BROOKHAVEN NATIONAL LABORATORY
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

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Executive Summary

This report documents the Operations and Maintenance activities undertaken during the calendar year 2012 for the Current Landfill (AOC 3) and the Former Landfill Areas (Former Landfill AOC 2A, Interim Landfill AOC 2D, and Slit Trench AOC 2E). Brookhaven National Laboratory 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 landfill caps are functioning as designed and the 2012 results are consistent with results from previous years.

GROUNDWATER QUALITY

The groundwater quality at both the Current and Former Landfill Areas remains relatively unchanged from 2011. Volatile organic compounds (VOCs) and metals continue to be detected downgradient of the Current Landfill. The most prevalent VOCs detected above standards are chloroethane and benzene, at maximum concentrations of 126 micrograms per liter (µg/L) and 1.5 µg/L, respectively. As with previous years, aluminum, arsenic, iron, manganese, and sodium were detected downgradient from the Current Landfill at concentrations above applicable standards. Concentrations of these metals were similar to those detected in 2011. Maximum concentrations of arsenic, iron, manganese, and sodium in downgradient wells were 10.9 µg/L, 62,400 µg/L, 7,610 µg/L, and 50,500 µg/L, respectively. These results are an indicator of continued low level leachate generation at this landfill.

Concentrations of parameters detected in wells downgradient of the Former Landfill Area do not indicate the presence of leachate. VOCs were not detected above standards in Former Landfill Area monitoring wells in 2012. With the exception of iron in well 106-02, leachate indicator parameters and metals concentrations were generally the same when comparing downgradient monitoring wells to upgradient monitoring wells. Well 106-02 has exhibited an increasing trend for iron, but all other parameters are stable at background levels.

The groundwater monitoring well network for the Current Landfill is adequate at this time. Based on the lack of detections above groundwater standards since 1998, it is recommended that radionuclide monitoring be reduced to sampling wells 087-23, 087-27, 088-21 and 088-109 annually for tritium, strontium-90 and gamma. These wells are downgradient of the Current Landfill and would detect a potential contamination release. It is recommended that the sampling frequency for all Former Landfill monitoring wells be changed from annual to once every two years with the exception of metals in well 106-02. Sampling for metals will continue on an annual basis for well 106-02.

WOODED WETLANDS MONITORING

The results of the May 2012 sediment and surface water sampling program indicate no elevated risk to adult tiger salamanders from sediments in the South or North Ponds. Overall, the results obtained from the May 2012 sampling indicate that metals in the sediment and the metals of concern in surface water are within the range of variability as compared to previous years' values. Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals indicates that the wooded wetland is not experiencing an increase in metals concentration.

SOIL-GAS MONITORING

Soil-gas monitoring at the Current Landfill indicates that decomposition is still occurring. However, as with prior years, there is no indication that the vapors are migrating beyond the monitoring well network. Therefore, there is no potential risk to the nearby National Weather Service building. Soil-gas monitoring at the Former Landfill Area indicates that there is no detection of gasses emanating from the landfill. The soil gas monitoring well networks are sufficient to monitor both landfill areas.

MAINTENANCE AND REPAIR

Monthly inspections and maintenance continued throughout 2012. To prevent ruts in the landfills caused by the weight of the lawn mowers and a significant amount of precipitation, the cutting of the grass only occurs when optimal soil conditions are evident. This pattern of vegetation control will continue. The grass was cut two times during the summer and fall for both landfills. Small pine seedlings and weeds were noted growing around the edge of both landfills and in the drainage channels throughout the year. During 2012, efforts were made to remove vegetation growth by pulling pine seedlings from the landfill edges and cutting/spraying the pine seedlings and weeds in the drainage channels with an approved herbicide. This occurred three times at the Former Landfill and three times at the Current Landfill.

