BROOKHAVEN NATIONAL LABORATORY 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS

Prepared by

Brookhaven National Laboratory
Environmental and Waste Management Services Division
Upton, New York

March 23, 2006

ENVIRONMENTAL MANAGEMENT SYSTEM REGISTERED TO ISO 14001:2004

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

A. Operable Unit I Wooded Wetlands Supplemental Surface Water and Sediment Sampling and Analysis Report
B. Soil Gas Sampling Field Notes
C. Monthly Site Landfill Inspection Forms
D. Historical Soil Gas Monitoring Data

1.0 INTRODUCTION

This report documents the Operation and Maintenance (O&M) activities undertaken during calendar year 2005 for the Current Landfill and the Former Landfill Areas (Former Landfill, Interim Landfill, and Slit Trench). Brookhaven National Laboratory (BNL) is responsible for performing this work to comply with the post-closure O&M requirements specified in 6 New York State Code of Rules and Regulations (NYCRR) Part 360, Solid Waste Management Facilities, effective December 31, 1988. The details of the O&M programs are described in the Final Operations and Maintenance Manuals for the Current Landfill (CDM Federal, 1996a) and the Former Landfill Areas (CDM Federal, 1996b).

The following are the primary objectives of the O&M program:

- Monitor the effectiveness of the impermeable caps in protecting groundwater quality;

- Monitor the potential generation and migration of soil gas; and

- Maintain and monitor the various components of the closure system (landfill caps, drainage structure, and environmental monitoring systems).

This is the tenth year of O&M for the Current Landfill, the ninth year for the Former Landfill and Slit Trench, and the eighth year for the Interim Landfill.

1.1 Site Description and Project Background

BNL is a 5,265-acre site located in central eastern Long Island, New York. The facility is a federally owned and funded international research and learning center managed, by Brookhaven Science Associates (BSA) under contract with the United States Department of Energy (DOE). On December 21, 1989, the site was placed on the United States Environmental Protection Agency's (USEPA's) National Priorities List (NPL), a ranking of hazardous waste sites compiled by the federal government as part of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Placing BNL on the NPL resulted in the establishment of a remediation-task list for various locations around the facility. The site subsequently was divided into seven (7) separate remediation work areas known as Operable Units. The Current Landfill and Former Landfill Area are located in Operable Unit I (OU I), near the south central portion of the BNL site (see Figure 1).

Current Landfill (CLF) The Current Landfill consists of one unlined waste-cell that was operated from the late 1960s until 1990 for disposing of waste generated at the Laboratory. An impermeable cap covering the cell was completed in November 1995. Additional information about the cap's construction can be obtained from the *Construction Certification Report for the Current Landfill* (CDM Federal, 1996b). Following the installation of the cap, the post-closure groundwater-monitoring program was implemented in December 1996, in accordance with 6 NYCRR Part 360 section 2.15, Solid Waste Management Facilities (effective December 31, 1988).

Groundwater quality near the Current Landfill is monitored under the O&M program for a wide variety of volatile organic compounds (VOCs), metals, radiological and water chemistry (landfill leachate) parameters. Monitoring in this vicinity was expanded in 1999 to include a wetland area adjacent to the landfill's eastern boundary. This area, known as the Wooded Wetland area, is a two-acre wetland located between the Former Hazardous Waste Management Facility (HWMF) and the Current Landfill. The wetland receives surface runoff from the Current Landfill, and usually is flooded during the spring/early summer, and dry in late summer/fall. Monitoring of the Wooded Wetland area has been incorporated into the Current Landfill Monitoring Program and consists of sampling and analyzing surface water and sediment to evaluate the potential for leachate migrating into this area, as originally performed under the *OU I Ecological Risk Assessment* (CDM Federal, 1999).

As required under 6 NYCRR Part 360, groundwater quality must be monitored for a minimum of five years, after which the permittee may request modification of the sampling and analysis requirements. In October 2001, BNL submitted the *Five-Year Evaluation Report for the Current Landfill* (BNL, 2001). This report assessed groundwater trends over the five years after capping, and proposed changes to the sampling program. These changes were implemented in CY02.

Former Landfill (FLF) The Former Landfill Area encompasses three closely located landfill units; the Former Landfill, the Slit Trench, and the Interim Landfill. The Former Landfill is an unlined waste-disposal area originally used by the United States Army in the 1940's. Waste disposal operations ceased in 1966, and the landfill was covered with soil. The Interim Landfill also is unlined, and was reportedly used for approximately one year between the time the Former Landfill was closed, and the Current Landfill was opened. The Slit Trench is unlined as well, and believed to have been operated between 1960 and 1967 for disposal of construction and demolition debris (CDM Federal, 1996).

The Former Landfill and Slit Trench were capped in November 1996 and the Interim Landfill was capped in October 1997. Additional information about the construction of the caps can be found in the *Construction Certification Report for the Former Landfill* (Roy F. Weston, 1997) and the Interim Landfill (PW Grosser, 1997). BNL started O&M activities in December 1996 at the Former Landfill and Slit Trench, and in November 1997 at the Interim Landfill. Under this O&M program, groundwater quality in downgradient wells in the vicinity of the Former Landfill is monitored for VOCs, metals radionuclides and landfill-leachate parameters.

In March 2002, BNL submitted a Five-Year Evaluation Report for the Former Landfill (P.W. Grosser, 2002), which assessed trends in groundwater quality over the 5-year period following capping and proposed changes to the sampling program. These changes were implemented in CY03.

1.2 Overview of the Monitoring Program

Groundwater Monitoring

Data quality objectives (DQOs) for each of BNL's groundwater monitoring programs are presented in the BNL Environmental Monitoring Plan (BNL, 2005). The design of the data-collection network was optimized as part of the process. Such optimization continues annually as part of the O&M program and is based on the interpretation of new data as well as historical trends. The primary decision identified for the landfill monitoring programs was "Are the controls effectively improving groundwater quality below and downgradient of the landfill?"

Groundwater samples are collected from monitoring wells positioned upgradient and downgradient of each landfill area. Analytical data are reviewed, and determinations are made regarding the effectiveness of landfill controls.

The monitoring program for the landfill areas consists of:

Soil Gas Monitoring. Measurements of methane, Lower Explosive Limit (LEL), and hydrogen sulfide are taken quarterly from numerous monitoring locations surrounding the landfills to evaluate the movement of soil gas from the landfills.

Wooded Wetland Monitoring. Surface waters and sediments in the wooded wetland adjacent to the eastern boundary of the Current Landfill are sampled annually to evaluate possible effects of landfill leachate on Tiger Salamander habitats. This work was incorporated into the routine landfill monitoring program, and is carried out annually (See Appendix A).

Routine Visual Inspection, Maintenance, and Repair. Monthly inspections are performed to monitor the structural and/or operational status of the landfill caps, drainage structures, and environmental monitoring systems.

Leachate Discharge. Visual inspections of the landfills are performed monthly to monitor for signs of leachate discharge. If observed, samples of the leachate are collected and analyzed.

These activities are discussed in greater detail in Sections 2 through 5 of this report. Section 6 contains the conclusions and recommendations. References are included in Section 7.

2.0 GROUNDWATER MONITORING

2.1 Monitoring Well Networks

Current Landfill

Since February 1996, groundwater quality at the Current Landfill has been monitored using ten downgradient wells and one background monitoring well. Figure 2 depicts the location of the monitoring wells. Figure 3 shows the water table contours for September 2005. The depths of the screen intervals for the Current Landfill wells are listed below.

Well ID	Screen Interval (feet BLS)
087-09*	24-34
087-11	11-21
087-23	25-40
087-24	70-80
087-26	70-80
087-27	5-20
088-109	6-21
088-110	10-25
088-21	5-20
088-22	70-80
088-23	120-130

*Background well

BLS - Below Land Surface

Former Landfill

Since January 1997, groundwater quality at the Former Landfill area has been monitored using eight shallow monitoring wells (3 upgradient and five downgradient). The locations of the eight monitoring wells are presented in Figure 4. The direction of groundwater flow in the Operable

Unit I area of the site is generally to the south-southeast. Figure 3 shows the September 2005 water table contours for the area. The screen zones for Former Landfill wells are summarized below.

Well ID	Screen Interval (feet BLS)
086-42*	65-75
086-72*	41.5-56.5
087-22*	43-53
097-17	29-39
097-64	29-44
097-277	40-55
106-02	55-65
106-30	29-44

*Background well

BLS - Below Land Surface

2.1.1 Sampling Frequency and Analytical Parameters

Monitoring wells at both landfills were sampled in 2005 during the following periods:

Sampling Event	Sampling Dates
Round 1	March 29
Round 2	May 2 - 4
Round 3	August 9
Round 4	November 1 - 3

Dvirka and Bartilucci Consulting Engineers, Woodbury, New York conducted the groundwater sampling and General Engineering Labs, Inc. and Severn Trent Laboratories, Inc analyzed the samples. See Table 1 for a summary of analyses performed by well and sampling round.

2.1.2 Quality Assurance / Quality Control

The groundwater samples were collected and analyzed in accordance with strict quality assurance, quality control (QA/QC) requirements as described in the BNL Groundwater Monitoring Program Quality Assurance Project Plan (QAPP) (BNL, 1999). The analytical results for groundwater samples collected during 2005 satisfied the data-quality objectives. The sampling team personnel are responsible for assuring that a master calibration/maintenance log is maintained for each field-measuring device (e.g., pH conductivity, turbidity meters e.g.). The sample coordinator provided a calibration/maintenance log for equipment supplied to the contractor's sampling teams.

The analytical results of samples collected for the Current and Former Landfill projects underwent data verification, using BNL standard operating procedures EM-SOP-203, Chemical Data Verification and EM-SOP-204, Radiochemical Data Verification. These procedures are designed to verify the accuracy and/or completeness of analytical data. The data-verification process is implemented to detect the most common analytical problems that affect the quality of the results. To accomplish this task, QA/QC items such as the following were checked: holding times, matrix spikes, laboratory and field blanks, and field logs. If items are found that can affect the use and interpretation of the data, they are either corrected, as in the case of unreadable information on the field logs, or the data is qualified, as in the case of contamination of the blanks or violations of the holding time.

Guidance on the collection of QA/QC samples is contained in the QAPP, and in BNL procedure EM-SOP-200 "Collection and Frequency of Field Quality Control Samples". The QA/QC samples collected included trip blanks, field blanks, matrix spike/matrix spike duplicate (MS/MSDs), and blind duplicates.

Trip blanks were analyzed for aqueous VOCs only. One trip blank was shipped to the analytical laboratory with each set of samples submitted for VOC analyses. One duplicate sample was collected during the first and third quarters when only the Current Landfill was sampled and two duplicate sample were collected during the second and fourth quarters when both landfills were sampled. No errors were detected in the duplicate analyses. Matrix spike/matrix spike duplicates (MS/MSDs) samples were collected at a frequency of two MS/MSD samples per quarter. This ensures that the matrix of the sample does not adversely impact the analysis. In August, Alkalinity and 1,1-dichloroethane reported recoveries below QC limits and manganese and total kjedahl nitrogen (TKN) reported recoveries above QC limits. In November, recoveries below QC limits were reported for Alkalinity, copper, and chloroethane. Iron results in November were above QC limits. Results were qualified for the associated data as estimated with the exception of selected TKN and manganese results in August and selected iron results in November, which were qualified as unusable. With the exception of the rejected data, the results were usable for the project. The amount of rejected data was within acceptable limits and did not adversely impact the review of the groundwater quality.

2.2 Landfill Groundwater Monitoring Results

This section summarizes the results for VOCs, metals, water-chemistry parameters, and radionuclides detected for both the Current Landfill and Former Landfill in calendar year 2005. The historical trends in concentrations of key contaminants are assessed and shown graphically in Figures 5 through 12. Summary tables of all 2005 landfill groundwater data are presented in Tables 2 through 10. Detections that exceed groundwater standards are bolded. The summary tables include groundwater standards, laboratory results, minimum detection limits, and laboratory data qualifiers.

The groundwater standards used for evaluating groundwater data include those contained in the NYSDEC Ambient Water Quality Standards and Guidance Values (June 1998, with addendums April 200 and June 2004). Groundwater standards for radiological compounds were supplemented with New York State Department of Health's (NYSDOH's) standards for drinking water when a NYSDEC groundwater standard was not available. When there were no groundwater standards for a radiological compound, a Groundwater Screening Level was used. This value is based on a dose equivalent of 4 mrem/year and was calculated as 4% of the USDOE Derived Concentration Guides (DCG) (DOE Order 5400.5) for the isotope of concern. These values are listed under the "groundwater standards" column in the summary tables and annotated where appropriate.

Laboratory results that exceed the groundwater standards are highlighted in the data summary tables to facilitate review of the information.

The laboratory data qualifiers included in the summary tables vary for the different analyses. Explanations for the most commonly used laboratory data qualifiers are included in the notes in each summary table. Complete 2005 laboratory data reports, chain of custody forms, and well-sampling logs for both landfills are archived and available upon request. In addition, analytical results are stored in the BNL Environmental Information Management System (EIMS) database.

2.2.1 Current Landfill

2.2.1.1 Volatile Organic Compounds (VOCs)

Benzene, and/or chloroethane, were detected above their respective groundwater standards in five of the ten-downgradient monitoring wells during 2005 (Table 2). 1,1-Dichloroethane was detected above it's groundwater standard in one downgradient well during 2005. These VOCs have historically been the primary groundwater contaminants detected downgradient of the Current Landfill.

Figure 5 plots the concentration trends of total VOCs (TVOC), benzene and chloroethane. As shown, VOCs remained relatively stable at low concentrations. Overall, the trend plots also show a distinct decrease in VOC concentrations from the high concentrations seen prior to the installation of the cap. This reflects the positive effects of the capping on the groundwater quality downgradient.

Benzene exceeded the 1 μg/L standard in wells 087-11, 087-27, and 088-110. Chloroethane exceeded the 5 μg/L standard in wells 087-11, 087-23, 088-109, and 088-110. The maximum chloroethane concentration was 94 μg/L in well 088-109; which is a significant increase from the 2004 high of 29 μg /L , but consistent with previous years high values. Benzene was detected at a maximum of 1.7 μg/L in well 087-11. There have been no detections of VOCs exceeding groundwater standards in wells 087-24, 088-22, and 088-23 since 1998. These downgradient wells are screened in the mid-to deep-Upper Glacial Aquifer as perimeter wells to monitor the vertical extent of contamination from the Current Landfill. Background well 087-09 had trace amounts of chloroform and bromodichloromethane detected which may be attributable to laboratory sample contamination.

2.2.1.2 Water Chemistry Parameters

Groundwater samples near the Current Landfill were analyzed for ammonia, total kjeldahl nitrogen (TKN) cyanide, sulfate, nitrite, nitrate, total nitrogen, chloride, alkalinity, total dissolved solids (TDS or residue, nonfilterable) and total suspended solids (TSS or residue, filterable), during 2005 (Table 1). The results are provided in Table 3. Elevated levels of these parameters can be indicative of the presence of landfill leachate.

Ammonia was the only compound detected above the standard of 2 mg/L, with exceedances in five downgradient wells (087-11, 087-26, 087-27, 088-109 and 088-110) during four sampling events as shown in Table 3. The highest concentration of 40 mg/L was reported for well 088-110 in August. With the exception of the August result from well 088-110, the levels of ammonia detected seem to have stabilized from their pre-cap highs.

During 2005, all sulfate and chloride concentrations remained below the groundwater standard of 250 mg/L. The highest sulfate value reported for 2005 was detected in the November sample from monitoring well 088-109, at a concentration of 27.7 mg/L.

Chloride concentrations ranged from 6.2 mg/L in well 087-23 during May, to a high of 59.1 mg/L in well 088-21 in March. Chloride concentrations historically have been significantly below the groundwater standard of 250 mg/L in all Current Landfill wells. Figure 6 plots these trends, showing the low and stable nature of chloride concentrations in the vicinity of the Current Landfill.

Alkalinity, in the form of bicarbonate, is the concentration of anions available to neutralize acid, and is often used as an indicator of leachate contamination. The alkalinity in background well 087-09 ranged from 13 mg/L to 28 mg/L during 2005. The highest alkalinity concentration during 2005 was detected in downgradient, shallow Upper Glacial Aquifer well 087-11, at 235 mg/L in March. There is no groundwater standard for alkalinity. The concentration trends plotted in Figure 6 show an overall decrease in alkalinity following the capping of the landfill. Alkalinity levels in the background well remained stable during this period.

TDS and TSS results were similar to those from previous years, and indicate some continuing movement of leachate from the Current Landfill as evidenced by comparing data from downgradient and background wells. TDS and TSS concentrations in background well 087-09 ranged from 97 mg/L to 112 mg/L, and 6 mg/L to 12 mg/L, respectively. The maximum concentrations observed in downgradient wells were 266 mg/L and 80 mg/L of TDS and TSS, respectively.

No water chemistry parameters have exceeded groundwater standards in downgradient wells 087-24, 088-22, and 088-23, since 1998. These wells are all screened in the mid to deep-Upper Glacial Aquifer to monitor the vertical extent of contamination from the Current Landfill. A comparison of downgradient and background wells shows that leachate continues to be generated from the Current Landfill, albeit at low concentrations. Decreasing trends in concentration indicate that the capping is effectively reducing the generation and migration of leachate.

2.2.1.3 Metals

Historically, iron and manganese were detected consistently above groundwater standards in the majority of wells surrounding the landfill. While these metals indicate the presence of leachate, the groundwater standards for these compounds are considered secondary standards based on aesthetics and taste rather than risk to human health. Precipitated iron from the BNL Water Treatment Plant was disposed of at the Current Landfill during past operations. The highest concentrations generally are found in the shallow wells 87-11 and 87-27, located immediately south of the Current Landfill (see Figure 7). There have been no detections of metals, other than iron and manganese, exceeding groundwater standards in wells 087-24, 087-26, and 088-23 since 1998. These wells are all screened in the mid-to-deep Upper Glacial Aquifer to monitor the vertical extent of contamination from the Current Landfill. Concentrations in upgradient well 87-09 still are lower than in the downgradient wells, suggesting continued leachate migration from the landfill. Given the relatively short time that the landfill has been capped (i.e. 10 years), the anticipated transport time of groundwater from the north end of the landfill to the downgradient monitoring network, and the disposal of sludge containing metals during the landfill's operation, the continued presence of iron, magnesium and sodium in these wells is not unexpected.

During 2005, iron, manganese, and sodium continued to be detected above their respective groundwater standards (Table 4). Iron in the downgradient wells peaked at a maximum of 75,200 µg/L in well 088-110 during August. In contrast to background concentrations, in well 87-09, iron ranged from 2,460 µg/L to 4,980 µg/L. Manganese ranged from 79.4 µg/L to 176 µg/L in background well 087-09, and up to 4,7400 µg/L in the downgradient wells. Background sodium levels ranged from 20,400 to 25,200 µg/L; whereas downgradient levels ranged up to 26,900 µg/L. The proximity of well 087-09 to Brookhaven Avenue and the affects of road salting in the winter may be contributing to the higher values. Arsenic was reported above the standard of 10 µg/L in wells 087-23, 088-110, and 088-22 at concentrations up to 33.2 µg/L. Arsenic detections have historically been observed at similar levels in Current Landfill wells. Aluminum was detected in the background well, 087-09, and one downgradient well above the standard of 200 µg/L. Concentrations of aluminum ranged up to 410 µg/L in background well 087-09 and 210 µg/L in downgradient well 088-109.

2.2.1.4 Radionuclides

No radionuclides were detected above groundwater standards during 2005 (Table 5). Strontium-90 and tritium were the only radionuclides detected during 2005. Low levels of strontium-90 were detected in downgradient wells 088-110, and 088-21. Concentrations were well below the 8 pCi/L groundwater standard, and ranged from 0.95 pCi/L in well 088-110 to 2.18 pCi/L in well 088-21. Overall, strontium-90 concentrations have shown either decreasing or stable trends, with concentrations at or near the detection limit (Figure 8). Detectable gross beta activity, which is a possible indicator of strontium-90 in groundwater, ranged from 2.01 pCi/L in well 087-23 to 6.2 pCi/L in wells 087-11 and 088-109.

Tritium was detected significantly below the groundwater standard of 20,000 pCi/L with a maximum value of 660 pCi/L in shallow downgradient well 088-110 (Figure 8). Tritium and Sr-90 concentrations have not exceeded groundwater standards in wells 087-24, 088-22, and 088-23 since

1998. These wells are all screened in the mid-to-deep-Upper Glacial Aquifer to monitor the vertical extent of contamination from the Current Landfill.

2.2.2 Former Landfill

2.2.2.1 VOCs

During 2005 there were no detections of VOCs above groundwater standards in wells in the Former Landfill Area (Table 6). The compounds consistently found in the Former Landfill monitoring wells include 1,1,1-trichloroethane, 1,1-dichloroethane, and chloroform. Chloroform was reported in several wells during the year at concentrations ranging from 0.37 µg/L to 1.7 µg/L, well below the groundwater standard of 7 µg/L. 1,2,2-Trichloroethane, 1,1-dichloroethane, dichlorodifluoromethane, tetrachloroethene and trichloroethene were also detected in one well, 106-30 in November at concentrations below 0.81 µg/L. These detections may be the result of low level contamination during the analysis of the sample.

Figure 9 shows plots of the historical VOC detections for the Former Landfill monitoring wells. During 2005, VOCs were detected at the Former Landfill in several wells, but only at trace concentrations, indicating that the cap on the landfill is operating as intended.

2.2.2.2 Water Chemistry Parameters

Groundwater samples from monitoring wells in the Former Landfill Area were analyzed for sulfate, nitrite, nitrate, total nitrogen, chloride, alkalinity, TDS (TDS or residue, non-filterable) and TSS (TSS or residue, filterable). During 2005, none of the of water chemistry parameters exceeded applicable groundwater standards (Table 7). In general, all of the landfill leachate indicator parameters were relatively low concentrations in comparison to background, and displayed either decreasing or stable trends in 2005. These trends indicate that the landfill cap is effective.

Sulfate concentrations ranged from 9.7 mg/L to 12.1 mg/L in the background wells, and from 10 mg/L to 17.9 mg/L in downgradient wells, significantly below the standard of 250 mg/L. Nitrogen in the form of nitrate (NO_3), and chloride were consistently low, with levels in the downgradient wells nearly indistinguishable from those in the background wells. During the May sampling event, background samples were inadvertently analyzed for the total of nitrates + nitrites rather than the individual parameters. The loss of this data does not adversely impact the analysis of the monitoring well results. Chloride concentrations ranged from 4.6 mg/L to 15.9 mg/L in downgradient monitoring wells, well below the groundwater standard of 250 mg/L. The trends plotted in Figure 10, indicate chloride concentrations are stable over time.

Detections of alkalinity ranged from 7 mg/L to 17.5 mg/L in background wells and from 6 mg/L to 23 mg/L in downgradient wells. The trends plotted in Figure 10**,** demonstrate the alkalinity concentrations in 2005 are generally consistent with 2004 levels. The concentrations are approaching background, and suggest a gradual decline in the release of landfill leachate since the landfill was capped.

TDS concentrations ranged from 17 mg/L to 101 mg/L in the background wells and from 23 mg/L to 76 mg/L in the downgradient wells. TSS concentrations were from 1 mg/L to 6 mg/L in the background wells, and from 1 mg/L to 4 mg/L in the downgradient wells.

Ammonia was only detected in one well, 106-02, in 2005 at a concentration of 0.065 mg/L. This is well below the standard of 2 mg/L.

Nitrite, and TKN were not detected in the Former Landfill monitoring wells during 2005.

2.2.2.3 Metals

Only two wells had detections of metals that exceeded the groundwater standards during 2005 (Table 8). Well 106-30 had metal concentrations exceeding groundwater standards for aluminum, and iron (375 -538 µg/L, and 415 µg/L, respectively). Well 87-22 had a thallium detection of 0.88 µg/L which is above the groundwater standard of 0.5 µg/L . These results are consistent with historic detections.

2.2.2.4 Pesticides/PCBs

There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2005. The sampling results are summarized in Table 9.

2.2.2.5 Radionuclides

There were no detections of radionuclides above the groundwater standards during 2005. The sampling results are summarized in Table 10, and concentration trend plots are shown on Figure 12.

Strontium-90 was detected in downgradient well 097-64, at an estimated concentration of 1.87 pCi/L, which is well below the standard of 8 pCi/L. Strontium-90 concentrations in this well have been decreasing since a peak of 12 pCi/L in 1998. Tritium was detected in upgradient well 086-42 at very low levels in each of the two sampling rounds with a maximum concentration of 600 pCi/L. Tritium was also detected in well 106-02 at a concentration of 1,000 pCi/L. Tritium was not detected in any other Former Landfill monitoring wells.

3.0 Wooded Wetland Monitoring

Sampling at the Wooded Wetland is performed as part of the compliance monitoring for the Current Landfill. Prior to the capping of the Current Landfill, leachate was periodically observed in the wetland. The monitoring is focused on metal concentrations in the sediment and surface water to evaluate potential risks to the local Tiger Salamander population. See Appendix A for a detailed discussion of the sampling and analysis results.

Surface Water

Surface water samples from the Southern and Northern Ponds had average iron concentrations of 1,611 µg/L and 1,830 µg/L , respectively. Although the average concentrations were higher than the 1,000-µg/L critical toxicity concentration (Appendix A, Table 2B), it was lower than the BNL background concentration of 1,990 µg/L .

With the exception of iron, all average metals results were below the critical water concentration during 2005.

Based on the 2005 sampling results, annual sampling of the Wooded Wetlands should continue as part of the annual O&M landfills monitoring activities for at least another year. A complete copy of the 2005 Annual Wooded Wetlands Report is included in Appendix A of this report.

Sediment

Sediment samples were collected from the Wooded Wetland Area in May 2005. Due to an oversight in sampling, only mercury was requested for the 2005 sediment samples rather than the entire Target Analyte List of metals. The results for 2005 indicate that mercury concentrations in sediments are less than the maximum concentration benchmarks (See Appendix A, Tables 2A and 2B). While complete metals analysis was not analyzed for sediments in 2005, analysis of metals in water was completed. This analysis indicates that no significant change has occurred. Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals provides indication that the wooded wetland is not experiencing an increase in metals concentration.

4.0 SOIL GAS MONITORING

4.1 Soil Gas Monitoring Networks

Soil gas readings were collected from wells surrounding the Current and Former Landfills in March - July, October, and December 2005. Methane, lower explosive limit (LEL), and hydrogen sulfide were measured using a Landtec GA-90 (Serial # 690). The LEL for methane is 5.3% and the upper explosive limit (UEL) is 15%.

4.1.1 Current Landfill

Along the perimeter of the Current Landfill, 58 points were sampled for soil gas, which includes four outpost soil gas well clusters, GSGM-1 to GSGM-4, located along the south side of Brookhaven Avenue. The sampling points include 12 soil-gas well clusters consisting of three sampling intervals per cluster, and 11 soil-gas well couplets consisting of two sampling intervals per couplet. Table 11 describes each soil-gas well. Their locations are illustrated on Figure 13.

4.1.2 Former Landfill Area

Twenty-four sampling points were monitored for the Former Landfill Area. These points include six well couplets consisting of two sampling points per couplet. Details of each soil gas well are given in Table 11 and their locations shown in Figure 14.

4.1.3 Sampling Frequency

Soil-gas was monitored for each landfill on the following dates.

Sampling Event	Current Landfill	Former Landfill
Round 1	March 2005	March 2005
Round 2	July 2005	July 2005
Round 3	October 2005	October 2005
Round 4	December 2005	December 2005

4.2 Results of Soil-Gas Monitoring

Action levels for soil gas are specified in 6 NYCRR Part 360-2.17(f) in terms of percent LEL, which is primarily related to the amount of methane present. This discussion focuses primarily on the methane levels detected during quarterly monitoring. Hydrogen sulfide is monitored, but has no regulatory action level. 6 NYCRR Part 360-2.17(f) specifies that active measures to control decomposition gases are required when the concentration of methane or other explosive gases exceeds 25 percent of the LEL (or 1.3% methane) in facility structures, or 100 percent (%) of the LEL (or 5.3% methane) at the site boundary.

4.2.1 Current Landfill

A total of 23-soil gas monitoring well clusters are positioned around the Current Landfill (Figure 13). Potential receptors, or areas where methane can accumulate in the vicinity of the Current Landfill, include the National Weather Service building located 480 feet north northwest of the Current Landfill on the north side of Brookhaven Avenue. Should methane extend to the south side of Brookhaven Avenue, active measures will be required to control its migration. The four outpost soil gas wells, GSGM-1 to GSGM-4, located along the south side of Brookhaven Avenue are used to monitor the northern extent of migration of landfill gas.

The results of the soil gas monitoring for 2005 are summarized in Table 12. Appendix B contains the field notes recorded during the sampling events. Instrument measurements show that methane continues to be generated in several areas of the landfill. The percent of the LEL is equivalent to 20 times the methane concentrations in the landfill and is elevated along the northwest corner and the south boundary of the Current Landfill. The highest levels were recorded in well cluster SGM-3 (ranging from 0 % of the LEL to 952 % of the LEL) and in well cluster SGM-4 (ranging from 4 % of the LEL to 924 % of the LEL) located along the western boundary. These levels have remained stable since 1996 when monitoring began and the current gas venting system appears to be controlling gas accumulation. These data are consistent with previous years (see Appendix D).

Outpost wells, GSGM-1 to GSGM-4, located along the south side of Brookhaven Avenue showed no methane during 2005, indicating that the methane accumulation and migration does not extend to this area. Should methane extend to the south side of Brookhaven Avenue, active measures will be required to control its migration.

Hydrogen sulfide is a product of anaerobic decay in landfills and can produce an odor like rotten eggs. It is a nuisance, but rarely a toxicity problem. For reference, the National Institute of Occupational Safety and Health sets an exposure limit of 10 parts per million (ppm) hydrogen sulfide in the breathing zone for an 8-hour period.

Hydrogen sulfide measurements collected from the soil gas monitoring wells ranged from 0 ppm to 51 ppm. Well SGM-12A located near the landfills southern section, had the highest hydrogen-sulfide concentration, which was above the 10 ppm exposure limit; however it was taken from a vapor point screened 2.5 - 7.5 feet below the surface and not from the breathing zone. Like methane, receptors to hydrogen sulfide are considered to be in areas such as basements where the gas can accumulate. Based upon the readings obtained from the outpost soil gas wells along the south side of Brookhaven Avenue (GSGM-1 – GSGM-4), there is no evidence that hydrogen sulfide is migrating toward the National Weather Service building.

4.2.1.1 Trend in Soil-Gas Data

Appendix D contains the results of methane monitoring for the Current Landfill from 1996 through 2005. Generally the levels of methane and hydrogen sulfide in the wells along the northwest landfill boundary and southeast corner have remained stable.

4.2.2 Former Landfill Area

A total of 12 soil gas monitoring well clusters are positioned around the Former Landfill areas. During 2005, the well clusters were monitored on a quarterly basis. The only existing operating facilities and offices within the immediate vicinity of the Former Landfill area are located approximately 600 feet to the west. However, because these facilities do not have basements, there is minimal potential for hazardous levels of landfill gases to accumulate in these structures.

Based upon the four sampling events, little to no methane or hydrogen sulfide was detected. Table 13 details the 2005 soil gas monitoring results for the Former Landfill Area. Appendix B contains the field notes recorded during the sampling events.

4.2.2.1 Trends in Soil-Gas Data

The results of monitoring the Former Landfill continue to be consistent with the initial survey of the methane- gas migration conducted in 1995, during which concentrations between 0% to 0.1% methane were recorded. Hydrogen-sulfide gas also was measured during this survey. The hydrogen sulfide results indicate there were no detections during 2005. Appendix D includes the results of monitoring methane in the Former Landfill Area for 1996 through 2005.

Presently, there is no measured pathway for methane-gas migration, nor do the concentrations represent an explosive hazard as shown by the non-detect readings on the LEL meter. The age of the Former Landfill and the types of materials disposed of would likely result in the low levels or absence of methane or hydrogen sulfide.

5.0 MAINTENANCE AND REPAIR

Monthly site inspections were performed by BNL at the Current and Former Landfill areas to monitor the structural and/or operational status of the landfill cap, gas vents, drainage structure, fences and environmental monitoring system (groundwater wells, soil gas wells) in general accordance with the approved O&M Manuals. A copy of the inspection reports is included in Appendix C. Maintenance and repair work completed or required by BNL is discussed below.

5.1 Landfill Cap and Gas Vents

The grass cover on the Former Landfill Area and the Current Landfill were maintained in accordance with the O&M Plan (CDM, 1996a and CDM 1996c). In April 2005, during the Five Year Review inspection, it was noted that there were animal burrows on the south and east slope. Due to heavy rains, an area of the Current Landfill cap approximately 20 feet long by 2 feet wide by 1 foot deep was washed out in November 2005. This area was repaired in February 2006. No gas vents at either landfill required repair. Lawn mowing was undertaken at both the Former and Current Landfills and the levels of grasses in some areas were allowed to grow higher to improve vegetation that is intended to protect the liner material.

5.2 Drainage Structures

The drainage structures at both the Current and Former landfill areas were maintained and any obstructions removed. They were observed to be operational and structurally sound during the site inspections. Grass and small brush were weeded from the drainage channels several times during the year. Weeds and bush were treated with herbicides in areas of the channel that are difficult to weed. Other than routine grass trimming, no additional maintenance or repair work was required.

5.3 Environmental Monitoring System

The monitoring wells and soil gas monitoring wells associated with the landfills required no significant maintenance.

5.4 Related Structures

The gates and locks to the Current Landfill were repaired in December 2005.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Groundwater Monitoring

6.1.1 *Conclusions for the Current Landfill*

- VOCs such as benzene, and chloroethane continue to be detected in downgradient wells 087-11, 087-23, 087-27, 088-109, and 088-110 at concentrations above groundwater standards. The maximum VOC concentration (chloroethane) in 2005 was 94 µg/L in well 088-109. TVOC concentrations in these five wells have ranged between non-detect to 113.5 µg/L over the past several years indicating that low level VOCs continue to emanate from the landfill. The continued presence of leachate indicators is expected and normal.

- Landfill water chemistry parameters and metals evaluated during the year suggest that leachate continues to emanate from the landfill. The continued presence of leachate indicators is expected and normal, in view of the relatively short time that the landfill has been capped, and the time needed for the transport of solutes from the upgradient end of the landfill to the downgradient monitoring network.

- Tritium and Sr-90 continue to be detected in the wells downgradient of the Current Landfill, but at concentrations well below groundwater standards. These concentrations were consistent with those observed in 2004.

- Since 1998, there have been no detections of VOCs, metals, water chemistry parameters or radionuclides exceeding groundwater standards in wells 087-24, 088-22, and 088-23. These wells are all screened in the mid-to deep-Upper Glacial Aquifer to monitor the vertical extent of contamination from the Current Landfill.

- Although low levels of contaminants continue to be detected, the landfill controls are effective as evidenced by the improving quality of groundwater downgradient of the landfill.

- Sediment samples collected from the Northern and Southern Pond of the Wooded Wetland area are below the maximum sediment benchmark concentrations for mercury. However, the full metals list was inadvertently not analyzed.

- Iron concentrations detected in the surface water samples from the Southern Pond of the Wooded Wetland indicate a low potential for risk to larval salamanders since, the ratio of their concentrations in the water to the critical concentrations is greater than 1.0 but less than 10.

6.1.2 Recommendations for the Current Landfill

The groundwater monitoring program is adequate at this time. Since leachate is continuing to discharge from the Landfill, there are no recommended changes to the monitoring program. The full round of metals parameters will be collected for the Wooded Wetland sediment samples in 2006. In order to help identify potential sampling errors, the BNL contract with environmental laboratories will be amended to require the laboratories to email receipt notices to the project managers when a new set of samples arrives. These notices will include a copy of the chain-of-custody, information pertaining to the condition of the samples bottles upon arrival at the laboratory, and a list of all parameters scheduled for analysis.

6.1.3 Conclusions for the Former Landfill

- The Former Landfill is not a significant source of VOC contamination. No VOCs were detected above groundwater standards in 2005. VOC concentrations in the downgradient wells were at or near the minimum detectable limits.
- Landfill-leachate indicators in downgradient wells continue to be detected at concentrations above background, indicating some continued generation of leachate. However, the leachate concentrations are very low and remain stable. This low level of generation is expected, given the age of the landfill.
- The Former Landfill no longer appears to be a source of strontium-90 contamination. Strontium-90 was only detected in a single downgradient well (097-64), but at a concentration below the standard of 8 µg/L.
- The implemented landfill controls are effective, as evidenced by the improving quality of groundwater downgradient of the landfill.

6.1.4 Recommendations for the Former Landfill

The groundwater monitoring program is adequate at this time. Since leachate is continuing to discharge from the Landfill, there are no recommended changes to the monitoring program.

6.2 Soil Gas Monitoring

6.2.1 Conclusions for the Current Landfill

Methane and hydrogen sulfide levels in wells located along the northwest landfill boundary and southeast corner have remained stable and have not shown any significant increases or decreases over time. No significant gas migration has been observed at the outpost soil gas wells along Brookhaven Avenue.

6.2.2 Recommendations for the Current Landfill

The soil-gas monitoring program is adequate at this time, since methane gas is still being produced and leachate is continuing to discharge from the Landfill.

6.2.3 Conclusions for the Former Landfill

Methane and hydrogen sulfide levels at the Former Landfill area continue to show little to no levels of landfill gasses.

6.2.4 Recommendations for the Former Landfill

The soil-gas monitoring program is adequate at this time, since there have been little to no detections of methane and/or hydrogen sulfide during monitoring at the Former Landfill over the past 7 years.

6.3 Maintenance and Repair

Maintenance of the landfill caps will continue in accordance with the O&M requirements.

6.3.1 Current Landfill

Monthly inspections and maintenance will continue in accordance with the O&M requirements.

6.3.2 *Former Landfill Area*

Monthly inspections and maintenance will continue in accordance with the O&M requirements.

7.0 REFERENCES

Brookhaven National Laboratory, 1999, BNL Groundwater Monitoring Program Quality Assurance/Quality Control Project Plan, BNL, August 1999.

Brookhaven National Laboratory, 2001a, Groundwater Monitoring Data Quality Objectives Project, BNL, September 2001.

Brookhaven National Laboratory, 2001b, Current Landfill Area Five-Year Evaluation Report. BNL Environnemental Services Division, October 29,2001.

Brookhaven National Laboratory. 2005. *Environmental Monitoring Plan CY 2005 Update.* Brookhaven National Laboratory, Upton, NY. January 2005.

CDM Federal, 1995a, Final Design Specifications for the Current Landfill, Brookhaven National Laboratory, CDM Federal Programs Corporation, February 1995.

CDM Federal, 1995b, Engineering Evaluation/Cost Analysis for Groundwater: Operable Unit I, Brookhaven National Laboratory, CDM Federal Programs Corporation, September 1995.

CDM Federal, 1995c, Final Closure/Design Report for the Former Landfill Area, Brookhaven National Laboratory, CDM Federal Programs Corporation, November 1995.

CDM Federal, 1996a, Final Operations and Maintenance Manual for the Current Landfill, Brookhaven National Laboratory, CDM Federal Programs Corporation, March 1996.

CDM Federal, 1996b, Final Construction Certification Report for Current Landfill Capping, Brookhaven National Laboratory, CDM Federal Programs Corporation, May 1996.

CDM Federal, 1996c, Final Operations and Maintenance Manual for the Former Landfill Area, Brookhaven National Laboratory, CDM Federal Programs Corporation, May 1996.

CDM Federal, 1997, Environmental Monitoring Report for Current Landfill, Brookhaven National Laboratory, CDM Federal Programs Corporation January 1997.

CDM Federal, 1999, Focused Ecological Risk Assessment, Appendix L., Final Feasibility Study Report OU I, CDM Federal Programs Corporation March 31, 1999.

EM-SOP-200, Collection and Frequency of Field Quality Control Samples, Brookhaven National Laboratory, Environmental Monitoring Standard Operating Procedure

EM-SOP-203, Chemical Data Verification, Brookhaven National Laboratory Environmental Monitoring, Standard Operating Procedure.

EM-SOP-204, Radiochemical Data Verification, Brookhaven National Laboratory Environmental Monitoring, Standard Operating Procedure

6NYCRR Part 360, Solid Waste Management facilities, New York State Department of Environmental Conservation, Division of Solid & Hazardous Waste.

PW Grosser Consulting, 1997, Construction Certification Report for the Interim Landfill Capping, Brookhaven National Laboratory, October 1997

PW Grosser Consulting, 2001, Current Landfill Area Five-Year Evaluation Report, October 29, 2001.

PW Grosser Consulting, 2002, Former Landfill Area Five-Year Evaluation Report, March 8, 2002.

Roy F. Weston, 1997, Final Construction Certification Report for Former Landfill Capping, Brookhaven National Laboratory, March 1997.

OER, 1997, Statement of Work For Hazardous Chemical and Radiochemical Data Validation, Brookhaven National Laboratory, April, 1997.

United States Department of Energy Order 5400.5, Radiation Protection of the Public and the Environment. Washington D.C., February 8, 1990.

Table 1. Analytical Requirements for Groundwater Samples

Well ID	Project	Decision Subunit	EPA 524.2 VOCs	EPA 504 EDB	EPA 625 Semi-VOCs	Pesticides Method 608	PCBs Method 608	TSS/TDS	Sufates/Chloride/Alkalinity	TK Nitrogen	Total Nitrogen	Nitrates	Nitrites	Ammonia	TAL Metals	Cyanide	Perchlorate	EPA 900 Gross Alpha/Beta	Isotopic Ce -137	EPA 901 Gamma Spec	EPA 906 Tritium	EPA 905 Sr 90	Blind Duplicate/MS/MSD	Frequency (events/year)
087-09	Current Landfill	Background	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
087-11	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
087-23	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
087-24	Current Landfill	Downgradient	X[a]					Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
087-26	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
087-27	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
088-109	Current Landfill	Downgradient	X					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]	X	4
088-110	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
088-21	Current Landfill	Downgradient	X[f]					X	X	X	X	X	X	X	X	X		X[a]		X[a]	X[a]	X[a]		4
088-22	Current Landfill	Downgradient	X[a]					Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
088-23	Current Landfill	Downgradient	X[a]					Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
086-42	Former Landfill	Background	X[a]			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X	X[a]		2f
086-72	Former Landfill	Background	X[a]			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
087-22	Former Landfill	Background	X[a]			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
097-17	Former Landfill	Downgradient	X			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
097-277	Former Landfill	Downgradient	X			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
097-64	Former Landfill	Downgradient	X			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
106-02	Former Landfill	Downgradient	X			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]		2f
106-30	Former Landfill	Downgradient	X			X[a]	X[a]	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf	Xf		X[a]		X[a]	X[a]	X[a]	X	2f

NOTES:
a: Collect in 4th Quarter only.
f: Collect in 2nd and 4th Quarters.