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ACRONYMS

AOC	Area of concern
BNL	Brookhaven National Laboratory
BSA	Brookhaven Science Associates
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CY	Calendar year
DCS	Derived concentration technical standard
DOE	U.S. Department of Energy
DQOs	Data quality objectives
EIMS	Environmental Info. Mgmt. System
HWMF	Former Hazardous Waste Management Facility
LEL	Lower explosive limit
µg/L	Micrograms per liter
mg/L	Milligrams per liter
mrem	Millirems
MS/MSDs	Matrix spike/matrix spike duplicates
NPL	National Priorities List
NYSDEC	NY State Dept. of Environmental Conservation
NYSDOH	NY State Dept. of Health
O&M	Operations and Maintenance
OU	Operable Unit
PCBs	polychlorinated biphenyls
pCi/L	picocuries per liter
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
Sr-90	Strontium 90
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
TSS	Total suspended solids
TVOCs	Total volatile organic compounds
UEL	Upper explosive limit
USEPA	United States Environmental Protection Agency
VOCs	Volatile organic compounds

1.0 INTRODUCTION

This report documents the Operation and Maintenance (O&M) activities conducted during calendar year 2012 for the Current Landfill (Area of Concern [AOC] 3) and the Former Landfill Areas (Former Landfill AOC 2A, Interim Landfill AOC 2D, and Slit Trench AOC 2E). Brookhaven National Laboratory (BNL) is responsible for performing this work to comply with the post-closure O&M requirements specified in the 6 New York State Code of Rules and Regulations (6NYCRR) 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 seventeenth year of O&M for the Current Landfill, the sixteenth year for the Former Landfill and Slit Trench, and the fifteenth 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 separate remediation work areas known as Operable Units (OU). The Current Landfill and Former Landfill Areas are located in OU I, near the south central portion of the BNL site (see Figure 1).

Current Landfill. The Current Landfill consists of one unlined waste-cell that 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 every other year 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 calendar year (CY) 2002. In July 2006, and March 2011 BNL issued the *Final Five-Year Review Report* which discussed all remediation areas at the site. Review of the Current Landfill was included in these

reports.

Former Landfill Area. 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 1940s. 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 is believed to have 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 *Construction Certification Report for the Interim Landfill Capping* (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 five-year period following capping and proposed changes to the sampling program. These changes were implemented in CY03. In July 2006, and March 2011 BNL issued the *Final Five-Year Review Report* which discussed all remediation areas at the site. Review of the Former Landfill was included in these reports.

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, 2012). 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 DQO decision identified for the landfill monitoring programs is "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 additional monitoring programs for the landfill areas consist of:

Soil-gas Monitoring. Measurements of methane, Lower Explosive Limit (LEL), and hydrogen sulfide are taken quarterly from monitoring locations surrounding the Current Landfill and semiannually from monitoring locations surrounding the Former Landfill 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 every two years 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 every two years (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. Leachate was not observed during 2012.

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

2.1.1 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 this area in November 2012. The depths of the screen intervals for the Current Landfill wells are listed below.

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

BLS = Below Land Surface

*Background well

Screen zones were determined based on the following characteristics:

- Shallow Glacial Zone: typical water table within 10 ft of the screen zone.
- Intermediate Glacial Zone: typical water table between 10 ft and 100 ft above the screen zone.
- Deep Glacial Zone: typical water table >100 ft above the screen zone.

2.1.2 Former Landfill

Since January 1997, groundwater quality at the Former Landfill area has been monitored using eight shallow monitoring wells (three background and five downgradient). The locations of the eight monitoring wells are presented in Figure 4. This network was supplemented by the transfer of six wells, 106-20, 106-21, 106-43, 106-44, 106-45 and 106-64 from the Chemical/Animal

Holes project to the Former Landfill Area project in 2010. The transfer was made since the analyte of interest detected in these wells (strontium-90) originated from the Former Landfill. The direction of groundwater flow in the OU I area of the site is generally to the south-southeast. Figure 3 shows the November 2012 water table contours for the area. The screen zones for Former Landfill Area wells are summarized below.

Well ID	Screen Interval (ft BLS)	Screen Zone
086-42*	65–75	Intermediate Glacial
086-72*	41.5–56.5	Shallow Glacial
087-22*	43–53	Shallow Glacial
097-17	29–39	Shallow Glacial
097-64	29–44	Shallow Glacial
097-277	40–55	Shallow Glacial
106-02	55–65	Intermediate Glacial
106-30	29–44	Shallow Glacial
106-20	85-95	Intermediate Glacial
106-21	55-65	Shallow Glacial
106-43	43-53	Shallow Glacial
106-44	44-54	Shallow Glacial
106-45	44-55	Shallow Glacial
106-64	30-40	Shallow Glacial

BLS = Below Land Surface
*Background well

Screen zones were determined based on the following characteristics:

- Shallow Glacial Zone: typical water table within 10 ft of the screen zone.
- Intermediate Glacial Zone: typical water table between 10 ft and 100 ft above the screen zone.