Table 2. Current Landfill - Summary of 2005 VOC Data

	Groundwater Standards*	087-09		087-09		087-11		087-11		087-23		087-23		087-24	
		5/2/2005		11/1/2005		5/2/2005		11/1/2005		5/3/2005		11/2/2005		11/2/2005	
Analyte	*ug/L*	(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)	
1,1,1,2-Tetrachloroethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	*5*	0.5	U	0.25	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	*1*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.66		0.37	J	0.5	U
1,1-Dichloroethylene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	*0.04*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	*0.6*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	*1*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	*1*	0.5	U	0.5	U	**1.7**		**1.7**		0.88		1		0.5	U
Benzene, 1,2,4-trimethyl	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	*--*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.12	J	0.5	U
Bromobenzene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	*50*	0.5	U	0.39	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	*50*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	*5*	0.5	U	0.5	U	0.67		0.34	J	0.58		0.77		0.5	U
Chlorobromomethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	*5*	0.5	U	0.5	U	**5.1**		**5.6**		**7.8**		0.5	U	0.5	U
Chloroform	*7*	0.5	U	1.3		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethylene	*5*	0.5	U	0.5	U	0.5	U	0.21	J	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	*0.4*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cymene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
DBCP	*0.04*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane	*5*	0.5	U	0.32	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
EDB	*0.05*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	*5*	0.5	U	0.5	U	0.5	U	0.12	J	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	*0.5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	*3*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
m/p xylene	*5*	0.5	U	0.5	U	0.5	U	0.13	J	0.5	U	0.5	U	0.5	U
Methyl bromide	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl chloride	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	*10*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methylene chloride	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	*10*	0.5	U	0.5	U	0.5	U	0.38	J	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.33	J	0.5	U
o-Dichlorobenzene	*3*	0.5	U	0.5	U	0.5	U	0.11	J	0.5	U	0.5	U	0.5	U
o-Xylene	*5*	0.5	U	0.5	U	0.5	U	0.079	J	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	*3*	0.5	U	0.5	U	0.72		0.27	J	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	*5*	0.5	U	0.5	U	0.5	U	0.098	J	0.5	U	0.5	U	0.5	U
Styrene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	*5*	0.5	U	0.5	U	0.5	U	0.098	J	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	*5*	0.5	U	0.5	U	0.5	U	0.19	J	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	*0.4*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	*5*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	*2*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
524.2 TVOC	*--*	0		2.26		8.19		10.403		9.92		2.59		0	

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 2. Current Landfill - Summary of 2005 VOC Data

Analyte	Groundwater Standards* ug/L	087-26 5/2/2005 (ug/L)		087-26 11/1/2005 (ug/L)		087-27 5/2/2005 (ug/L)		087-27 11/1/2005 (ug/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	**1.3**		0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	5	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.56		0.5	U
Chlorobromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	5	0.5	U	0.5	U	3.4		0.5	U
Chloroform	7	0.5	U	0.5	U	0.5	U	2.4	
cis-1,2-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	0.5	U	0.5	U	0.5	U
DBCP	0.04	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
EDB	0.05	0.5	U	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	0.5	U	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
m/p xylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl bromide	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl chloride	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	10	0.5	U	0.5	U	0.5	U	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U
o-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
o-Xylene	5	0.5	U	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Styrene	5	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	0.5	U	0.5	U	0.5	U	0.5	U
524.2 TVOC	--	0		0		5.26		2.4	

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 2. Current Landfill - Summary of 2005 VOC Data

Analyte	***Groundwater Standards**** *ug/L*	**088-109** **3/29/2005** (ug/L)	**088-109** **5/2/2005** (ug/L)	**088-109** **8/9/2005** (ug/L)	**088-109** **11/1/2005** (ug/L)	**088-110** **5/2/2005** (ug/L)	**088-110** **11/1/2005** (ug/L)
1,1,1,2-Tetrachloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	5	0.5 U	0.5 U	**18**	3.9	1	3.1
1,1-Dichloroethylene	5	0.5 U	0.5 U	0.77	0.13 J	0.5 U	0.5 U
1,1-Dichloropropene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	1	0.5 U	0.5 U	0.39 J	0.63	0.77	**1.3**
Benzene, 1,2,4-trimethyl	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,3,5-trimethyl-	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1-methylethyl-	--	0.5 U	0.5 U	0.5 U	0.15 J	0.5 U	0.26 J
Bromobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.44 J
Chlorobromomethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	5	0.5 U	0.5 U	**94** D	31 R	4.4	**7.7**
Chloroform	7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethylene	5	0.5 U	0.5 U	0.34 J	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cymene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DBCP	0.04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EDB	0.05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethene, 1,2-dichloro-, (E)-	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2
Hexachlorobutadiene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m-Dichlorobenzene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m/p xylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl bromide	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl chloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.21 J
Methylene chloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.072 J
n-Propylbenzene	5	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.21 J
Naphthalene	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.87
o-Chlorotoluene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Dichlorobenzene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J
o-Xylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Chlorotoluene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Dichlorobenzene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.62
sec-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J
Styrene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
524.2 TVOC	--	0	0	113.5	35.92	6.17	16.862

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 2. Current Landfill - Summary of 2005 VOC Data

Analyte	Groundwater Standards* ug/L	088-21 5/3/2005 (ug/L)		088-21 11/2/2005 (ug/L)		088-22 11/2/2005 (ug/L)		088-23 11/2/2005 (ug/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U	0.15	J
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	5	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	0.5	U	0.5	U	0.5	U
DBCP	0.04	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
EDB	0.05	0.5	U	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	0.5	U	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
m/p xylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl bromide	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl chloride	5	0.5	U	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	10	0.5	U	0.5	U	0.5	U	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U
o-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
o-Xylene	5	0.5	U	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Styrene	5	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	0.5	U	0.5	U	0.5	U	0.5	U
524.2 TVOC	--	0		0		0		0.15	

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 3. Current Landfill - Summary of 2005 Water Chemistry Data

Analyte	***Groundwater Standards**** *mg/L*	**087-09 3/29/2005** (mg/L)	**087-09 5/2/2005** (mg/L)	**087-09 8/9/2005** (mg/L)	**087-09 11/1/2005** (mg/L)	**087-11 3/29/2005** (mg/L)	**087-11 5/2/2005** (mg/L)	**087-11 8/9/2005** (mg/L)	**087-11 11/1/2005** (mg/L)
Alkalinity (as CaCO3)	--	17	28 J	13 J	26 J	235	130 J	188 J	64 J
Ammonia (as N)	*2*	0.05 U	0.05 U	0.05 U	0.05 U	**6**	**6.3**	**7.2**	**3.5**
Chloride	*250*	29.6	21.9 J	34.1 J	20.7 J	22.5	20.8 J	19.7 J	17.7 J
Cyanide	*0.2*	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate (as N)	*10*	1.1 U	0.72	0.46 J		0.02 U	0.02 U	0.02 U	
Nitrite (as N)	*1*	0.02 U	0.02 U	0.02 U		0.2 U	0.02 U	0.02 U	
Nitrite + Nitrate-N					2.88 U				0.718 U
Nitrogen	--	1.1	0.72	0.46	2.9	0.41	8	5.9	4.5
Sulfate	*250*	18.2	17.8	14.6	19	2.2	4.2	2.8	2.3
TDS	--	105 J	112 J	102 J	97 J	266 J	220 J	163 J	148 J
Total Kjeldahl Nitrogen	--	0.1 U	0.1 U	0.1 R	0.1 J	0.41	8	5.9 R	3.8 J
TSS	--	6	12	12	6 J	20	17	52	14 J

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 3. Current Landfill - Summary of 2005 Water Chemistry Data

Analyte	***Groundwater Standards**** *mg/L*	**087-23 3/29/2005** (mg/L)	**087-23 5/3/2005** (mg/L)	**087-23 8/9/2005** (mg/L)	**087-23 11/2/2005** (mg/L)	**087-24 5/2/2005** (mg/L)	**087-24 11/2/2005** (mg/L)	**087-26 3/29/2005** (mg/L)	**087-26 5/2/2005** (mg/L)	**087-26 8/9/2005** (mg/L)	**087-26 11/1/2005** (mg/L)
Alkalinity (as CaCO3)	--	130	53 J	76 J	84	12.5 J	114	14	15 J	13.5 J	12 J
Ammonia (as N)	*2*	0.83	1.4	1.1	1.2	0.05 U	0.05 U	0.05 U	**4.4**	0.05 U	0.05 U
Chloride	*250*	8.9	6.2 J	7.5 J	9.5 J		20.3 J	16	15.1 J	15.2 J	15.3 J
Cyanide	*0.2*	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate (as N)	*10*	0.02 U	0.02 U	0.097 J	0.037	0.41	0.44	0.51	0.49	0.47 J	
Nitrite (as N)	*1*	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	
Nitrite + Nitrate-N											1.09 U
Nitrogen	--	0.2 U	2	0.82	1.6	0.41	0.44	1.6	0.49	0.47	1.1 U
Sulfate	*250*	5.7	4.4	6.7	6.5	12.5	11	12.1	12	12.1	11.5
TDS	--	141 J	123 J	67 J	96 J	78 J	70 J	62 J	75 J	57 J	63 J
Total Kjeldahl Nitrogen	--	0.2	2	0.72 R	1.5	0.1 U	0.1 U	1.1	0.1 U	0.1 R	0.1 J
TSS	--	3	18	36	16 J	1 U	4 J	6	7	1 U	2

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 3. Current Landfill - Summary of 2005 Water Chemistry Data

Analyte	***Groundwater Standards**** *mg/L*	**087-27** **3/29/2005** (mg/L)	**087-27** **5/2/2005** (mg/L)	**087-27** **8/9/2005** (mg/L)	**087-27** **11/1/2005** (mg/L)	**088-109** **3/29/2005** (mg/L)	**088-109** **5/2/2005** (mg/L)	**088-109** **8/9/2005** (mg/L)	**088-109** **11/1/2005** (mg/L)	**088-110** **3/29/2005** (mg/L)	**088-110** **5/2/2005** (mg/L)	**088-110** **8/9/2005** (mg/L)	**088-110** **11/1/200** (mg/L)
Alkalinity (as CaCO3)	--	178	121 J	170 J	125 J	21	14.5 J	200 J	144 J	133	76 J	152 J	168
Ammonia (as N)	*2*	**3.9**	1.6	**4.3**	1.2	0.05 U	0.05 U	**5.6**	**4.6**	1.2	1.6	**40**	**5.3**
Chloride	*250*	24.4	29.2 J	15.2 J	6.2 J	10	9 J	11.4 J	15.8 J	28	25.5 J	27.7 J	29.1
Cyanide	*0.2*	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
Nitrate (as N)	*10*	0.02 U	0.084	0.036 J		0.034 U	0.04	0.02 U		0.02 U	0.02 U	0.013 B J	
Nitrite (as N)	*1*	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U	
Nitrite + Nitrate-N					0.861 U				0.705 U				0.757
Nitrogen	--	0.15 U	6.5	3.7	2.2	0.034 U	0.34	4.9	5.6	0.72	2.6	3	7.1
Sulfate	*250*	14.9	17.6	15.3	10.1	27.7	23.4	9.1	12.8	23.6	23.2	20	17.7
TDS	--	242 J	229 J	195 J	58 J	69 J	87 J	199 J	188 J	224 J	204 J	196 J	226
Total Kjeldahl Nitrogen	--	0.1 U	6.4	3.7 R	1.4 J	0.1 U	0.3	4.9 R	4.9 J	0.72	2.6	3 R	6.3
TSS	--	6	25	80	10	2	2	51	9	14	26	52	21

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 3. Current Landfill - Summary of 2005 Water Chemistry Data

Analyte	***Groundwater Standards**** *mg/L*	5
Alkalinity (as CaCO3)	*--*	J
Ammonia (as N)	*2*	
Chloride	*250*	J
Cyanide	*0.2*	U
Nitrate (as N)	*10*	
Nitrite (as N)	*1*	
Nitrite + Nitrate-N		U
Nitrogen	*--*	
Sulfate	*250*	
TDS	*--*	J
Total Kjeldahl Nitrogen	*--*	J
TSS	*--*	

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 3. Current Landfill - Summary of 2005 Water Chemistry Data

Analyte	***Groundwater Standards**** *mg/L*	**088-21 3/29/2005** (mg/L)	**088-21 5/3/2005** (mg/L)	**088-21 8/9/2005** (mg/L)	**088-21 11/2/2005** (mg/L)	**088-22 5/3/2005** (mg/L)	**088-22 11/2/2005** (mg/L)	**088-23 5/3/2005** (mg/L)	**088-23 11/2/2005** (mg/L)
Alkalinity (as CaCO3)	--	19	24.5 J	20 J	46	5 UJ	5 U	28 J	24
Ammonia (as N)	*2*	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloride	*250*	59.1	28.7 J	24.9 J	29.2 J	13.8 J	14 J	17.5 J	18.2 J
Cyanide	*0.2*	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nitrate (as N)	*10*	0.4	0.19	0.079 J	1.2	0.02 U	0.02 U	0.02 U	0.02 U
Nitrite (as N)	*1*	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.13	0.02 U
Nitrite + Nitrate-N Nitrogen	--	0.4	0.19	0.079 B	1.2	0.15 U	0.15 U	0.13 B	0.15 U
Sulfate	*250*	4.6	4.1	6.6	9.8	11.6	11.1	12.7	12.1
TDS	--	120 J	95 J	68 J	99 J	65 UJ	5 UJ	103 J	74 J
Total Kjeldahl Nitrogen	--	0.1 U	0.1 U	0.1 R	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TSS	--	9	5	1 U	7 J	38	26 J	7	31 J

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 4. Current Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**087-09** **3/29/2005** (ug/L)	**087-09** **5/2/2005** (ug/L)	**087-09** **8/9/2005** (ug/L)	**087-09** **11/1/2005** (ug/L)	**087-11** **3/29/2005** (ug/L)	**087-11** **5/2/2005** (ug/L)	**087-11** **8/9/2005** (ug/L)	**087-11** **11/1/2005** (ug/L)
Aluminum	*200*	63.6	**307** J	263	**411**	84.2	86.3 J	59.1	69.2 R
Antimony	*3*	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Arsenic	*10*	5 U	3.4 B	5.4 R	5 U	5	7.7	7.3 R	7
Barium	*1000*	26.9	26.4	33.7 J	22.5	56.3	48.2	49 J	31.4
Beryllium	*3*	2 U	0.16 B	2 U	2 U	2 U	2 U	2 U	2 U
Cadmium	*5*	0.17 B	0.2 B	2 U	0.13 B	2 U	2 U	2 U	2 U
Calcium	--	7540	8010	9300	7260	30000	27200	25700	19300
Chromium	*50*	8.7	21.1 J	**99.5**	24.5	5 U	5 U	5 U	5 U
Cobalt	--	0.56 B	2.6 B	1.2 B	1.1 B	0.76 B	0.47 B	0.69 B	0.88 B
Copper	*200*	3.4 B	4.8 B	5 B	2.6 UJB	2.9 B	2.7 B	5.2 B	2 UJB
Iron	*300*	**2460**	**4980** J	**3570**	**926** R	**68800**	**58000** J	**64800**	**59000** R
Lead	*25*	1.2 B	1.2 B	1.2 B	3 UJ	0.58 B	3 U	3 U	3 UJ
Magnesium	*35000*	3720	3480	3900	2820 J	9430	8780	7880	4760 J
Manganese	*300*	79.4	159 J	67.3 R	176	**1990**	**1830** J	1890 R	**1660**
Mercury	*0.7*	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 B J	0.2 U	0.2 U
Nickel	*100*	3.1 B	6.3 B J	28.7	18	2 B	2 B J	2 B	1.3 B
Potassium	--	2170	7060	1200 B	3370	8750	10000	7890	5550
Selenium	*10*	5 U	1 B	0.78 B	5 U	0.69 B	0.82 B	5 U	5 U
Silver	*50*	2 U	2 U	2 U	2 U	2 U	0.042 B	2 U	2 U
Sodium	*20000*	**25200**	**23100**	**20400**	**20500**	**18200**	**18100**	**15000**	**10200**
Thallium	*0.5*	5 U	**0.57** B	**0.73** B J	0.32 B	5 U	**0.8** B	5 U	1.2 B
Vanadium	--	4.1 B	3.9 B	5.7 R	2.4 B	2 B	1.9 B	3.1 B J	1.6 B
Zinc	*2000*	10 U	10 U	12.3 R	5.7 B	10 U	10 U	10 U	3.1 B

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 4. Current Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**087-23** **3/29/2005** (ug/L)		**087-23** **5/3/2005** (ug/L)		**087-23** **8/9/2005** (ug/L)		**087-23** **11/2/2005** (ug/L)		**087-24** **5/2/2005** (ug/L)		**087-24** **11/2/2005** (ug/L)		**087-26** **3/29/2005** (ug/L)		**087-26** **5/2/2005** (ug/L)		**087-26** **8/9/2005** (ug/L)		**087-26** **11/1/2005** (ug/L)	
Aluminum	*200*	8.9	B	17	B	9.5	B	9	B	33.9	B J	10.2	B	9.4	B	37.1	B J	50	U	50	U
Antimony	*3*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Arsenic	*10*	9.7		**10.1**		11.9	R	10		1.3	B	5	U	5	U	2	B	5	U	5	U
Barium	*1000*	36.7		41.9		40.6	J	33.6		11.6	B	12.6	B	19.2	B	22.1		22.5	J	19.9	B
Beryllium	*3*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Cadmium	*5*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Calcium	*--*	8690		8860	J	7330		6020		4860		5410		5080		5360		5270		4710	
Chromium	*50*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cobalt	*--*	3.2	B	4	B	3.1	B	2.3	B	1.7	B	1.6	B	2.5	B	2.6	B	2	B	2	B
Copper	*200*	10	U	2	B	10	U	10	U	0.39	B	10	U	3.5	B	4	B	4.4	B	3.4	UJB
Iron	*300*	**58800**		**60700**		**47300**		**50500**		**29**	J	**32**	B	**367**		**576**	J	**130**		**145**	R
Lead	*25*	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	UJ
Magnesium	*35000*	2580		2530		1720		1760	J	3440		3820	J	3480		3790		3590		3320	J
Manganese	*300*	**4640**		**4230**		3090	R	**3500**		1.2	J	1.3	B	2.5	B	2.4	J	1.5	R	1.1	B
Mercury	*0.7*	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	*100*	1.4	B	1.6	B	1.3	B	10	U	0.68	B J	10	U	1.2	B	1.5	B J	1.3	B	10	U
Potassium	*--*	1230	B	1480	B	1430	B	1290	B	2000	U	1220	B	896	B	2000	U	921	B	867	B
Selenium	*10*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Silver	*50*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Sodium	*20000*	**7640**		**6370**		**6390**		**6770**		**11900**		**12000**		**12100**		**12100**		**12400**		**10700**	
Thallium	*0.5*	5	U	5	U	5	U	5	U	0.36	B	5	U	5	U	0.25	B	5	U	0.31	B
Vanadium	*--*	5	U	5	U	2.5	B J	5	U	5	U	5	U	5	U	5	U	2.3	B J	5	U
Zinc	*2000*	10	U	10	U	10	U	4.2	B	10	U	1.4	B	10	U	10	U	3.3	B J	10	U

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 4. Current Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**087-27** **3/29/2005** (ug/L)	**087-27** **5/2/2005** (ug/L)	**087-27** **8/9/2005** (ug/L)	**087-27** **11/1/2005** (ug/L)	**088-109** **3/29/2005** (ug/L)	**088-109** **5/2/2005** (ug/L)	**088-109** **8/9/2005** (ug/L)	**088-109** **11/1/2005** (ug/L)	**088-110** **3/29/2005** (ug/L)	**088-110** **5/2/2005** (ug/L)	**088-110** **8/9/2005** (ug/L)	**088-110** **11/1/2005** (ug/L)
Aluminum	*200*	45.9 B	50.1 J	71.5	38.5 B	79.4	**210** B J	28.3 B	50 U	26.9 B	49.1 B J	15.6 B	24.2 B
Antimony	*3*	0.73 B	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.76 B	5 U	5 U
Arsenic	*10*	4.6 B	6.3	10.5 R	2.9 B	5 U	2.6 B	5 R	9.2	9.9	**13.1**	14.2 R	**12.1**
Barium	*1000*	43.2	40.6	69 J	11.2 B	11.6 B	9.9 B	108 J	83.1	33.8	38.4	77 J	79.5
Beryllium	*3*	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Cadmium	*5*	2 U	2 U	2 U	2 U	0.078 B	0.045 B	0.12 B	2 U	0.12 B	2 U	2 U	0.58 B
Calcium	*--*	34400	35700	36600	9430	11200	10400	42100	38300	19900	22400	26900	26000
Chromium	*50*	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cobalt	*--*	5.1	4.6 B	14.6	2.8 B	1.2 B	0.77 B	10.5	1.3 B	4.6 B	5.8	7.5	7.5
Copper	*200*	10 U	0.32 B	0.74 B	10 UJ	10 U	0.41 B	10 U	79.8 UJ	4.8 B	0.58 B	2.7 B	67.1 UJ
Iron	*300*	**50500**	**43200** J	**62900**	**8840** R	**2730**	**1340** J	**49700**	**36000** R	**60800**	**67600** J	**75200**	**70500** R
Lead	*25*	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	31.9 UJ	0.91 B	3 U	3 U	13 UJ
Magnesium	*35000*	8690	7600	8860	3010 J	5280	4990	8640	7660 J	5430	6370	7960	8690 J
Manganese	*300*	**2860**	**2050** J	2340 R	**551**	137	131 J	3040 R	**1620**	**4160**	**4740** J	3630 R	**3730**
Mercury	*0.7*	0.2 U	0.2 U	1.1	0.2 U	0.2 U	0.2 U	0.067 B	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	*100*	2.2 B	2.2 B J	3.1 B	10 U	10 U	0.56 B J	3.8 B	2.3 B	2.3 B	2.3 B J	2.2 B	2.3 B
Potassium	*--*	5100	6760	5600	2320	891 B	2000 U	9670	8670	3380	5250	6390	6670
Selenium	*10*	5 U	5 U	5 U	5 U	5 U	0.77 B	5 U	5 U	5 U	0.65 B	5 U	5 U
Silver	*50*	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.029 B	2 U	2 U
Sodium	*20000*	**20500**	**22600**	**15600**	**3710**	**6610**	**6220**	**9980**	**13100**	**21000**	**21000**	**21600**	**20100**
Thallium	*0.5*	5 U	5 U	5 U	**0.7** B	**0.61** B	5 U	5 U	5 U	5 U	**0.58** B	5 U	0.36 B
Vanadium	*--*	2.2 B	0.8 B	4.1 B J	5 U	1.9 B	5 U	2.8 B J	5 U	5 U	5 U	5 R	5 U
Zinc	*2000*	3.1 B	10 U	3.2 B J	1.5 B	10 U	10 U	10 U	10 U	6.7 B	10 U	10 U	10 U

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 4. Current Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**088-21** **3/29/2005** (ug/L)		**088-21** **5/3/2005** (ug/L)		**088-21** **8/9/2005** (ug/L)		**088-21** **11/2/2005** (ug/L)		**088-22** **5/3/2005** (ug/L)		**088-22** **11/2/2005** (ug/L)		**088-23** **5/3/2005** (ug/L)		**088-23** **11/2/2005** (ug/L)	
Aluminum	*200*	186		79.5		48.3	B	77		11.1	B	11.2	B	61.4		50	U
Antimony	*3*	2.1	B	2.8	B	5	U	5	U	5	U	5	U	5	U	5	U
Arsenic	*10*	5	U	5	U	2.1	B J	5	U	**33.2**		**20**		2.1	B	2.3	B
Barium	*1000*	9.9	B	6.2	B	14.2	B J	7.4	B	29		28.2		5	B	4	B
Beryllium	*3*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Cadmium	*5*	0.095	B	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Calcium	--	12000		8930	J	5520		9160		2350	J	1900		11000	J	11300	
Chromium	*50*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cobalt	--	1.3	B	5	U	5	U	5	U	6.1		4.7	B	5	U	5	U
Copper	*200*	1.2	B	10	U	10	U	10	U	10	U	10.1		10	U	10	U
Iron	*300*	**3510**		**1150**		**484**		**629**		**30300**		**16200**		**3100**		**2320**	
Lead	*25*	0.76	B	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Magnesium	*35000*	6290		4540		3270		4940	J	730		555	J	2680		2610	J
Manganese	*300*	249		99.3		43.7	R	61.7		**1130**		**1200**		**2150**		**1840**	
Mercury	*0.7*	0.2	U	0.2	U	0.19	B	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	*100*	10	U	10	U	10	U	10	U	3.2	B	3.7	B	10	U	10	U
Potassium	--	1270	B	882	B	1340	B	879	B	1150	B	1140	B	677	B	665	B
Selenium	*10*	5	U	5	U	5	U	5	U	5	U	5	U	0.69	B J	5	U
Silver	*50*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Sodium	*20000*	**24500**		**16800**		**20100**		**26900**		**12500**		**11200**		**14400**		**12900**	
Thallium	*0.5*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Vanadium	--	15.1		5	U	3.5	B J	2.7	B	5	U	5	U	5	U	5	U
Zinc	*2000*	3.3	B	3.4	B J	1.6	B J	1.2	B	10	U	10	U	4.2	B J	10	U

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 5. Current Landfill - Summary of 2005 Radionuclide Data.

Analyte	***Groundwater Standards**** *pCi/L*	**087-09** **11/1/2005** pCi/L				**087-11** **11/1/2005** pCi/L				**087-23** **11/2/2005** pCi/L				**087-23** **11/3/2005** pCi/L				**087-24** **11/2/2005** pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	*1.2*	-2.2	U	12	7.5	4.2	U	13	7.2	-0.4	U	11	6.5					0.9	U	12	7.1
Beryllium-7	*40000*	-12	U	61	35	6	U	65	35	-18	U	63	36					-12	U	63	36
Cesium-134	*80*	-3.5	U	9.1	5.4	-2.7	U	10	5.9	-2.3	U	8.7	5					0.8	U	9.7	6.1
Cesium-137	*120*	0.4	U	10	5.3	-5.2	U	10	6.1	-4.3	U	10	5.9					0.4	U	9.1	4.8
Co-60	*200*	-5.1	U	10	6.2	0.8	U	10	4.9	0.7	U	9.5	4.6					-1.2	U	11	5.7
Cobalt-57	*4000*	-26	U	35	22	-17	U	37	22	-9	U	35	21					2	U	35	20
Europium-152	*841*	-6	U	20	12	-4	U	24	14	-8	U	19	12					0.5	U	21	11
Europium-154	*573*	-27	U	81	48	12	U	80	41	-15	U	78	44					-17	U	72	41
Europium-155	*4000*	5.1	U	18	9.9	1	U	18	10	4.3	U	17	9.7					4.6	U	17	9
Gross Alpha	*15*	0.46	U	1.1	0.66	0.1	U	2.3	1.2	0.32	U	1.1	0.61					0.07	U	1.6	0.87
Gross Beta	*1000*	3.7	J	1.7	1.2	6.2		2.1	1.6	2.01	J	1.4	0.96					0.92	U	1.5	0.94
Manganese-54	*2000*	0.7	U	11	6	1.1	U	9.3	4.8	0.4	U	9.2	4.8					-2.2	U	8.6	4.9
Sodium-22	*10000*	2.5	U	12	5.9	4.8	U	12	5.7	-1.6	U	10	5.6					2.8	U	12	5.4
Strontium-90	*8*	0.16	U	0.32	0.19	0.54	J	0.5	0.32	0.28	U	0.48	0.29					-0.14	U	0.55	0.31
Tritium	*20000*	-30	U	360	330	370	J	360	230					290	U	380	240	640		350	240
Zinc-65	*360*	-1	U	21	11	-5	U	24	14	0.3	U	24	13					-8	U	18	11

pCi/L - Picocuries per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 5. Current Landfill - Summary of 2005 Radionuclide Data.

Analyte	***Groundwater Standards****	**087-26**				**087-26**				**087-27**				**088-109**				**088-110**			
		11/1/2005				**11/3/2005**				**11/1/2005**				**11/1/2005**				**11/1/2005**			
	pCi/L	pCi/L				pCi/L				pCi/L				pCi/L				pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	*1.2*	0.009	U	13	7.3					4.9	U	12	6.8	1.5	U	12	6.7	-8.4	U	12	7.5
Beryllium-7	*40000*	-3	U	63	35					-17	U	68	39	-9	U	64	36	-17	U	72	42
Cesium-134	*80*	-1.7	U	7.5	5.1					-8.2	U	7.2	5.1	2	U	9	4.9	-6.2	U	9	5.7
Cesium-137	*120*	-0.2	U	9.8	5.3					-3.5	U	11	6.2	4	U	14	6.6	3	U	11	5.3
Co-60	*200*	2.7	U	13	6					-3.8	U	10	6	0.5	U	13	7.1	0.9	U	11	5.6
Cobalt-57	*4000*	1	U	37	21					-1	U	41	23	18	U	39	21	0.2	U	43	24
Europium-152	*841*	13	U	23	11					-2	U	21	12	-3	U	23	13	-0.3	U	23	13
Europium-154	*573*	9	U	79	39					-45	U	82	51	0.1	U	87	46	-27	U	79	46
Europium-155	*4000*	5	U	18	10					0.5	U	16	9.2	5.5	U	16	9	8	U	21	11
Gross Alpha	*15*	-0.1	U	1	0.51					0.43	U	1.2	0.71	1.3	U	2	1.3	0.2	U	2.7	1.4
Gross Beta	*1000*	0.4	U	1.7	1					2.2	J	1.8	1.2	6.2		1.8	1.4	6.7		1.8	1.5
Manganese-54	*2000*	1.3	U	10	5.2					-0.3	U	10	5.5	2.2	U	10	5.1	-3.6	U	8.8	5.4
Sodium-22	*10000*	-7.5	U	7.2	5.7					-3.7	U	10	6.1	-1.1	U	10	5.5	-6.9	U	7.1	5.3
Strontium-90	*8*	0.13	U	0.59	0.35					0.08	U	0.54	0.32	0.28	U	0.58	0.35	0.95		0.65	0.43
Tritium	*20000*					530		380	250	-20	U	360	380	90	U	360	190	660		360	250
Zinc-65	*360*	-5	U	22	12					-6	U	23	13	-10	U	17	11	-7	U	23	13

pCi/L - Picocuries per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 5. Current Landfill - Summary of 2005 Radionuclide Data.

Analyte	Groundwater Standards* pCi/L	088-21 11/2/2005 pCi/L Result	Qual	MDA	Error	088-22 11/2/2005 pCi/L Result	Qual	MDA	Error	088-23 11/2/2005 pCi/L Result	Qual	MDA	Error
Americium-241	*1.2*	0.4	U	13	7	7.4	U	12	6.5	1.6	U	12	6.4
Beryllium-7	*40000*	0.2	U	65	35	-25	U	56	34	16	U	60	30
Cesium-134	*80*	1.6	U	9.2	5	-0.2	U	8.9	5	-0.3	U	8.6	4.8
Cesium-137	*120*	-4	U	11	5.9	-3.5	U	12	6.1	4.8	U	8.5	5.6
Co-60	*200*	6.9	U	13	5.5	9.8	U	14	5.1	8.5	U	17	9.5
Cobalt-57	*4000*	-8	U	36	20	8	U	38	20	7	U	38	20
Europium-152	*841*	-5	U	19	11	-8	U	18	11	-3	U	23	13
Europium-154	*573*	-36	U	67	41	-40	U	62	40	13	U	76	38
Europium-155	*4000*	-1.6	U	16	9.2	-5.9	U	15	9.4	-2.1	U	16	9.3
Gross Alpha	*15*	-0.27	U	1.7	0.83	0.01	U	1.5	0.79	-0.27	U	1.2	0.55
Gross Beta	*1000*	4.2		1.3	1.1	3.8	J	1.4	1.1	1.12	U	1.5	0.95
Manganese-54	*2000*	-3	U	7.8	4.7	3.7	U	11	5.4	1	U	9.4	4.9
Sodium-22	*10000*	1.2	U	11	5.8	-2.9	U	7.8	4.6	1.2	U	11	5.3
Strontium-90	*8*	2.18		0.51	0.44	0.006	U	0.45	0.27	0.03	U	0.58	0.34
Tritium	*20000*	9	U	360	82	260	U	360	210	100	U	360	200
Zinc-65	*360*	4	U	23	12	0.06	U	21	11	-4	U	21	12

pCi/L - Picocuries per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 6. Former Landfill - Summary of 2005 VOC Data

Analyte	Groundwater Standards ug/L	086-42 11/2/2005 (ug/L)		086-72 11/2/2005 (ug/L)		087-22 11/2/2005 (ug/L)		097-17 5/4/2005 (ug/L)		097-17 11/3/2005 (ug/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	1.7		0.35	J	0.5	U	0.47	J
cis-1,2-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
DBCP	0.04	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
EDB	0.05	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
m/p xylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl bromide	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl chloride	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	10	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
o-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
o-Xylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Styrene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
524.2 TVOC	--	0		1.7		0.35		0		0.47	

ug/L - Micrograms per liter.
U - Not detected.
J - Estimated value.
-- No standard applicable.

Analyte	***Groundwater Standards*** *ug/L*	**097-277** **5/4/2005** (ug/L)	**097-277** **11/3/2005** (ug/L)	**097-64** **5/4/2005** (ug/L)	**097-64** **11/3/2005** (ug/L)	**106-02** **5/4/2005** (ug/L)	**106-02** **11/3/2005** (ug/L)	**106-30** **5/4/2005** (ug/L)
1,1,1,2-Tetrachloroethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,1-Trichloroethane	*5*	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5
1,1,2,2-Tetrachloroethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane	*1*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1-Dichloroethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1-Dichloroethylene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1-Dichloropropene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2,3-Trichlorobenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2,3-Trichloropropane	*0.04*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2,4-Trichlorobenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethane	*0.6*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane	*1*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,3-Dichloropropane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2,2-Dichloropropane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene	*1*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene, 1,2,4-trimethyl	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene, 1,3,5-trimethyl-	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene, 1-methylethyl-	*--*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromobenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane	*50*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform	*50*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chlorobenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chlorobromomethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroform	*7*	0.83	1.4	0.5 U	0.37 J	0.53	0.4 J	0.5
cis-1,2-Dichloroethylene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene	*0.4*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Cymene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
DBCP	*0.04*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Dibromochloromethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Dibromomethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Dichlorodifluoromethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
EDB	*0.05*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethene, 1,2-dichloro-, (E)-	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethylbenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Hexachlorobutadiene	*0.5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
m-Dichlorobenzene	*3*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
m/p xylene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methyl bromide	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methyl chloride	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methyl tert-butyl ether	*10*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
n-Butylbenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
n-Propylbenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Naphthalene	*10*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
o-Chlorotoluene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
o-Dichlorobenzene	*3*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
o-Xylene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
p-Chlorotoluene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
p-Dichlorobenzene	*3*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
sec-Butylbenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Styrene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
tert-Butylbenzene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethylene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Toluene	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
trans-1,3-Dichloropropene	*0.4*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethylene	*5*	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5
Trichlorofluoromethane	*5*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride	*2*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
524.2 TVOC	*--*	0.83	1.4	0	0.78	0.53	0.4	0.5

ug/L - Micrograms per liter.
U - Not detected.
J - Estimated value.
-- No standard applicable.

Table 7. Former Landfill - Summary of 2005 Water Chemistry Data.

Analyte	***Groundwater Standards**** *mg/L*	**086-42 5/3/2005** (ug/L)		**086-42 11/2/2005** (ug/L)		**086-72 5/3/2005** (ug/L)		**086-72 11/2/2005** (ug/L)		**087-22 5/3/2005** (ug/L)		**087-22 11/2/2005** (ug/L)		**097-17 5/4/2005** (ug/L)	
Alkalinity (as CaCO3)	--	17.5	J	7		5	UJ	5	U	5	UJ	5	U	5	UJ
Ammonia (as N)	*2*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Chloride	*250*	23.4	J	22.6	J	8.2	J	6.3	J	3.6	J	4.1	J	8.5	
Cyanide	*0.2*	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U
Nitrate (as N)	*10*			0.6				0.026				0.62		0.23	
Nitrite (as N)	*1*			0.02	U			0.02	U			0.02	U	0.02	U
Nitrite + Nitrate-N	--	1.01				0.05	U			0.525					
Nitrogen	--	1		0.6		0.15	U	0.026	B	0.52		0.62		0.23	
Sulfate	*250*	11.4		12.1		11.5		10.7		11		9.7		10.3	
TDS	--	101	J	80	J	49	UJ	73	J	63	J	17	J	32	J
Total Kjeldahl Nitrogen	--	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
TSS	--	1		4	J	1	U	6	J	1		4	J	4	J

mg/L - Milligrams per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 7. Former Landfill - Summary of 2005 Water Chemistry Data.

Analyte	***Groundwater Standards**** *mg/L*	**097-17** **11/3/2005** (ug/L)	**097-277** **5/4/2005** (ug/L)	**097-277** **11/3/2005** (ug/L)	**097-64** **5/4/2005** (ug/L)	**097-64** **11/3/2005** (ug/L)	**106-02** **5/4/2005** (ug/L)	**106-02** **11/3/2005** (ug/L)	**106-30** **5/4/2005** (ug/L)	**106-30** **11/3/2005** (ug/L)
Alkalinity (as CaCO3)	--	6	15 J	12	19.5 J	8	23 J	20	15 J	16
Ammonia (as N)	*2*	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.065	0.05 U	0.05 U	0.05 U
Chloride	*250*	4.6 J	15.9	7.8 J	5.5	9.1 J	7.4	6.8 J	11.1	12.9 J
Cyanide	*0.2*		0.005 U		0.005 U		0.005 U		0.005 U	
Nitrate (as N)	*10*	0.41	0.48	0.17	0.64	0.92	0.55	0.46	0.2	0.74
Nitrite (as N)	*1*	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Nitrite + Nitrate-N	--									
Nitrogen	--	0.41	0.48	0.17	0.64	0.92	0.55	0.46	0.2	0.74
Sulfate	*250*	10	18.3	15.7	17.9	19.3	12.8	13.5	15.5	17.1
TDS	--	23 J	65 J	49 J	70 J	76 J	65 J	38 J	63 J	56 J
Total Kjeldahl Nitrogen	--	0.1 R	0.1 U	0.1 R	0.1 U	0.1 R	0.1 U	0.1 R	0.1 U	0.1 R
TSS	--	6 UJ	1 J	1 UJ	3 J	3 UJ	2 J	1 UJ	1 UJ	11 UJ

mg/L - Milligrams per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 8. Former Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**086-42 5/3/2005** (ug/L)		**086-42 11/2/2005** (ug/L)		**086-72 5/3/2005** (ug/L)		**086-72 11/2/2005** (ug/L)		**087-22 5/3/2005** (ug/L)		**087-22 11/2/2005** (ug/L)	
Aluminum	*200*	23	B	13.8	B	44.3	B	11.3	B	21.3	B	10.7	B
Antimony	*3*	5	U	5	U	5	U	5	U	5	U	5	U
Arsenic	*10*	5	U	5	U	5	U	5	U	5	U	5	U
Barium	*1000*	11.2	B	10.9	B	14.6	B	12.2	B	15.7	B	14.5	B
Beryllium	*3*	2	U	2	U	2	U	2	U	2	U	2	U
Cadmium	*5*	2	U	2	U	2	U	2	U	2	U	2	U
Calcium	--	10400	J	9710		2550	J	2260		2760	J	2950	
Chromium	*50*	5.4	R	5	U	4.3	B	5	U	4	B	5	U
Cobalt	--	0.63	B	0.64	B	5	U	5	U	5	U	5	U
Copper	*200*	10	U	10	U	1.1	B	10	U	10	U	10	U
Iron	*300*	46.5	B	24.3	B	41.7	B	10.5	B	31	B	12.3	B
Lead	*25*	3	U	3	U	3	U	3	U	3	U	3	U
Magnesium	*35000*	4770		4610	J	1970		1760	J	1870		2190	J
Manganese	*300*	2.1	B	0.84	B	5		3.8	B	7.6		2.9	B
Mercury	*0.7*	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	*100*	10	U	10	U	10	U	10	U	10	U	10	U
Potassium	--	1210	B	1240	B	850	B	832	B	1210	B	1110	B
Selenium	*10*	0.61	B J	5	U	0.87	B J	5	U	1	B J	5	U
Silver	*50*	2	U	2	U	2	U	2	U	2	U	2	U
Sodium	*20000*	**10500**		**10100**		**6760**		**6010**		**4280**		**3360**	
Thallium	*0.5*	5	U	0.33	B	5	U	0.7	B	0.88	B	5	U
Vanadium	--	5	U	5	U	5	U	5	U	5	U	5	U
Zinc	*2000*	7	B J	10	U	1.6	B J	10	U	4.4	B J	1.8	B

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 8. Former Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**097-17 5/4/2005** (ug/L)		**097-17 11/3/2005** (ug/L)		**097-277 5/4/2005** (ug/L)		**097-277 11/3/2005** (ug/L)		**097-64 5/4/2005** (ug/L)		**097-64 11/3/2005** (ug/L)	
Aluminum	*200*	43.1	B	34	B	9.3	B	50	U	134		63.2	
Antimony	*3*	5	U	5	U	5	U	5	U	5	U	5	U
Arsenic	*10*	5	U	5	U	5	U	5	U	5	U	5	U
Barium	*1000*	14.2	B	10.4	B	13.5	B	10.2	B	25.2		26.9	
Beryllium	*3*	2	U	2	U	2	U	2	U	2	U	2	U
Cadmium	*5*	2	U	2	U	2	U	2	U	2	U	2	U
Calcium	--	4600	J	3620		6290	J	5220		11300	J	15000	
Chromium	*50*	5	U	5	U	5	U	5	U	5	U	5	U
Cobalt	--	5	U	5	U	5	U	5	U	5	U	5	U
Copper	*200*	10	U	10	U	10	U	10	U	10	U	10	U
Iron	*300*	11.4	B	11.8	B	40.9	B	56.3		95.5		35.8	B
Lead	*25*	3	U	3	U	3	U	3	U	3	U	3	U
Magnesium	*35000*	1590		1550	R	2540		2060	J	1850		2220	J
Manganese	*300*	23.9		25.5		129		125		16.6		7.8	
Mercury	*0.7*	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	*100*	10	U	10	U	10	U	10	U	10	U	10	U
Potassium	--	906	B	770	B	1470	B	1270	B	2150		1950	B
Selenium	*10*	0.83	B J	5	U	0.99	B J	5	U	0.74	B J	0.6	B
Silver	*50*	2	U	2	U	2	U	2	U	2	U	2	U
Sodium	*20000*	**5540**		**4930**		**12400**		**7900**		**6570**		**5960**	
Thallium	*0.5*	5	U	0.34	B J	5	U	5	U	5	U	5	U
Vanadium	--	5	U	5	U	5	U	5	U	5	U	5	U
Zinc	*2000*	10	U	10	U	2.5	B J	10	U	2.2	B J	10	U

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 8. Former Landfill - Summary of 2005 Metals Data.