2.1.3 Sampling Frequency and Analytical Parameters

The majority of monitoring wells for the Current Landfill were sampled semiannually, during June and December 2012 for VOCs, metals, and water chemistry parameters. Radionuclides were sampled once, in December. A quarterly sampling frequency was maintained for well 088-109, due to the continued presence of chloroethane.

Landfill leachate parameters, VOCs, metals, and radionuclides at the Former Landfill were sampled once during 2012. In addition, strontium-90 was sampled twice in monitoring wells 106-20, 106-21, 106-43, 106-44, 106-45, and 106-64.

R&C Formation, Ltd. of Babylon, New York conducted the groundwater sampling, and Test America of St. Louis, Missouri analyzed the samples. See Table 1 for a summary of analyses performed, by well and sampling round.

2.1.4 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 2012 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). 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 Area 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 are "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 from the Current Landfill during the second and fourth rounds, and one duplicate sample was collected during the second round from the Former Landfill. No errors were detected in the duplicate analyses. Matrix spike/matrix spike duplicate (MS/MSD) samples were collected at the same frequency as the duplicates. Sample results with concentrations of these compounds within the appropriate range of the associated blank value were declared non-detect. The amount of qualified 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 Area in 2012. The historical trends in concentrations of key contaminants are assessed and shown graphically in Figures 5 through 12. Summary tables of all 2012 landfill groundwater data are presented in Tables 2 through 10. Detections that exceed groundwater standards are in bold text. The tables include groundwater standards, laboratory results, minimum detection limits, and laboratory data qualifiers.

The groundwater standards used for evaluating nonradiological groundwater data are those contained in the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values (June 1998, with addendums April 2000 and June 2004) (NYSDEC 1998, 2000, and 2004) and 6NYCRR Part 703.5. Groundwater standards for radiological isotopes were supplemented with New York State Department of Health's (NYSDOH's) strontium-90 and tritium standards for drinking water. There were no groundwater standards for the gamma constituents; therefore a Groundwater Screening Level was used. This value is based on a dose equivalent of 4 millirems (mrem)/year and was calculated as 4% of the DOE Derived Concentration Technical Standards (DCS) (DOE-STD-1196-2011) 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 lower of the groundwater standards or the Selected Cleanup Goals listed in the Record of Decision (ROD) are highlighted in the data summary tables to facilitate review of the information.

The laboratory data qualifiers included in the tables vary for the different analyses. Explanations for the data qualifiers are included in the notes in each table. Complete 2012 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 chloroethane have historically been the primary groundwater contaminants detected downgradient of the Current Landfill. Benzene was detected above its standard of 1 microgram per liter (μg/L) in three monitoring wells: 087-11, 087-23, and 088-109. Chloroethane, and 1,1-dichloroethane were detected above their respective groundwater standards (5 μg/L) in one downgradient monitoring well, 088-109, during 2012 (Table 2). No other VOCs were detected above groundwater standards during 2012.

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, and 087-23 during the June sampling event, and 088-109 during the December sampling event. The highest detection of benzene was 1.49 μg/L during the December event in well 088-109. 1,1-Dichloroethene was detected above the standard of 5 μg/L in only one well, 088-109. Well 088-109 had detections of 1,1-dichloroethane above 5 μg/L during the February, June and September sampling events with a maximum concentration of 18.9 μg/L during June. Chloroethane exceeded the 5 μg/L standard in well 088-109 during all four sampling events. The maximum chloroethane concentration was 126 μg/L detected in well 088-109 during the February sampling event, which is well below the historic high of 560 ug/L detected in this well in 1998. Figure 5 shows VOC concentration spikes in wells 087-11, 087-23, 087-27, 088-109 and 088-110, approximately every two years. Even with these spikes, the VOC concentrations are generally stable to decreasing over the last 16 years.

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 2012 (Table 1). The results are provided in Table 3. Elevated levels of these parameters can be indicative of the presence of landfill leachate. During 2012, ammonia was the only water chemistry parameter detected above standards.

Ammonia was detected above the standard of 2 milligrams per liter (mg/L), with exceedances in four downgradient wells (087-11, 087-27, 088-109, and 088-110) during two sampling events, as shown in Table 3. The highest concentration of 4.61 mg/L was reported for well 087-11 in June. The levels of ammonia detected are consistent with historic data.

Chloride was not detected above the standard of 250 mg/L in any wells in 2012. Well 088-21 had the highest concentration of chloride at 65.6 mg/L in June. Figure 6 plots these trends. The trends for downgradient wells show 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 9.27 to 12.9 mg/L during 2012. The highest alkalinity concentration during 2012 was detected in downgradient, shallow Upper Glacial aquifer well 087-27, at 192 mg/L in June. There is no groundwater standard for alkalinity. The historical concentration trends plotted in Figure 6 show overall stable to decreasing levels of alkalinity.

During 2012, all sulfate concentrations remained below the groundwater standard of 250 mg/L. The highest sulfate value reported for 2012 was detected in the June sample from monitoring well 088-110 at a concentration of 18.1 mg/L. This is consistent with historic background levels at the Current Landfill.

TDS and TSS results were similar to those from previous years. TDS and TSS concentrations in background well 087-09 ranged from 82.9 mg/L to 98.6 mg/L, and 3.6 mg/L to 11.6 mg/L, respectively. The maximum concentrations observed in downgradient wells were 317 mg/L and 30.3 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 to stable trends in concentrations of contaminants indicate that the capping continues to effectively reduce the generation and migration of leachate.

2.2.1.3 Metals

Historically, iron is detected consistently above groundwater standards in the majority of wells surrounding the landfill. Precipitated iron from the BNL Water Treatment Plant was disposed of at the Current Landfill during past operations. Concentrations in upgradient well 87-09 are still lower than in several downgradient wells, suggesting continued leachate migration from the landfill.

During 2012, chromium, iron, and nickel in the background well, and arsenic, iron, manganese, and sodium in several downgradient wells were detected above their respective groundwater standards (Table 4).

Arsenic was reported above the standard of 10 μg/L in wells 087-23 and 088-110 at concentrations of 10.9 μg/L and 10.6 μg/L, respectively. Arsenic detections have historically been observed at similar levels in Current Landfill wells.

Iron was reported above the standard of 300 μg/L in all wells except 087-24, 087-26. The background concentrations ranged up to 4,410 μg/L while downgradient concentrations ranged up to 58,000 μg/L (well 087-23). Iron trend graphs are plotted on Figure 7.

Manganese ranged from 7.9 µg/L to 14.2 µg/L in background well 087-09, and up to 7,760 µg/L in the downgradient wells. Background sodium levels ranged up to 19,600 µg/L; whereas downgradient levels reached a high of 50,500 µg/L.

Nickel and chromium were detected above the standards of 100 µg/L and 50 µg/L, respectively, in background well 087-09. Nickel and chromium in well 087-09 were detected at concentrations up to 156 µg/L and 885 µg/L , respectively. However, neither was detected above standards in any of the downgradient wells.

2.2.1.4 Radionuclides

No radionuclides were detected above groundwater standards during 2012 (Table 5). Tritium was the only radionuclide detected during 2012. Tritium was detected significantly below the groundwater standard of 20,000 pCi/L with a maximum value of 476 pCi/L in well 088-109 (Figure 8). Tritium and strontium-90 concentrations have not exceeded groundwater standards in any wells since 1998.

2.2.2 Former Landfill

2.2.2.1 VOCs

During 2012, there were no detections of VOCs above groundwater standards in wells in the Former Landfill Area (Table 6). The only VOCs detected were 1,1,1-trichloroethane, 1,1-dichloroethane, chloroform and trichloroethylene. 1,1,1-Trichloroethane was detected in wells 097-64 and 106-30 at concentrations of 0.34 µg/L and 3.56 µg/L, respectively. 1,1-Dichloroethane was detected in one monitoring well, well 106-30, at a concentration of 2.31 µg/L. Trichloroethylene was also detected in wells 097-64 and 106-30 at estimated concentrations of 0.27 µg/L and 0.45 µg/L, respectively. These concentrations are well below the standards of 5 µg/L for 1,1,1-trichloroethane, 1,1-dichloroethane and trichloroethylene. Chloroform was detected in six of eight wells up to a concentration of 1 µg/L. These concentrations are significantly below the standard of 7 µg/L. These low VOC detections are an indicator 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 and TSS. During 2012, none of the of water

chemistry parameters exceeded applicable groundwater standards (Table 7). In general, all of the landfill leachate indicator parameter concentrations in the downgradient wells were indistinguishable from concentrations in the upgradient wells in 2012. These trends indicate that the landfill cap is effective.