Analyte	***Groundwater Standards**** *ug/L*	**106-02 5/4/2005** (ug/L)		**106-02 11/3/2005** (ug/L)		**106-30 5/4/2005** (ug/L)		**106-30 11/3/2005** (ug/L)	
Aluminum	*200*	77.4		28.8	B	375		**538**	
Antimony	*3*	5	U	5	U	5	U	5	U
Arsenic	*10*	5	U	5	U	5	U	5	U
Barium	*1000*	13	B	11.5	B	22.9		20.4	
Beryllium	*3*	2	U	2	U	2	U	2	U
Cadmium	*5*	2	U	2	U	2	U	0.071	B
Calcium	*--*	13500	J	9990		10200	J	9480	
Chromium	*50*	5	U	5	U	5	U	5	U
Cobalt	*--*	5	U	5	U	5	U	5	U
Copper	*200*	0.86	B	10	U	1.1	B	1.4	B
Iron	*300*	19.7	B	12.2	B	237		**415**	
Lead	*25*	3	U	3	U	3	U	3	U
Magnesium	*35000*	2300		1980	J	2560		2850	J
Manganese	*300*	6.1		3.5	B	26.3		39.7	
Mercury	*0.7*	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	*100*	10	U	10	U	10	U	10	U
Potassium	*--*	1260	B	1170	B	1930	B	2520	
Selenium	*10*	0.75	B J	5	U	0.63	B J	5	U
Silver	*50*	2	U	2	U	2	U	2	U
Sodium	*20000*	**4770**		**4920**		**6460**		**6870**	
Thallium	*0.5*	5	U	5	U	5	U	5	U
Vanadium	*--*	5	U	5	U	5	U	5	U
Zinc	*2000*	7	B J	1.4	B	2.5	B J	3.8	B

ug/L - Micrograms per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable
R - Unusable data.

Table 9. Former Landfill - Summary of 2005 Pesticide/PCB Data

Analyte	***Groundwater Standards*** *ug/L*	**086-42** **11/2/2005** (ug/L)		**086-72** **11/2/2005** (ug/L)		**087-22** **11/2/2005** (ug/L)		**097-17** **11/3/2005** (ug/L)		**097-277** **11/3/2005** (ug/L)		**097-64** **11/3/2005** (ug/L)		**106-02** **11/3/2005** (ug/L)		**106-30** **11/3/2005** (ug/L)	
4,4''-DDD	*0.3*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
4,4''-DDE	*0.2*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
4,4''-DDT	*0.2*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Aldrin	*0*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
alpha-BHC	*0.01*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Aroclor 1016	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor 1221	*0.09*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Aroclor 1232	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor 1248	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor 1254	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor 1260	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1242	*0.09*	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
beta-BHC	*0.01*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Chlordane	*0.05*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
delta-BHC	*0.04*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Dieldrin	*0.004*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan I	*0.009*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Endosulfan II	--	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan sulfate	--	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin	*0*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin aldehyde	*5*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin ketone	*5*	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Heptachlor	*0.04*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Heptachlor epoxide	*0.03*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Lindane	*0.05*	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Methoxychlor	*35*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toxaphene	*0.06*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U

ug/L - Micrograms per liter.
U - Not detected.
J - Estimated value.
-- No standard applicable.

Table 10. Former Landfill - Summary of 2005 Radionuclide Data

Analyte	***Groundwater Standards*** *pCi/L*	**086-42** **5/3/2005** pCi/L				**086-42** **11/2/2005** pCi/L				**086-72** **11/2/2005** pCi/L				**087-22** **11/2/2005** pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	*1.2*					8.4	U	13	6.5	1.3	U	12	6.8	-7.9	U	11	7.1
Beryllium-7	*40000*					-12	U	58	33	26	U	68	34	20	U	78	41
Cesium-134	*80*					-2.6	U	7.6	4.6	-3.3	U	8.5	5.1	-6	U	7.4	4.9
Cesium-137	*120*					-0.7	U	12	5.7	-2.6	U	9.9	5.5	-5.7	U	7.7	5.1
Co-60	*200*					7.4	U	14	6.3	2.5	U	11	5.4	3.4	U	12	5.5
Cobalt-57	*4000*					-16	U	35	21	-26	U	35	22	-30	U	32	22
Europium-152	*841*					2	U	22	12	-8	U	19	11	3	U	20	11
Europium-154	*573*					-19	U	74	42	62	U	100	50	-24	U	70	41
Europium-155	*4000*					10.2	U	17	9	-4.7	U	16	9.6	-3.2	U	16	9.3
Gross Alpha	*15*					0.37	U	1.3	0.74	0.13	U	1.3	0.7	-0.54	U	1.5	0.73
Gross Beta	*1000*					2.28	J	1.2	0.87	5.8		1.5	1.3	9.3		1.6	1.7
Manganese-54	*2000*					-2.9	U	7.9	4.7	-2	U	8	4.6	-2.4	U	8.2	4.7
Sodium-22	*10000*					4.4	U	10	4.3	1.8	U	12	5.8	0.6	U	10	4.9
Strontium-90	*8*					0.15	U	0.66	0.39	0.38	U	0.63	0.39	0.1	U	0.55	0.33
Tritium	*20000*	580		360	240	600		360	240	-170	U	350	230	20	U	360	140
Zinc-65	*360*					-6	U	18	11	7	U	24	12	2	U	22	11

pCi/L - Picocuries per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 10. Former Landfill - Summary of 2005 Radionuclide Data

Analyte	***Groundwater Standards*** *pCi/L*	**097-17** **11/3/2005** pCi/L				**097-277** **11/3/2005** pCi/L				**097-64** **11/3/2005** pCi/L				**106-02** **11/3/2005** pCi/L				**106-30** **11/3/2005** pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	*1.2*	-3.2	UJ-D	12	7	3.5	UJ-D	14	7.5	0.1	UJ-D	13	7.5	1.3	UJ-D	11	6.2	10.1	UJ-D	13	6.7
Beryllium-7	*40000*	-8	U	66	37	8	U	64	34	21	U	77	41	-11	U	63	36	18	U	68	35
Cesium-134	*80*	-3.6	U	7.7	4.6	-3.8	U	8	4.9	-6.2	U	7	4.7	-3.6	U	7.1	4.5	-4.7	U	7.6	4.9
Cesium-137	*120*	-3	U	9.9	5.6	2.1	U	9.8	4.9	2.2	U	9.8	4.9	2.3	U	14	6.7	-1.7	U	13	6.5
Co-60	*200*	-0.01	U	11	5.7	-5.7	U	8.4	5.6	3.6	U	12	5.3	8.4	U	14	6.3	10.2	U	16	7.1
Cobalt-57	*4000*	-13	U	33	20	-3	U	43	24	-16	U	40	24	10	U	39	21	-17	U	36	21
Europium-152	*841*	1	U	23	13	-8	U	21	13	0.8	U	24	14	-7	U	21	13	1	U	21	11
Europium-154	*573*	3	U	85	46	7	U	82	42	2	U	77	39	-3	U	85	46	0.1	U	83	44
Europium-155	*4000*	1.8	U	17	9.6	-3	U	18	11	-3	U	19	11	2.7	U	16	8.8	7.8	U	18	9.7
Gross Alpha	*15*	0.37	U	0.67	0.43	0.23	U	1.2	0.7	0.19	U	0.93	0.51	-0.04	U	1.9	1.1	0.24	U	1.3	0.71
Gross Beta	*1000*	1	J(-)-S	1.8	1.1	5.7	J(-)-S	1.7	1.4	6.6	J(-)-S	2	1.6	1	J(-)-S	1.8	1.1	2.2	J(-)-S	1.9	1.2
Manganese-54	*2000*	3.3	U	10	5.2	-1.6	U	7.9	4.5	2.5	U	9.4	4.5	3.4	U	11	5.6	0.6	U	8.9	4.7
Sodium-22	*10000*	-1.9	U	7.8	4.3	-4.3	U	7.9	5	1.2	U	12	6	0.05	U	8.9	4.4	-0.5	U	9.4	4.8
Strontium-90	*8*	0	U	0.6	0	0.14	U	0.47	0.28	1.87		0.58	0.46	-0.03	U	0.5	0.29	0.15	U	0.52	0.31
Tritium	*20000*	40	U	390	270	-180	U	390	200	30	U	390	280	1000		390	300	40	U	390	250
Zinc-65	*360*	17	U	25	11	-5.2	U	17	9.8	-6	U	18	10	5	U	26	13	-4.4	U	17	9.5

pCi/L - Picocuries per Liter.
U - Not detected.
J - Estimated value.
-- No standard applicable

Table 11
Soil Gas Monitoring Well Description

Current Landfill			
Soil Gas Monitoring Well	Screen Location	Top of Screen (Feet BLS)	Bottom Screen (Feet BLS)
SGM-1 PROBE A	Shallow	2.5	7.5
SGM-1 PROBE B	Intermediate	10.5	17.5
SGM-1 PROBE C	Deep	20	29.5
SGM-2 PROBE A	Shallow	2.5	7.5
SGM-2 PROBE B	Intermediate	10.5	16
SGM-2 PROBE C	Deep	19	28
SGM-3 PROBE A	Shallow	2.5	7.5
SGM-3 PROBE B	Intermediate	10.5	17
SGM-3 PROBE C	Deep	20	29
SGM-4 PROBE A	Shallow	2.5	7.5
SGM-4 PROBE B	Intermediate	10.5	20
SGM-4 PROBE C	Deep	23	32
SGM-5 PROBE A	Shallow	2.5	7.5
SGM-5 PROBE B	Intermediate	10.5	22
SGM-5 PROBE C	Deep	25	34
SGM-6 PROBE A	Shallow	2.5	7.5
SGM-6 PROBE B	Intermediate	10.5	18.5
SGM-6 PROBE C	Deep	21.5	30.5
SGM-7 PROBE A	Shallow	2.5	7.5
SGM-7 PROBE B	Intermediate	10.5	16
SGM-7 PROBE C	Deep	19	26
SGM-8 PROBE A	Shallow	2.5	7.5
SGM-8 PROBE B	Intermediate	10.5	16.5
SGM-8 PROBE C	Deep	19.5	28.5
SGM-9 PROBE A	Shallow	2.5	7.5
SGM-9 PROBE B	Intermediate	10.5	20.5
SGM-9 PROBE C	Deep	23.5	32.5
SGM-10 PROBE A	Shallow	2.5	7.5
SGM-10 PROBE B	Intermediate	10.5	15.5
SGM-10 PROBE C	Deep	18.5	27.5
SGM-11 PROBE A	Shallow	2.5	7.5
SGM-11 PROBE B	Intermediate	10.5	16
SGM-12 PROBE A	Shallow	2.5	7.5
SGM-12 PROBE B	Intermediate	10.5	15
SGM-13 PROBE A	Shallow	2.5	7.5
SGM-13 PROBE B	Intermediate	10.5	13
SGM-14 PROBE A	Shallow	2.5	7.5
SGM-14 PROBE B	Intermediate	10.5	13
SGM-15 PROBE A	Shallow	2.5	5.5
SGM-15 PROBE B	Intermediate	8.5	11.5
SGM-16 PROBE A	Shallow	2.5	5.5
SGM-16 PROBE B	Intermediate	8.5	11
SGM-17 PROBE A	Shallow	2.5	5.5
SGM-17 PROBE B	Intermediate	8.5	11

Table 11
Soil Gas Monitoring Well Description

Current Landfill			
SGM-18 PROBE A	Shallow	2.5	7.5
SGM-18 PROBE B	Intermediate	10.5	13.5
SGM-19 PROBE A	Shallow	2.5	7.5
SGM-19 PROBE B	Intermediate	10.5	17

BLS – Below Land Surface

Former Landfill			
Soil Gas Monitoring Well	Screen Location	Top of Screen (Feet BLS)	Bottom Screen (Feet BLS)
SGM-1 PROBE A	Shallow	2.5	10
SGM-1 PROBE B	Intermediate	15	43
SGM-2PROBE A	Shallow	2.5	10
SGM-2 PROBE B	Intermediate	15	40
SGM-3 PROBE A	Shallow	2	9.5
SGM-3 PROBE B	Intermediate	14.5	36
SGM-4 PROBE A	Shallow	2.5	10
SGM-4 PROBE B	Intermediate	15	35.5
SGM-5 PROBE A	Shallow	2.5	10
SGM-5 PROBE B	Intermediate	15	37
SGM-6 PROBE A	Shallow	2.7	10.2
SGM-6 PROBE B	Intermediate	22	37.2
SGM-7 PROBE A	Shallow	2.8	10.3
SGM-7 PROBE B	Intermediate	15	42
SGM-8 PROBE A	Shallow	2.5	10
SGM-8 PROBE B	Intermediate	15	47
SGM-9 PROBE A	Shallow	2.5	10
SGM-9 PROBE B	Intermediate	15	52
SGM-10 PROBE A	Shallow	2.5	10
SGM-10 PROBE B	Intermediate	15	52
SGM-11 PROBE A	Shallow	2.5	10
SGM-11 PROBE B	Intermediate	15	46
SGM-12 PROBE A	Shallow	2.5	10
SGM-12 PROBE B	Intermediate	15	43.5

BLS – Below Land Surface

Table 12

2005 Current Landfill Soil Gas Monitoring Summary Table

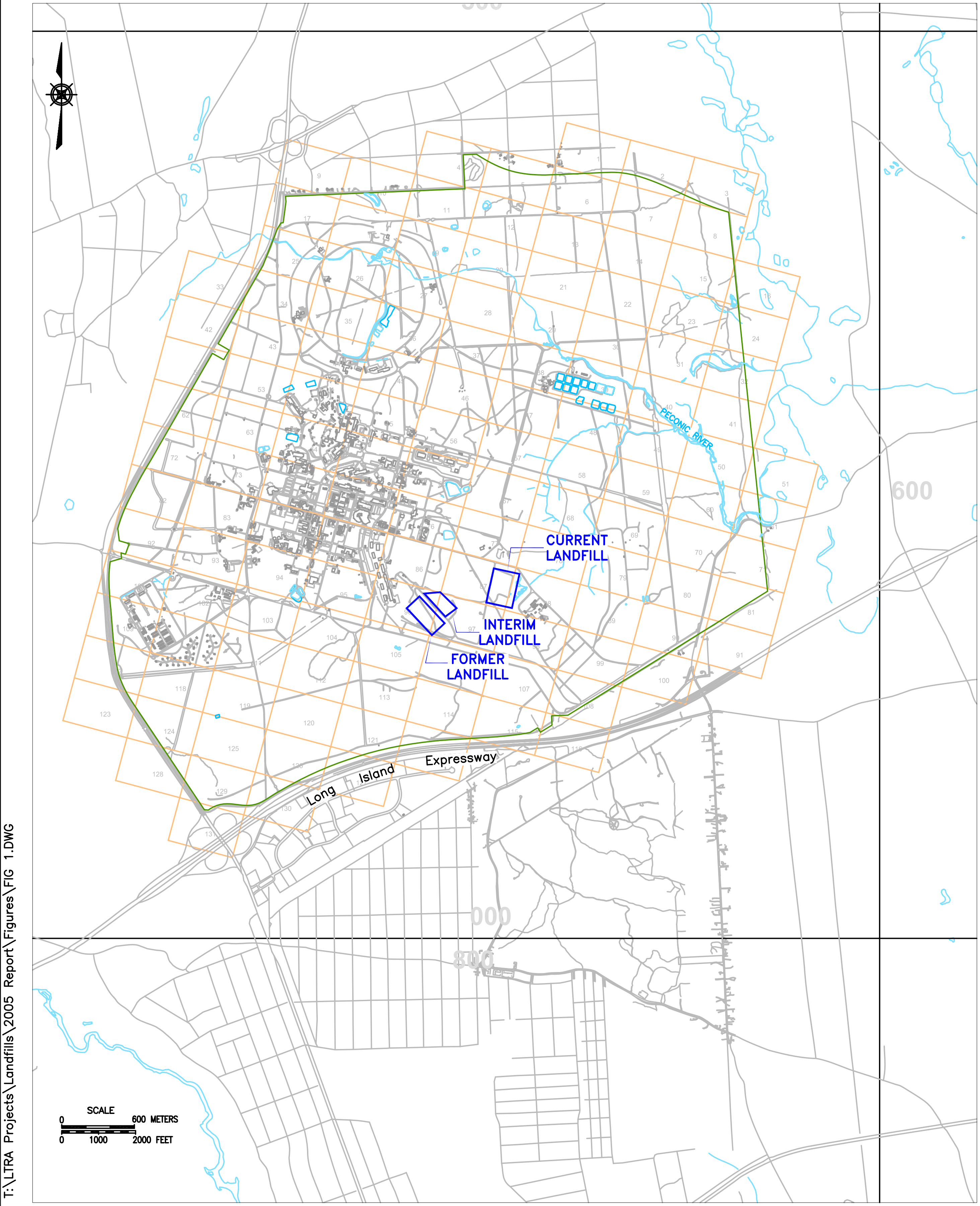
Soil Gas Monitoring Well	Methane (% By Volume) 3/30/05	Methane (% By Volume) 7/21/05	Methane (% By Volume) 10/21/05	Methane (% By Volume) 12/28/05	LEL (% By Volume) 3/30/05	LEL (% By Volume) 7/21/05	LEL (% By Volume) 10/21/05	LEL (% By Volume) 12/28/05	Hydrogen Sulfide (ppm by volume) 3/30/05	Hydrogen Sulfide (ppm by volume) 7/21/05	Hydrogen Sulfide (ppm by volume) 10/21/05	Hydrogen Sulfide (ppm by volume) 12/28/05	Soil Gas Monitoring Well
SGMW-01A	8.8	5.4	5	6.7	176	108	100	134	1	3	2	2	SGMW-01A
SGMW-01B	3.0	2.9	3	3.8	60	58	60	76	0	0	0	0	SGMW-01B
SGMW-01C	7.5	5.6	5.5	6.1	150	112	110	122	1	0	0	0	SGMW-01C
SGMW-02A	0.3	13.7	1.7	3.0	6	274	34	60	0	0	0	1	SGMW-02A
SGMW-02B	0.2	0.7	27.2	12.4	4	14	544	248	1	0	6	3	SGMW-02B
SGMW-02C	0.3	0.1	247	0.0	6	2	494	0	1	0	0	0	SGMW-02C
SGMW-03A	0.7	36.8	0.7	0.0	14	736	14	0	0	0	0	0	SGMW-03A
SGMW-03B	0.5	2.5	47.6	11.0	10	50	952	220	1	0	2	1	SGMW-03B
SGMW-03C	0.1	0.2	39.9	0.0	2	4	798	0	0	0	1	0	SGMW-03C
SGMW-04A	0.2	10.7	46.2	9.3	4	214	924	186	0	1	0	0	SGMW-04A
SGMW-04B	6.5	25.1	42.4	18.0	130	502	848	360	0	0	1	1	SGMW-04B
SGMW-04C	6.3	0.2	38.2	14.1	126	4	764	282	0	0	0	2	SGMW-04C
SGMW-05A	0.7	14.3	36.6	10.2	14	286	732	204	1	1	1	1	SGMW-05A
SGMW-05B	13.4	21.1	34.6	22.8	268	422	692	456	0	1	0	0	SGMW-05B
SGMW-05C	9.2	18.8	27.3	18.3	184	376	546	366	0	1	0	0	SGMW-05C
SGMW-06A	0.2	2.4	29.7	8.1	4	48	594	162	1	1	0	0	SGMW-06A
SGMW-06B	7.7	24.4	29.7	16.8	154	488	594	336	1	1	0	0	SGMW-06B
SGMW-06C	8.6	24.7	27.2	14.9	172	494	544	298	1	1	1	0	SGMW-06C
SGMW-07A	0.0	0.0	0.0	0.0	0	0	0	0.0	0	0	0	0	SGMW-07A
SGMW-07B	0	0.0	0.0	0.0	0	0	0	0.0	0	0	0	0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0	0	0	0.0	1	1	0	0	SGMW-07C
SGMW-08A	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08A
SGMW-08B	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08B
SGMW-08C	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08C
SGMW-09A	0	.2	0	0.0	0	4	0	0.0	0	1	1	0	SGMW-09A
SGMW-09B	0	.2	0	0.0	0	4	0	0.0	1	0	0	0	SGMW-09B
SGMW-09C	0	.2	0	0.0	0	4	0	0.0	0	0	0	0	SGMW-09C
SGMW-10A	0.2	2.7	12.3	0.0	4	54	246	0.0	1	0	1	0	SGMW-10A
SGMW-10B	0.2	12.0	16.7	1.6	4	240	334	32	1	2	0	0	SGMW-10B
SGMW-10C	0.1	1.6	14.3	1.2	2	32	286	24	1	0	1	1	SGMW-10C
SGMW-11A	0.2	6.0	17.2	0.0	4	120	344	0	0	1	20	0	SGMW-11A
SGMW-11B	0.2	13.2	19.6	0.0	4	264	392	0	1	1	4	0	SGMW-11B
SGMW-12A	0.2	3.9	40.1	4.0	4	78	802	80	0	0	51	3	SGMW-12A
SGMW-12B	0.1	0.8	25.7	0.0	2	16	514	0	0	0	0	0	SGMW-12B
SGMW-13A	0.1	6.2	0.1	0.0	2	124	2	0	0	1	1	0	SGMW-13A
SGMW-13B	0.2	.4	.2	0.0	4	8	4	0	0	2	1	0	SGMW-13A
SGMW-14A	0.3	0.1	5.6	0.1	6	2	112	2	0	1	2	0	SGMW-14A
SGMW-14B	0	.2	.2	0.0	0	4	4	0	0	1	1	0	SGMW-14B
SGMW-15A	0.0	.2	0.1	0.0	0	4	2	0	0	0	1	0	SGMW-15A
SGMW-15B	0	.1	.1	0.0	0	2	2	0	0	0	0	0	SGMW-15B
SGMW-16A	0	.2	0	0.0	0	4	0	0	0	1	0	0	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17B
SGMW-18A	0	0	0	0.0	0	0	0	0	0	0	1	0	SGMW-18A
SGMW-18B	0	0	0.0	0.0	0	0	0	0	0	0	0	1	SGMW-18B
SGMW-19A	5.6	6.3	29.2	15.7	112	126	584	314	0	1	20	2	SGMW-19A
SGMW-19B	0.0	0.0	31.8	8.1	0	0	636	162	0	0	46	0	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	1	0	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4B

Measurements in ( ) are calculated, not measured.

Table 13

2005 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/30/05	Methane (% By Volume) 7/21/05	Methane (% By Volume) 10/26/05	Methane (% By Volume) 12/28/05	LEL (% By Volume) 3/30/05	LEL (% By Volume) 7/21/05	LEL (% By Volume) 10/26/05	LEL (% By Volume) 12/28/05	Hydrogen Sulfide (ppm by volume) 3/30/05	Hydrogen Sulfide (ppm by volume) 7/21/05	Hydrogen Sulfide (ppm by volume) 10/26/05	Hydrogen Sulfide (ppm by volume) 12/28/05	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0.1	0	0	0	2	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12B



BROOKHAVEN NATIONAL LABORATORY

EWMS Division

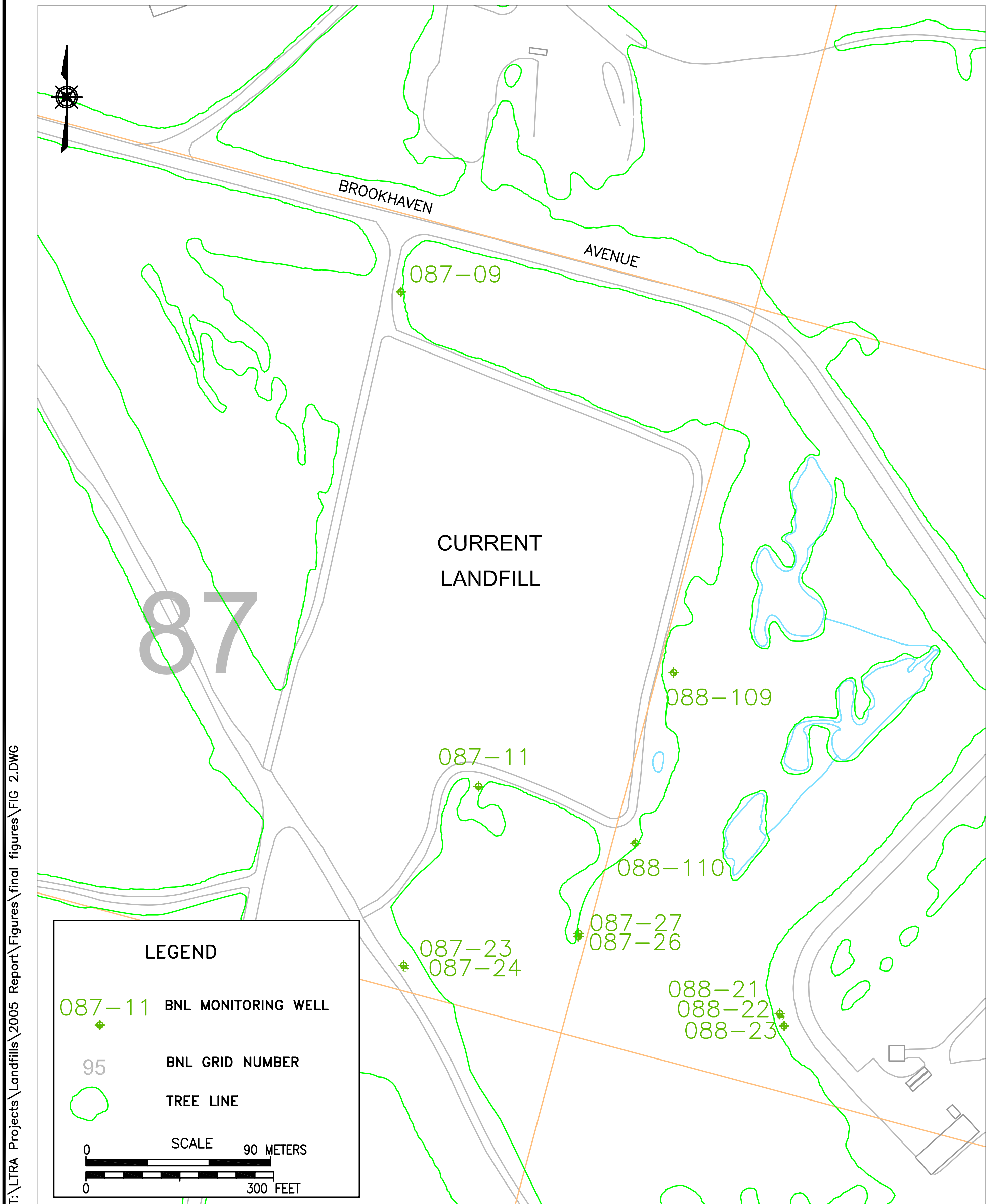
TITLE:

SITE LOCATION MAP

2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
KCK	–	02/18/04	07928
CHKD: WRD	APPD: WRD	REV.: –	NOTES: –

FIGURE NO.: 1



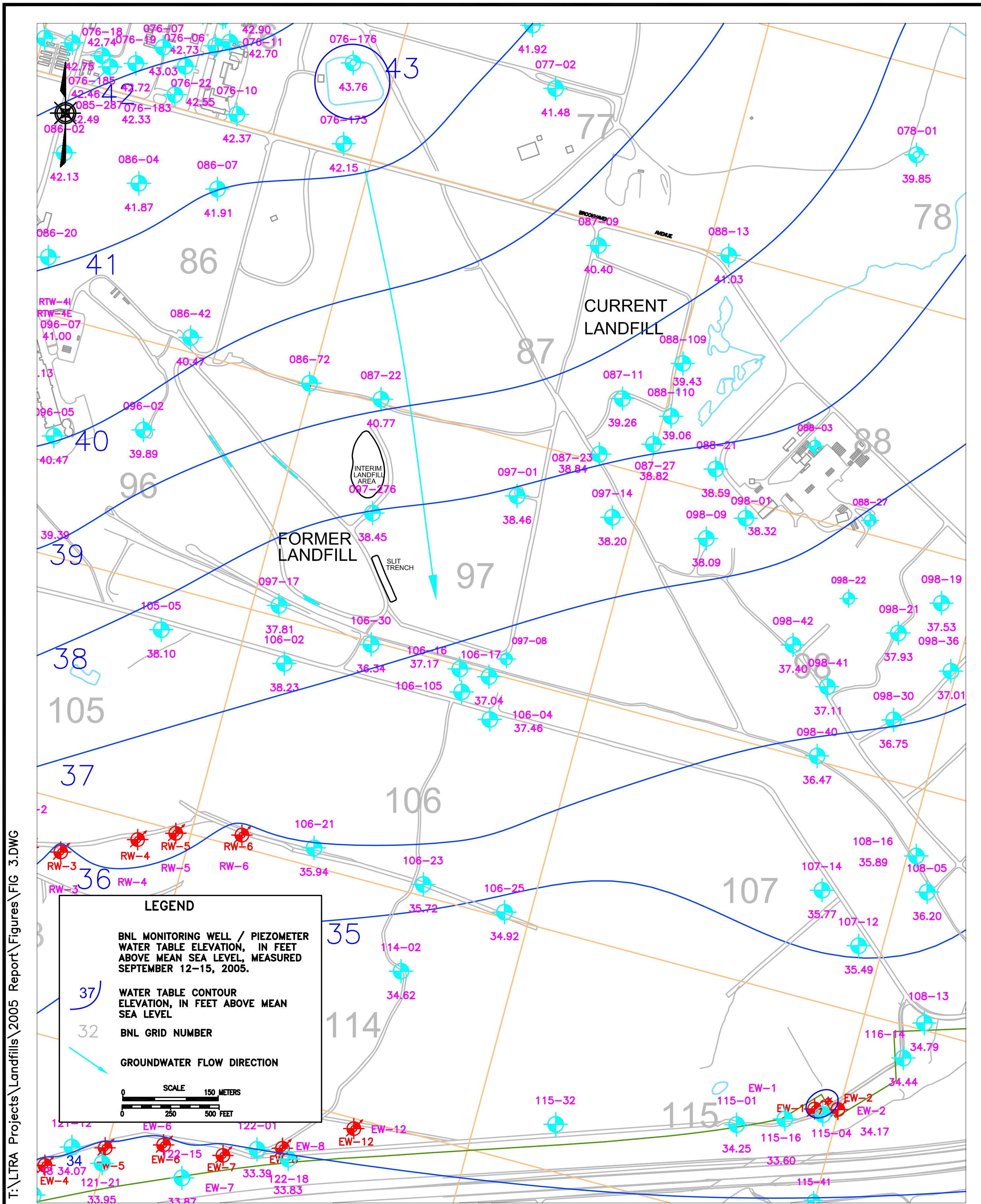
BROOKHAVEN NATIONAL LABORATORY

EWMS Division

TITLE:

CURRENT LANDFILL
MONITORING WELL LOCATIONS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: KCK	VT: HZ.: –	DATE: 02/24/04	PROJECT NO.: 07928
CHKD: WRD	APPD: WRD	REV.: –	NOTES: –
FIGURE NO.:		2	



BROOKHAVEN NATIONAL LABORATORY

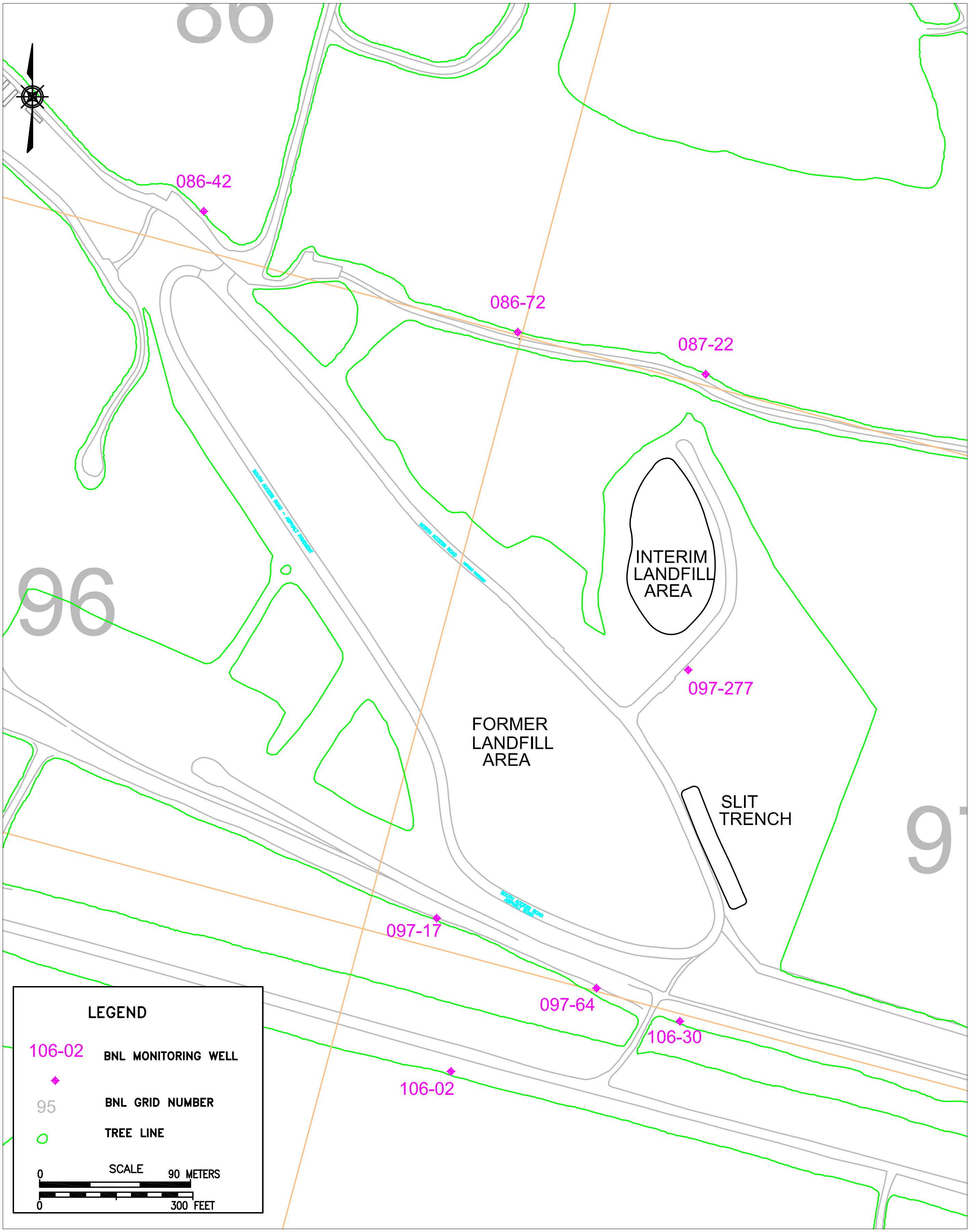
EWMS DIVISION

TITLE:

WATER TABLE CONTOUR MAP
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
CAJ	–	03/07/06	07928
CHKD: JEB	APPD: BH	REV.: –	NOTES: –

FIGURE NO.: 3



T:\LTRA Projects\Landfills\2005 Report\Figures\FIG 4.DWG

BROOKHAVEN
NATIONAL LABORATORY

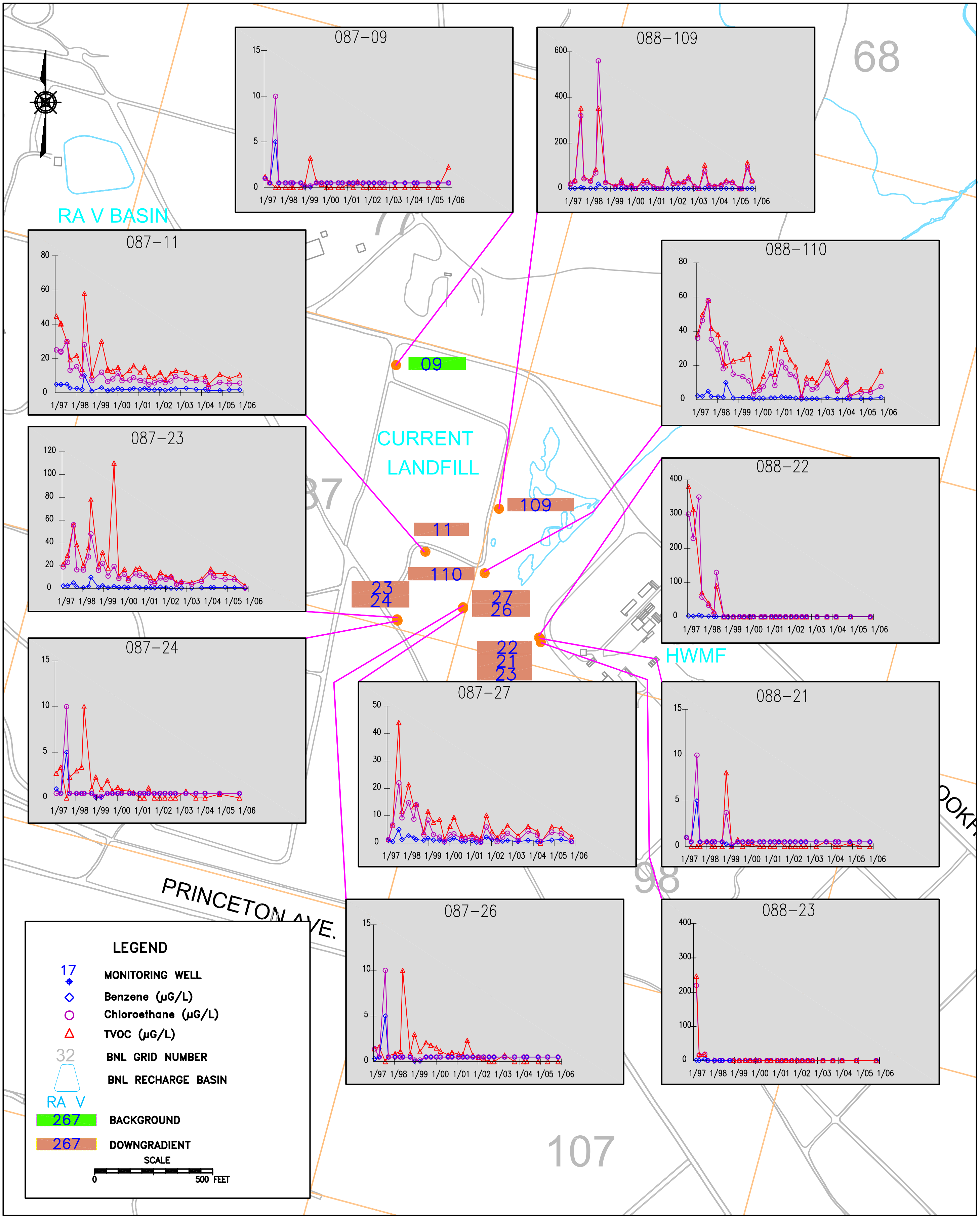
EWMS DIVISION

TITLE:

FORMER LANDFILL
MONITORING WELL LOCATIONS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

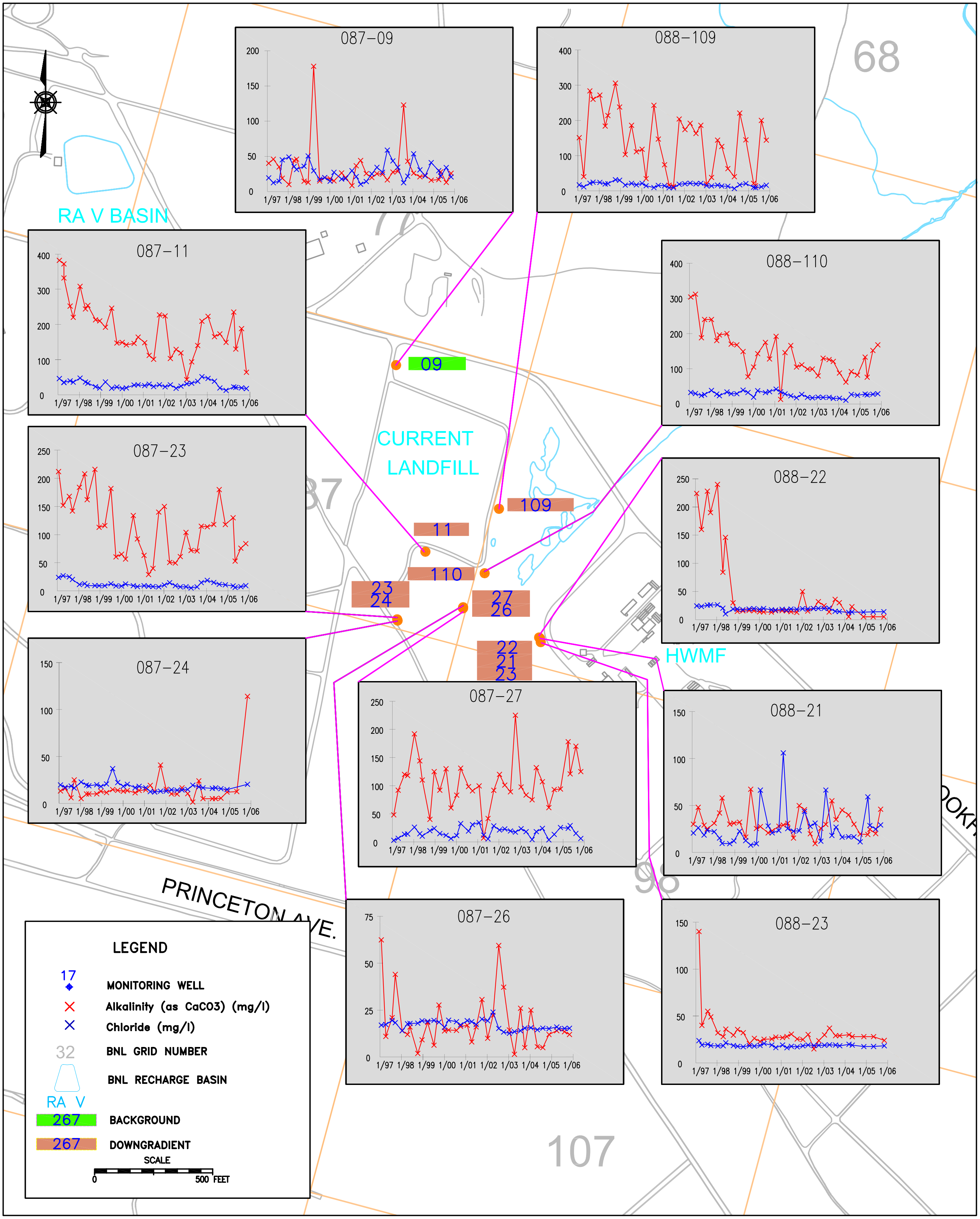
DWN:	VT: HZ.:	DATE:	PROJECT NO.:
KCK	–	02/18/04	07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: –

FIGURE NO.: 4



T:\LTRA Projects\Landfills\2005 Report\Figures\FIG 5.DWG

BROOKHAVEN NATIONAL LABORATORY EWMS DIVISION	TITLE: CURRENT LANDFILL VOC TREND PLOTS 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS	DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
		CHKD: JEB	APPD: WRD	REV.: –	NOTES: ––
		FIGURE NO.: 5			



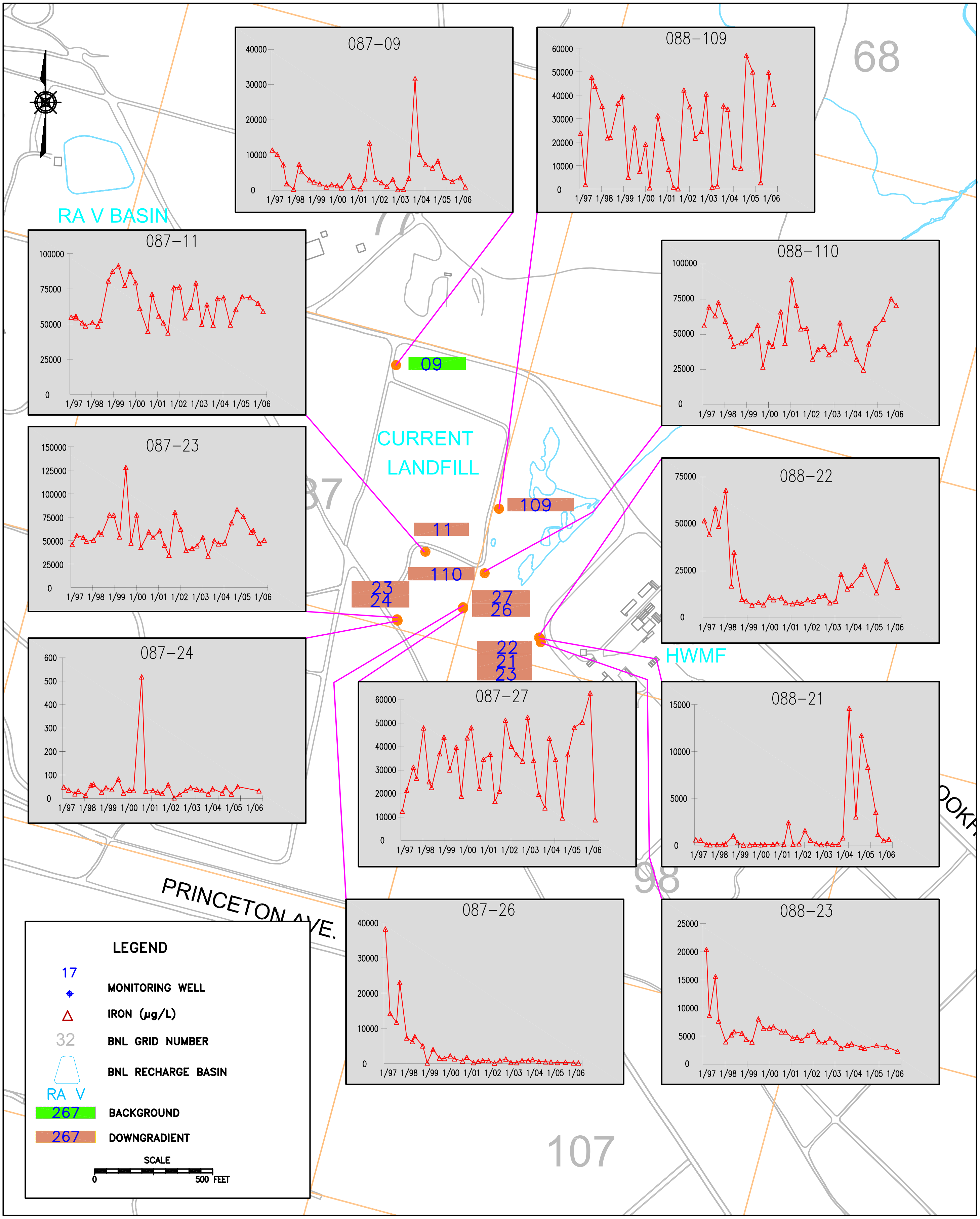
BROOKHAVEN NATIONAL LABORATORY

EWMS DIVISION

TITLE:

CURRENT LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: ––
FIGURE NO.: 6			



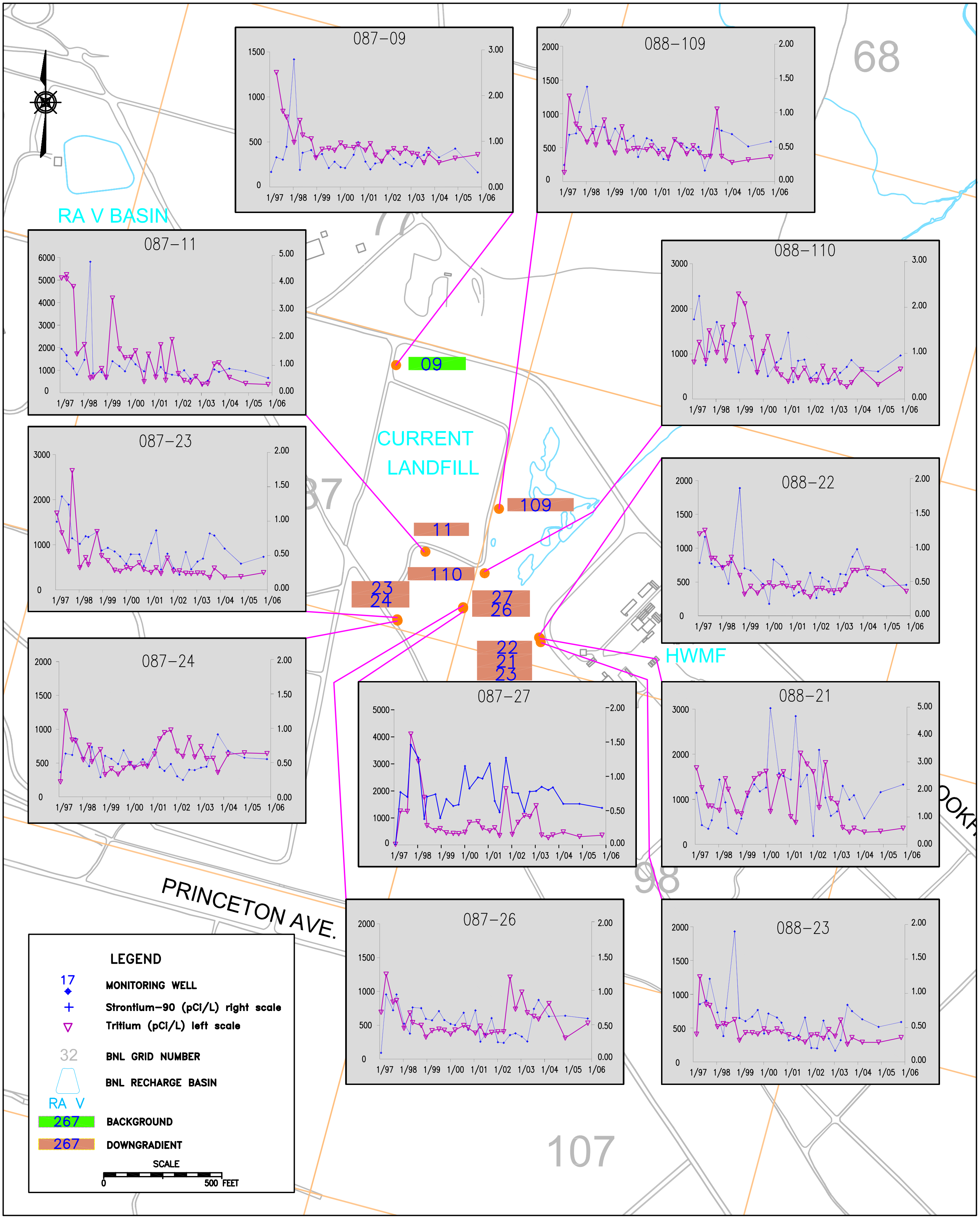
BROOKHAVEN NATIONAL LABORATORY

EWMS DIVISION

TITLE:

CURRENT LANDFILL
IRON TREND PLOTS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: ––
FIGURE NO.: 7			



BROOKHAVEN NATIONAL LABORATORY

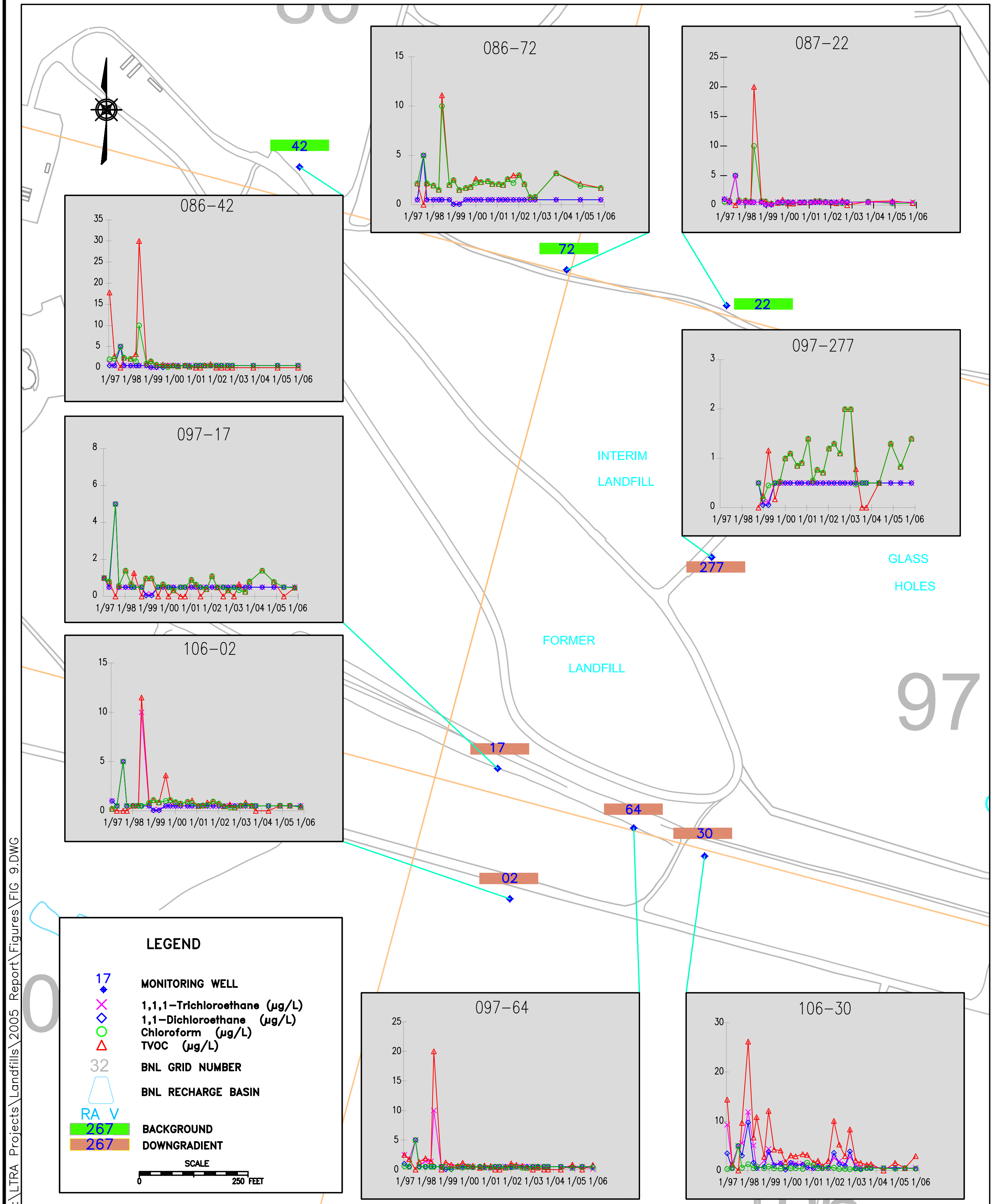
EWMS DIVISION

TITLE:

CURRENT LANDFILL
TRITIUM AND SR-90 TREND PLOTS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
CAJ	–	03/10/06	07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: ––

FIGURE NO.: 8



BROOKHAVEN NATIONAL LABORATORY

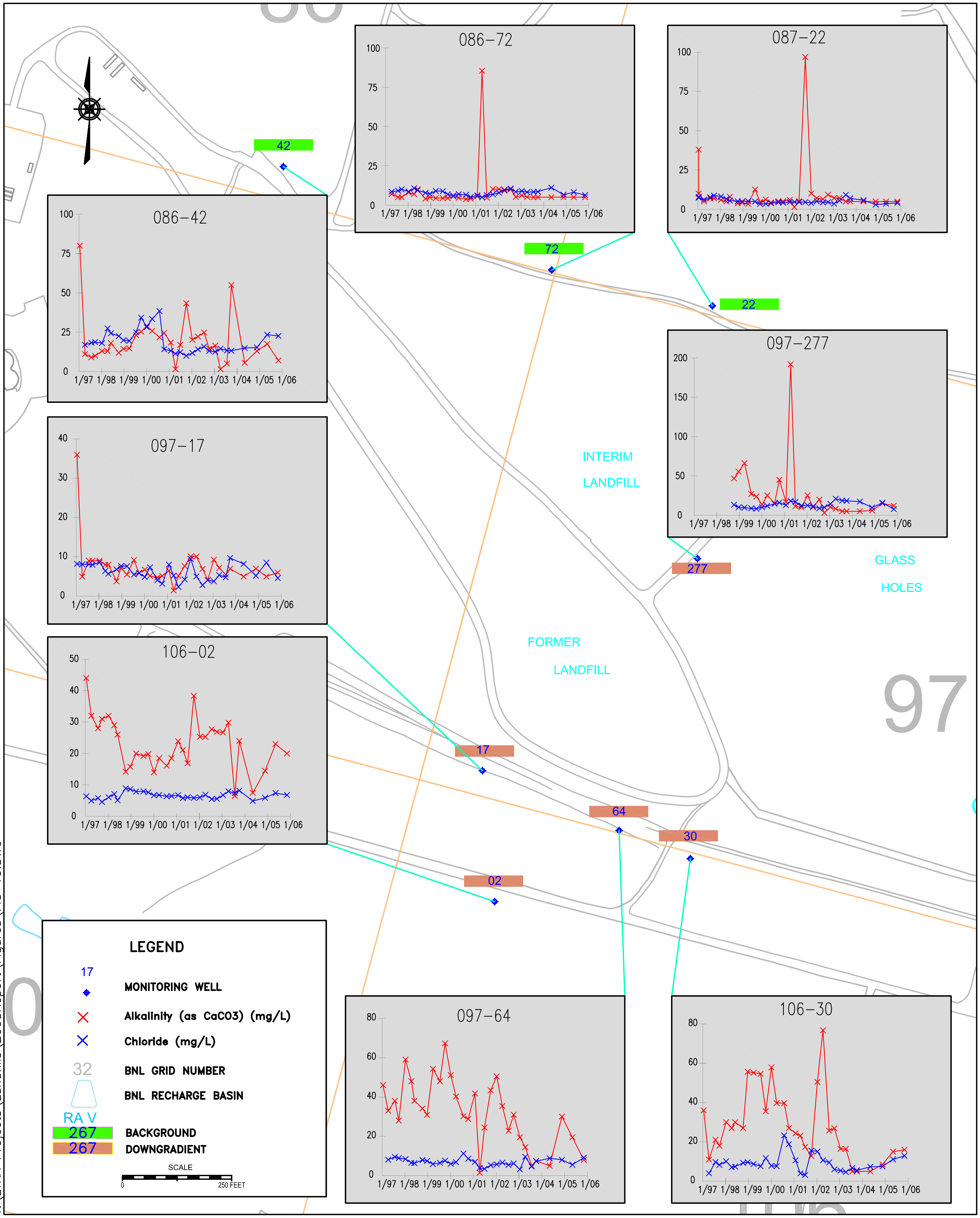
EWMS DIVISION

TITLE:

FORMER LANDFILL
VOC TREND PLOTS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
CAJ	–	03/10/06	07928
CHKD:	APPD:	REV.:	NOTES:
JEB	WRD	–	––

FIGURE NO.: 9



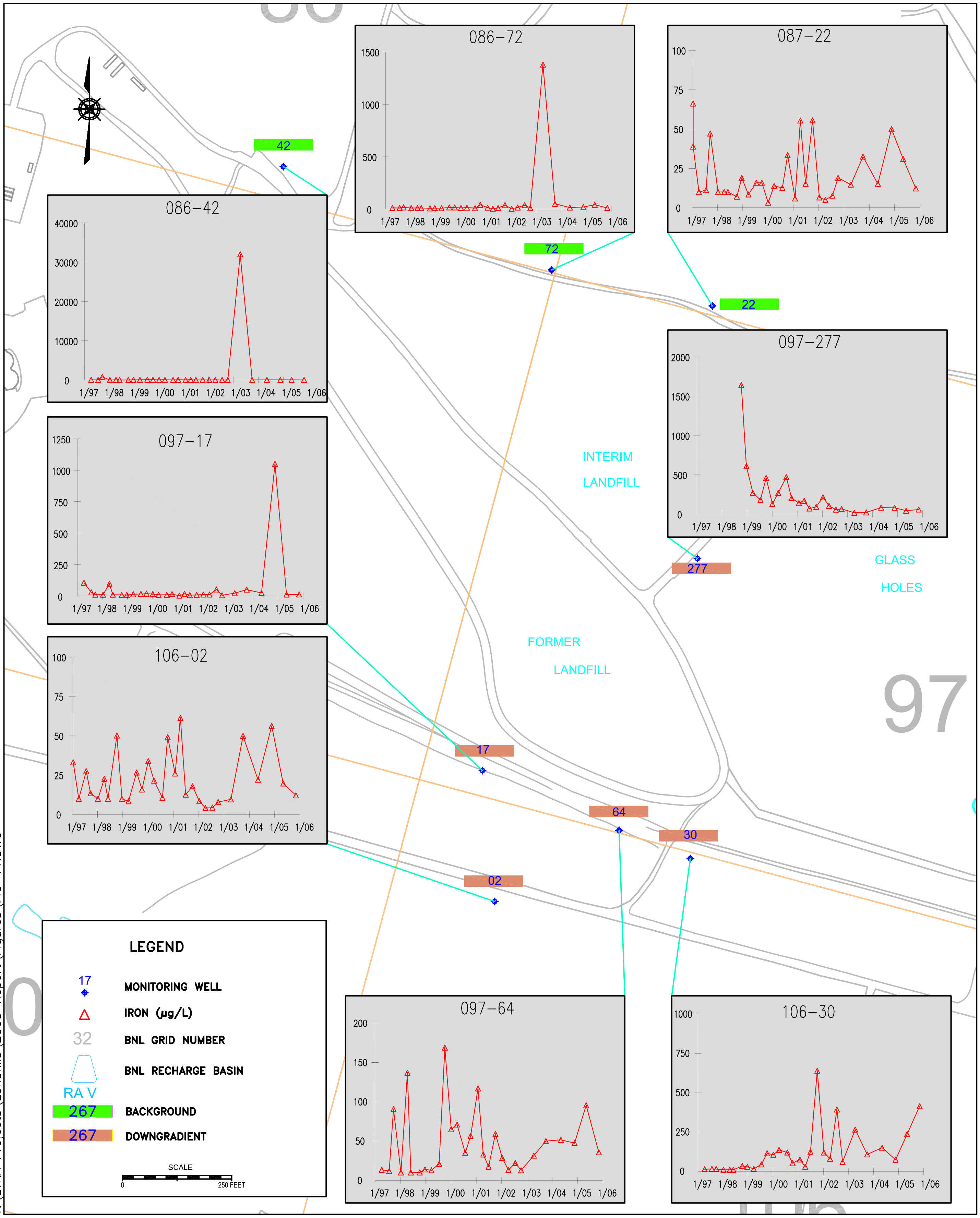
BROOKHAVEN NATIONAL LABORATORY

EWMS DIVISION

TITLE:

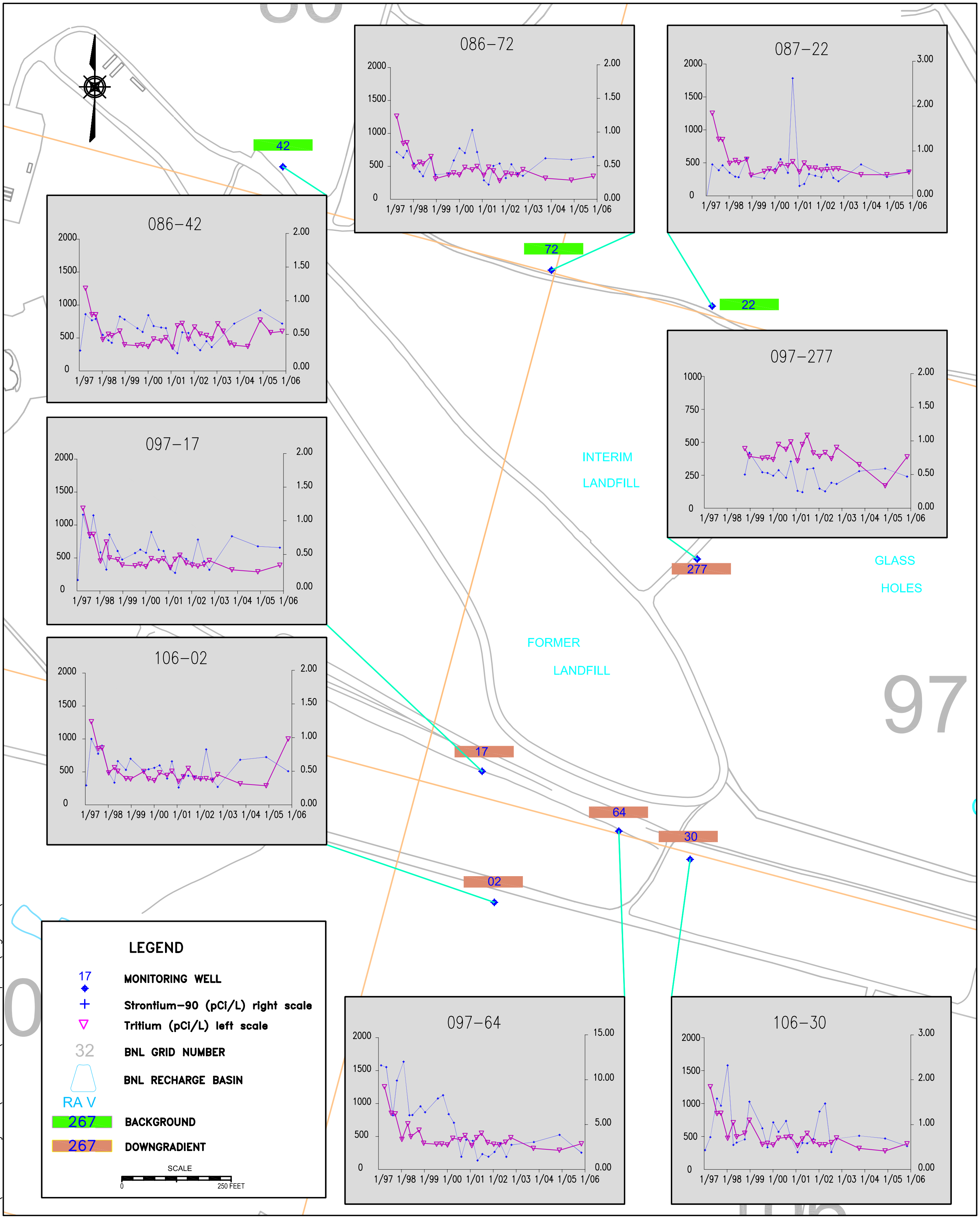
FORMER LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: --
FIGURE NO.: 10			



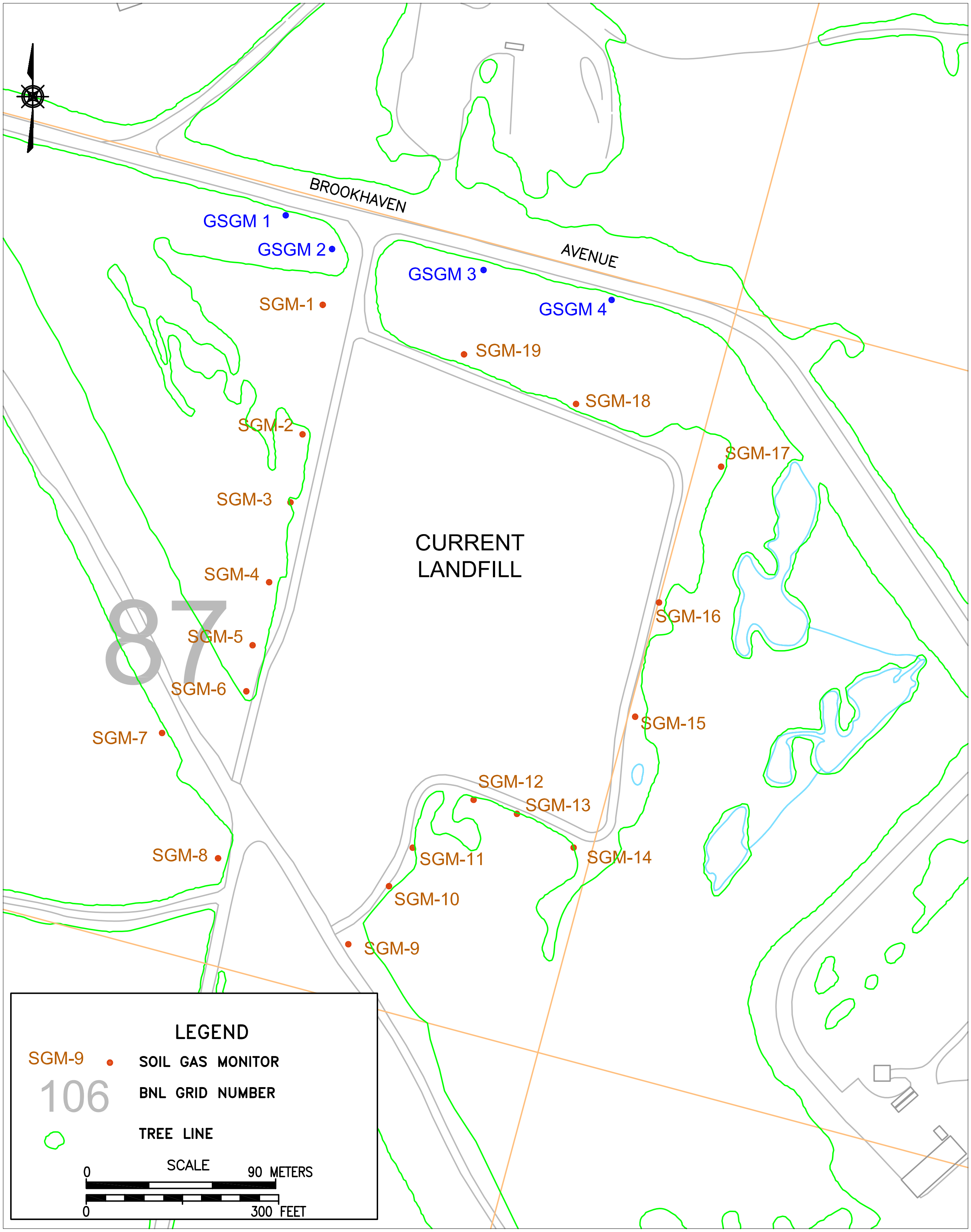
T:\LTRA Projects\Landfills\2005 Report\Figures\FIG 11.DWG

BROOKHAVEN NATIONAL LABORATORY EWMS DIVISION	TITLE: FORMER LANDFILL IRON TREND PLOTS 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS	DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
		CHKD: JEB	APPD: WRD	REV.: –	NOTES: – –
		FIGURE NO.: 11			



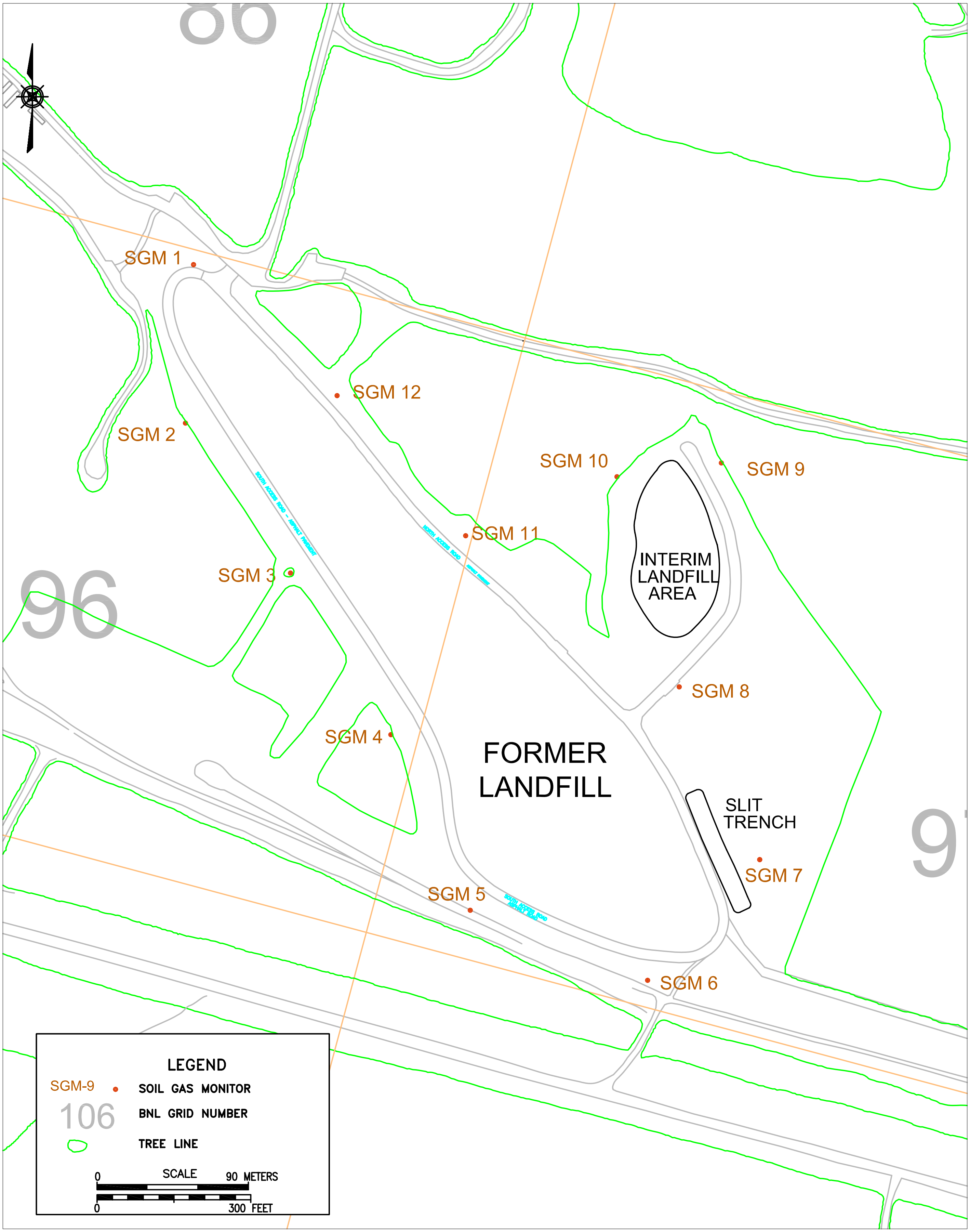
T:\LTRA Projects\Landfills\2005 Report\Figures\FIG 12.DWG

BROOKHAVEN NATIONAL LABORATORY EWMS DIVISION	TITLE: FORMER LANDFILL TRITIUM AND SR–90 TREND PLOTS 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS	DWN: CAJ	VT: HZ.: –	DATE: 03/10/06	PROJECT NO.: 07928
		CHKD: JEB	APPD: WRD	REV.: –	NOTES: – –
		FIGURE NO.: 12			



\\T\LTRA\Landfills\2005 REPORT\FIGURES\FIG 13.DWG

BROOKHAVEN NATIONAL LABORATORY EWMS DIVISION	TITLE: CURRENT LANDFILL SOIL GAS MONITOR LOCATION MAP 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS	DWN: KCK	VT: HZ.: –	DATE: 02/18/04	PROJECT NO.: 07928
		CHKD: JEB	APPD: WRD	REV.: –	NOTES: –
		FIGURE NO.: 13			



\\T\LTRA\Landfills\2005 REPORT\FIGURES\FIG 14.DWG

BROOKHAVEN NATIONAL LABORATORY EWMS DIVISION	TITLE: FORMER LANDFILL SOIL GAS MONITOR LOCATION MAP 2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS	DWN: KCK	VT: HZ.: –	DATE: 02/18/04	PROJECT NO.: 07928
		CHKD: JEB	APPD: WRD	REV.: –	NOTES: –
		FIGURE NO.: 14			

Appendix A

Operable Unit 1
Wooded Wetlands Supplemental Surface Water
and
Sediment Sampling and Analysis Report

ANNUAL WOODED WETLAND REPORT 2005

1.0 INTRODUCTION

This report summarizes and evaluates the annual sediment and surface-water sampling performed for Operable Unit I (OU I), Wooded Wetland area at Brookhaven National Laboratory, Upton, New York (BNL). The Wooded Wetland is located east of and adjacent to the Current Landfill and has the potential to receive leachate from the landfill. The wetland consists of a North and South pond. The annual sampling of the Wooded Wetland follows the recommendations of the Focused Ecological Risk Assessment Operable Units I/VI (CDM, 1999b). This report summarizes the results of the sampling conducted in accordance with the 1999 and 2000 OU I Wooded Wetlands Supplemental Sampling and Analysis Plans (BNL, 1999 and BNL, 2000). These plans were prepared as an addendum to the Sampling and Analysis Plan for the Remedial Investigation/Feasibility Study for Operable Unit I (SAIC, 1993).

The annual sampling focuses on analysis of metals in the sediment and surface-water to evaluate their potential risks to the local Tiger Salamander population. Seven sediment and seven surface-water samples were collected in May 2005 from two ponds (North and South), in the Wooded Wetland area.

1.1 Background

The Wooded Wetland is a two-acre area located between the Former Hazardous Waste Management Facility and the Current Landfill (Figure 1). The wetland receives surface runoff from the Current Landfill, which was capped in 1995, as well as land runoff from the south. The Wooded Wetland usually is flooded during the spring and early summer and dry in late summer. In the Current Landfill area, the water table is located approximately 10 to 15 feet below the Wooded Wetlands; therefore the wetland area does not receive groundwater recharge. High clay content of the near surface soils allows for perching of water from precipitation and runoff.

An ecological review and assessment of the wooded wetland is provided in the *OU I/VI Preliminary Ecological Risk Screening Report* (CDM, 1996b). As part of the Feasibility Study for OU I, a Focused Ecological Risk Assessment was conducted for this area of concern (CDM, 1999b).

Two surface-water samples (SW-4 and SW-5) and 14 sediment samples (SD-10 through SD-17) were collected from this area in 1994 during the OU I Remedial Investigation (CDM, 1996a). At six of the sediment locations, samples were collected from two intervals: 0 to 0.5 feet, and 1 to 1.5 feet. Samples were collected from the surface only at the remaining two locations (SD-10 and SD-11).

A gap was identified in the 1994 data set and supplemental sampling was carried out in December 1997 as part of the Ecological Risk Assessment. Only two surface-water and two sediment samples were collected and analyzed for metals during this sampling event due to the dry conditions at this time. Results from all four locations indicated lower concentrations of contaminants in both the surface-water and sediment compared to the May 1994 locations. Figure 1 shows the benchmark 1994 and 1997 surface-water/sediment sample locations, respectively.

The results of the surface-water samples from four of the locations (SW-17, SW-5S, SW-5N, and SW-E) indicated that the risk for larval salamanders was unlikely to low. At location SW-6, the concentration of metals in the surface-water sample indicated a moderate risk. Sediment results from the five locations indicated that the risk to adult salamanders is unlikely. (See the Ecological Risk Assessment, CDM, 1999b.)

In August 2000, four surface-water samples (2 from each pond), and seven sediment samples (4 from the South Pond, 3 from the North Pond) were collected from the Wooded Wetlands Area. The locations are shown in Figure 2. Background and maximum concentration values for sediment and water are presented in Tables 2A and 2B. From 2001 through 2005 seven annual surface-water and sediment samples were taken from the ponds (Table 1). Analytical data for all years are provided in Tables 3 through 6. The following discussions focus on the findings of the 2005 sampling season.

2.0 GENERAL PROCEDURES

2.1 Environmental Sampling Procedures

Sampling was conducted by BNL on May 23, 2005, in accordance with the procedures and sampling locations outlined in the *OU I Sampling and Analysis Plan* (SAIC, 1993), supplementary Wooded Wetlands sampling plans (BNL 1999 and 2000) and BNL standard operating procedures for sampling surface-water and sediments. Samples of surface-water and sediment were collected at seven locations, as shown on Figure 2. These places were chosen based upon the locations where samples were collected in 1994 and 1997. Locations SW/SD-5 and SW/SD-6 were near to the two 1997 locations. SW/SD-17, SW/SD-12, and SW/SD-13 were close to three of the 1994 sediment sampling locations. Variability in sampling locations and number of samples were related primarily to seasonal drying of the ponds. Table 1 provides the sampling designation for comparison between samples taken each year since 1999.

Water and sediment samples were sent to an off-site certified laboratory for analysis. The surface water samples were submitted for the EPA Target Analyte List (TAL) of total metals by EPA Methods 6010B, and mercury by EPA Methods 7470. Due to an error filling out the chain-of-custody, only mercury analysis by EPA method 7471 was requested for the sediment samples in 2005. While the bottle labels stated that the full TAL list was required, the analytical laboratory did not notice this inconsistency between the chain-of-custody and the bottle labels. In accordance with the July 2000 Sampling and Analysis Plan, quality assurance/quality control samples included a blind duplicate (one per matrix), matrix spike/matrix spike duplicate (one per matrix), and, one equipment blank.

2.2 Criteria

To determine if sediment or surface-water concentrations pose a risk to tiger salamanders, analytical data were compared to benchmark sediment concentrations and critical water concentrations (Tables

2A and 2B) that were calculated in the *Ecological Risk Assessment* (CDM, 1999b). A benchmark sediment dose is a dose above which an observable toxic effect may occur in adult tiger salamanders. Table 2A gives the benchmark sediment concentrations for five metals of concern. BNL background levels are higher than established Maximum Sediment Concentrations. Critical water concentrations are surface-water concentrations that have the potential to produce observable adverse effects to larval salamanders. The ten metals in the surface-water that have an estimated critical concentration, are summarized in Table 2B. Three of them have benchmark maximum concentrations greater than the critical levels.

2.3 Sample Locations

Seven sediment and seven surface-water samples were collected in 2005 from the Northern and Southern Ponds. Four sediment and four surface-water samples were taken from the Southern Pond, and three sediment and three surface-water samples were collected from the Northern Pond. Table 1 lists 2005 samples with cross-references of the sampling locations to 1994, 1997, 1999, 2000, 2001, 2002, 2003, and 2004. Figure 2 shows the sediment and surface-water sampling locations.

3.0 SUMMARY OF ANALYTICAL RESULTS

The results from the total metals sample analyses of sediment and surface-water for each year are summarized in Tables 3 and 4, respectively. Tables 5 and 6 contain comparisons of average sediment and surface-water sample results for contaminants of concern to maximum contaminant and background concentrations, for each year.

3.1 Sediment

Table 5 summarizes the results for the contaminants of concern, specifically copper, lead, manganese, mercury and zinc, for the Northern and Southern Ponds from 1994, 1997, and 1999 to 2005. Due to an error on the chain-of-custody, only mercury was requested for the 2005 sediment samples. These results are compared with the maximum and background sediment concentrations from Table 2A.

To evaluate sediment concentrations in the Northern and Southern Ponds for mercury, annual averages were calculated from the samples collected. The averages were determined to evaluate trends, since the sediment samples were grab samples collected from a number of locations.

The results from the four Southern Pond locations, SD-5, SD-6, SD-16, and SD-17, indicate that the concentrations of mercury at these locations are below the maximum contaminant and background concentrations. While complete metals analysis was not analyzed for sediments in 2005, analysis of metals in water was completed. This analysis indicates that no significant change has occurred. Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals provides indication that the wooded wetland is not experiencing an increase in metals concentration.

3.2 Surface-Water

Table 6 presents the results of the ten metals of concern for each of the seven surface water samples collected during 2005. Also shown in Table 6, for comparison, are the surface water results from previous monitoring, along with the critical and benchmark water concentrations from Table 1B. Four surface water samples came from the Southern Pond (SW-5S, SW-6, SW-16 and SW-17) and three samples were collected from the Northern Pond (SW-4, SW-5N and SW-2001).