Sulfate results for wells 087-22 and 097-277 were not obtained from the December sampling round due to an analytical laboratory error. Sulfate concentrations ranged from 12 mg/L to 16.6 mg/L in the background wells, and from 6.3 mg/L to 11.6 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 concentrations up to 1.24 mg/L and 17.9 mg/L, respectively in the background wells and concentrations up to 1.33 mg/L and 23.8 mg/L, respectively in the downgradient wells. The trends plotted in Figure 10 indicate chloride concentrations are stable over time. TKN was not detected during the 2012 sampling round.

Alkalinity concentrations ranged from 4.8 mg/L to 24.2 mg/L in background wells and from 7.5 mg/L to 21.5 mg/L in downgradient wells. The trends plotted in Figure 10 demonstrate that the alkalinity concentrations in 2012 continue to be at background levels.

TDS concentrations ranged from 32.9 mg/L to 80 mg/L in the background wells, and from 34.3 mg/L to 68.6 mg/L in the downgradient wells. TSS concentrations were nondetect in the background wells, and from nondetect (0.6 mg/L) to 6.1 mg/L in the downgradient wells.

2.2.2.3 Metals

The sampling results are summarized in Table 8, and concentration trend plots for iron are shown on Figure 11. All metal detections were below groundwater standards during 2012 except for iron in well 106-02. The iron result for well 106-02 was 2,190 µg/L which is above the groundwater standard of 300 µg/L. Since December 2008, iron has shown an increasing trend in well 106-02. However, iron is the only parameter in the well to have an increasing trend. All other parameters are stable at background levels. In an effort to find the source of iron, the pump was pulled and

examined from well 106-02. It was determined that the pump was approximately 14 years old. This pump was replaced with a new pump. A sample will be collected during the second quarter of 2013.

2.2.2.4 Pesticides/PCBs

There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2012. The sampling results are summarized in Table 9.

2.2.2.5 Radionuclides

Tritium was not detected in any wells during 2012. Strontium-90 was detected in four wells in 2012 below the groundwater standard of 8 pCi/L. Detections ranged from 1.64 pCi/L in well 106-64 to 3.18 pCi/L in well 106-45. Strontium-90 has not been detected above the standard of 8 pCi/L in Former Landfill monitoring wells since May 2001, in wells 106-44 and 106-64. The 2012 sampling results are summarized in Table 10, and concentration trend plots for tritium and strontium-90 are shown on Figure 12. Gross beta activity was detected in wells 087-22, 097-17, and 097-277, at concentrations up to 9 pCi/L. These low results are not consistent with historic data and are most likely false positives. Gross beta activity was also detected in well 097-64 at 9 pCi/L which is consistent with the strontium-90 detection from this well of 2.58 pCi/L.

3.0 WOODED WETLAND MONITORING

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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. As recommended in the *2008 Environmental Monitoring Report – Current and Former Landfill Areas*, samples are collected on a biennial schedule (BNL 2009). The next scheduled sampling event after 2012 will be in 2014. To determine if sediment or surface water concentrations pose a risk to tiger salamanders, analytical data are compared to benchmark sediment concentrations and critical water concentrations (Appendix A Tables 2A and 2B) that were calculated in the *Ecological Risk Assessment* (CDM, 1999). A benchmark sediment dose is a dose above which an observable toxic effect may occur in adult tiger salamanders. Critical water concentrations are surface water concentrations that have the potential to produce observable adverse effects to larval salamanders. See Appendix A for a detailed

discussion of the sampling and analytical results, and associated figures and data tables.

Surface Water

Seven surface water samples from the Southern and Northern Ponds were collected in May 2012. All metal results were below the critical concentration (Appendix A, Table 6).

Metals in water are the primary source of absorption by tiger salamanders. No significant change in dissolved metals indicates that the wooded wetland is not experiencing an increase in metals concentration.

Sediment

Seven sediment samples were collected from the Wooded Wetland Area in May 2012. The results for 2012 indicate that average metals concentrations in sediments in the South Pond are less than the maximum concentration benchmarks (Appendix A, Table 5). In the North Pond, the average 2012 concentration of mercury (0.18 mg/kg) was slightly above the maximum sediment concentrations (Appendix A, Table 5). However, the average mercury result was below the background sediment concentration of 0.41 mg/kg. Mercury was not detected in the water column during 2012. This indicates that the mercury will not likely have an adverse impact on Tiger Salamanders.