The Southern Pond samples from 2005 show concentrations of aluminum above the critical concentration value at locations SW-6 and SW-16. Values for iron were in excess of the critical concentration value at three of four locations (SW-6, SW16 and SW17). Comparison of average values for 2005 indicated that iron was the only metal of concern that was above the critical concentration value.

Iron concentrations in the Northern Pond have historically been detected in excess of the critical concentration value. However, in 2004 all three locations indicated iron above the critical concentration value. The average 2005 concentrations are similar to those in previous years.

4.0 CONCLUSIONS & RECOMMENDATIONS

The results of the May 2005 sediment and surface water sampling program indicate no elevated risk to adult salamanders from sediments in the Southern or the Northern Ponds when compared to the maximum benchmark concentrations (Table 2A). The sample concentrations for both ponds were lower than the maximum concentrations that would result in an elevated hazard quotient as discussed in the Final Focused Ecological Risk Assessment for OU I (CDM, 1999b). While complete metals analysis was not analyzed for sediments in 2005, analysis of metals in water was completed. This analysis indicates that no significant change has occurred. Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals provides indication that the wooded wetland is not experiencing an increase in metals concentration.

Surface water samples indicated an average iron concentration of 1,611 ug/l in the Southern Pond, and 2,830 ug/L in the Northern Pond, which is higher than the 1,000 ug/l critical concentration. Although the iron concentrations exceeded the background concentration in six of the seven samples in both ponds, the average concentrations were within the historic range. The average concentration of aluminum was below the critical water concentration (525 ug/l) in the both Southern and Northern Ponds where in the past it had been above the critical concentration in the Northern Pond.

There is a considerable amount of uncertainty reflected in deriving the critical water concentrations established in the Ecological Risk Assessment (CDM, 1999). This is largely due to the limited number of published toxicity values for the tiger salamander related to the metal of concern. In the case of aluminum, the critical water concentration is calculated by applying a correction factor of 0.1 (to account for uncertainty) to the mortality as indicated by the Lowest Observed Adverse Effects Level (LOAEL) for the mortality of the Jefferson salamander larvae. The Jefferson salamander larvae species is the closest match for the tiger salamander larvae. The critical water concentration for iron was taken from the EPA National Recommended Water Quality Criteria for Non-Priority Pollutants (EPA, April 1999). No maximum value is given under these criteria.

Overall, the results obtained from the May 2005 sampling indicates that mercury in the sediment and the metals of concern in surface-water are within the range of variability as compared to previous year values. The number of sediment and water samples collected from the Southern Pond in 2005 was the same as those collected in 2004, so the averages can be directly compared for the parameters analyzed. No substantive effect due to leached metals from the landfill is evident in the sediments or surface-water.

In summary, the average values of the concentrations of the mercury in the sediments in either pond in 2005 were not above benchmark or BNL background concentrations. The averages for the water samples collected from each pond in 2005 indicate that only iron was above the critical concentration in the Southern and Northern Ponds. However, there is considerable uncertainty inherent in establishing the critical water concentration for aluminum in assigning the actual risk posed to tiger salamander larvae. This analysis indicates that no significant change has occurred. Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals provides indication that the wooded wetland is not experiencing an increase in metals concentration.

Based on the results of the 2005 sampling event, annual sampling of the Wooded Wetlands during the spring should continue for another year to document and confirm the trends monitored as part of the O&M Landfill Report. The full round of metals parameters should be collected for the sediment and surface water samples in 2006.

5.0 REFERENCES

SAIC, 1993. Sampling and Analysis Plan for the Remedial Investigation/Feasibility Study for Operable Unit I/VI. SAIC Inc., October 8, 1993.

CDM, 1996a. Brookhaven National Laboratory Final Remedial Investigation/Risk Assessment Report Operable Unit I. CDM Federal Programs Corp., June 14, 1996.

CDM, 1996b. Preliminary Ecological Risk Screening, Volume 2D, BNL Final Remedial Investigation/Risk Assessment Report OU I/VI. CDM Federal Programs Corp., June 14, 1996.

CDM, 1999a. Brookhaven National Laboratory Final Feasibility Study Report Operable Unit I and Radiologically Contaminated Soils. CDM Federal Programs Corp., March 31, 1999.

CDM, 1999b. Appendix L, Final Focused Ecological Risk Assessment for OU I/VI. BNL Final Feasibility Study Report Operable Unit I and Radiologically Contaminated Soils. CDM Federal Programs Corp., March 31, 1999.

BNL, 1999. OU I Wooded Wetland Supplemental Surface-water and Sediment Sampling and Analysis Plan. Memorandum, A. Bou to J. Brower, May 3, 1999.

BNL, 2000. OU I Wooded Wetland Supplemental Surface-water and Sediment Sampling 2000. Memorandum, P. Riche' to J. Brower, July 19, 2000.

P. W. Grosser (2002). BNL 2001 Environmental Monitoring Report – Current and Former Landfill Areas. P. W. Grosser Consulting Engineers. February, 2002.

SAIC, 1993. Sampling and Analysis Plan for the Remedial Investigation/Feasibility Study for Operable Unit I/VI. SAIC Inc., October 8, 1993.

TABLES

Table 1
Sediment and Surface Sample Locations

Table 1. Crosswalk of sample designation between years for sediment and surface water sampling at the wooded wetland.

Sediment Sample Locations									
Pond Sampled	**2005 Sample Designation**	**2004 Sample Designation**	**2003 Sample Designation**	**2002 Sample Designation**	**2001 Sample Designation**	**2000 Sample Designation**	**1999 Sample Designation**	**1997 Sample Designation**	**1994 Sample Designation**
South	SD-5	SD-5	SD-5	SD-5	SD-5	SD-5	SD-B	SD-5	NS
South	SD-6	SD-6	SD-6	SD-6	SD-6	SD-6	SD-C	SD-6	NS
South	SD-16	SD-16	SD-16	SD-16	SD-16	SD-16	NS	NS	SD-16
South	SD-17	SD-17	SD-17	SD-17	SD-17	SD-17	SD-A	NS	SD-17
North	SD-11	SD-11	SD-11	SD-11	SD-11	SD-11	NS	NS	SD-11
North	SD-12	SD-12	SD-12	SD-12	SD-12	SD-12	SD-D	NS	SD-12
North	NS	NS	NS	NS	NS	SD-13	SD-E	NS	SD-13
North	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	NS	NS	NS	NS

Surface-Water Sample Locations									
Pond Sampled	**2005 Sample Designation**	**2004 Sample Designation**	**2003 Sample Designation**	**2002 Sample Designation**	**2001 Sample Designation**	**2000 Sample Designation**	**1999 Sample Designation**	**1997 Sample Designation**	**1994 Sample Designation**
South	SW-5 S	SW-5 S	SW-5 S	SW-5 S	SW-5 S	SW-5	SW-B	SW-5	SW-5
South	SW-6	SW-6	SW-6	SW-6	SW-6	SW-6	SW-C	SW-6	NS
South	SW-16	SW-16	SW-16	SW-16	SW-16	NS	NS	NS	NS
South	SW-17	SW-17	SW-17	SW-17	SW-17	NS	SW-A	NS	NS
North	SW-4	SW-4	SW-4	SW-4	SW-4	SW-4	NS	NS	SW-4
North	SW-5N	SW-5N	SW-5 N	SW-5 N	SW-5 N	SW-5	SW-D	NS	NS
North	NS	NS	NS	NS	NS	NS	SW-E	NS	NS
North	SW-2001	SW-2001	SW-2001	SW-2001	SW-2001	NS	NS	NS	NS

NS Not Sampled

Table 2A
Benchmark Sediment Concentrations for Adult Salamanders*

Contaminants of Concern	BNL** Background Concentration (mg/kg)	Maximum Sediment Concentration (mg/kg)	Maximum Dose (mg/kg/day)	Benchmark Dose (mg/kg/day)	Hazard Quotient***
Copper	52.5	29.0	0.00903	0.232	0.0389
Lead	97.6	82.9	3.86	151	0.0255
Manganese	84.3	541	0.168	556	0.000302
Mercury	0.41	0.17	0.0000529	0.00958	0.00552
Zinc	158	122	6.49	105	0.0618

NOTES:
*OU I Feasibility Study, Appendix L. Final Focused Ecological Risk Assessment for Operable Unit I/VI, 3/31/99.
** Off-site stream sediment concentrations from the upper Peconic River. OU V Remedial Investigation Report, IT Corp. 1996.
*** Contaminants with hazard quotients greater than 0.0001.

Table 2B
Critical Benchmark Water Concentrations for Larval Salamanders*

Contaminants of Concern	BNL Background Concentration (ug/l) **	Maximum Concentration (ug/l)	Critical Concentration (ug/l) ***
Aluminum	820	762	525
Cadmium	3.5	0.3	12.8
Copper	10.1	8.1	15.0
Cobalt	ND	18.7	50.0
Iron	1,990	4,400	1,000
Lead	ND	4.4	14.6
Mercury	0.18	0.24	2.7
Nickel	ND	3.5	420
Silver	ND	ND	2.4
Zinc	62.9	64.9	23.8

NOTES:
*OU I Feasibility Study, Appendix L. Final Focused Ecological Risk Assessment for Operable Unit I/VI, 3/31/99.
** Based on OU V Remedial Investigatigation Report, IT Corp., 1996 and OU I/VI Remedial Investigatigation Report, CDM Federal Corp., 1996.
***The critical concentration for contaminants of concern in water represents the reported toxic concentration most applicable to salamanders which is adjusted, where necessary, to the equivalent of the No Observable Adverse Effects Levels (NOAEL).

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-5	Aluminum	NS	4,470	11,600	11,000	8,490	10,200	11,300 *	9,200 *	NS
(SD-B)	Antimony	NS	1.4 U	0.27 U	0.26 U	0.481 B	0.719 UN	0.485 B	0.632 UN	NS
	Arsenic	NS	1.1 B	1.4	1.81	1.39 B	1.66	1.8	1.79	NS
	Barium	NS	18.4 B	19.4	24.4	25.1 B	26.6	28	26.9	NS
	Beryllium	NS	0.15 B	0.23 B	0.364 B	0.34 B	0.327 B	0.406 B	0.401 B	NS
	Cadmium	NS	0.15 B	0.05 B	0.396 B	0.145 B	0.154 B	0.091 U	0.196 B	NS
	Calcium	NS	915 B	343 B	432 B	554 B	727 *	394 *N	1110 N	NS
	Chromium	NS	6.1	9.9	13.9	11.7	11.6	14	10.6 *	NS
	Cobalt	NS	1.3 B	1.7 B	3.15 B	3.36 B	1.97	3.53	1.91	NS
	Copper	NS	4.8 B	8.1	9.59	9.03	9.65	11.7	10.5	NS
	Iron	NS	2,560	7,490	7,590	8,670	6,130	8,820 *N	5,700	NS
	Lead	NS	28	19.4	13.4	13.0	21.1 N	12.7	30.1 *	NS
	Magnesium	NS	487 B	1150	1890	2,240	1,420	2,080 *N	1,310 *	NS
	Manganese	NS	41.5	45.1	82.4	123	78.7 *	88.3 *N	109 *	NS
	Mercury	NS	0.11 U	0.05	0.098	0.053	0.053	0.021	0.052	0.0512
	Nickel	NS	4.1 B	5.7	8.02	9.25	6.74	8.17	7.31 *	NS
	Potassium	NS	238 B	397 B	653 B	891	602	889 N	734 E*N	NS
	Selenium	NS	1.3 U	0.36 B	0.896	0.508 B	0.827	0.468 U	0.384 B	NS
	Silver	NS	0.44 U	0.29 B	0.151 U	0.126 U	0.172 U	0.235 U	0.166 U	NS
	Sodium	NS	42.2 B	27.2 B	33.6 B	50.2 B	40.8	44.9	34.5	NS
	Thallium	NS	1 U	0.82 U	0.34 U	0.561 U	0.748 U	0.502 U	3.18	NS
	Vanadium	NS	15.6 B	17.4	24.1	20.4	21.8	22.5	22.3 *	NS
	Zinc	NS	22.3	25.1	31.4	29.8	31.9	29.5	26.3 *	NS
	Cyanide	NS	NA	0.489	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-6	Aluminum	NS	4,920	9,780	1,670	10,500	1,900	1,390 *	2,000 *	NS
(SD-C)	Antimony	NS	1.1 U	0.93 U	0.247 U	0.338 U	0.645 UN	0.417 B	0.481 UN	NS
	Arsenic	NS	0.47 U	1.3 U	0.556 B	1.34	0.535 U	0.372 U	0.366 B	NS
	Barium	NS	15.2 B	21.5	3.57	26.2	4.74	3.27	5	NS
	Beryllium	NS	0.11 B	0.08 B	0.07 U	0.336	0.045 B	0.033 B	0.082 B	NS
	Cadmium	NS	0.2 B	0.17 U	0.105 U	0.057 B	0.064 B	0.074 U	0.067 U	NS
	Calcium	NS	487 B	774 B	88.3 B	279 B	136 *	51.5 *N	133 N	NS
	Chromium	NS	6.1	6.5	1.87	13	2.31	1.47	2.33 *	NS
	Cobalt	NS	1.4 B	0.81 B	0.344 B	3.68 B	0.308 B	0.397 B	0.393 B	NS
	Copper	NS	4.8 B	7.8	0.72 B	7.27	1.85	0.549 B	1.37	NS
	Iron	NS	2,620	5,710	1,040	8,050	1,060	816 *N	1,280	NS
	Lead	NS	19.8	63.5	4.62 B	5.28	9.74 N	1.6	10.3 *	NS
	Magnesium	NS	596 B	568 B	250	2,750	245	214 *N	300 *	NS
	Manganese	NS	29.3	39.3	10.4	144	13.4 *	9,87 *N	15 *	NS
	Mercury	NS	0.1 U	0.18	0.049	0.004 U	0.011 B	0.006 U	0.019	0.0122 B
	Nickel	NS	4.1 B	5.3	1.28	9.9	1.51	1.05	1.84 *	NS
	Potassium	NS	273 B	268	103 B	1,240	94	100 N	137 E*N	NS
	Selenium	NS	1 U	0.95 B	0.328 U	0.374 U	0.359 U	0.381 U	0.227 U	NS
	Silver	NS	0.34 U	0.44 U	0.143 U	0.111 U	0.155 U	0.191 U	0.126 U	NS
	Sodium	NS	35.1 B	96.9 U	11.5 B	50.9 B	18.6	13.9	11 B	NS
	Thallium	NS	0.8 U	2.8 B	0.324 U	0.495 U	0.671 U	0.409 U	1.4 U	NS
	Vanadium	NS	11.5 B	20.2 U	3.35 B	16 B	4.85	2.35	4.96 *	NS
	Zinc	NS	19.7	26 B	5.86	27.6	6.45	3.98	6.67 *	NS
	Cyanide	NS	NA	1.27	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-16	Aluminum	5,110 *	NS	NS	1,780	1,240	2,660	716 *	6,120 *	NS
	Antimony	8.7 U	NS	NS	0.226 U	0.302 U	0.702 UN	0.568 B	0.859 BN	NS
	Arsenic	0.59 B	NS	NS	0.566 B	0.377 B	0.582 U	0.357 U	0.411 U	NS
	Barium	7.1 B	NS	NS	5.25	3.6 B	9.13	1.89	28.5	NS
	Beryllium	0.25 U	NS	NS	0.064 U	0.036 B	0.071 B	0.023 U	0.23 B	NS
	Cadmium	1.2 U	NS	NS	0.096 U	0.031 U	0.132 B	0.071 U	0.292 B	NS
	Calcium	125 B	NS	NS	216 B	137 B	451 *	62 *N	2160 N	NS
	Chromium	5.5	NS	NS	2.41	1.63	3.21	1.44	5.7 *	NS
	Cobalt	1.2 U	NS	NS	0.347 B	0.248 B	0.372 B	0.197 B	1	NS
	Copper	1 B	NS	NS	1.48	0.904 B	3.78	0.389 B	8.14	NS
	Iron	1,730 *	NS	NS	1,120	817	1320	569 *N	2960	NS
	Lead	4.4 NJ	NS	NS	9.99	3.19	16.1 N	1.7	39.5 *	NS
	Magnesium	259 B	NS	NS	239 B	185 B	293	109 *N	580 *	NS
	Manganese	11.5 *	NS	NS	12.4	9.68	17.7 *	8.07 *N	45 *	NS
	Mercury	0.01 B	NS	NS	0.064	0.003 U	0.033	0.005 U	0.028	0.0336
	Nickel	7.5 U	NS	NS	1.43	1.2 B	2.01	0.78	4.74 *	NS
	Potassium	138 U	NS	NS	113 B	114 B	133	54.5 N	414 E*N	NS
	Selenium	0.25 U,	NS	NS	0.365 B	0.334 U	0.391 U	0.366 U	0.323 U	NS
	Silver	1 U	NS	NS	0.131 U	0.099 U	0.168 U	0.183 U	0.18 U	NS
	Sodium	39 B	NS	NS	14.4 B	17 B	22.9	11.5	17 B	NS
	Thallium	0.25 U,	NS	NS	0.295 U	0.442 U	0.73 U	0.393 U	2.03	NS
	Vanadium	5.1 B	NS	NS	5.26 B	2.39 B	6.58	1.6	15.1 *	NS
	Zinc	4.7 B	NS	NS	7.34	6.48	12.9	2.58	29.1 *	NS
	Cyanide	3.1 U	NS	NS	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-17	Aluminum	3,550	NS	3,500	2,840	1,440	1,870	2,870 *	1,080 *	NS
(SD-A)	Antimony	8.8 U	NS	0.26 U	0.198 U	0.312 U	0.614 UN	0.415 B	0.492 UN	NS
	Arsenic	0.25 U	NS	1.1	0.397 B	0.424 B	0.51 U	0.435 B	0.296 U	NS
	Barium	8.8 B	NS	21.6	6.32	5.34 B	4.96	5.63	2.96	NS
	Beryllium	0.25 U	NS	0.17 B	0.056 U	0.037 B	0.042 B	0.052 B	0.072 U	NS
	Cadmium	1.3 U	NS	0.11 B	0.092 B	0.075 B	0.055 B	0.077 U	0.069 U	NS
	Calcium	80.4 B	NS	785	240 B	136 B	183 *	137 *N	107 N	NS
	Chromium	4.4	NS	7.4	2.54	1.98	1.99	2.68	1.21 *	NS
	Cobalt	1.3 U	NS	1.1 B	0.209 B	0.196 B	0.166 B	0.504 B	0.114 U	NS
	Copper	2.9 B	NS	8.2	1.64	1.41 B	1.42	12.6	1.39	NS
	Iron	1,590	NS	1,750	757	740	742	1210 *N	614	NS
	Lead	4.1 NJ	NS	21.3	6.98	6.15	5.29 N	4.71	2.49 *	NS
	Magnesium	389 B	NS	665 B	157 B	162 B	169	280 *N	128 *	NS
	Manganese	14.8	NS	40.1	10.9	12.3	9.72 *	16 *N	9.49 *	NS
	Mercury	0.02 B	NS	0.028 U	0.038	0.003 U	0.014	0.012 B	0.012 B	0.0618
	Nickel	7.6 U	NS	4.3	1.13	1.25 B	1	3.34	0.792 *	NS
	Potassium	140 U	NS	216 B	88.7 B	91.6 B	83.2	117 N	69.4 E*N	NS
	Selenium	0.25 U	NS	0.57 B	0.412 B	0.482 B	0.342 U	0.396 U	0.232 U	NS
	Silver	1 U	NS	0.22 B	0.115 U	0.103 U	0.147 U	0.199 U	0.129 U	NS
	Sodium	16.5 B	NS	31.9 B	9.14 B	19.3 B	17	15.6	5.21 U	NS
	Thallium	0.25 U	NS	0.79 U	0.259 U	0.457 U	0.639 U	0.425 U	1.43 U	NS
	Vanadium	4.4 B	NS	12.6	4.52 B	2.99 B	3.19	4.09	1.62 *	NS
	Zinc	8.8	NS	27.5	7.37	4.6	6.37	6.24	3.4 *	NS
	Cyanide	3.2 U	NS	0.243	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-11	Aluminum	4,030 *	NS	NS	5,070	12,800	11,400	6,920 *	7,570 *	NS
	Antimony	10.9 U	NS	NS	0.311 U	0.532 U	1.51 UN	0.688 U	0.761 UN	NS
	Arsenic	0.31 U,	NS	NS	1.07	0.859 B	2.35	1.81	1.27	NS
	Barium	9.3 NB	NS	NS	27.1	53.4	61.1	35.4	34.6	NS
	Beryllium	0.31 U	NS	NS	0.134 B	0.291 B	0.342 B	0.232 B	0.281 B	NS
	Cadmium	1.6 U	NS	NS	0.135 B	0.06 B	0.232 B	0.144 B	0.152 B	NS
	Calcium	125 B	NS	NS	225 B	389	1750 *	551 *N	467 N	NS
	Chromium	4.5	NS	NS	4.99	11.6	10.5	6.48	7.1 *	NS
	Cobalt	1.6 U	NS	NS	0.221 B	0.258 B	1.9	0.586 B	0.439 B	NS
	Copper	R	NS	NS	5.25	7.06	21.3	7.52	7.55	NS
	Iron	763 *	NS	NS	938	1,260 B	4,920	1,570 *N	1,660	NS
	Lead	6.3 N	NS	NS	8.41	13.2	85.7 N	17.8	16.9 *	NS
	Magnesium	168 B	NS	NS	118 B	295 B	819	262 *N	293 *	NS
	Manganese	6.6 *	NS	NS	3.74	9.41	33.9 *	10.5 *N	11.4 *	NS
	Mercury	0.03 B	NS	NS	0.074	0.12	0.198	0.056	0.044	0.0729
	Nickel	9.3 U	NS	NS	2	2.77 B	7.51	3.13	3.3 *	NS
	Potassium	171 U	NS	NS	131 B	308 B	488	285 N	355 E*N	NS
	Selenium	0.31 B	NS	NS	1.43	2.68	1.59	0.993 B	0.817 B	NS
	Silver	1.2 U	NS	NS	0.198 B	0.175 U	0.363 U	0.338 U	0.2 U	NS
	Sodium	40.9 B	NS	NS	32.2 B	58.4 B	87.2	44.3	21 B	NS
	Thallium	0.31 U,	NS	NS	0.723 B	0.779 U	1.57 U	0.724 U	2.22 U	NS
	Vanadium	4.2 B	NS	NS	4.27 B	8.33 B	35.8	9.46	10.3 *	NS
	Zinc	R	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS
	Cyanide	3.9 U	NS	NS	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-12	Aluminum	7,220 *	NS	30,300	4,420	27,900	20,600	13,600 *	10,500 *	NS
(SD-D)	Antimony	8.7 U	NS	0.6 U	0.247 U	0.734 B	1.34 BN	1.61 B	1.03 BN	NS
	Arsenic	0.76 B, \	NS	5	0.981	6.58 B	4.46	4.17	2.17	NS
	Barium	17.4 B	NS	85.9	32	77.5	68.2	49.5	46.5	NS
	Beryllium	0.25 U	NS	0.73 B	0.129 B	0.82 B	0.546 B	0.348 B	0.399 B	NS
	Cadmium	1.2 U	NS	0.54 B	0.148 B	0.724 B	0.241 B	0.199 B	0.096 U	NS
	Calcium	379 B	NS	1,820	964	2,780	2,020 *	2,260 *N	1,870 N	NS
	Chromium	7.8	NS	22.1	4.7	27.8	20.3	13.3	10.9 *	NS
	Cobalt	2.5 B	NS	5.3 B	0.428 B	6.59 B	3.82	3.09	1.65	NS
	Copper	R	NS	44.6	7.41	36.6	26.4	20.2	13.6	NS
	Iron	5,150	NS	22,000	1,840	18,700	11,700	8,940 *N	5,960	NS
	Lead	10.4 NJ	NS	86.3	6.11	71.1	59.8 N	42.3	25.5 *	NS
	Magnesium	943 B	NS	2220	207 B	3,020	1,610	885 *N	672 *	NS
	Manganese	56 *	NS	125	4.12	147	73.3 *	48.4 *N	33.4 *	NS
	Mercury	0.03 B	NS	0.37	0.074	0.272	0.215	0.214	0.079	0.203
	Nickel	7.5 U	NS	16.5	2.04	19.6	11.6	7.9	5.5 *	NS
	Potassium	292 B	NS	766 B	130 B	1,300 B	774	611 N	570 E*N	NS
	Selenium	0.25 U	NS	2.2	1.22	2.01	1.74	1.44	1.23	NS
	Silver	1 U	NS	1.3 B	0.146 B	0.441 U	0.284 U	0.47 U	0.18 U	NS
	Sodium	29.8 B	NS	106 B	31.4 B	133 B	81.1	69.4	26.5	NS
	Thallium	0.25 U	NS	1.8 U	0.323 U	1.03 U	1.23 U	1.01 U	2.46	NS
	Vanadium	10.8 B	NS	54.5	3.49 B	59.9	45.7	31.1	18.7 *	NS
	Zinc	R	NS	123	5.91	137	70.3	38.4	22.3 *	NS
	Cyanide	3.1 U	NS	0.708	NA	NA	NA	NA	NA	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-13	Aluminum	9,100 *	NS	8,360	2,090	NS	NS	NS	NS	NS
(SD-E)	Antimony	9.2 U	NS	0.51 U	0.194 U	NS	NS	NS	NS	NS
	Arsenic	1.2 B, \	NS	1 B	0.46 B	NS	NS	NS	NS	NS
	Barium	22.7 B	NS	21.7	10.2	NS	NS	NS	NS	NS
	Beryllium	0.26 U	NS	0.08 B	0.055 U	NS	NS	NS	NS	NS
	Cadmium	1.3 U	NS	0.18 B	0.083 U	NS	NS	NS	NS	NS
	Calcium	640 B	NS	993 B	264 B	NS	NS	NS	NS	NS
	Chromium	9.1	NS	5.3	2.58	NS	NS	NS	NS	NS
	Cobalt	2.7 B	NS	0.64 B	0.124 B	NS	NS	NS	NS	NS
	Copper	8.1	NS	9.5	1.42	NS	NS	NS	NS	NS
	Iron	7,040 *	NS	3,340	781	NS	NS	NS	NS	NS
	Lead	15.8 NJ	NS	39.9 B	5.14	NS	NS	NS	NS	NS
	Magnesium	1190 B	NS	312	108 B	NS	NS	NS	NS	NS
	Manganese	85 *	NS	16	3.96	NS	NS	NS	NS	NS
	Mercury	0.06 B	NS	0.13	0.054	NS	NS	NS	NS	NS
	Nickel	7.9 U	NS	3.2	0.848	NS	NS	NS	NS	NS
	Potassium	300 B	NS	209 B	113 B	NS	NS	NS	NS	NS
	Selenium	0.26 U	NS	0.89 B	0.502 B	NS	NS	NS	NS	NS
	Silver	1.1 U	NS	0.35 B	0.113 U	NS	NS	NS	NS	NS
	Sodium	48.4 B	NS	76.1 B	14.1 B	NS	NS	NS	NS	NS
	Thallium	0.26 U	NS	1.5 U	0.254 U	NS	NS	NS	NS	NS
	Vanadium	16.3	NS	14.9	2.99 B	NS	NS	NS	NS	NS
	Zinc	27.9	NS	17.3	4.35	NS	NS	NS	NS	NS
	Cyanide	3.3 U	NS	0.847	NA	NS	NS	NS	NS	NS

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT Units : mg/Kg	SAMPLES COLLECTED 1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SD-2001	Aluminum	NS	NS	NS	1,780	46,900	15,800	14,900 *	11,600 *	NS
	Antimony	NS	NS	NS	0.226 U	0.821 U	1.32 UN	1.44 B	0.953 BN	NS
	Arsenic	NS	NS	NS	0.566 B	9.03	4.21	4.4	2.23	NS
	Barium	NS	NS	NS	5.25	118	52.9	52.1	45.4	NS
	Beryllium	NS	NS	NS	0.064 U	1.23 B	0.434 B	0.359 B	0.397 B	NS
	Cadmium	NS	NS	NS	0.096 U	1.07 B	0.277 B	0.249 B	0.102 U	NS
	Calcium	NS	NS	NS	216 B	2,310 B	1,900 *	1,720 *N	1,430 N	NS
	Chromium	NS	NS	NS	2.41	45.5	15.7	15.1	11.4 *	NS
	Cobalt	NS	NS	NS	0.347 B	8.87 B	2.98	3.16	1.7	NS
	Copper	NS	NS	NS	1.48	52.9	23.3	21.2	11.6	NS
	Iron	NS	NS	NS	1,120	25,600	8,720	7,180 *N	5,690	NS
	Lead	NS	NS	NS	9.99	145	57 N	60.8	29.7 *	NS
	Magnesium	NS	NS	NS	239 B	3,940	1,210	853 *N	675 *	NS
	Manganese	NS	NS	NS	12.4	158	69.3 *	41.2 *N	40.4 *	NS
	Mercury	NS	NS	NS	0.064	0.727	0.192	0.18	0.098	0.116
	Nickel	NS	NS	NS	1.43	28	10.1	9.12	5.73 *	NS
	Potassium	NS	NS	NS	113 B	1,780	603	599 N	570 E*N	NS
	Selenium	NS	NS	NS	0.365 B	2.42	1.4	1.31	0.623 B	NS
	Silver	NS	NS	NS	0.131 U	0.689 B	0.316 U	0.441 U	0.192 U	NS
	Sodium	NS	NS	NS	14.4 B	149 B	74.7	74.9	21.8	NS
	Thallium	NS	NS	NS	0.295 U	1.2 U	1.37 U	0.943 U	3.05	NS
	Vanadium	NS	NS	NS	5.26 B	107	40	41.5	22.6 *	NS
	Zinc	NS	NS	NS	7.34	186	76.6	42.1	24.2 *	NS
	Cyanide	NS	NS	NS	NA	NA	NA	NA	NA	NS

NOTES:

1994 Samples were collected from 0.0 ' to 0.5'

Number in parenthesis ( ) indicates alternate identification for same location.

NA Not available

NS Not sampled

U Analyte was analyzed for but not detected.

N - Spike sample recovery was not within control limits

Table 3
Annual Wooded Wetland Report
Sediment Sample Results - Metals Analysis

LOCATION	CONTAMINANT	SAMPLES COLLECTED								
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05

J - Estimated value; concentration below method detection limit.

* - Duplicate precision is not within control limits.

B - Concentraion less than the contract required detection limit, but greater than or equal to the instrument detection limit.

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW-5S	Aluminum	38,600	304	1,240	253	385	445 E	429	434	210
(SWB)	Antimony	35 U	2.5 U	1.9 U	4.14 U	2.65 U	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	8.7 B	1.1 U	2.7 U	2.09 U	4.47 B	3.97 U	3.31 U	2.24 U	6 U
	Barium	136 B	11.7 B	19.6	5.32 B	7.7 B	6.32 B	6.91 B	10.2 B	5.1
	Beryllium	1.2 U	0.1 B	0.14 U	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	5 U	0.2 U	0.44 B	0.69 U	0.274 B	0.21 U	0.66 U	0.313 U	1 U
	Calcium	29,700	8,860	5,520	2,360 B	3,170 B	3,590 B	2,450 B	2,720 B	2,960
	Chromium	32.1 U	0.7 U	2.8 B	1.03 B	0.774 B	0.781 B	1.69 U	0.892 B	1.3 B
	Cobalt	18.7 B	1.3 U	1.1 B	0.91 U	0.679 B	0.581 U	1.71 B	0.918 B	1 U
	Copper	56.2	0.9 U	13.4	1.63 U	2.24 B	1.52 B	2.58 B	1.39 U	3 U
	Iron	44,000	347	3,740	1,120	1,100	890	779	1,210	832
	Lead	NA	2.2 B	5.3	1.38 U	1.47 U	2.16 B	2.4 U	1.72 U	2.5 U
	Magnesium	12,500	2,460 B	1,560 B	985 B	1,060 B	1,230 B	774 B	848 B	939
	Manganese	1,410	96.1	383	181	339	227	153	176	21
	Mercury	0.25 B	0.1 U	0.13 B	0.05 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	30 U	1.6 U	7.6	1.29 U	1.91 B	2.09 B	1.64 U	1.19 B	3.8 B
	Potassium	5,720 B	2,430 B	4,790 B	2,340 B	3,470 B	2,700 B	2,010 B	1,860 B	2,240
	Selenium	1 U	2.4 U	2.6 B	3.66 U	2.93 U	2.67 U	3.39 U	2.81 U	6 U
	Silver	4 U	0.8 U	0.89 U	0.94 U	0.871 U	1.15 U	1.7 U	0.835 U	1 U
	Sodium	7,200	3,500 B	4,250 B	1,840 B	2,670 B	2,620 B	2,290 BE	2,530 B	3,020
	Thallium	1 U	1.9 U	5.6 U	2.11 U	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	74.9 B	3.4 B	9.2 B	1.94 B	2.84 B	2.32 B	4.13 B	2.83 B	1.3 B
	Zinc	252	47.5	65.8	8.12 B	12.4 B	13.7 B	34.4	15.4 B	12.2

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- 6	Aluminum	NS	762	110,000	503	523	541 E	413	346	539
(SW-C)	Antimony	NS	2.5 U	3.7 U	4.14 U	2.65 U	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	NS	1.1 U	19.8	2.09 U	2.33 U	3.97 U	3.31 U	2.24 U	6 U
	Barium	NS	13.8 B	507	9.62 B	7.9 B	7.37 B	5.89 B	5.74 B	8
	Beryllium	NS	0.1 B	3.3 B	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	NS	0.1 B	7.4 B	0.69 U	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	NS	7,000	28,400	2,660 B	2150 B	2450 B	1540 B	1450 B	2520
	Chromium	NS	0.7 U	99.4	1.41 B	0.779 B	0.533 B	1.69 U	0.643 B	1.2 B
	Cobalt	NS	1.3 U	22.7 B	0.91 U	0.419 U	0.581 U	1.33 B	0.738 B	1 U
	Copper	NS	8.1 B	165	1.92 B	2.48 B	1.55 B	1.91 B	1.39 U	3 U
	Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470
	Lead	NS	4.4	887	1.38 U	1.47 U	1.24 U	2.4 U	1.72 U	2.5 U
	Magnesium	NS	2,690 B	13200	860 B	810 B	982 B	642 B	624 B	883
	Manganese	NS	256	1,280	107	106	133	78.1	71.6	124
	Mercury	NS	0.1 U	1	0.085 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	NS	3.4 B	121	1.93 B	2.07 B	2.07 B	1.64 U	1.07 B	2.5 B
	Potassium	NS	2,610 B	9,990 B	1,940 B	2,360 B	1,920 B	1,180 B	1,270 B	2,240
	Selenium	NS	2.4 U	10 B	3.66 U	3.46 B	2.67 U	3.61 B	3.5 B	6 U
	Silver	NS	0.8 U	2.3 B	0.94 U	0.871 U	1.15 U	1.7 U	0.835 U	1 U
	Sodium	NS	3,330 B	4,350 B	2,070 B	2,920 B	3,180 B	2,270 BE	2,560 B	3,390
	Thallium	NS	1.9 U	11.3 U	2.11 U	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	NS	9.1 B	348	3.19 B	2.94 B	3.33 B	4.71 B	1.51 B	2 B
	Zinc	NS	53.2	699	16.8 B	14.1 B	14.4 B	29.9	11.5 B	20.4

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- 16	Aluminum	NS	NS	NS	NS	928	521 E	446	543	618
	Antimony	NS	NS	NS	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	NS	NS	NS	NS	2.33 U	3.97 U	3.31 U	2.24 U	6 U
	Barium	NS	NS	NS	NS	27.3 B	11.2 B	8.81 B	11.7 B	9.8
	Beryllium	NS	NS	NS	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	NS	NS	NS	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	NS	NS	NS	NS	5,480	6,040	4,200 B	3,150 B	3,790
	Chromium	NS	NS	NS	NS	1.31 B	0.723 B	2.07 B	1.26 B	1.5 B
	Cobalt	NS	NS	NS	NS	0.627 B	0.581 U	1.69 B	0.812 B	1 U
	Copper	NS	NS	NS	NS	3.3 B	2.21 B	3.09 B	1.39 U	3 U
	Iron	NS	NS	NS	NS	2,320	1,330	1,430	1,480	1,820
	Lead	NS	NS	NS	NS	3.86	1.39 B	2.4 U	1.72 U	2.5 U
	Magnesium	NS	NS	NS	NS	1,420 B	1,580 B	1,120 B	922 B	1,000
	Manganese	NS	NS	NS	NS	156	158	116	83.6	120
	Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	NS	NS	NS	NS	2.81 B	2.23 B	1.64 U	1.03 B	2.1 B
	Potassium	NS	NS	NS	NS	2,730 B	2,270 B	1,730 B	1,590 B	1,830
	Selenium	NS	NS	NS	NS	2.93 U	2.67 U	3.39 U	2.81 U	6 U
	Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U
	Sodium	NS	NS	NS	NS	2,520 B	2,680 B	2,170 BE	2,400 B	2,700
	Thallium	NS	NS	NS	NS	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	NS	NS	NS	NS	4.61 B	2.96 B	5.02 B	3.44 B	4 B
	Zinc	NS	NS	NS	NS	15.5 B	14.6 B	34	14.8 B	17.1

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW-17	Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357
(SW-A)	Antimony	NS	NS	2 U	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	NS	NS	2.7 U	NS	3.21 B	3.97 U	3.31 U	2.24 U	6 U
	Barium	NS	NS	21.6	NS	36 B	14.6 B	10.3 B	13 B	8.3
	Beryllium	NS	NS	0.14 U	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	NS	NS	0.34 U	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	NS	NS	8,570	NS	9,120	7,900	6,930	3,920 B	4,820
	Chromium	NS	NS	3 B	NS	1.73 B	1.16 B	1.69 U	0.984 B	10
	Cobalt	NS	NS	1.1 B	NS	1.49 B	0.759 B	1.82 B	0.754 B	1 U
	Copper	NS	NS	5	NS	4.2 B	2.21 B	3.26 B	1.39 U	17.6
	Iron	NS	NS	5,410	NS	5430	1650	1120	1170	2320
	Lead	NS	NS	6	NS	3.31	2.04 B	2.4 U	1.72 U	2.5 U
	Magnesium	NS	NS	1,950 B	NS	1,950 B	1,780 B	1,530 B	1,050 B	1,130
	Manganese	NS	NS	240	NS	469	150	157	102	136
	Mercury	NS	NS	0.12 U	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	NS	NS	6	NS	3.28 B	2.27 B	1.64 U	1.04 B	6.7
	Potassium	NS	NS	2,480 B	NS	3,310 B	2,400 B	1,960 B	1,550 B	1,910
	Selenium	NS	NS	2.1 B	NS	3 U	3 U	3 U	3 U	6 U
	Silver	NS	NS	0.89 U	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U
	Sodium	NS	NS	3,610 B	NS	2,560 B	2,470 B	2,050 BE	2,220 B	2,580
	Thallium	NS	NS	6 U	NS	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	NS	NS	6.5 B	NS	7.54 B	4.11 B	4.25 B	2.63 B	3.4 B
	Zinc	NS	NS	31.5	NS	24	14.2 B	30.1	16.6 B	14

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- 4	Aluminum	829	NS	NS	179 B	1,500	1,320 E	326	258	356
	Antimony	35 U	NS	NS	4.14 U	2.65 U	4.79 U	3.46 U	5.08 U	5.1 B
	Arsenic	1.3 B	NS	NS	2.09 U	2.33 U	3.97 U	3.31 U	2.24 U	6 U
	Barium	21.9 B	NS	NS	17.4 B	77.9 B	15.1 B	6.39 B	8.11 B	9.9
	Beryllium	1 U	NS	NS	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	5 U	NS	NS	0.69 U	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	8,150	NS	NS	16,400	7,230	5,350	3,630 B	4,300 B	4,290
	Chromium	5 UUE	NS	NS	0.87 U	1.62 B	1.62 B	1.99 B	0.795 B	4.4 B
	Cobalt	5	NS	NS	0.91 U	1.84 B	0.581 U	1.68 B	0.903 B	1 U
	Copper	8.5 B	NS	NS	1.63 U	5.79 B	3.79 B	2.59 B	1.39 U	10.4
	Iron	3930	NS	NS	2,600	3,670	1,760	499	996	1,640
	Lead	NA	NS	NS	1.38 U	5.61	3.53	2.4 U	1.72 U	4.9 B
	Magnesium	4,260 B	NS	NS	2,780 B	2,170 B	1,930 B	1,340 B	1,560 B	1,520
	Manganese	146	NS	NS	135	312	69.5	39.6	112	47.2
	Mercury	0.2 B	NS	NS	0.109 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	30 U	NS	NS	1.29 U	3.5 b	2.14 B	1.64 U	0.69 U	2.2 B
	Potassium	2,130 B	NS	NS	3,350 B	2,980 B	2,200 B	1,380 B	1,560 B	1,920
	Selenium	1 U	NS	NS	3.66 U	2.93 U	2.67 U	3.84 B	2.81 U	6 U
	Silver	4 U	NS	NS	0.94 U	0.871 U	1.15 U	1.8 B	0.835 U	1 U
	Sodium	6,850	NS	NS	2,410 B	2,860 B	2,960 B	2,390 BE	2,570 B	2,970
	Thallium	1 U	NS	NS	2.48 B	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	9 U	NS	NS	2.05 B	6.95 B	4.03 B	4.06 B	1.38 B	2.6 B
	Zinc	33.3	NS	NS	2.19 U	28	22	55.8	12.2 B	10.7

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant UNITS ug/L	SAMPLES COLLECTED								
		1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- 5N	Aluminum	NS	NS	945	179 B	575	238 E	1180	133 B	449
(SW-D)	Antimony	NS	NS	1.9 U	4.14 U	2.89 B	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	NS	NS	2.7 U	2.09 U	2.33 U	3.97 U	3.31 U	2.24 U	6 U
	Barium	NS	NS	22.8	17.4 B	25.6 B	9.22 B	9.58 B	6.4 B	9.3
	Beryllium	NS	NS	0.14 U	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	NS	NS	0.34 U	0.69 U	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	NS	NS	7,990	16,400	15,700	11,000	10,500	9,730	11,300
	Chromium	NS	NS	1.4 B	0.87 U	1.06 B	0.532 U	2.12 B	0.558 B	1.7 B
	Cobalt	NS	NS	1.1 B	0.91 U	0.515 B	0.581 U	1.78 B	0.541 U	1 U
	Copper	NS	NS	3.2 B	1.63 U	2.28 B	1.3 U	4.09 B	1.39 U	3 U
	Iron	NS	NS	6,900	2,600	1,290	598	1,070	564	2,000
	Lead	NS	NS	3.6 B	1.38 U	2.27 B	1.24 U	2.4 U	1.72 U	2.5 U
	Magnesium	NS	NS	2,560 B	2,780 B	2,850 B	2,110 B	2,010 B	2,010 B	2,000
	Manganese	NS	NS	146	135	103	33.2	35.2	18	60
	Mercury	NS	NS	0.12 U	0.109 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	NS	NS	5 B	1.29 U	1.09 B	0.837 U	1.64 U	0.69 U	1 U
	Potassium	NS	NS	3,910 B	3,350 B	3,160 B	2,210 B	1,600 B	1,370 B	770
	Selenium	NS	NS	1.9 U	3.66 U	2.93 U	2.67 U	3.39 U	2.81 U	6 U
	Silver	NS	NS	0.89 U	0.94 U	0.871 U	1.15 U	2 B	0.835 U	1.1 B
	Sodium	NS	NS	3,870 B	2,410 B	2,280 B	2,160 B	1,650 BE	1,830 B	2,080
	Thallium	NS	NS	5.6 U	2.48 B	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	NS	NS	4.6 B	2.05 B	2.56 B	1.27 B	4.4 B	1.06 B	4.1 B
	Zinc	NS	NS	21.9	2.19 U	4.96 B	4.54 B	25.4	7.02 B	5.9 B

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- E	Aluminum	NS	NS	1,170	NS	NS	NS	NS	NS	NS
	Antimony	NS	NS	1.9 U	NS	NS	NS	NS	NS	NS
	Arsenic	NS	NS	2.7 U	NS	NS	NS	NS	NS	NS
	Barium	NS	NS	30.4	NS	NS	NS	NS	NS	NS
	Beryllium	NS	NS	0.14 U	NS	NS	NS	NS	NS	NS
	Cadmium	NS	NS	0.34 U	NS	NS	NS	NS	NS	NS
	Calcium	NS	NS	8,410	NS	NS	NS	NS	NS	NS
	Chromium	NS	NS	3.9 B	NS	NS	NS	NS	NS	NS
	Cobalt	NS	NS	2.3 B	NS	NS	NS	NS	NS	NS
	Cooper	NS	NS	6.4	NS	NS	NS	NS	NS	NS
	Iron	NS	NS	6,970	NS	NS	NS	NS	NS	NS
	Lead	NS	NS	4.5 B	NS	NS	NS	NS	NS	NS
	Magnesium	NS	NS	2,610 B	NS	NS	NS	NS	NS	NS
	Manganese	NS	NS	323	NS	NS	NS	NS	NS	NS
	Mercury	NS	NS	0.12 U	NS	NS	NS	NS	NS	NS
	Nickel	NS	NS	6.7	NS	NS	NS	NS	NS	NS
	Potassium	NS	NS	4,140 B	NS	NS	NS	NS	NS	NS
	Selenium	NS	NS	1.9 U	NS	NS	NS	NS	NS	NS
	Silver	NS	NS	0.89 U	NS	NS	NS	NS	NS	NS
	Sodium	NS	NS	3,990 B	NS	NS	NS	NS	NS	NS
	Thallium	NS	NS	5.6 U	NS	NS	NS	NS	NS	NS
	Vanadium	NS	NS	7.5 B	NS	NS	NS	NS	NS	NS
	Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	NS

Table 4
Annual Wooded Wetland Report
Surface Water Sample Results - Metals Analysis

Location	Contaminant	SAMPLES COLLECTED								
	UNITS ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
SW- 2001	Aluminum	NS	NS	NS	NS	466	427 E	4090	119 B	412
	Antimony	NS	NS	NS	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U
	Arsenic	NS	NS	NS	NS	2.33 U	3.97 U	3.31 U	2.24 U	6 U
	Barium	NS	NS	NS	NS	42.9 B	11.2 B	20.9 B	6.54 B	8.3
	Beryllium	NS	NS	NS	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U
	Cadmium	NS	NS	NS	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U
	Calcium	NS	NS	NS	NS	15,300	11,700	10,400	9,780	10,300
	Chromium	NS	NS	NS	NS	0.977 B	0.532 U	4.52 B	0.503 U	1.6 B
	Cobalt	NS	NS	NS	NS	0.518 B	0.581 U	2.86 B	0.541 U	1 U
	Copper	NS	NS	NS	NS	1.94 B	2.74 B	7.14 B	1.39 U	3 U
	Iron	NS	NS	NS	NS	1,190	753	3,420	558	1,850
	Lead	NS	NS	NS	NS	1.66 B	1.24 U	8.68	1.72 U	2.5 U
	Magnesium	NS	NS	NS	NS	2,760 B	2,180 B	2,320 B	2,020 B	1,940
	Manganese	NS	NS	NS	NS	130	103	105	18.9	60.4
	Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
	Nickel	NS	NS	NS	NS	0.815 U	1.08 B	1.64 U	0.69 U	1.9 B
	Potassium	NS	NS	NS	NS	3,050 B	2,130 B	1,960 B	1,360 B	811
	Selenium	NS	NS	NS	NS	2.93 U	2.67 U	3.39 U	2.81 U	6 U
	Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U
	Sodium	NS	NS	NS	NS	2,270 B	2,230 B	1,800 BE	1,830 B	2,010
	Thallium	NS	NS	NS	NS	3.88 U	4.99 U	3.64 U	10 U	5 U
	Vanadium	NS	NS	NS	NS	2.32 B	2.13 B	12 B	1.03 B	2.9 B
	Zinc	NS	NS	NS	NS	4.25 B	5.91 B	72.6	7.05 B	7.7 B

NOTES:

U Analyte was analyzed for but not detected.

1994 Samples were collected from 0.0 ' to 0.5'

N - Spike sample recovery was not within control limits

Number in parenthesis ( ) indicates alternate identification for same location.

J - Estimated value; concentration below method detection limit.

NA Not available

* - Duplicate precision is not within control limits.

NS Not sampled

B - Concentraion less than the contract required detection limit, but greater than or equal to the instrument detection limit.

Table 5
Wooded Wetlands-Sediment Results and Benchmark Concentrations
Brookhaven National Laboratory, Upton, New York

South Pond

Contaminant	SD-5 (SD-B)									SD-6 (SD-C)								
units mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Copper	NS	4.8 B	8.1	9.59	9.03	9.65	11.7	10.5	NS	NS	4.8 B	7.8	0.72 B	7.27	1.85	0.55 B	1.37	NS
Lead	NS	28	19.4	13.4	13	21.1 N	12.7	30.1 *	NS	NS	19.8	63.5	4.62	5.28	9.74 N	1.6	10.3 *	NS
Manganese	NS	41.5	45.1	82.4	123	78.7	88.3 *N	109 *	NS	NS	29.3	39.3	10.4	144	13.4	9.87 *N	15 *	NS
Mercury	NS	0.11 U	0.05	0.098	0.053	0.053	0.021	0.052	0.051	NS	0.1 U	0.18	0.049	0.004	0.011 B	0.01 U	0.02	0.0122
Zinc	NS	22.3	25.1	31.4	29.8	31.9	29.5	26.3 *	NS	NS	19.7	26	5.86	27.6	6.45	3.98	6.67 *	NS

	SD-16									SD-17 (SD-A)								
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Copper	1 B	NS	NS	1.48	0.904	3.78	0.389 B	8.14	NS	2.9 B	NS	8.2	1.64	1.41	1.42	12.6	1.39	NS
Lead	4.4 NJ	NS	NS	9.99	3.19	16.1 N	1.7	39.5 *	NS	4.1 NJ	NS	21.3	6.98	6.15	5.29 N	4.71	2.49 *	NS
Manganese	11.5	NS	NS	12.4	9.68	17.7	8.07 *N	45 *	NS	14.8	NS	40.1	10.9	12.3	9.72	16 *N	9.49 *	NS
Mercury	0.001 B	NS	NS	0.064	0.003	0.033	0.005 U	0.028	0.034	0.02 B	NS	0.03 U	0.038	0.003	0.014	0.01 B	0.01 B	0.062
Zinc	4.7 B	NS	NS	7.34	6.48	12.9	2.58	29.1 *	NS	8.8	NS	27.5	7.37	4.6	6.37	6.24	3.4 *	NS

South Pond Averages

Contaminant units mg/Kg	1999	2000	2001	2002	2003	2004	2005	Maximum Sediment Conc.[1]	Bkg. Sediment Conc.
Copper	8.03	3.36	4.7	4.2	6.3	5.4	NS	29	52.5
Lead	34.73	8.75	6.9	13.1	5.2	20.6	NS	82.9	97.6
Manganese	41.50	29.03	72.2	29.9	30.6	44.6	NS	541	84.3
Mercury	0.09	0.06	0.02	0.03	0.01	0.03	0.04	0.17	0.41
Zinc	26.20	12.99	17.1	14.4	10.6	16.4	NS	122	158

North Pond

Contaminant	SD-11									SD-12 (SD-D)								
units mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Copper	NA	NS	NS	5.25	7.06	21.3	7.52	7.55	NS	NA	NS	45	7.41	37	26.4	20.2	13.6	NS
Lead	6.3 N	NS	NS	8.41	13.2	85.7 N	17.8	16.9 *	NS	10.4 NJ	NS	86	6.11	71.1	59.8 N	42.3	25.5 *	NS
Manganese	6.6	NS	NS	3.74	9.41	33.9	10.5 *N	11.4 *	NS	56	NS	125	4.12	147	73.3	48.4 *N	33.4 *	NS
Mercury	0.030 B	NS	NS	0.074	0.120	0.198	0.056	0.044	0.073	0.03 B	NS	0.370	0.074	0.272	0.215	0.21	0.08	0.203
Zinc	NA	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS	NA	NS	123	5.91	137	70.3	38.4	22.3 *	NS

	SD-13 (SD-E)									SD-2001								
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Copper	8.1	NS	9.5	1.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	53	23.3	21.2	11.6	NS
Lead	15.8 NJ	NS	39.9	5.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	145	57 N	60.8	29.7 *	NS
Manganese	85	NS	16.0	4.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	158	69.3	41.2 *N	40.4 *	NS
Mercury	0.08 B	NS	0.13	0.054	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.727	0.192	0.18	0.098	0.116
Zinc	27.9	NS	17.3	4.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	186	76.6	42.1	24.2 *	NS

North Pond Averages

Contaminant units mg/Kg	1999	2000	2001	2002	2003	2004	2005	Maximum Sediment Conc.[1]	Bkg. Sediment Conc.
Copper	27.1	4.7	32.2	23.7	16.3	16.3	NS	29	52.5
Lead	63.1	6.6	76.4	67.5	40.3	40.0	NS	82.9	97.6
Manganese	70.5	3.9	104.8	58.8	33.4	33.7	NS	541	84.3
Mercury	0.25	0.07	0.37	0.20	0.15	0.15	0.08	0.17	0.41
Zinc	70.2	8.6	113.2	69.5	34.3	33.6	NS	122	158

NOTES:

[1] Final Focused Ecological Risk Assessment for Operable Unit I/VI (CDM 1999)
1994 Samples were collected from 0.0 ' to 0.5'
Number in parenthesis ( ) indicates alternate identification for same location.
NA Not available
NS Not sampled
U Analyte was analyzed for but not detected.
N - Spike sample recovery was not within control limits
J - Estimated value; concentration below method detection limit.
* - Duplicate precision is not within control limits.
B - Concentraion less than the contract required detection limit, but greater than or equal to the instrument detection limit.

Table 6
Wooded Wetlands-Surface Water Results and Critical Water Concentrations
Brookhaven National Laboratory, Upton, New York

South Pond

Contaminant	SW-5S (SW-B)								
units ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Aluminum	NS	304	1,240	253	385	445 E	429	434	210
Cadmium	NS	0.2 B	0.44 B	0.69 U	0.274 B	0.210 U	0.660 U	0.313 U	1 U
Cobalt	NS	1.3 U	1.1 B	0.91 U	0.679 B	0.581 U	1.710 B	0.918 B	1 U
Copper	NS	0.9 U	13.4	1.63 U	2.24 B	1.52 B	2.58 B	1.39 U	3 U
Iron	NS	347	3,740	1,120	1,100	890	779	1,210	832
Lead	NS	2.2 B	5.3	1.38 U	1.47 U	2.16 B	2.4 U	1.72 U	2.5 U
Mercury	NS	0.1 B	0.13 B	0.05 B	0.057 U	0.04 U	0.10 U	0.05 U	0.05 U
Nickel	NS	1.6 U	7.6	1.29 U	1.91 B	2.09 B	1.64 U	1.19 B	3.8 B
Silver	NS	0.8 U	0.89 U	0.94 U	0.871 U	1.15 U	1.70 U	0.84 U	1 U
Zinc	NS	47.5	65.8	8.12 B	12.4 B	13.7 B	34.4	15.4 B	12.2

Contaminant	SW-6 (SW-C)								
units ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May -04	May-05
Aluminum	NS	762	110,000	503	523	541 E	413	346	539
Cadmium	NS	NA	7.4 B	0.69 U	0.272 U	0.210 U	0.660 U	0.313 U	1.000 U
Cobalt	NS	1.4 B	22.7 B	0.91 U	0.419 U	0.581 U	1.330 B	0.738 B	1.000 U
Copper	NS	8.1 B	165	1.92 B	2.48 B	1.55 B	1.91 B	1.39 U	3 U
Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470
Lead	NS	4.4	887	1.38 U	1.47 U	1.24 U	2.4 U	1.72 U	2.5 U
Mercury	NS	NA	1	0.085 B	0.057 U	0.04 U	0.10 U	0.05 B	0.05 U
Nickel	NS	NA	121	1.93 B	2.07 B	2.07 B	1.64 U	1.07 B	2.5 B
Silver	NS	NA	2.3 B	0.94 U	0.871 U	1.15 U	1.70 U	0.84 U	1.00 U
Zinc	NS	53.2	699	16.8 B	14.1 B	14.4 B	29.9	11.5 B	20.4

	SW-16								
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Aluminum	NS	NS	NS	NS	928	521 E	446	543	618
Cadmium	NS	NS	NS	NS	0.272 U	0.210 U	0.660 U	0.313 U	1 U
Cobalt	NS	NS	NS	NS	0.627 B	0.581 U	1.690 B	0.812 B	1 U
Copper	NS	NS	NS	NS	3.3 B	2.21 B	3.09 B	1.39 U	3 U
Iron	NS	NS	NS	NS	2,320	1,330	1,430	1480	1820
Lead	NS	NS	NS	NS	3.86	1.39 B	2.4 U	1.72 U	2.5 U
Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.10 U	0.047 U	0.05 U
Nickel	NS	NS	NS	NS	2.81 B	2.23 B	1.64 U	1.03 B	2.1 B
Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.70 U	0.835 U	1 U
Zinc	NS	NS	NS	NS	15.5 B	14.6 B	34	14.8 B	17.1

	SW-17 (SW-A)								
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05
Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357
Cadmium	NS	NS	0.34 U	NS	0.272 U	0.210 U	0.660 U	0.313 U	1 U
Cobalt	NS	NS	1.1 B	NS	1.49 B	0.759 B	1.820 B	0.754 B	1 U
Copper	NS	NS	5	NS	4.2 B	2.21 B	3.26 B	1.39 U	17.6
Iron	NS	NS	5,410	NS	5,430	1,650	1,120	1170	2320
Lead	NS	NS	5.7	NS	3.31	2.04 B	2.4 U	1.72 U	2.5 U
Mercury	NS	NS	0.12 U	NS	0.057 U	0.04 U	0.10 U	0.047 U	0.05 U
Nickel	NS	NS	5.5	NS	3.28 B	2.27 B	1.64 U	1.04 B	6.7
Silver	NS	NS	0.89 U	NS	0.871 U	1.15 U	1.70 U	0.835 U	1 U
Zinc	NS	NS	32	NS	24	14.2 B	30.1	16.6 B	14

South Pond Averages

Contaminant	**Bench-mark[1]**								**Critical**
units ug/L	1994/97	1999	2000	2001	2002	2003	2004	2005	**Conc.[1]**
Aluminum	**762**	**37,500**	378	**612**	487	445	452	431	525
Cadmium	0.3	2.73	0.69	0.27	0.21	0.66	0.31	1.00	12.8
Cobalt	8.1	8.30	0.91	0.80	0.63	1.64	0.81	1.00	15
Copper	18.7	**61.13**	1.78	3.06	1.87	2.71	1.39	6.65	50
Iron	**4,400**	**28,883**	**1,630**	**2,525**	1148.75	963	1,114	1,611	1,000
Lead	4.4	**299**	1.38	2.53	1.71	2.40	1.72	2.50	14.6
Mercury	0.24	0.42	0.07	0.06	0.04	0.10	0.05	0.05	27
Nickel	3.5	44.70	1.61	2.52	2.17	1.64	1.08	3.78	420
Silver	ND	1.36	0.94	0.87	1.15	1.70	0.84	1.00	2.4
Zinc	**64.9**	**265.4**	12.5	16.5	14.23	32.10	14.6	15.9	23.8

Table 6
Wooded Wetlands-Surface Water Results and Critical Water Concentrations
Brookhaven National Laboratory, Upton, New York

North Pond

Contaminant units ug/L	SW-4 1994	SW-4 1997	SW-4 Jun-99	SW-4 Aug-00	SW-4 Jun-01	SW-4 May-02	SW-4 May-03	SW-4 May-04	SW-4 May-05	SW-5N (SW-D) 1994	SW-5N (SW-D) 1997	SW-5N (SW-D) Jun-99	SW-5N (SW-D) Aug-00	SW-5N (SW-D) Jun-01	SW-5N (SW-D) May-02	SW-5N (SW-D) May-03	SW-5N (SW-D) May-04	SW-5N (SW-D) May-05
Aluminum	829	NS	NS	193 B	1,500	1320 E	326	258	356	38,600	NS	945	179 B	575	238 E	1180	133 B	449
Cadmium	5 U	NS	NS	0.69 U	0.272 U	0.210 U	0.66 U	0.313 U	1 U	NA	NS	0.34 U	0.69 U	0.272 U	0.210 U	0.66 U	0.313 U	1 U
Cobalt	5 U	NS	NS	0.91 U	1.84 B	0.581 U	1.68 B	0.903 B	1 U	18.7 B	NS	1.1 B	0.91 U	0.515 B	0.581 U	1.78 B	0.541 U	1 U
Copper	8.5 B	NS	NS	1.63 U	5.79 B	3.79 B	2.59 B	1.39 U	3 U	56.2	NS	3.2 B	1.63 U	2.28 B	1.3 U	4.09 B	1.39 U	3 U
Iron	3,930	NS	NS	2,790	3,670	1,760	499	996	1640	4,400	NS	6,900	2,600	1,290	598	1070	564	2000
Lead	NA	NS	NS	1.38 U	5.61	3.53	2.4 U	1.72 U	4.9 B	NA	NS	3.6 B	1.38 U	2.27	1.24 U	2.4 U	1.72 U	2.5 U
Mercury	0.2 B	NS	NS	0.106 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.24 B	NS	0.12 U	0.109 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
Nickel	30 U	NS	NS	1.29 U	3.5 B	2.14 B	1.64 U	0.69 U	2.2 B	3.5 B	NS	5 B	1.29 U	1.09 B	0.837 U	1.64 U	0.69 U	1 U
Silver	4 U	NS	NS	0.94 U	0.871 U	1.15 U	1.8 B	0.835 U	1 U	NA	NS	0.89 U	0.94 U	0.871 U	1.15 U	2 B	0.835 U	1.1 B
Zinc	33	NS	NS	2.19 U	28	22	55.8	12.2 B	10.7	252	NS	21.9	2.19 U	4.96 B	4.54 B	25.4	7.02 B	5.9 B

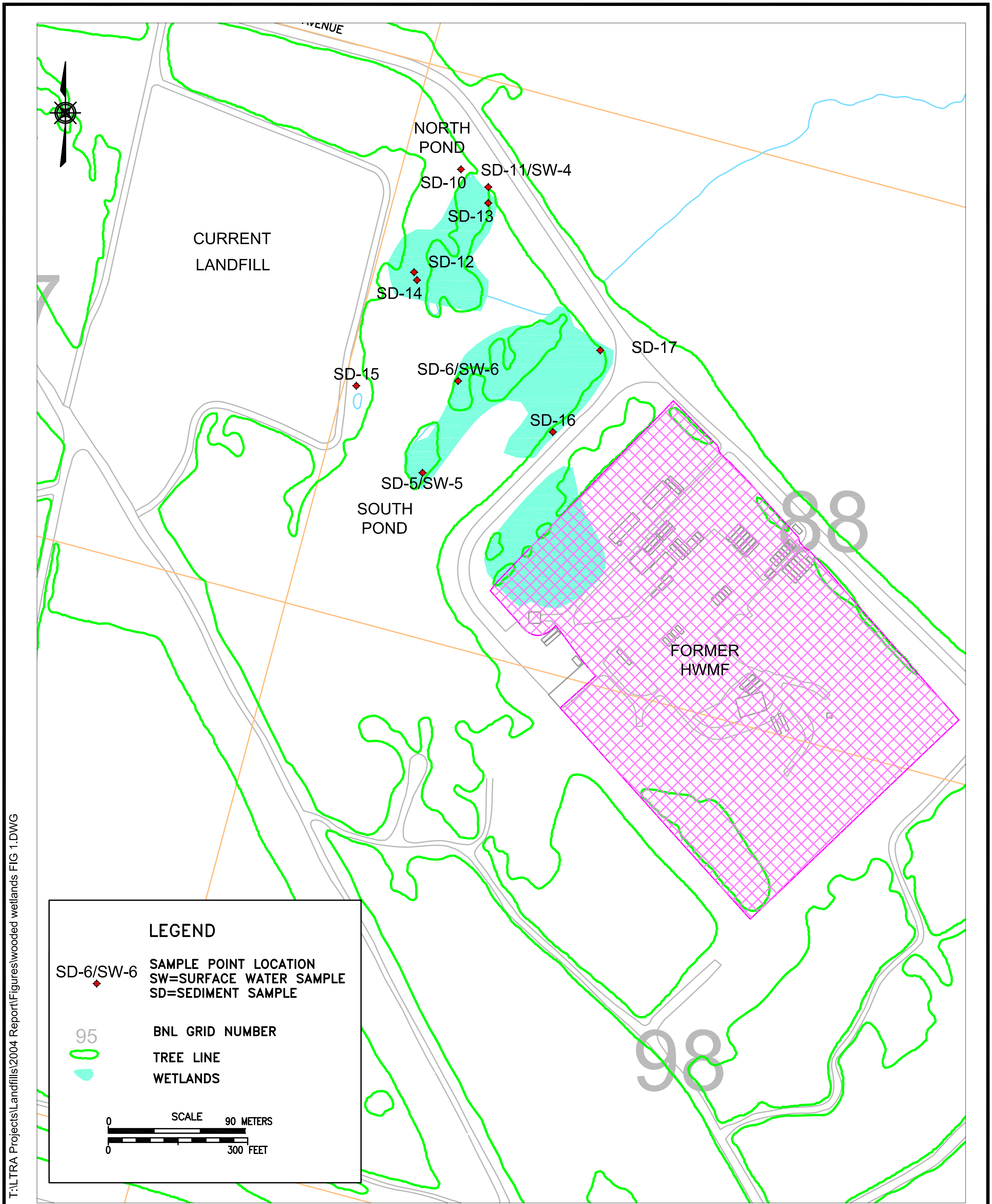
	SW-E 1994	SW-E 1997	SW-E Jun-99	SW-E Aug-00	SW-E Jun-01	SW-E May-02	SW-E May-03	SW-E May-04	SW-E May-05	SW-2001 1994	SW-2001 1997	SW-2001 Jun-99	SW-2001 Aug-00	SW-2001 Jun-01	SW-2001 May-02	SW-2001 May-03	SW-2001 May-04	SW-2001 May-05
Aluminum	NS	NS	1,170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	466	427 E	4090	119 B	412
Cadmium	NS	NS	0.34 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.272 U	0.210 U	0.66 U	0.313 U	1 U
Cobalt	NS	NS	2.3 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.518 B	0.581 U	2.86 B	0.541 U	1 U
Copper	NS	NS	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.94 B	2.74 B	7.14 B	1.39 U	3 U
Iron	NS	NS	6,970	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,190	753	3420	558	1850
Lead	NS	NS	4.5 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.66 B	1.24 U	8.68	1.72 U	2.5 U
Mercury	NS	NS	0.12 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U
Nickel	NS	NS	6.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.815 U	1.08 B	1.64 U	0.69 U	1.9 B
Silver	NS	NS	0.89 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U
Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.25 B	5.91 B	72.6	7.05 B	7.7 B

North Pond Averages

Contaminant units ug/L	Bench-mark[1] 1994/97	1999	2000	2001	2002	2003	2004	2005	Critical Conc.[1]
Aluminum	**762**	**945**	186	**847**	**662**	**1,865**	170	406	525
Cadmium	0.3	0.34	0.69	0.27	0.21	0.66	0.31	1.00	12.8
Cobalt	8.1	1.10	0.91	0.96	0.58	2.11	0.66	1.00	15
Copper	18.7	3.20	1.63	3.34	2.61	4.61	1.39	3	50
Iron	**4,400**	**6,900**	**2,695**	**2,050**	**1,037**	**1,663**	706	1,830	1,000
Lead	4.4	3.60	1.38	3.18	2.00	4.49	1.72	3.3	14.6
Mercury	0.24	0.12	0.11	0.06	0.04	0.10	0.05	0.05	27
Nickel	3.5	5.00	1.29	1.80	1.35	1.64	0.69	1.7	420
Silver	ND	0.89	0.94	0.87	1.15	1.83	0.84	1.03	2.4
Zinc	**64.9**	21.9	2.2	12.40	10.82	**51.27**	8.76	8.10	23.8

NOTES:
[1] Final Focused Ecological Risk Assessment (FERA) for Operable Unit I/VI (CDM 8/98)
Number in parenthesis ( ) indicates alternate identification for same location.
NA Not available
NS Not sampled
U Analyte was analyzed for but not detected.
N - Spike sample recovery was not within control limits
J - Estimated value; concentration below method detection limit.
* - Duplicate precision is not within control limits.
B - Concentraion less than the contract required detection limit, but greater than or equal to the instrument detection limit.

FIGURES



BROOKHAVEN NATIONAL LABORATORY

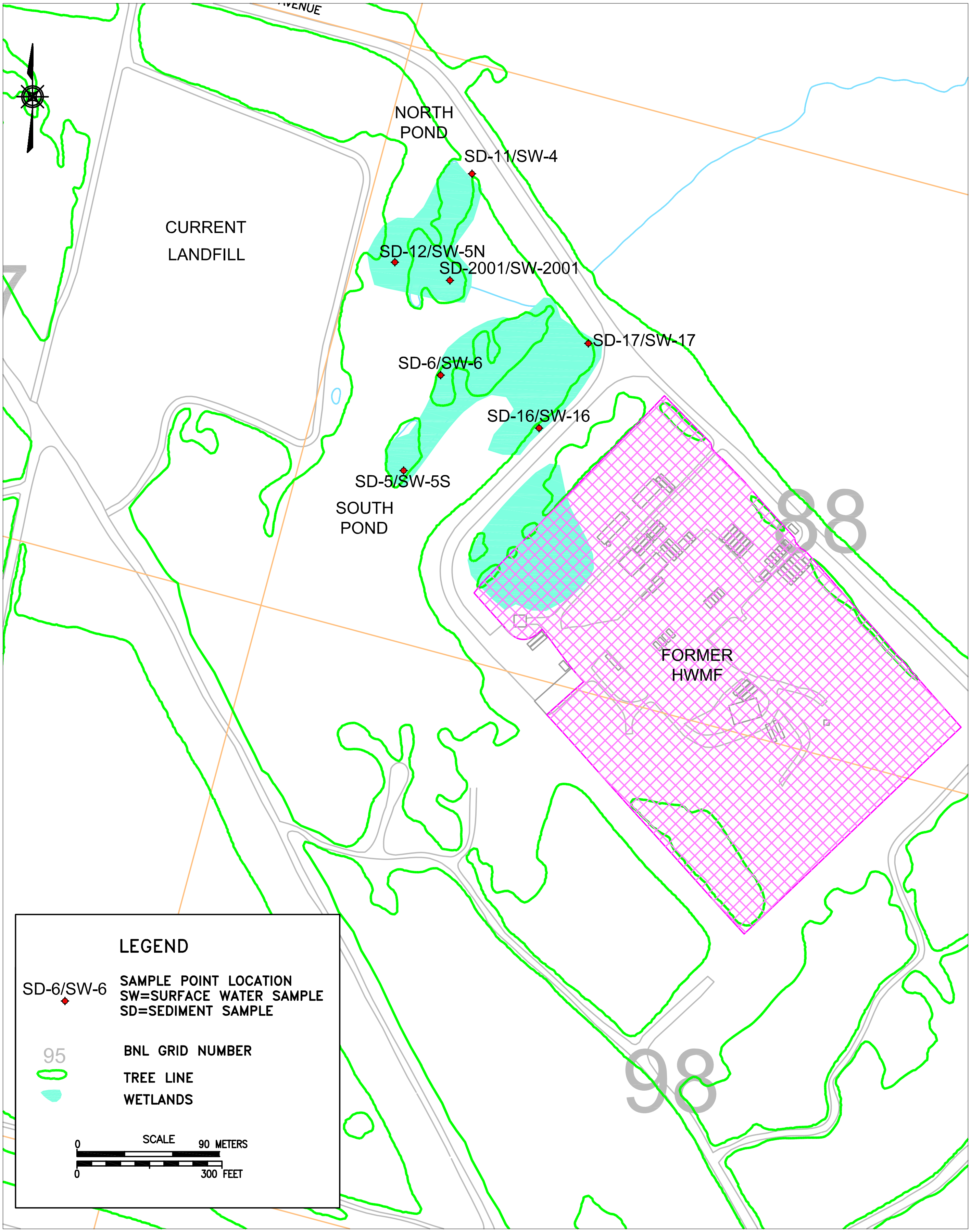
EWMS DIVISION

TITLE: WOODED WETLANDS BENCHMARK SURFACE AND SEDIMENT SAMPLE LOCATIONS FROM ECOLOGICAL RISK ASSESSMENT 1994 – 1997

2005 ENVIRONMENTAL MONITORING REPORT CURRENT AND FORMER LANDFILL AREAS

DWN: KCK	VT: HZ.: –	DATE: 02/18/04	PROJECT NO.: 07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: –
FIGURE NO.: 1			

T:\LTRA Projects\Landfills\2004 Report\Figures\wooded wetlands FIG 2.DWG



BROOKHAVEN NATIONAL LABORATORY

EWMS DIVISION

TITLE:

WOODED WETLANDS
SEDIMENT AND SURFACE WATER
SAMPLING LOCATIONS
2005 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
KCK	–	02/18/04	07928
CHKD: JEB	APPD: WRD	REV.: –	NOTES: –
FIGURE NO.: 2			

Appendix B

Soil Gas Sampling Field Notes

Ozoke

[illegible]/30/05
Sun 50°

Current Landfill

Calibration check of Landtec GA-90 w/ new H_2S pod performed prior to use.
Time onsite: 0920 SN 690
Time offsite: 11 55

Location	CH_4%	LEL%	H_2S ppm	Comment
GM 1A	8.8	176	1	
1B	3.0	60	0	
1C	7.5	150	1	
GM 2A	0.3	6	0	
2B	0.2	4	1	
2C	0.3	6	1	
GM 3A	0.7	14	0	
3B	0.5	10	1	
3C	0.1	2	0	
GM 4A	0.2	4	0	
4B	6.5	130	0	
4C	6.3	126	0	
GM 5A	0.7	14	1	
5B	13.4	268	0	
5C	9.2	184	0	

3/30/05
Sun 50

Current Landfil

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 6A	0.2	4	1	
6B	7.7	154	1	
6C	8.6	172	1	
SGM 7A	0	0	0	
7B	0	0	0	
7C	0	0	1	
SGM 8A	0	0	0	
8B	0	0	0	
8C	0	0	0	
SGM 9A	0	0	0	
9B	0	0	1	
9C	0	0	0	
SGM 10A	0.2	4	1	
10B	0.2	4	1	
10C	0.1	2	1	
SGM 11A	0.2	4	0	
11B	0.2	4	1	
SGM 12A	0.2	4	0	
12B	0.1	2	0	
SGM 13A	0.1	2	0	
13B	0.2	4	0	

3/30/05
Sun 50°

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 14A	0.3	6	0	
14B	0	0	0	water in well screen
SGM 15A	0	0	0	water in well
15B	0	0	0	screen
SGM 16A	0	0	0	water in well
16B	0	0	0	screen ↓
SGM 17A	0	0	0	
17B	0	0	0	
SGM 18A	0	0	0	
18B	0	0	0	
SGM 19A	5.6	112	0	
19B	0	0	0	
GSGM 1A	0	0	0	
1B	0	0	0	
1C	0	0	0	
GSGM 2A	0	0	0	
2B	0	0	0	
2C	0	0	0	
GSGM 3A	0	0	0	
3B	0	0	0	
GSGM 4A	0	0	0	
4B	0	0	0	

Cogent

7/21/05
cooler 75°
Sun

Current Landfill

50.3 % CH_4 prior to calibration
35.1 % CO_2 prior to calibration
0 ppm on H_2S
O_2 ok
SN 690 Landtec GA-90
Time onsite: 0730
Time offsite:

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 1A	5.4	108	3	
1B	2.9	58	0	
1C	5.6	112	0	
SGM 2A	13.7	274	0	
2B	0.7	14	0	
2C	0.1	2	0	
SGM 3A	36.8	736	0	
3B	2.5	50	0	
3C	0.2	4	0	
SGM 4A	10.7	214	1	
4B	25.1	502	0	
4C	0.2	4	0	
SGM 5A	14.3	286	1	
5B	21.1	422	1	

Cogent

7/21/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 5C	18.8	376	1	
SGM 6A	2.4	48	1	
6B	24.4	488	1	
6C	24.7	494	1	
SGM 7A	0	0	0	
7B	0	0	0	
7C	0	0	1	
SGM 8A	0	0	0	
8B	0	0	0	
8C	0	0	0	
SGM 9A	0.2	4	1	
9B	0.2	4	0	
9C	0.2	4	0	
SGM 10A	2.7	54	0	
10B	12.0	240	2	
10C	1.6	32	0	
SGM 11A	6.0	120	1	
11B	13.2	264	1	
SGM 12A	3.9	78	0	
12B	0.8	16	0	

CO safe

7/21/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 13A	6.2	124	1	
13B	0.4	8	2	
SGM 14A	0.1	2	1	
14B	0.2	4	1	* H_2O in screen
SGM 15A	0.2	4	0	*
15B	0.1	2	0	
SGM 16A	0.2	4	1	
16B	0	0	0	*
SGM 17A	0	0	0	*
17B	0	0	0	*
SGM 18A	0	0	0	*
18B	0	0	0	*
SGM 19A	6.3	124	1	
19B	0	0	0	0

* H_2O in screen - caused vacuum on sample pump

CO safe

7/21/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm	Comment
GSGM 1A	0	0	0	
1B	0	0	0	
1C	0	0	0	
GSGM 2A	0	0	0	
2B	0	0	0	
2C	0	0	0	
GSGM 3A	0	0	1	
3B	0	0	0	
GSGM 4A	0	0	0	
4B	0	0	0	

[initials] 7/21/05

CO site

10/21/05
56° overcast

Current Landfill

53.9 prior to Cal CH4
32.1 prior to Cal CO2
Landtec GA-90 SN 690 w/ H_2S ppm

Location	CH_4 %	LEL %	H_2S ppm
SGM 1A	5.0	100	2
1B	3.0	60	0
1C	5.5	110	0
SGM 2A	1.7	34	0
2B	27.2	544	6
2C	24.7	494	0
SGM 3A	0.7	14	0
3B	47.6	952	2
3C	39.9	798	1
SGM 4A	46.2	924	0
4B	42.4	848	1
4C	38.2	764	0
SGM 5A	36.6	732	1
5B	34.6	692	0
5C	27.3	546	0
SGM 6A	29.7	594	0
6B	29.7	594	0
6C	27.2	544	1

CO site

10/21/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm
SGM 7A	0	0	0
7B	0	0	0
7C	0	0	0
SGM 8A	0	0	0
8B	0	0	0
8C	0	0	0
SGM 9A	0	0	1
9B	0	0	0
9C	0	0	0
SGM 10A	12.3	246	1
10B	16.7	334	0
10C	14.3	286	1
SGM 11A	17.2	344	20
11B	19.6	392	4
SGM 12A	40.1	802	51
12B	25.7	514	0
SGM 13A	0.1	2	1
13B	0.2	4	1
SGM 14A	5.6	112	2
14B	0.2	4	1

Clyde

10/21/05

Current Landfill

Location	CH4 %	LEL %	H2S ppm
SGM 15A	0.1	2	1
15B	0.1	2	0
SGM 16A	0	0	0
16B	0	0	0
SGM 17A	0	0	0
17B	0	0	0
SGM 18A	0	0	1
18B	0	0	0
SGM 19A	29.2	584	20
19B	31.8	636	46
GSGM 1A	0	0	0
1B	0	0	0
1C	0	0	0
GSGM 2A	0	0	0
2B	0	0	0
2C	0	0	0
GSGM 3A	0	0	0
3B	0	0	0
GSGM 4A	0	0	0
4B	0	0	0

Drake

12/29/05
Sun 30°

Current Landfill

Calibration check of Landtec
GA-90 SN 690 w/ H2S pod
performed prior to use
and passed. 50.3 CH4, 35.1 CO2
Time onsite 0850 O2 good
Time offsite 1200

Location	CH4 %	LEL %	H2S ppm
SGM 1A	6.7	134	2
1B	3.8	76	0
1C	6.1	122	0
SGM 2A	3.0	60	1
2B	12.4	248	3
2C	0	0	0
SGM 3A	0	0	0
3B	11.0	220	1
3C	0	0	0
SGM 4A	9.3	186	0
4B	18.0	366	1
4C	14.1	282	2
SGM 5A	10.2	204	1
5B	22.8	456	6
5C	18.3	366	0

Weight

12/23/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm
SGM 6A	8.1	162	0
6B	16.8	336	0
6C	14.9	298	0
SGM 7A	0	0	0
7B	0	0	0
7C	0	0	0
SGM 8A	0	0	0
8B	0	0	0
8C	0	0	0
SGM 9A	0	0	0
9B	0	0	0
9C	0	0	0
SGM 10A	0	0	0
10B	1.6	32	0
10C	1.2	24	1
SGM 11A	0	0	0
11B	0	0	0
SGM 12A	4.0	80	3
12B	0	0	0
SGM 13A	0	0	0
13B	0	0	0

Weight

12/28/05

Current Landfill

Location	CH_4 %	LEL %	H_2S ppm	
SGM 14A	0.1	2	0	
14B	0	0	0	H_2O in Screen
SGM 16A	0	0	0	H_2O in Screen
16B	0	0	0	H_2O in Screen
SGM 17A	0	0	0	H_2O in Screen
17B	0	0	0	H_2O in Screen
SGM 18A	0	0	0	
18B	0	0	1	
SGM 19A	15.7	314	2	
19B	8.1	162	0	
6SGM 1A	0	0	0	
1B	0	0	1	
1C	0	0	0	
6SGM 2A	0	0	0	
2B	0	0	0	
2C	0	0	0	
6SGM 3A	0	0	0	
3B	0	0	0	
6SGM 4A	0	0	0	
4B	0	0	0	
SGM 15A	0	0	0	H_2O in Screen
15B	0	0	0	"

Cosenka

[illegible]/05

[illegible] 56°

Former Landfill

Calibration check of Landtec GA 90 performed prior to use. Had new H_2S pod installed. SN 690

Time Onsite: 1346

Time offsite: 1500

...ation	CH_4%	LEL%	H_2S ppm	Comment
Gm 1A	0	0	0	
1B	0	0	0	
Gm 2A	0	0	0	
2B	0	0	0	
Gm 3A	0	0	0	
3B	0	0	0	
Gm 4A	0	0	0	
4B	0	0	0	
Gm 5A	0	0	0	
5B	0	0	0	
Gm 6A	0	0	0	
6B	0	0	0	
Gm 7A	0	0	0	
7B	0	0	0	

64

3/30/05

Sun 56°

Former landfill

Location	CH_4 %	LEL %	H_2S ppm	Comments
SGM 8A	0	0	0	
8B	0	0	0	
SGM 9A	0	0	0	
9B	0	0	0	
SGM 10A	0	0	0	
10B	0	0	0	
SGM 11A	0	0	0	
11B	0	0	0	
SGM 12A	0	0	0	
12B	0	0	0	

3/30/05

65

7/21/05

Sun 80°

Former landfill

Location	CH_4	LEL %	H_2S ppm	Comment
SGM 1A	0	0	0	
1B	0	0	0	
SGM 2A	0	0	0	
2B	0	0	0	
SGM 3A	0	0	0	
3B	0	0	0	
SGM 4A	0	0	0	
4B	0	0	0	
SGM 5A	0	0	0	
5B	0	0	0	
SGM 6A	0	0	0	
6B	0	0	0	
SGM 7A	0	0	0	
7B	0	0	0	
SGM 8A	0	0	0	
8B	0	0	0	
SGM 9A	0	0	0	
9B	0	0	0	
SGM 10A	0	0	0	
10B	0	0	0	

COsgita

7/21/05
sn 80

Former Landfill

Location	CH_4 %	LEL %	H_2S ppm	Comment
SGM 11A	0	0	0	
11B	0	0	0	
SGM 12A	0	0	0	
12B	0	0	0	

Calibration check of
Landtec GA-90 SN 690
performed prior to use
15.1 % CH_4
14.8 % CO_2
read prior to calibration
0 H_2S (ppm)
O_2 ok.

CO 7/21/05

R Metz

10/26/05
Sun 50°F

Former Landfill
on site @ 1330

Location	CH_4 %	LEL %	H_2S ppm	Comments
SGM 1A	0	0	0	
SGM 1B	0	0	0	
SGM 2A	0	0	0	
SGM 2B	0	0	0	
SGM 3A	0	0	0	
SGM 3B	0	0	0	
SGM 4A	0	0	0	
SGM 4B	0	0	0	
SGM 5A	0	0	0	
SGM 5B	0	0	0	
SGM 6A	0	0	0	
SGM 6B	0	0	0	
SGM 7A	0	0	0	
SGM 7B	0	0	0	
SGM 8A	0	0	0	
SGM 8B	0	0	0	
SGM 9A	0	0	0	
SGM 9B	0	0	0	
SGM 10A	0	0	0	
SGM 10B	0	0	0	
SGM 11A	0	0	0	
SGM 11B	0	0	0	

R. Metz

10/26/05
Sunny
50°F

Former Landfill

Location	CH4%	LEL%	H2S ppm	Comments
SGM12A	0	0	0	
SGM12B	0	0	0	

completed @ 1445
Cal check of Landtec 90
SN#690 performed
prior to use
15% CH4 } cal readings
14.8% CO2 }
~~H~~ H2S 0ppm OK
O2 OK

RM 10/26/05

C. Ogata

12/28/05
cloudy 35°

Former Landfill

Calibration check of
Landtec GA-90 SN 690
w/ H_2S pod performed
prior to use
15% CH_4 14.9% CO_2 O_2 OK

Location	CH_4%	LEL%	H_2S ppm
SGM 1A	0	0	0
1B	0	0	0
SGM 2A	0	0	0
2B	0	0	0
SGM 3A	0	0	0
3B	0	0	0
SGM 4A	0	0	0
4B	0	0	0
SGM 5A	0	0	0
5B	0	0	0
SGM 6A	0	0	0
6B	0	0	0
SGM 7A	0	0	0
7B	0	0	0
SGM 8A	0	0	0

70
12/28/05

C Ozgte

Former Landfill

Location	CH_4%	LEL%	H_2S ppm
SGM8 B	0	0	0
SGM9A	0	0	0
9B	0	0	0
SGM-10A	0	0	0
10B	0	0	0
SGM 11A	0	0	0
11B	0	0	0
SGM12A	0	0	0
12B	0	0	0

Time onsite 1400
Time offsite 1530

CO 12/28/05

Appendix C

Monthly Landfill Site Inspection Forms

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 1-12-05

Purpose of Inspection: ✓ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site:

Time off Site:

Weather Conditions:

A. Inspection Checklist

Component		Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation					✓
	Cap	✓				✓
	Gas Vents	✓				✓
2.0	**Drainage Structures:**					
	Toe Drain					✓
	Drainage Channels	✓				✓
	French Drains/Outfalls	✓				✓
	Subsurface Drainage Pipes/Outfalls	✓				✓
	Manholes	✓				✓
	Recharge Areas	✓				✓
3.0	**Monitoring System:**					
	Soil Gas Wells	✓				✓
	Groundwater Wells	✓				✓
4.0	**Site Access:**					
	Asphalt Access Road	✓				✓
	Crushed-Concrete Access Road	✓				✓

B. Description of Further Action Requirements:

1. Location:

Observed Conditions:

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 2-16-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	✓				X
	Cap	✓				X
	Gas Vents	✓				X
2.0	**Drainage Structures:**					
	Toe Drain	✓				X
	Drainage Channels	✓				X
	French Drains/Outfalls	✓				X
	Subsurface Drainage Pipes/Outfalls	✓				X
	Manholes	✓				X
	Recharge Areas	✓				X
3.0	**Monitoring System:**					
	Soil Gas Wells	✓				X
	Groundwater Wells	✓				X
4.0	**Site Access:**					
	Asphalt Access Road	✓				X
	Crushed-Concrete Access Road	✓				X

B. Description of Further Action Requirements:

1. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-20-05

Purpose of Inspection: ✓ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	✓				✓
	Cap	✓				✓
	Gas Vents	✓				✓
2.0	**Drainage Structures:**					
	Toe Drain					✓
	Drainage Channels	✓				✓
	French Drains/Outfalls	✓				✓
	Subsurface Drainage Pipes/Outfalls	✓				✓
	Manholes	✓				✓
	Recharge Areas	✓				✓
3.0	**Monitoring System:**					
	Soil Gas Wells	✓				✓
	Groundwater Wells	✓				✓
4.0	**Site Access:**					
	Asphalt Access Road	✓				✓
	Crushed-Concrete Access Road	✓				✓

B. Description of Further Action Requirements:

1. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-27-05

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______

Time off Site: ______

Weather Conditions: Sunny

A. Inspection Checklist

	Component	Observed Condition: Excellent	Observed Condition: Fair	Observed Condition: Poor	Further Action Required: Yes	Further Action Required: No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
3.0	**Monitoring System:**					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-31-00

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
3.0	**Monitoring System:**	X				
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**	X				
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-23-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ________

Time off Site: ________

Weather Conditions: ________

A. Inspection Checklist

Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0 Landfill Cap:					
Vegetation	✓				✓
Cap	✓				✓
Gas Vents	✓				✓
2.0 Drainage Structures:					
Toe Drain	✓				✓
Drainage Channels	✓				✓
French Drains/Outfalls	✓				✓
Subsurface Drainage Pipes/Outfalls	✓				✓
Manholes	✓				✓
Recharge Areas	✓				✓
3.0 Monitoring System:	✓				
Soil Gas Wells	✓				✓
Groundwater Wells	✓				✓
4.0 Site Access:					
Asphalt Access Road	✓				✓
Crushed-Concrete Access Road	✓				✓

B. Description of Further Action Requirements:

1. Location: ________

Observed Conditions: ________

Recommendations: ________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-13-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
3.0	**Monitoring System:**	X				
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**	X				X
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-22-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ________

Time off Site: ________

Weather Conditions: ________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
3.0	**Monitoring System:**	X				
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ________

Observed Conditions: ________

Recommendations: ________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-16-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				│
	Cap	X				│
	Gas Vents	X				│
2.0	**Drainage Structures:**					
	Toe Drain	X				│
	Drainage Channels	X				│
	French Drains/Outfalls	X				│
	Subsurface Drainage Pipes/Outfalls	X				│
	Manholes	X				│
	Recharge Areas	X				│
3.0	**Monitoring System:**	X				
	Soil Gas Wells	X				│
	Groundwater Wells	X				│
4.0	**Site Access:**	X				
	Asphalt Access Road	X				│
	Crushed-Concrete Access Road	X				│

B. Description of Further Action Requirements:

I. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-20-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ____________

Time off Site: ____________

Weather Conditions: ____________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				
	Cap	X				
	Gas Vents	X				
2.0	**Drainage Structures:**					
	Toe Drain	X				
	Drainage Channels	X				
	French Drains/Outfalls	X				
	Subsurface Drainage Pipes/Outfalls	X				
	Manholes	X				
	Recharge Areas	X				
3.0	**Monitoring System:**					
	Soil Gas Wells	X				
	Groundwater Wells	X				
4.0	**Site Access:**					
	Asphalt Access Road	X				
	Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

1. Location: ____________

Observed Conditions: ____________

Recommendations: ____________

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-23-95

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ___

Time off Site: ___

Weather Conditions: ___

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				✓
	Cap	X				✓
	Gas Vents	X				✓
2.0	**Drainage Structures:**					
	Toe Drain	X				✓
	Drainage Channels	X				✓
	French Drains/Outfalls	X				✓
	Subsurface Drainage Pipes/Outfalls	X				✓
	Manholes	X				✓
	Recharge Areas	X				✓
3.0	**Monitoring System:**	X				
	Soil Gas Wells	X				✓
	Groundwater Wells	X				✓
4.0	**Site Access:**	X				
	Asphalt Access Road	X				✓
	Crushed-Concrete Access Road	X				✓

B. Description of Further Action Requirements:

1. Location: ___

Observed Conditions: ___

Recommendations: ___

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 12-13-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______

Time off Site: ______

Weather Conditions: ______

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				✓
	Cap	X				✓
	Gas Vents	✓				✓
2.0	**Drainage Structures:**					
	Toe Drain	X				✓
	Drainage Channels	X				✓
	French Drains/Outfalls	X				✓
	Subsurface Drainage Pipes/Outfalls	X				✓
	Manholes	X				✓
	Recharge Areas	X				✓
3.0	**Monitoring System:**					
	Soil Gas Wells	X				✓
	Groundwater Wells	X				✓
4.0	**Site Access:**					
	Asphalt Access Road	X				✓
	Crushed-Concrete Access Road	X				✓

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric KRAMER

Date of Inspection: 1-12-05

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______________________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				
	Cap	X				
	Gas Vents	X				
2.0	**Drainage Structures:**					
	Toe Drain	X				
	Drainage Channels	X				
	French Drains/Outfalls	X				
	Subsurface Drainage Pipes/Outfalls	X				
	Manholes	X				
	Recharge Areas	X				
	Monitoring System:					
	Soil Gas Wells	X				
	Groundwater Wells	X				
4.0	**Site Access:**					
	Asphalt Access Road	X				
	Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer
Date of Inspection: 2-16-05
Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident
Time on Site: ______ ______
Time off Site: ______ ______
Weather Conditions: ______________

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				✓
	Cap	X				✓
	Gas Vents	X				✓
2.0	**Drainage Structures:**					
	Toe Drain	X				✓
	Drainage Channels	X				✓
	French Drains/Outfalls	X				✓
	Subsurface Drainage Pipes/Outfalls	X				✓
	Manholes	X				✓
	Recharge Areas	X				✓
	Monitoring System:					
	Soil Gas Wells	X				✓
	Groundwater Wells	X				✓
4.0	**Site Access:**					
	Asphalt Access Road	X				✓
	Crushed-Concrete Access Road	X				✓

B. Description of Further Action Requirements:

1. Location: ______________

Observed Conditions: ______________

Recommendations: ______________

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-30-05

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______

Time off Site: ______

Weather Conditions: Clear, Cool

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation		X		X	
	Cap	X				
	Gas Vents	X				
2.0	**Drainage Structures:**					
	Toe Drain		X			
	Drainage Channels		X			
	French Drains/Outfalls	X				
	Subsurface Drainage Pipes/Outfalls	X				
	Manholes	X				
	Recharge Areas	X				
	Monitoring System:					
	Soil Gas Wells	X				
	Groundwater Wells	X				
4.0	**Site Access:**					
	Asphalt Access Road	X				
	Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

1. Location: Need Weedwacking All Around

Observed Conditions:

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): E. Kramer, W. Dorsch V. Racaniello, T. Kneitel, R. Howe

Date of Inspection: April 4, 2005

Purpose of Inspection: X Routine ____ Heavy Rainfall ____ Reported Incident

Time on Site: 1310 hours

Time off Site: 1350 hours

Weather Conditions: Cool, sunny

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	Landfill Cap					
	Vegetation	X				X
	Cap		X		X	
	Gas Vents	X				X
2.0	Drainage Structures:					
	Toe Drain		X		X	
	Drainage Channels		X		X	
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
3.0	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	Site Access					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location:

Observed Conditions: 1) Weeds in drainage channels, 2) animal burrowing holes along south and east slopes, 3) netting on north and east slopes showing through in some areas, 4) BNL contacts on green emergency placard out of date, 5) lock missing from Brookhaven Ave gate, and south gate is broken (can't latch).

Recommendations: 1 and 2) Have PE Grounds perform weed trimming and fill in holes, 3) evaluate need to seed or fill in areas with netting visible, 4) Modify green placard to reflect LTRA ownership, 5) Get lock and have PE grounds fix south gate.

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill
Date of Inspection: 10/26/05
Name of Inspector(s): R. Howe, W. Dorsch, V. Racaniello, K. Conkling, R. Travis, P. Sullivan
Purpose of Inspection: ☒ Routine (Scheduled Frequency of ________) ☐ Heavy Rainfall ☐ Reported Incident

A. Inspection Checklist

	Component	Observed Condition: Excell.	Fair	Poor	Not Applic.	Further Action Req'd: Yes (describe)	No
1.	**Landfill Cap/Soil Covers/Wetlands:**						
	Vegetation (e.g. grass)	X					X
	Soil (Cap/Cover/Fill)		X			Repair 3 erosion areas	
	Other: ________						
2.	**Drainage Structures:**						
	Standing Water				X		X
	Toe Drain	X					X
	Drainage Channels	X					X
	French Drains/Outfalls				X		X
	Subsurface Drainage Pipes/Outfalls	X					X
	Manholes				X		X
	Berms				X		X
	Roof Drains				X		X
	Recharge Areas	X					X
	Other: ________						
3.	**Monitoring System:**						
	Soil Gas Wells	X					X
	Groundwater Wells	X					X
	Gas Vents	X					X
	Other: ________						
4.	**Site Access:**						
	Asphalt Access Road		X			Have EM remove plastic water hose	
	Crushed-concrete Access Road	X					X
	Fence	X					X
	Gates/locks			X		Repair the 3 gates so they can lock.	
	Radiological Postings				X		
	Other: Green Emergency Placard			X		Update Contacts	

5. Evidence of unauthorized work activities and/or unauthorized access has occurred? ☐ Yes ☒ No
If yes, describe evidence: ________

B. Description of Other Observations

Observed Conditions/Recommendations: The erosional areas may have started as animal burrows. Confirm that previous issues from May 2005 inspection were resolved. Also confirm that buried drainage pipe on slope was not damaged from erosion. Confirm that Fire Rescue has a key to the gate locks. As a best management practice, add signs at each of the vehicle access points to the landfill (i.e., gates) that identify it as a landfill, LUICs in place, and for further info to contact LTRA at x2828. LUIC Factsheet Notes: revise to reflect that the Landfill is not entirely fenced. We'll keep the gates locked since they were preexisting.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-27-05

Purpose of Inspection: ✓ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: SUNNY

A. Inspection Checklist

Component		Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation		X		X	
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-31-05

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______

Time off Site: ______

Weather Conditions: ______

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-23-05

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-13-00

Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ____________________

____

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				↓
	Cap	X				
	Gas Vents	X				
2.0	**Drainage Structures:**					
	Toe Drain	X				
	Drainage Channels	X				
	French Drains/Outfalls	X				
	Subsurface Drainage Pipes/Outfalls	X				
	Manholes	X				
	Recharge Areas	X				
	Monitoring System:	X				
	Soil Gas Wells	X				
	Groundwater Wells	X				
4.0	**Site Access:**					
	Asphalt Access Road	X				
	Crushed-Concrete Access Road	X				↓

B. Description of Further Action Requirements:

1. Location: ____________________

Observed Conditions: ____________________

Recommendations: ____________________

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-22-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				✓
	Cap	X				✓
	Gas Vents	X				✓
2.0	**Drainage Structures:**					
	Toe Drain	X				✓
	Drainage Channels	X				✓
	French Drains/Outfalls	X				✓
	Subsurface Drainage Pipes/Outfalls	X				✓
	Manholes	X				✓
	Recharge Areas	X				✓
	Monitoring System:					
	Soil Gas Wells	X				✓
	Groundwater Wells	X				✓
4.0	**Site Access:**					
	Asphalt Access Road	X				✓
	Crushed-Concrete Access Road	X				✓

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-16-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-20-03

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______

A. Inspection Checklist

Component		Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X				X
	Cap	X				X
	Gas Vents	X				X
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: ______

Recommendations: ______

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric [illegible]

Date of Inspection: 12-23-05

Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ____________________

A. Inspection Checklist

Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0 Landfill Cap:					
Vegetation		X		X	
Cap		X		X	
Gas Vents		X		X	
2.0 Drainage Structures:					
Toe Drain	X				
Drainage Channels	X				
French Drains/Outfalls	X				
Subsurface Drainage Pipes/Outfalls	X				
Manholes	X				
Recharge Areas	X				
Monitoring System:					
Soil Gas Wells	X				
Groundwater Wells	X				
4.0 Site Access:					
Asphalt Access Road	X				
Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

1. Location: Current

Observed Conditions: Wash-out of Soil

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 12-13-05

Purpose of Inspection: ✓ Routine ___ Heavy Rainfall ___ Reported Incident

Time on Site: ______ ______

Time off Site: ______ ______

Weather Conditions: ______________________

A. Inspection Checklist

	Component	Excellent	Fair	Poor	Further Action Required: Yes	Further Action Required: No
1.0	**Landfill Cap:**					
	Vegetation		X		X	
	Cap		X		X	
	Gas Vents		X		X	
2.0	**Drainage Structures:**					
	Toe Drain	X				X
	Drainage Channels	X				X
	French Drains/Outfalls	X				X
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells	X				X
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: ______

Observed Conditions: Washout of Soil on Slope

Recommendations: ______

Appendix D

Historical Soil Gas Monitoring Data

1996 CURRENT LANDFILL SOIL GAS MONITORING SUMMARY TABLE

1998 Environmental Monitoring Report

Current and Former Landfills - Brookhaven National Laboratory

Soil Gas Monitoring Well	Methane (% By Volume)			
	April-96	June-96	July-96	December-96
SGMW-01A	21.6	0	16.5	29.8
SGMW-01B	23.2	0	11	28.9
SGMW-01C	24.1	0	11.4	26.8
SGMW-02A	55.1	53	49.5	64.8
SGMW-02B	55.5	52.7	51.4	59
SGMW-02C	55.6	56.4	43.8	58
SGMW-03A	66	61.2	54	62.8
SGMW-03B	62	59.5	45	61.6
SGMW-03C	57.8	58.1	54	57.9
SGMW-04A	49.7	0	48.9	52.4
SGMW-04B	53	0	49.4	54.3
SGMW-04C	52.8	0	48.6	55.9
SGMW-05A	50.1	49.4	46.5	52
SGMW-05B	50.9	47.5	42	53.7
SGMW-05C	48.7	46.9	30.4	51.6
SGMW-06A	40.1	44.2	0.8	0
SGMW-06B	44	46	41.9	0
SGMW-06C	45.2	46.7	42	0
SGMW-07A	8.6	10.4	14.5	6.2
SGMW-07B	76	11.6	0.2	0.8
SGMW-07C	8.4	11.7	3.2	8.7
SGMW-08A	0	0	0.7	0
SGMW-08B	0	0	0	0
SGMW-08C	0	0	0	0
SGMW-09A	0.3	0	0	2.8
SGMW-09B	1.2	0	0	6.7
SGMW-09C	2.5	0.3	0	5.8
SGMW-10A	16.7	22.8	23	22.7
SGMW-10B	16.6	14.3	15.8	32.5
SGMW-10C	14	18.2	11.4	29.2
SGMW-11A	16.4	26.8	23.5	39.3
SGMW-11B	15.7	25.6	25	29.6
SGMW-12A	57.5	0	36.9	57.2
SGMW-12B	51.3	0	32.3	55.7
SGMW-13A	46.3	0	18.7	0
SGMW-13B	47.5	0	26	0
SGMW-14A	34.9	0	18.2	38.6
SGMW-14B	41.4	44.2	16	0
SGMW-15A	0	0.6	3.6	3.4
SGMW-15B	12.7	0	0	0
SGMW-16A	0	0	0	0
SGMW-16B	0	0	0.7	0
SGMW-17A	0	0	0	0
SGMW-17B	0	0	0	0
SGMW-18A	8.6	0	0	7.1
SGMW-18B	0.6	0	0	0
SGMW-19A	40.8	29	16	52.5
SGMW-19B	36.7	30.1	6.9	46.5
GSGM-1A	NA	<>	0	<>
GSGM-1B	NA	<>	0	<>
GSGM-1C	NA	<>	0	<>
GSGM-2A	NA	0	0	<>
GSGM-2B	NA	0	0	<>
GSGM-2C	NA	0	0	<>
GSGM-3A	NA	0	<>	<>
GSGM-3B	NA	0	0	<>
GSGM-4A	NA	0	0	<>
GSGM-4B	NA	0	0	<>

<> No measurement was recorded.   NA Well was not yet installed.

1997 CURRENT LANDFILL SOIL GAS MONITORING SUMMARY TABLE

1998 Environmental Monitoring Report

Current and Former Landfills - Brookhaven National Laboratory

Soil Gas Monitoring Well	Methane (% By Volume)			Hydrogen sulfide (ppm By Volume)		
	March-97	August-97	November-97	March-97	August-97	November-97
SGMW-01A	33.4	17.1	16.4	5	5	8
SGMW-01B	32.5	17.2	15.8	1	4	7
SGMW-01C	34.2	15.9	14.5	1	0	1
SGMW-02A	62.4	47.7	53.2	40	39	137
SGMW-02B	64.7	57	56.7	9	17	43
SGMW-02C	62.6	56.6	55.6	2	0	0
SGMW-03A	65.2	55.7	52.2	3	24	15
SGMW-03B	67.5	55.8	57	7	5	9
SGMW-03C	62.5	55.8	57	3	6	7
SGMW-04A	57.6	53.9	52.5	6	52	6
SGMW-04B	58.2	52.5	55.8	7	29	25
SGMW-04C	58.2	52.5	54.5	6	14	15
SGMW-05A	55.2	47.5	50.5	6	44	29
SGMW-05B	54.4	43.3	45.5	10	21	20
SGMW-05C	53.6	37.5	38.7	3	1	2
SGMW-06A	42.6	44	42.9	7	33	3
SGMW-06B	45	43.5	44.4	10	16	17
SGMW-06C	46	42	43.1	7	13	15
SGMW-07A	10.1	2.3	0	3	0	0
SGMW-07B	8.8	0	0	5	0	6
SGMW-07C	9.9	4.1	0.2	3	0	9
SGMW-08A	0	0	0	1	0	5
SGMW-08B	0	0	0	0	0	9
SGMW-08C	0	0	0	0	0	10
SGMW-09A	0.3	0	0	0	0	15
SGMW-09B	3.4	0	0	0	0	14
SGMW-09C	4.6	0.8	1	0	0	12
SGMW-10A	20.5	28	19	1	19	13
SGMW-10B	19.8	24.5	24	1	0	5
SGMW-10C	0	21.7	20.6	0	0	18
SGMW-11A	24.3	27.6	25.2	20	60	56
SGMW-11B	0	27.8	20.5	0	74	32
SGMW-12A	55.9	48	42	21	89	98
SGMW-12B	0	46.5	44.3	0	0	25
SGMW-13A	28.7	45.2	0.7	2	16	19
SGMW-13B	0	0.4	38.9	0	0	27
SGMW-14A	39.1	20.1	5.2	6	10	24
SGMW-14B	0	0	13.5	0	0	13
SGMW-15A	1.8	0.2	2.5	0	0	14
SGMW-15B	0	0	2.6	0	0	14
SGMW-16A	0	31.7	1.1	0	0	9
SGMW-16B	0	<>	0	0	<>	0
SGMW-17A	0	0	0	0	0	20
SGMW-17B	0	0	0	0	0	0
SGMW-18A	0	0	0	0	0	14
SGMW-18B	0	0	0	0	0	15
SGMW-19A	35.1	22	10.6	41	51	42
SGMW-19B	0	29	17.3	0	30	12
GSGM-1A	0	<>	0	4	<>	0
GSGM-1B	0	<>	0	5	<>	1
GSGM-1C	0	<>	0	6	<>	0
GSGM-2A	0	<>	0	6	<>	0
GSGM-2B	0	<>	0	6	<>	4
GSGM-2C	0	<>	0	6	<>	0
GSGM-3A	0	<>	0	5	<>	0
GSGM-3B	0	<>	0	4	<>	0
GSGM-4A	0	<>	0	5	<>	8
GSGM-4B	0	<>	0	5	<>	0

* Values are calculated, not measured.

<> No measurement was recorded.

Brookhaven National Laboratory

1998 Landfills Environmental Monitoring Report

1998 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) February-98	Methane (% By Volume) May-98	Methane (% By Volume) August-98	Methane (% By Volume) December-98	Hydrogen sulfide (ppm By Volume) February-98	Hydrogen sulfide (ppm By Volume) May-98	Hydrogen sulfide (ppm By Volume) August-98	Hydrogen sulfide (ppm By Volume) December-98	Soil Gas Monitoring Well
SGMW-01A	26.3	26.1	24.2	20.4	5	0	0	0	SGMW-01A
SGMW-01B	26.1	30.1	28	19.7	4	0	0	4	SGMW-01B
SGMW-01C	24	29	26	17.7	1	2	1	2	SGMW-01C
SGMW-02A	67.6	65.3	70.4	51.1	92	3	4	6	SGMW-02A
SGMW-02B	64.1	66	66	54.9	93	5	5	4	SGMW-02B
SGMW-02C	61.5	64.7	65	53.1	11	0	0	0	SGMW-02C
SGMW-03A	20.4	80	78.6	2.5	10	3	2	1	SGMW-03A
SGMW-03B	76.6	74	74	51.1	23	0	0	0	SGMW-03B
SGMW-03C	65.3	65.5	65.3	41.5	4	3	0	1	SGMW-03C
SGMW-04A	11.3	54.2	55	0.4	9	7	4	0	SGMW-04A
SGMW-04B	58.9	55.8	58	36.1	5	4	3	0	SGMW-04B
SGMW-04C	60.5	57.5	57.5	0	17	5	2	0	SGMW-04C
SGMW-05A	48.1	52.4	50	48.9	3	5	5	2	SGMW-05A
SGMW-05B	54	52.1	55.4	47.7	3	4	3	3	SGMW-05B
SGMW-05C	49	50.3	48	41.5	0	3	2	0	SGMW-05C
SGMW-06A	27.3	44.1	38.3	17.5	2	7	6	0	SGMW-06A
SGMW-06B	44.8	46.5	7.8	47.2	15	0	0	1	SGMW-06B
SGMW-06C	46.3	48	5.4	0	0	0	3	0	SGMW-06C
SGMW-07A	2.2	8.9	7.2	0	0	3	4	0	SGMW-07A
SGMW-07B	0	6.5	7	0	0	4	3	0	SGMW-07B
SGMW-07C	4.9	8.5	8.5	0.1	1	8	6	0	SGMW-07C
SGMW-08A	0	0	0	0	2	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	3	3	3	0	SGMW-08B
SGMW-08C	0	0	0	0	4	1	1	0	SGMW-08C
SGMW-09A	0	0	0	0	8	0	0	0	SGMW-09A
SGMW-09B	0.7	1.4	1.3	0	2	0	0	0	SGMW-09B
SGMW-09C	3	2.7	2.5	0.7	6	2	1	0	SGMW-09C
SGMW-10A	17.9	29.7	30	29.2	0	0	0	0	SGMW-10A
SGMW-10B	23.5	26.4	28.3	26	2	0	0	0	SGMW-10B
SGMW-10C	20.7	24	23	23.7	0	0	0	0	SGMW-10C
SGMW-11A	22.8	31	29.4	17.8	16	0	0	0	SGMW-11A
SGMW-11B	19.9	29	25.3	26.4	9	0	0	0	SGMW-11B
SGMW-12A	53.7	57.2	50.4	33.9	37	2	1	3	SGMW-12A
SGMW-12B	50.3	0.2	3	39.2	11	3	4	0	SGMW-12B
SGMW-13A	7	61.5	59	0	9	0	0	0	SGMW-13A
SGMW-13B	0.1	0.1	0	0	9	0	0	0	SGMW-13B
SGMW-14A	17.1	21	20	1.2	0	1	2	0	SGMW-14A
SGMW-14B	0	0	15	0	0	0	2	0	SGMW-14B
SGMW-15A	4	1.2	0	0	5	0	0	0	SGMW-15A
SGMW-15B	0	0	0.7	0	0	0	0	0	SGMW-15B
SGMW-16A	0	0	0	0	0	0	0	0	SGMW-16A
SGMW-16B	0	0	0	0	0	1	0	0	SGMW-16B
SGMW-17A	0	0	0	0	0	0	0	0	SGMW-17A
SGMW-17B	0	0	0	0	0	0	0	0	SGMW-17B
SGMW-18A	0.2	0	0	0	0	0	2	0	SGMW-18A
SGMW-18B	0	0	0	0	0	0	0	0	SGMW-18B
SGMW-19A	37.4	47.2	30.4	6.7	69	0	0	1	SGMW-19A
SGMW-19B	38.7	4	4	12	5	1	1	4	SGMW-19B

Soil Gas Monitoring Well	Methane (% By Volume) February-98	Methane (% By Volume) May-98	Methane (% By Volume) August-98	Methane (% By Volume) December-98
GSGM-1A	0	0	0	0
GSGM-1B	0	0	0	0
GSGM-1C	0	0	0	0
GSGM-2A	0	0	0	0
GSGM-2B	0	0	20.1	0
GSGM-2C	0	0	0	0
GSGM-3A	0	0	0	0
GSGM-3B	0	0	0	0
GSGM-4A	0	0	0	0
GSGM-4B	0	0	0	0

Hydrogen sulfide (ppm By Volume) February-98	Hydrogen sulfide (ppm By Volume) May-98	Hydrogen sulfide (ppm By Volume) August-98	Hydrogen sulfide (ppm By Volume) December-98	Soil Gas Monitoring Well
0	0	0	0	GSGM-1A
1	0	0	0	GSGM-1B
0	0	0	0	GSGM-1C
0	0	0	0	GSGM-2A
0	0	1	0	GSGM-2B
2	0	0	0	GSGM-2C
0	0	0	0	GSGM-3A
0	0	0	0	GSGM-3B
0	0	0	0	GSGM-4A
2	0	0	0	GSGM-4B

* Values are calculated, not measured.

<> No measurement was recorded.

Brookhaven National Laboratory
1999 Landfills Environmental Monitoring Report
1999 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) June-99	Methane (% By Volume) October-99	Methane (% By Volume) December-99	LEL (% By Volume) June-99	LEL (% By Volume) October-99	LEL (% By Volume) December-99	Hydrogen sulfide (ppm By Volume) June-99	Hydrogen sulfide (ppm By Volume) October-99	Hydrogen sulfide (ppm By Volume) December-99	Soil Gas Monitoring Well
SGMW-01A	19.5	17.9	19.6	390	360	394	0	<>	2	SGMW-01A
SGMW-01B	18.6	18.1	18.6	370	362	372	0	<>	3	SGMW-01B
SGMW-01C	17.2	14.2	16.7	344	286	334	0	<>	1	SGMW-01C
SGMW-02A	52.4	52.6	55.8	1048	1052	1116	13	<>	25	SGMW-02A
SGMW-02B	54.4	55	56.7	1088	1100	1134	3	<>	11	SGMW-02B
SGMW-02C	55.3	55.2	57.5	1106	1104	1150	0	<>	3	SGMW-02C
SGMW-03A	59.6	41.5	2.3	1192	830	50	3	<>	1	SGMW-03A
SGMW-03B	61.4	58.3	61.3	1228	1166	1226	0	<>	4	SGMW-03B
SGMW-03C	59.9	53.3	59.5	1198	1066	1190	0	<>	3	SGMW-03C
SGMW-04A	53.8	0	39.1	1076	0	782	0	<>	2	SGMW-04A
SGMW-04B	53.5	53.5	52.8	1070	1070	1056	0	<>	7	SGMW-04B
SGMW-04C	52.4	55.2	48.7	1048	1104	974	2	<>	9	SGMW-04C
SGMW-05A	47.8	51.1	47.4	940	1022	944	0	<>	6	SGMW-05A
SGMW-05B	45	51.5	48	900	1030	884	0	<>	4	SGMW-05B
SGMW-05C	39.7	35	38.3	794	702	766	0	<>	4	SGMW-05C
SGMW-06A	41.1	0.1	39.2	826	2	784	0	<>	2	SGMW-06A
SGMW-06B	43.2	43.2	46.8	862	862	934	0	<>	7	SGMW-06B
SGMW-06C	43.1	0	46.6	862	0	926	0	<>	5	SGMW-06C
SGMW-07A	3.3	0.1	0	66	2	0	0	<>	2	SGMW-07A
SGMW-07B	0.9	0	0	18	0	0	0	<>	2	SGMW-07B
SGMW-07C	4.4	0.17	1.3	88	34	26	0	<>	2	SGMW-07C
SGMW-08A	0	0	0	0	0	0	0	<>	2	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	<>	2	SGMW-08B
SGMW-08C	0	0	0	0	0	0	0	<>	3	SGMW-08C
SGMW-09A	0	0	0	0	0	0	0	<>	3	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	<>	3	SGMW-09B
SGMW-09C	0	0	0.1	0	0	2	<>	<>	3	SGMW-09C
SGMW-10A	21.4	15.7	20	428	314	400	1	<>	2	SGMW-10A
SGMW-10B	19.8	26.7	21.1	396	532	420	0	<>	3	SGMW-10B
SGMW-10C	17.8	22.6	16.1	356	454	324	0	<>	3	SGMW-10C
SGMW-11A	19.3	31.2	19.9	386	624	398	8	<>	3	SGMW-11A
SGMW-11B	19.2	25.6	14.8	384	512	294	10	<>	3	SGMW-11B
SGMW-12A	46.8	45.1	47.1	936	902	942	30	<>	9	SGMW-12A
SGMW-12B	44.2	46.5	47.6	884	930	954	5	<>	3	SGMW-12B
SGMW-13A	53.1	0.1	0	1062	2	0	12	<>	0	SGMW-13A
SGMW-13B	0.2	0.2	24.6	4	4	492	0	<>	2	SGMW-13B
SGMW-14A	7.6	5.9	7.1	152	118	142	0	<>	5	SGMW-14A
SGMW-14B	0	22.6	3.4	0	452	68	0	<>	2	SGMW-14B
SGMW-15A	0	1.6	2.9	0	32	58	0	<>	3	SGMW-15A
SGMW-15B	0	0.1	0	0	2	0	0	<>	2	SGMW-15B
SGMW-16A	0	0.1	0	0	2	0	0	<>	2	SGMW-16A
SGMW-16B	0	0.1	0	0	2	0	0	<>	2	SGMW-16B
SGMW-17A	screen in water table	0.1	0	<>	2	0	<>	<>	2	SGMW-17A
SGMW-17B	screen in water table	0.1	0	<>	2	0	<>	<>	2	SGMW-17B
SGMW-18A	0	0.1	0	0	2	0	0	<>	2	SGMW-18A
SGMW-18B	0	1	0.4	0	20	8	0	<>	1	SGMW-18B
SGMW-19A	25.1	23	20.3	502	460	406	16	<>	15	SGMW-19A
SGMW-19B	30.1	27.3	20.5	602	544	410	8	<>	12	SGMW-19B

Brookhaven National Laboratory
1999 Landfills Environmental Monitoring Report
1999 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) June-99	Methane (% By Volume) October-99	Methane (% By Volume) December-99	LEL (% By Volume) June-99	LEL (% By Volume) October-99	LEL (% By Volume) December-99	Hydrogen sulfide (ppm By Volume) June-99	Hydrogen sulfide (ppm By Volume) October-99	Hydrogen sulfide (ppm By Volume) December-99	Soil Gas Monitoring Well
GSGM-1A	0	0	0	0	0	0	0	<>	0	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	<>	0	GSGM-1B
GSGM-1C	0	broken valve	broken valve	0	0	0	0	0	0	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	<>	2	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	<>	1	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	<>	1	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	<>	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	<>	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	<>	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	<>	0	GSGM-4B

<> No measurement was recorded.

Brookhaven [illegible] Laboratory
2000 Landfills Environmental Monitoring Report
2000 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) February-00	Methane (% By Volume) June-00	Methane (% By Volume) September-00	Methane (% By Volume) December-00	LEL (% By Volume) February-00	LEL (% By Volume) June-00	LEL (% By Volume) September-00	LEL (% By Volume) December-00	Hydrogen Sulfide (ppm by volume) February-00	Hydrogen Sulfide (ppm by volume) June-00	Hydrogen Sulfide (ppm by volume) September-00	Hydrogen Sulfide (ppm by volume) December-00	Soil Gas Monitoring Well
SGMW-01A	20.0	20.5	21.0	18.8	402	410	422	388	0	0	4	0	SGMW-01A
SGMW-01B	18.3	20.3	11.2	14.3	386	406	222	286	1	0	1	0	SGMW-01B
SGMW-01C	17.5	13.7	11.5	13.0	350	276	230	260	0	0	1	0	SGMW-01C
SGMW-02A	48.5	54.0	50	54.4	990	(1080)	(1000)	(1088)	1	3	2	18	SGMW-02A
SGMW-02B	55.1	57.1	58.3	58.2	(1102)	(1142)	(1120)	(1124)	4	20	9	11	SGMW-02B
SGMW-02C	58.0	48.3	58.9	58.0	(1120)	986	(1120)	(1120)	2	0	4	5	SGMW-02C
SGMW-03A	49.3	62.8	64.0	57.6	988	(1256)	(1280)	(1162)	1	8	0	3	SGMW-03A
SGMW-03B	57.0	67.0	60.2	57.4	(1140)	(1340)	(1200)	(1148)	1	4	0	2	SGMW-03B
SGMW-03C	57.3	61.2	62.0	56.7	(1146)	(1224)	(1240)	(1134)	1	4	0	4	SGMW-03C
SGMW-04A	30.7	51.9	2.6	51.6	614	(1038)	52	(1132)	1	4	1	1	SGMW-04A
SGMW-04B	48.9	52.8	46.0	50.0	978	(1056)	922	(1000)	2	2	0	2	SGMW-04B
SGMW-04C	43.0	52.1	43.0	45.2	860	(1042)	858	906	4	0	1	6	SGMW-04C
SGMW-05A	47.7	49.4	47.5	47.2	954	988	950	944	1	0	8	8	SGMW-05A
SGMW-05B	44.6	50.0	46.2	43.9	892	(1000)	984	878	1	0	5	6	SGMW-05B
SGMW-05C	36.7	43.7	40.7	36.7	734	874	814	736	2	1	0	6	SGMW-05C
SGMW-06A	33.0	41.7	16.0	44.0	660	834	320	880	0	4	0	2	SGMW-06A
SGMW-06B	43.0	45.5	40.0	46.0	860	910	800	920	1	2	2	3	SGMW-06B
SGMW-06C	44.3	45.3	33.7	45.8	886	906	674	916	0	1	1	6	SGMW-06C
SGMW-07A	0.3	5.9	0.9	0.0	6	118	18	0	0	0	1	1	SGMW-07A
SGMW-07B	0	0.6	0.0	0.0	0	12	0	0	0	0	1	2	SGMW-07B
SGMW-07C	2.6	3.0	1.8	0.5	52	60	36	10	0	0	2	2	SGMW-07C
SGMW-08A	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-08A
SGMW-08B	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-08B
SGMW-08C	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-08C
SGMW-09A	0	0	0	0.0	0	0	0	0	1	0	1	3	SGMW-09A
SGMW-09B	0	0	0	0.0	0	0	0	0	1	0	1	3	SGMW-09B
SGMW-09C	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-09C
SGMW-10A	9.3	26.1	23.7	17.0	186	522	474	340	1	3	2	3	SGMW-10A
SGMW-10B	13.5	21.2	26.1	15.5	270	424	522	310	1	0	2	2	SGMW-10B
SGMW-10C	10.6	19.5	22.2	12.8	212	390	444	256	1	0	2	3	SGMW-10C
SGMW-11A	10.1	27.1	54.6	13.6	202	342	(1080)	272	2	20	10	7	SGMW-11A
SGMW-11B	6.8	26.4	54.3	9.2	136	528	(1086)	184	2	21	2	8	SGMW-11B
SGMW-12A	43.9	60.0	64.4	46.5	876	(1200)	(1288)	930	2	63	2	7	SGMW-12A
SGMW-12B	42.6	49.8	48.1	47.0	852	998	962	940	1	0	0	5	SGMW-12B
SGMW-13A	23.4	57.6	63.8	49.8	466	(1152)	(1276)	998	1	0	2	2	SGMW-13A
SGMW-13A	45.1	0	0	49.2	902	0	0	984	1	0	0	57	SGMW-13A
SGMW-14A	2.7	20.2	15.8	12.1	54	404	316	242	1	0	9	7	SGMW-14A
SGMW-14B	0	0	0	22.3	0	0	0	446	1	0	0	31	SGMW-14B
SGMW-15A	2.0	0	1.6	0.0	40	0	32	0	2	0	2	4	SGMW-15A
SGMW-15B	0	0	0	0.0	0	0	0	0	2	0	0	5	SGMW-15B
SGMW-16A	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	0	0	0	2	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	1	0	0	1	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-17B
SGMW-18A	0	0	0	0.0	0	0	0	0	0	0	0	2	SGMW-18A
SGMW-18B	0	0.1	0.3	0.0	0	2	6	0	0	0	0	4	SGMW-18B
SGMW-19A	12.9	38.9	34.9	14.2	258	778	698	284	4	2	18	13	SGMW-19A
SGMW-19B	16.7	34.6	32.8	10.0	334	692	656	200	4	0	0	4	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	0	0	4	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	3	GSGM-4B

<> No Measurement was collected due to other work in the area.
Measurements in ( ) are calculated, not measured.

Brookhaven National Laboratory
2001 Landfills Environmental Monitoring Report
2001 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) March-01	Methane (% By Volume) June-01	Methane (% By Volume) September-01	LEL (% By Volume) March-01	LEL (% By Volume) June-01	LEL (% By Volume) September-01	Hydrogen Sulfide (ppm by volume) March-01	Hydrogen Sulfide (ppm by volume) June-01	Hydrogen Sulfide (ppm by volume) September-01
SGMW-01A	22.2	23.1	18.3	440	462	368	2	11	0
SGMW-01B	2.6	0.0	17.1	434	0	354	4	0	0
SGMW-01C	15.3	20.4	15.3	306	408	306	0	0	0
SGMW-02A	59.9	52.9	67.9	1208	1058	>1,000	140	57	49
SGMW-02B	58.9	0.0	55.3	1188	0	>1,000	101	1	0
SGMW-02C	0.0	0.0	53.2	0	0	>1,000	1	0	0
SGMW-03A	39.8	61.8	62.9	780	1158	>1,000	5	14	43
SGMW-03B	67.2	66.5	64.7	1344	1330	>1,000	28	21	0
SGMW-03C	0.2	0.0	63.5	4	0	>1,000	1	2	0
SGMW-04A	42.8	3.8	62.8	856	76	>1,000	2	4	32
SGMW-04B	50.8	53.6	62.8	1016	1072	>1,000	3	15	14
SGMW-04C	0.0	0.2	60.9	0	4	>1,000	1	2	0
SGMW-05A	45.6	48.2	67.5	912	964	>1,000	3	2	0
SGMW-05B	43.9	0.2	52.6	878	4	>1,000	2	3	0
SGMW-05C	0.0	0.1	46.3	0	2	906	2	3	0
SGMW-06A	18.4	8.3	54.4	368	166	>1,000	3	4	84
SGMW-06B	0.0	0.2	53.9	0	4	>1,000	2	4	5
SGMW-06C	0.0	0.1	52.6	0	2	>1,000	2	3	0
SGMW-07A	0.6	5.1	0.2	12	102	4	4	0	0
SGMW-07B	0	0.3	0.2	0	6	4	2	3	0
SGMW-07C	0.9	0.0	1.1	18	0	24	3	1	0
SGMW-08A	0	0	.2	0	0	4	4	1	0
SGMW-08B	0	0	.2	0	0	4	2	2	0
SGMW-08C	0	0	.3	0	0	6	2	1	0
SGMW-09A	0	.2	0	0	4	0	1	3	0
SGMW-09B	0	.2	0	0	4	0	1	2	0
SGMW-09C	0	.2	0	0	4	0	0	5	0
SGMW-10A	10.9	16.9	29.6	218	338	590	4	2	0
SGMW-10B	11.2	18.9	25.6	224	378	512	2	3	0
SGMW-10C	8.0	13.2	18.9	160	264	378	2	2	0
SGMW-11A	8.9	21.5	28.3	178	430	566	16	43	2
SGMW-11B	6.1	19.3	26.9	122	386	540	0	27	38
SGMW-12A	49.5	53.4	53.7	990	1068	1074	1	85	168
SGMW-12B	44.4	0.2	50.1	888	4	1002	3	0	101
SGMW-13A	16.3	65.1	55.7	326	1302	1114	0	5	0
SGMW-13A	8.9	.2	0	18	4	0	0	2	0
SGMW-14A	17.4	6.2	7.4	348	124	150	0	4	0
SGMW-14B	0	0	0	0	0	0	0	3	0
SGMW-15A	0.0	.3	0.0	0	0	0	2	4	0
SGMW-15B	0	0	0	0	0	0	2	0	0
SGMW-16A	0	0	0	0	0	0	1	0	0
SGMW-16B	0	0	0	0	0	0	0	4	0
SGMW-17A	0	0	0	0	0	0	0	1	0
SGMW-17B	0	0	0	0	0	0	0	0	0
SGMW-18A	0	0	0	0	0	0	0	1	0
SGMW-18B	0	0	0.0	2	0	0	0	0	0
SGMW-19A	21.9	38.2	28.6	238	764	572	3	200	0
SGMW-19B	20.3	36.8	26.1	406	736	524	5	63	0
GSGM-1A	0	0	0	0	0	0	0	0	0
GSGM-1B	0	0	0	0	0	0	0	0	0
GSGM-1C	0	0	0	0	0	0	0	0	0
GSGM-2A	0	0	0	0	0	0	1	0	0
GSGM-2B	0	0	0	0	0	0	0	0	0
GSGM-2C	0	0	0	0	0	0	1	0	0
GSGM-3A	0	0	0	0	0	0	0	0	0
GSGM-3B	0	0	0	0	0	0	0	0	0
GSGM-4A	0	0	0	0	0	0	1	0	0
GSGM-4B	0	0	0	0	0	0	0	0	0

<> No Measurement was collected due to other work in the area.
Measurements in ( ) are calculated, not measured.

2002 Current Landfill Soil Gas Monitoring Summary

Soil Gas Monitoring Well	Methane (% By Volume) March-02	Methane (% By Volume) June-02	Methane (% By Volume) Sept-02, Oct-02	Methane (% By Volume) December-02	LEL (% By Volume) March-02	LEL (% By Volume) June-02	LEL (% By Volume) Sept-02, Oct-02	LEL (% By Volume) December-02	Hydrogen Sulfide (ppm by volume) March-02	Hydrogen Sulfide (ppm by volume) June-02	Hydrogen Sulfide (ppm by volume) Sept-02, Oct-02	Hydrogen Sulfide (ppm by volume) December-02	Soil Gas Monitoring Well
SGMW-01A	13.8	14.1	9.8	18.0	276	282	192	354	0	7	10	3	SGMW-01A
SGMW-01B	13.7	11.5	8.2	16.9	274	230	164	334	0	1	2	14	SGMW-01B
SGMW-01C	10.8	8.6	5.5	11.6	216	172	110	234	0	1	1	4	SGMW-01C
SGMW-02A	46.0	49.6	48.2	56.6	920	992	964	(1130)	54	132	141	0	SGMW-02A
SGMW-02B	17.1	28.5	34.6	43.2	342	570	692	864	0	2	8	40	SGMW-02B
SGMW-02C	37.5	43.8	52.0	51.7	750	876	(1040)	(1034)	0	24	58	77	SGMW-02C
SGMW-03A	36.5	53.6	54.1	41.4	730	(1072)	(1082)	828	6	148	0	15	SGMW-03A
SGMW-03B	57.0	62.4	59.6	65.9	(1140)	(1248)	(1192)	(1318)	13	18	34	12	SGMW-03B
SGMW-03C	54.1	58.6	58.9	60.0	(1082)	(1172)	(1178)	(1200)	0	6	28	6	SGMW-03C
SGMW-04A	40.8	46.9	50.8	48.1	816	938	(1016)	960	0	1	20	3	SGMW-04A
SGMW-04B	44.9	49.0	51.3	19.2	898	480	(1026)	982	2	11	75	37	SGMW-04B
SGMW-04C	36.5	43.5	44.4	42.5	730	870	888	844	26	38	32	38	SGMW-04C
SGMW-05A	39.1	38.6	38.8	42.5	782	772	776	850	6	44	2	34	SGMW-05A
SGMW-05B	37.4	38.4	42.0	41.2	738	768	840	838	1	13	53	20	SGMW-05B
SGMW-05C	29.0	31.0	31.6	34.2	579	620	632	684	8	10	13	12	SGMW-05C
SGMW-06A	30.7	33.6	40.0	41.6	818	672	800	832	2	3	37	2	SGMW-06A
SGMW-06B	36.1	35.8	40.6	43.1	712	716	812	864	11	22	62	22	SGMW-06B
SGMW-06C	36.3	35.2	38.1	42.0	722	704	762	840	8	10	21	12	SGMW-06C
SGMW-07A	0.2	0.4	0.0	0.0	4	8	0	0	0	1	2	2	SGMW-07A
SGMW-07B	0.2	0.0	0.0	0.0	4	0	0	0	0	1	0	1	SGMW-07B
SGMW-07C	0.2	1.2	0.0	0.0	4	24	0	0	0	1	0	2	SGMW-07C
SGMW-08A	0.2	0	0	0.0	4	0	0	0	1	3	0	0	SGMW-08A
SGMW-08B	0.2	0	0	0.0	4	0	0	0	1	4	0	0	SGMW-08B
SGMW-08C	0.2	0	0	0.0	4	0	0	0	0	3	0	0	SGMW-08C
SGMW-09A	0.1	0	0	0.0	2	0	0	0	0	2	2	2	SGMW-09A
SGMW-09B	0.2	0	0	0.0	4	0	0	0	1	0	1	1	SGMW-09B
SGMW-09C	0.2	0	0	0.0	4	0	0	0	1	2	0	2	SGMW-09C
SGMW-10A	10.6	15.0	25.5	16.8	212	300	510	336	4	13	1	6	SGMW-10A
SGMW-10B	10.7	14.2	20.0	14.8	214	284	400	282	0	0	5	2	SGMW-10B
SGMW-10C	8.0	12.2	17.1	12.2	160	244	342	246	0	3	1	9	SGMW-10C
SGMW-11A	9.2	14.9	26.7	17.0	184	298	334	338	9	68	125	29	SGMW-11A
SGMW-11B	6.1	14.5	24.7	10.4	122	290	494	208	1	48	152	16	SGMW-11B
SGMW-12A	37.6	43.0	50.4	49.0	752	860	1008	976	15	0	0	34	SGMW-12A
SGMW-12B	35.9	39.0	46.0	45.0	718	780	920	894	4	13	32	15	SGMW-12B
SGMW-13A	35.5	43.5	47.3	47.9	710	870	946	958	63	156	78	3	SGMW-13A
SGMW-13A	33.7	42.3	46.2	47.1	674	846	924	942	2	4	22	5	SGMW-13A
SGMW-14A	1.0	4.9	2.8	10.6	20	98	56	212	2	2	0	7	SGMW-14A
SGMW-14B	5.6	11.0	10.4	14.8	112	220	208	296	1	3	0	1	SGMW-14B
SGMW-15A	0.1	0	4.0	8.3	2	0	80	168	0	3	4	4	SGMW-15A
SGMW-15B	0.1	0	44.5	19.1	2	0	890	376	0	4	9	35	SGMW-15B
SGMW-16A	0	0	0.1	0.0	0	0	2	0	0	3	0	1	SGMW-16A
SGMW-16B	0.1	0	0.1	0.0	2	0	2	0	0	4	4	1	SGMW-16B
SGMW-17A	0.1	0	0.2	0.0	2	0	4	0	0	3	3	2	SGMW-17A
SGMW-17B	0.1	0	0.2	0.0	2	0	4	0	0	2	2	4	SGMW-17B
SGMW-18A	0.2	0	0.1	0.0	4	0	2	0	0	4	4	2	SGMW-18A
SGMW-18B	0.4	0	0.2	0.0	8	0	4	0	0	3	3	4	SGMW-18B
SGMW-19A	5.8	15.9	28.5	0.0	116	318	570	0	2	121	19	132	SGMW-19A
SGMW-19B	8.5	19.6	31.2	0.0	168	392	624	0	4	32	36	9	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	6	3	1	4	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	4	2	2	3	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	3	3	2	3	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	3	1	3	2	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	3	3	1	2	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	4	3	2	3	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	3	3	1	3	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	2	2	0	2	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	4	3	1	3	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	2	2	2	2	GSGM-4B

Measurements in ( ) are calculated, not measured.

2003 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) April-03	Methane (% By Volume) July-03	Methane (% By Volume) October-03	Methane (% By Volume) December-03	LEL (% By Volume) April-03	LEL (% By Volume) July-03	LEL (% By Volume) October-03	LEL (% By Volume) December-03	Hydrogen Sulfide (ppm by volume) April-03	Hydrogen Sulfide (ppm by volume) July-03	Hydrogen Sulfide (ppm by volume) October-03	Hydrogen Sulfide (ppm by volume) December-03	Soil Gas Monitoring Well
SGMW-01A	17.6	22.1	21.1	21.5	352	444	422	438	2	~	0	~	SGMW-01A
SGMW-01B	18.6	16.2	19.7	19.8	372	324	394	396	3	~	81	~	SGMW-01B
SGMW-01C	18.0	13.9	20.0	17.3	360	282	400	348	3	~	80	~	SGMW-01C
SGMW-02A	58.2	41.2	5.0	22.2	(1164)	324	100	442	14	~	68	~	SGMW-02A
SGMW-02B	55.7	0.0	0.1	0.0	(1140)	0	2	0	32	~	13	~	SGMW-02B
SGMW-02C	59.1	0.0	0	42.7	538	0	0	858	9	~	0	~	SGMW-02C
SGMW-03A	26.8	57.8	55.0	0.0	(1182)	(1156)	(1100)	0	19	~	0	~	SGMW-03A
SGMW-03B	69.1	0.0	54.2	11.7	(1078)	0	(1084)	234	23	~	95	~	SGMW-03B
SGMW-03C	63.9	0.0	0.2	41.0	(1052)	0	4	820	3	~	0	~	SGMW-03C
SGMW-04A	54.1	0.0	0.5	8.4	968	0	10	168	3	~	109	~	SGMW-04A
SGMW-04B	53.9	0.0	0.2	47.0	938	0	4	940	7	~	27	~	SGMW-04B
SGMW-04C	52.6	0.0	0.1	41.5	882	0	2	832	15	~	0	~	SGMW-04C
SGMW-05A	48.3	48.0	54.0	23.4	968	960	(1098)	468	2	~	163	~	SGMW-05A
SGMW-05B	46.9	43.8	53.8	38.8	938	876	(1076)	778	3	~	0	~	SGMW-05B
SGMW-05C	43.1	0.0	41.8	32.3	882	0	836	648	3	~	0	~	SGMW-05C
SGMW-06A	40.3	5.8	15.5		806	116	310	420	1	~	0	~	SGMW-06A
SGMW-06B	42.9	0.0	0.0	20.7	858	0	0	896	3	~	0	~	SGMW-06B
SGMW-06C	43.6	0.0	0.1	44.8	872	0	2	900	2	~	0	~	SGMW-06C
SGMW-07A	0.8	0.0	0.0	45.1	16	0	0	0	1	~	0	~	SGMW-07A
SGMW-07B	0.9	0.0	0.1	0.0	18	0	2	0	2	~	0	~	SGMW-07B
SGMW-07C	4.0	0.0	0.1	0.0	80	0	2	0	0	~	0	~	SGMW-07C
SGMW-08A	0.0	0	0.1	0.0	0	0	2	0	0	~	27	~	SGMW-08A
SGMW-08B	0.0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-08B
SGMW-08C	0.0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-08C
SGMW-09A	0	0	0.1	0.0	0	0	2	0	0	~	13	~	SGMW-09A
SGMW-09B	0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-09B
SGMW-09C	0.1	0	0.1	0.0	2	0	2	0	0	~	0	~	SGMW-09C
SGMW-10A	18.0	22.0	27.9	5.6	360	440	558	112	1	~	0	~	SGMW-10A
SGMW-10B	15.8	17.7	22.0	0.0	316	354	440	0	1	~	0	~	SGMW-10B
SGMW-10C	14.0	16.6	18.2	0.0	280	332	364	0	2	~	0	~	SGMW-10C
SGMW-11A	15.6	29.3	0.4	17.7	312	586	8	356	1	~	0	~	SGMW-11A
SGMW-11B	13.7	26.0	0.1	0.0	274	520	2	0	13	~	0	~	SGMW-11B
SGMW-12A	60.0	47.6	64.7	0.0	(1200)	952	(1294)	0	0	~	0	~	SGMW-12A
SGMW-12B	50.9	0.3	0.5	1.8	(1018)	6	10	36	1	~	0	~	SGMW-12B
SGMW-13A	30.5	0.0	67.2	68.4	610	0	(1344)	1328	1	~	163	~	SGMW-13A
SGMW-13B	0.0	0.8	0.1	0.0	0	16	2	0	1	~	0	~	SGMW-13A
SGMW-14A	29.4	9.8	8.3	0.0	588	196	2	0	10	~	0	~	SGMW-14A
SGMW-14B	0.2	0	0.1	0.1	4	0	2	2	1	~	0	~	SGMW-14B
SGMW-15A	0.1	0	0.1	0.0	2	0	2	0	1	~	54	~	SGMW-15A
SGMW-15B	0	0	0.1	0.0	0	0	2	0	0	~	0	~	SGMW-15B
SGMW-16A	0.1	0	0	0.0	2	0	0	0	1	~	0	~	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	3	~	0	~	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	3	~	0	~	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	2	~	0	~	SGMW-17B
SGMW-18A	0.1	0	0	0.0	2	0	0	0	2	~	0	~	SGMW-18A
SGMW-18B	0	0.1	0.0	0.0	0	2	0	0	0	~	0	~	SGMW-18B
SGMW-19A	41.8	29.1	40.0	27.0	838	582	800	540	0	~	0	~	SGMW-19A
SGMW-19B	44.0	0.7	33.2	29.5	880	14	664	592	39	~	191	~	SGMW-19B
GSGM-1A	0.1	0	0	0	2	0	0	0	0	~	0	~	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-4B

Measurements in ( ) are calculated, not measured.
~ H2S pod was not operating correctly.
July measurements taken with a Landtec GEM 500.

2004 Current Landfill Soil Gas Monitoring Summary

Soil Gas Monitoring Well	Methane (% By Volume) 3/10/04	Methane (% By Volume) 6/25/04	Methane (% By Volume) 10/7/04	Methane (% By Volume) 11/30/04	LEL (% By Volume) 3/10/04	LEL (% By Volume) 6/25/04	LEL (% By Volume) 10/7/04	LEL (% By Volume) 11/30/04	Hydrogen Sulfide (ppm by volume) 3/10/04	Hydrogen Sulfide (ppm by volume) 6/25/04	Hydrogen Sulfide (ppm by volume) 10/7/04	Hydrogen Sulfide (ppm by volume) 11/30/04	Soil Gas Monitoring Well
SGMW-01A	16.6	14.4	6.8	6.8	332	288	136	136	150	2	3	1	SGMW-01A
SGMW-01B	15.6	8.6	6.0	2.5	312	172	120	50	23	0	0	0	SGMW-01B
SGMW-01C	14.0	0.2	4.2	6.3	280	4	84	126	34	0	0	0	SGMW-01C
SGMW-02A	34.5	8.6	39.7	2.1	692	172	794	42	191	0	11	0	SGMW-02A
SGMW-02B	22.7	0.6	12.7	0.0	454	12	254	0	177	0	0	0	SGMW-02B
SGMW-02C	44.4	0.0	2	4.6	888	0	4	92	0	0	0	0	SGMW-02C
SGMW-03A	25.4	15.2	4.1	0.0	508	304	82	0	0	0	0	0	SGMW-03A
SGMW-03B	52.1	28.0	14.0	0.1	(1042)	560	280	2	0	0	0	0	SGMW-03B
SGMW-03C	51.3	7.3	1.8	0.0	(1026)	146	36	0	0	0	0	0	SGMW-03C
SGMW-04A	37.5	49.1	3.5	1.8	748	982	70	36	0	0	0	0	SGMW-04A
SGMW-04B	43.0	50.7	23.2	14.4	860	(1014)	454	288	0	0	0	0	SGMW-04B
SGMW-04C	36.2	40.9	21.2	14.5	724	818	424	290	0	0	0	0	SGMW-04C
SGMW-05A	36.1	40.0	13.6	3.7	722	800	272	74	150	0	0	0	SGMW-05A
SGMW-05B	36.8	41.4	25.2	13.6	736	828	504	272	0	0	0	0	SGMW-05B
SGMW-05C	29.0	24.0	18.6	13.6	590	480	372	272	0	0	0	0	SGMW-05C
SGMW-06A	31.8	9.7	3.9	1.8	636	194	78	36	0	0	0	0	SGMW-06A
SGMW-06B	40.4	27.4	20.6	0.3	808	548	412	6	0	0	0	0	SGMW-06B
SGMW-06C	42.1	29.8	4.7	13.2	842	596	94	264	0	0	0	0	SGMW-06C
SGMW-07A	0.2	0.1	0.0	0.0	4	2	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0.5	0.1	0.0	0.0	10	2	0	0	0	0	0	0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-07C
SGMW-08A	0.0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0.0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-08C	0.0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-08C
SGMW-09A	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-09C	0.2	0	0	0.0	4	0	0	0	0	0	0	0	SGMW-09C
SGMW-10A	1.9	16.4	2.0	0.0	38	328	40	0	0	1	0	0	SGMW-10A
SGMW-10B	2.4	16.1	12.0	3.9	48	322	240	78	0	2	0	0	SGMW-10B
SGMW-10C	0.0	14.5	10.0	2.4	0	290	200	48	0	0	0	0	SGMW-10C
SGMW-11A	0.0	16.0	5.5	0.0	0	320	110	0	0	2	0	0	SGMW-11A
SGMW-11B	0.0	14.7	10.1	0.3	0	294	202	6	109	0	0	0	SGMW-11B
SGMW-12A	22.5	48.5	9.9	0.0	450	970	198	0	122	21	0	0	SGMW-12A
SGMW-12B	0.0	0.2	7.2	0.0	0	4	144	0	136	0	0	0	SGMW-12B
SGMW-13A	0.0	0.6	1.0	0.0	0	12	20	0	0	0	0	0	SGMW-13A
SGMW-13B	0.0	0.1	0	1.1	0	2	0	22	191	0	0	0	SGMW-13A
SGMW-14A	0.0	0.1	0.0	0.0	0	2	0	0	130	0	0	0	SGMW-14A
SGMW-14B	0	0.1	0	2.3	0	2	0	46	122	0	0	0	SGMW-14B
SGMW-15A	0.0	0.1	0.0	0.0	0	2	0	0	0	0	0	0	SGMW-15A
SGMW-15B	0	0	0	5.8	0	0	0	116	0	0	0	0	SGMW-15B
SGMW-16A	0	0.1	0	0.0	0	2	0	0	0	0	0	0	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17B
SGMW-18A	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-18A
SGMW-18B	0	0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-18B
SGMW-19A	6.0	26.7	25.9	13.0	120	534	518	260	0	0	0	4	SGMW-19A
SGMW-19B	5.8	30.0	27.7	9.2	116	600	554	184	0	0	0	0	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	1	0	0	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4B

Measurements in ( ) are calculated, not measured.
H2S pod suspected of not operating correctlyin March.

2005 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/30/05	Methane (% By Volume) 7/21/05	Methane (% By Volume) 10/21/05	Methane (% By Volume) 12/28/05	LEL (% By Volume) 3/30/05	LEL (% By Volume) 7/21/05	LEL (% By Volume) 10/21/05	LEL (% By Volume) 12/28/05	Hydrogen Sulfide (ppm by volume) 3/30/05	Hydrogen Sulfide (ppm by volume) 7/21/05	Hydrogen Sulfide (ppm by volume) 10/21/05	Hydrogen Sulfide (ppm by volume) 12/28/05	Soil Gas Monitoring Well
SGMW-01A	8.8	5.4	5	6.7	176	108	100	134	1	3	2	2	SGMW-01A
SGMW-01B	3.0	2.9	3	3.8	60	58	60	76	0	0	0	0	SGMW-01B
SGMW-01C	7.5	5.6	5.5	6.1	150	112	110	122	1	0	0	0	SGMW-01C
SGMW-02A	0.3	13.7	1.7	3.0	6	274	34	60	0	0	0	1	SGMW-02A
SGMW-02B	0.2	0.7	27.2	12.4	4	14	544	246	1	0	6	3	SGMW-02B
SGMW-02C	0.3	0.1	247	0.0	6	2	494	0	1	0	0	0	SGMW-02C
SGMW-03A	0.7	36.8	0.7	0.0	14	736	14	0	0	0	0	0	SGMW-03A
SGMW-03B	0.5	2.5	47.6	11.0	10	50	952	220	1	0	2	1	SGMW-03B
SGMW-03C	0.1	0.2	39.9	0.0	2	4	798	0	0	0	1	0	SGMW-03C
SGMW-04A	0.2	10.7	46.2	9.3	4	214	924	186	0	1	0	0	SGMW-04A
SGMW-04B	6.5	25.1	42.4	18.0	130	502	848	360	0	0	1	1	SGMW-04B
SGMW-04C	6.3	0.2	38.2	14.1	126	4	764	282	0	0	0	2	SGMW-04C
SGMW-05A	0.7	14.3	36.6	10.2	14	286	732	204	1	1	1	1	SGMW-05A
SGMW-05B	13.4	21.1	34.6	22.6	268	422	692	456	0	1	0	0	SGMW-05B
SGMW-05C	9.2	18.8	27.3	18.3	184	376	546	366	0	1	0	0	SGMW-05C
SGMW-06A	0.2	2.4	29.7	8.1	4	48	594	162	1	1	0	0	SGMW-06A
SGMW-06B	7.7	24.4	29.7	16.6	154	488	594	336	1	1	0	0	SGMW-06B
SGMW-06C	8.6	24.7	27.2	14.9	172	494	544	298	1	1	1	0	SGMW-06C
SGMW-07A	0.0	0.0	0.0	0.0	0	0	0	0.0	0	0	0	0	SGMW-07A
SGMW-07B	0	0.0	0.0	0.0	0	0	0	0.0	0	0	0	0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0	0	0	0.0	1	1	0	0	SGMW-07C
SGMW-08A	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08A
SGMW-08B	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08B
SGMW-08C	0.0	0	0	0.0	0	0	0	0.0	0	0	0	0	SGMW-08C
SGMW-09A	0	.2	0	0.0	0	4	0	0.0	0	1	1	0	SGMW-09A
SGMW-09B	0	.2	0	0.0	0	4	0	0.0	1	0	0	0	SGMW-09B
SGMW-09C	0	.2	0	0.0	0	4	0	0.0	0	0	0	0	SGMW-09C
SGMW-10A	0.2	2.7	12.3	0.0	4	54	246	0.0	1	0	1	0	SGMW-10A
SGMW-10B	0.2	12.0	16.7	1.6	4	240	334	32	1	2	0	0	SGMW-10B
SGMW-10C	0.1	1.6	14.3	1.2	2	32	286	24	1	0	1	1	SGMW-10C
SGMW-11A	0.2	6.0	17.2	0.0	4	120	344	0	0	1	20	0	SGMW-11A
SGMW-11B	0.2	13.2	19.6	0.0	4	264	392	0	1	1	4	0	SGMW-11B
SGMW-12A	0.2	3.9	40.1	4.0	4	78	802	80	0	0	51	3	SGMW-12A
SGMW-12B	0.1	0.8	25.7	0.0	2	16	514	0	0	0	0	0	SGMW-12B
SGMW-13A	0.1	6.2	0.1	0.0	2	124	2	0	0	1	1	0	SGMW-13A
SGMW-13B	0.2	.4	.2	0.0	4	8	4	0	0	2	1	0	SGMW-13A
SGMW-14A	0.3	0.1	5.6	0.1	6	2	112	2	0	1	2	0	SGMW-14A
SGMW-14B	0	.2	.2	0.0	0	4	4	0	0	1	1	0	SGMW-14B
SGMW-15A	0.0	.2	0.1	0.0	0	4	2	0	0	0	1	0	SGMW-15A
SGMW-15B	0	.1	.1	0.0	0	2	2	0	0	0	0	0	SGMW-15B
SGMW-16A	0	.2	0	0.0	0	4	0	0	0	1	0	0	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	0	0	0	0	SGMW-17B
SGMW-18A	0	0	0	0.0	0	0	0	0	0	0	1	0	SGMW-18A
SGMW-18B	0	0	0.0	0.0	0	0	0	0	0	0	0	1	SGMW-18B
SGMW-19A	5.6	6.3	29.2	15.7	112	126	584	314	0	1	20	2	SGMW-19A
SGMW-19B	0.0	0.0	31.8	8.1	0	0	636	162	0	0	46	0	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	0	0	1	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	1	0	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4B

Measurements in ( ) are calculated, not measured.

1996/97 FORMER LANDFILL AREA SOIL GAS MONITORING SUMMARY TABLE

1998 Environmental Monitoring Report

Current and Former Landfills Brookhaven National Laboratory

Soil Gas Monitoring Well	Methane (% By Volume)				Hydrogen Sulfide (ppm by volume)			
	Aug-96	Mar-97	Aug-97	Nov-97	Aug-96	Mar-97	Aug-97	Nov-97
SGMW-01A	0	0	0.3	0	<>	6	-5	0
SGMW-01B	0	0	0.3	0	<>	4	-5	0
SGMW-02A	0	0	0	0	<>	6	-2	0
SGMW-02B	0	0	0	0	<>	3	-2	0
SGMW-03A	0	0	0	0	<>	1	-4	0
SGMW-03B	0	0	0	0	<>	5	-4	0
SGMW-04A	0	0	0.2	0.1	<>	7	-5	8
SGMW-04B	0	0	0.2	0.1	<>	7	-5	9
SGMW-05A	0	0	0	0	<>	7	-2	12
SGMW-05B	0	0	0	0	<>	4	-2	0
SGMW-06A	0	0	0	0	<>	7	-4	0
SGMW-06B	0	0	0.1	0	<>	4	-4	0
SGMW-07A	0	0	<>	<>	<>	7	<>	<>
SGMW-07B	0	0	<>	<>	<>	7	<>	<>
SGMW-08A	0	0	0.1	0	<>	6	-5	0
SGMW-08B	0	0	0.1	0	<>	6	-1	0
SGMW-09A	0	0	0	0	<>	5	-2	1
SGMW-09B	0	0	0	0	<>	4	-2	0
SGMW-10A	0	0	0	0	<>	7	-1	1
SGMW-10B	0	0	0	0	<>	5	-2	0
SGMW-11A	0	0	0.3	0	<>	9	-5	0
SGMW-11B	0	0	0	0	<>	4	-1	2
SGMW-12A	0	0	0.3	0	<>	9	-5	0
SGMW-12B	0	0	0.3	0	<>	5	-5	0

<> No measurement taken.

Negative numbers reported are due to equipment problems.

Brookhaven National Laboratory

1998 Landfills Environmental Monitoring Report

1998 Former Landfill Area Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) February-98	Methane (% By Volume) May-98	Methane (% By Volume) August-98	Methane (% By Volume) December-98
SGMW-01A	0	0	0	0
SGMW-01B	0.1	0	0	0
SGMW-02A	0	0	0	0
SGMW-02B	0.1	0	0	0
SGMW-03A	0	0	0	0
SGMW-03B	0	0	0	0
SGMW-04A	0	0.1	0	0.1
SGMW-04B	0	0	0	0
SGMW-05A	0	0	0	0
SGMW-05B	0	0	0	0
SGMW-06A	0	0	0	0
SGMW-06B	0	0	0	0
SGMW-07A	<>	<>	<>	<>
SGMW-07B	<>	<>	<>	<>
SGMW-08A	0	0	0	0
SGMW-08B	0	0	0	0
SGMW-09A	0	0	0	0
SGMW-09B	0	0	0	0
SGMW-10A	0	0	0	0
SGMW-10B	0	0	0	0
SGMW-11A	0	0	0	0
SGMW-11B	0	0	0	0
SGMW-12A	0	0	0	0
SGMW-12B	0	0	0	0

Hydrogen sulfide (ppm By Volume) February-98	Hydrogen sulfide (ppm By Volume) May-98	Hydrogen sulfide (ppm By Volume) August-98	Hydrogen sulfide (ppm By Volume) December-98	Soil Gas Monitoring Well
1	0	1	0	SGMW-01A
1	0	0	0	SGMW-01B
6	0	0	0	SGMW-02A
6	1	0	0	SGMW-02B
0	0	1	1	SGMW-03A
3	0	2	0	SGMW-03B
0	2	0	1	SGMW-04A
1	0	0	0	SGMW-04B
0	0	3	0	SGMW-05A
0	0	4	0	SGMW-05B
2	0	0	1	SGMW-06A
0	0	0	0	SGMW-06B
<>	<>	<>	<>	SGMW-07A
<>	<>	<>	<>	SGMW-07B
1	0	0	0	SGMW-08A
0	0	4	0	SGMW-08B
1	0	1	1	SGMW-09A
0	0	3	0	SGMW-09B
0	0	4	0	SGMW-10A
0	0	3	0	SGMW-10B
0	0	0	2	SGMW-11A
1	0	1	0	SGMW-11B
0	0	2	1	SGMW-12A
0	0	4	0	SGMW-12B

<> Well SGM07 was not accessible

Brookhaven National Laboratory
1999 Landfills Environmental Monitoring Report
1999 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) June-99	Methane (% By Volume) October-99	Methane (% By Volume) December-99	LEL (% By Volume) June-99	LEL (% By Volume) October-99	LEL (% By Volume) December-99	Hydrogen sulfide (ppm By Volume) June-99	Hydrogen sulfide (ppm By Volume) October-99	Hydrogen sulfide (ppm By Volume) December-99	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	<>	1	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	<>	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	<>	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	<>	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	<>	0	SGMW-03A
SGMW-03B	0.1	0	0	2	0	0	0	<>	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	<>	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	<>	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	<>	3	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	<>	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	<>	1	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	<>	0	SGMW-06B
SGMW-07A	<>	<>	<>	<>	<>	<>	<>	<>	<>	SGMW-07A
SGMW-07B	<>	<>	<>	<>	<>	<>	<>	<>	<>	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	<>	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	<>	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	<>	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	<>	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	1	<>	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	<>	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	1	<>	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	<>	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	<>	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	<>	0	SGMW-12B

<> No measurement was recorded.

Brookhaven National Laboratory
2000 Landfills Environmental Monitoring Report
2000 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) February-00	Methane (% By Volume) June-00	Methane (% By Volume) September-00	Methane (% By Volume) December-00	LEL (% By Volume) February-00	LEL (% By Volume) June-00	LEL (% By Volume) September-00	LEL (% By Volume) December-00	Hydrogen Sulfide (ppm by volume) February-00	Hydrogen Sulfide (ppm by volume) June-00	Hydrogen Sulfide (ppm by volume) September-00	Hydrogen Sulfide (ppm by volume) December-00	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	2	5	1	1	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	0	0	2	2	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	2	0	2	2	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	0	0	0	1	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	0	1	2	2	SGMW-03A
SGMW-03B	0	0	0	0	0	0	0	0	0	0	1	2	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	0	0	0	1	3	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	0	0	0	1	4	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	1	1	1	4	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	0	2	3	SGMW-05B
SGMW-06A	0	<>	0	0	0	<>	0	0	0	<>	0	4	SGMW-06A
SGMW-06B	0	<>	0	0	0	<>	0	0	0	<>	1	4	SGMW-06B
SGMW-07A	0	<>	0	0	0	<>	0	0	0	<>	1	6	SGMW-07A
SGMW-07B	0	<>	0	0	0	<>	0	0	0	<>	0	6	SGMW-07B
SGMW-08A	0	<>	0	0	0	<>	0	0	0	<>	0	3	SGMW-08A
SGMW-08B	0	<>	0	0	0	<>	0	0	0	<>	0	4	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	0	0	2	1	6	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	1	2	4	SGMW-09B
SGMW-10A	0	0	0	0	0	0	0	0	0	0	1	6	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	0	0	0	0	5	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	0	1	0	5	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	0	0	0	1	4	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	0	2	1	1	3	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	2	0	1	2	SGMW-12B

<> No Measurement was collected due to other work in the area.

Brookhaven National Laboratory
2001 Landfills Environmental Monitoring Report
2001 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) March-01	Methane (% By Volume) June-01	Methane (% By Volume) September-01	LEL (% By Volume) March-01	LEL (% By Volume) June-01	LEL (% By Volume) September-01	Hydrogen Sulfide (ppm by volume) March-01	Hydrogen Sulfide (ppm by volume) June-01	Hydrogen Sulfide (ppm by volume) September-01
SGMW-01A	0	0	0	0	0	0	3	N/A	1
SGMW-01B	0	0	0	0	0	0	3	N/A	1
SGMW-02A	0	0	0.1	0	0	0.2	4	N/A	2
SGMW-02B	0	0	0	0	0	0	5	N/A	2
SGMW-03A	0	0	0.1	0	0	0.2	4	N/A	3
SGMW-03B	0	0	0.1	0	0	0.2	4	N/A	2
SGMW-04A	0	0	0	0	0	0	5	N/A	0
SGMW-04B	0	0	0	0	0	0	5	N/A	0
SGMW-05A	0	0	0	0	0	0	6	N/A	0
SGMW-05B	0	0	0	0	0	0	5	N/A	0
SGMW-06A	0	0	0	0	<>	0	6	N/A	0
SGMW-06B	0	0	0	0	<>	0	5	N/A	0
SGMW-07A	0	0	0	0	<>	0	5	N/A	0
SGMW-07B	0	0	0	0	<>	0	6	N/A	0
SGMW-08A	0	0	0	0	<>	0	7	N/A	0
SGMW-08B	0	0	0	0	<>	0	6	N/A	0
SGMW-09A	0	0	0	0	0	0	3	N/A	0
SGMW-09B	0	0	0	0	0	0	6	N/A	0
SGMW-10A	0	0	0	0	0	0	6	N/A	0
SGMW-10B	0	0	0	0	0	0	7	N/A	0
SGMW-11A	0	0	0	0	0	0	4	N/A	0
SGMW-11B	0	0	0	0	0	0	6	N/A	0
SGMW-12A	0	0	0	0	0	0	7	N/A	0
SGMW-12B	0	0	0	0	0	0	6	N/A	0

<> No Measurement was collected due to other work in the area.

2002 Former Landfill Soil Gas Monitoring Summary

Soil Gas Monitoring Well	Methane (% By Volume) March-01	Methane (% By Volume) June-02	Methane (% By Volume) October-02	Methane (% By Volume) December-02	LEL (% By Volume) March-02	LEL (% By Volume) June-02	LEL (% By Volume) October-02	LEL (% By Volume) December-02	Hydrogen Sulfide (ppm by volume) March-02	Hydrogen Sulfide (ppm by volume) June-02	Hydrogen Sulfide (ppm by volume) October-02	Hydrogen Sulfide (ppm by volume) December-02	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	2	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	0	0	1	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	3	1	0	2	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	1	1	1	2	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	3	0	1	6	SGMW-03A
SGMW-03B	0	0	0	0	0	0	0	0	3	0	0	5	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	0	2	0	0	5	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	0	2	0	0	4	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	2	1	1	7	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	1	0	6	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	0	1	1	1	7	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	0	1	1	0	5	SGMW-06B
SGMW-07A	0	0	0	0	0	0	0	0	2	0	0	3	SGMW-07A
SGMW-07B	0	0	0	0	0	0	0	0	3	0	4	2	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	0	2	4	1	6	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	2	3	1	6	SGMW-08B
SGMW-09A	0	0.2	0	0.1	0	4	0	2	2	3	2	9	SGMW-09A
SGMW-09B	0	0.2	0	0.1	0	4	0	2	2	4	0	8	SGMW-09B
SGMW-10A	0	0.2	0	0	0	4	0	0	2	3	0	7	SGMW-10A
SGMW-10B	0	0.2	0	0.1	0	4	0	2	3	3	0	7	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	2	0	1	7	SGMW-11A
SGMW-11B	0	0	0	0.1	0	0	0	2	2	2	0	6	SGMW-11B
SGMW-12A	0	0	0	0.1	0	0	0	2	4	3	2	8	SGMW-12A
SGMW-12B	0	0	0	0.1	0	0	0	2	3	3	0	9	SGMW-12B

2003 Former Landfill Soil Gas Monitoring Summary

Soil Gas Monitoring Well	Methane (% By Volume) March-03	Methane (% By Volume) July-03	Methane (% By Volume) October-03	Methane (% By Volume) December-03	LEL (% By Volume) March-03	LEL (% By Volume) July-03	LEL (% By Volume) October-03	LEL (% By Volume) December-03	Hydrogen Sulfide (ppm by volume) March-03	Hydrogen Sulfide (ppm by volume) July-03	Hydrogen Sulfide (ppm by volume) October-03	Hydrogen Sulfide (ppm by volume) December-03	Soil Gas Monitoring Well
SGMW-01A	0	0	0.1	0	0	0	2	0	0	–	0	–	SGMW-01A
SGMW-01B	0.1	0	0	0	2	0	0	0	1	–	0	–	SGMW-01B
SGMW-02A	0.1	0	0.1	0	2	0	2	0	4	–	0	–	SGMW-02A
SGMW-02B	0	0	0.1	0	0	0	2	0	1	–	0	–	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	1	–	0	–	SGMW-03A
SGMW-03B	0.1	0	0.1	0	2	0	2	0	1	–	0	–	SGMW-03B
SGMW-04A	0.2	0	0.1	0	4	0	2	0	2	–	0	–	SGMW-04A
SGMW-04B	0	0	0.1	0	0	0	2	0	3	–	0	–	SGMW-04B
SGMW-05A	0.1	0	0	0	2	0	0	0	1	–	0	–	SGMW-05A
SGMW-05B	0	0	0.1	0	0	0	2	0	1	–	0	–	SGMW-05B
SGMW-06A	0.1	0	0.2	0	2	0	4	0	2	–	0	–	SGMW-06A
SGMW-06B	0.1	0	0.2	0	0	0	4	0	2	–	0	–	SGMW-06B
SGMW-07A	0.1	0	0.1	0	2	0	2	0	4	–	0	–	SGMW-07A
SGMW-07B	0.2	0	0.1	0	4	0	2	0	5	–	0	–	SGMW-07B
SGMW-08A	0.1	0	0.1	0	2	0	2	0	1	–	0	–	SGMW-08A
SGMW-08B	0.2	0	0.1	0	4	0	2	0	2	–	0	–	SGMW-08B
SGMW-09A	0.1	0	0	0	2	0	0	0	3	–	0	–	SGMW-09A
SGMW-09B	0.1	0	0	0	2	0	0	0	1	–	0	–	SGMW-09B
SGMW-10A	0.2	0	0.1	0	4	0	2	0	2	–	0	–	SGMW-10A
SGMW-10B	0.2	0	0	0	4	0	0	0	4	–	0	–	SGMW-10B
SGMW-11A	0.1	0	0.1	0	2	0	2	0	0	–	0	–	SGMW-11A
SGMW-11B	0.1	0	0.1	0	2	0	2	0	3	–	0	–	SGMW-11B
SGMW-12A	0.1	0	0.1	0	2	0	2	0	4	–	0	–	SGMW-12A
SGMW-12B	0.1	0	0.1	0	2	0	2	0	3	–	0	–	SGMW-12B

July measurements taken with a Landtec GEM 500

– H2S pod not operational.

2004 Former Landfill Soil Gas Monitoring Summary

Soil Gas Monitoring Well	Methane (% By Volume) 3/11/04	Methane (% By Volume) 6/25/04	Methane (% By Volume) 10/20/04	Methane (% By Volume) 11/30/04	LEL (% By Volume) 3/11/04	LEL (% By Volume) 6/25/04	LEL (% By Volume) 10/20/04	LEL (% By Volume) 11/30/04	Hydrogen Sulfide (ppm by volume) 3/11/04	Hydrogen Sulfide (ppm by volume) 6/25/04	Hydrogen Sulfide (ppm by volume) 10/20/04	Hydrogen Sulfide (ppm by volume) 11/30/04	Soil Gas Monitoring Well
SGMW-01A	0.1	0	0	0.1	2	0	0	2	150	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	63	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	109	0	0	0	SGMW-03A
SGMW-03B	0	0.1	0	0	0	2	0	0	0	2	0	0	SGMW-03B
SGMW-04A	0.1	0.1	0	0	2	2	0	0	0	2	0	0	SGMW-04A
SGMW-04B	0	0.1	0	0	0	2	0	0	0	2	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	NR	0	0	0	NR	0	0	0	NR	SGMW-07A
SGMW-07B	0	0	0	NR	0	0	0	NR	0	0	0	NR	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12B

NR = Not read, access to well was not possible due to construction.
H2S pod suspected of not operating correctly in March.

2005 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/30/05	Methane (% By Volume) 7/21/05	Methane (% By Volume) 10/26/05	Methane (% By Volume) 12/28/05	LEL (% By Volume) 3/30/05	LEL (% By Volume) 7/21/05	LEL (% By Volume) 10/26/05	LEL (% By Volume) 12/28/05	Hydrogen Sulfide (ppm by volume) 3/30/05	Hydrogen Sulfide (ppm by volume) 7/21/05	Hydrogen Sulfide (ppm by volume) 10/26/05	Hydrogen Sulfide (ppm by volume) 12/28/05	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0.1	0	0	0	2	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12B