Overall, the 2012 results are consistent with previous years with all average metals concentrations the lowest detected since 2007. Based on the 2012 sampling results, sampling of the Wooded Wetlands should continue once every two years as part of the annual O&M landfills monitoring activities. A complete copy of the *2012 Wooded Wetlands Report* is included in Appendix A of this report.

4.0 SOIL-GAS MONITORING

4.1 Soil-gas Monitoring Networks

Soil-gas readings were collected from wells surrounding the Current Landfill in March, June, September, and December 2012 and from the Former Landfill in June, and December 2012. Methane, lower explosive limit (LEL), and hydrogen sulfide were measured using a Landtec GA-90. 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 located adjacent to the landfill. 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 12 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 in the following months.

Sampling Event	Current Landfill	Former Landfill
Round 1	March 2012	June 2012
Round 2	June 2012	December 2012
Round 3	September 2012	None
Round 4	December 2012	None

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 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) and were sampled quarterly during 2012. Potential receptors, or areas where methane can accumulate in the vicinity of the Current Landfill, include the National Weather Service office building located 480 feet north northwest of the Current Landfill on the north side of Brookhaven Avenue. The four outpost soil-gas locations, GSGM-1 to GSGM-4, located along the south side of Brookhaven Avenue, are used to monitor the northern extent of the migration of landfill gas. Should methane extend to the south side of Brookhaven Avenue, active measures will be required to control its migration.

The results of the soil-gas monitoring for 2012 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 elevated along the western side and the southeast boundary of the Current Landfill. In addition, one point, SGM-19, along the northern side of the Current Landfill had elevated LEL readings. The elevated 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 2012, indicating that the methane accumulation and migration does not extend to this area. Should methane extend to these outpost wells on 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 29 ppm. Well SGM-12A located near the south-eastern section of the landfill, had the highest hydrogen sulfide concentration, which was above the 10 ppm exposure limit. However, the measurement was taken from a vapor point screened 2.5 - 7.5 ft below the surface and not from the ambient 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 2011. Generally the levels of methane and hydrogen sulfide in the wells along the northwest landfill boundary and southeast corner have remained elevated but stable.

4.2.2 Former Landfill Area

A total of 12 soil-gas monitoring well clusters are positioned around the Former Landfill Area. During 2012, the well clusters were monitored two times. The only existing operating facility within the immediate vicinity of the Former Landfill Area is Building 670, located approximately 650 feet to the southeast. This building houses the Chemical/Animal Holes Sr-90 groundwater treatment system. Because this facility does not have a basement, there is minimal potential for hazardous levels of landfill gases to accumulate in this structure.

Based upon the two sampling events, there was no methane or hydrogen sulfide detected. Table 13 details the 2012 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 Area 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 are consistent with historic values. Appendix D includes the results of methane monitoring in the Former Landfill Area for 1996 through 2011.

Presently, there is no measured pathway for methane gas migration, nor do the concentrations represent an explosive hazard, as shown by the nondetect readings on the LEL meter. The age of the Former Landfill Area 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 accordance with the 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

To prevent ruts in the landfills caused by the weight of the lawn mowers during periods of above normal precipitation, the cutting of the grass is only conducted when optimal soil conditions are evident. The grass was cut during April and November for the Former Landfill and during April for the Current Landfill. Small cracks in the asphalt road next to the Current Landfill were noted on the inspection logs. The cracks do not impact the structural integrity of the road; however there was vegetation growing in some of the cracks. A bobcat was used to scrape the roads around the Current Landfill in March to remove the vegetation and soil. Also, small pine seedlings and weeds were noted growing around the edge of both landfills. Vegetation removal was conducted in March, April, June and November for the Former landfill and during February, June and August for the Current

Landfill. During vegetation removal, small pine seedlings were pulled out and weeds were sprayed with an approved herbicide.

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. Small pine seedlings and weeds were noted growing in the drainage channels of both landfills during various times of the year. Vegetation removal was conducted in March, April, June and November for the Former landfill and during February, June and August for the Current Landfill. During vegetation removal, small pine seedlings and weeds were cut, as appropriate, and sprayed with an approved herbicide.

5.3 Environmental Monitoring System

The monitoring wells and soil-gas monitoring wells associated with the landfills required no significant maintenance. Access to the soil-gas monitoring wells was cleared via mechanical weed whacking prior to each sampling event.

5.4 Related Structures

During inspections, it was noted that the railing on the stairs at the Former Landfill was loose. This is scheduled for repair during early 2013. The southwest gate to the Current Landfill was extremely difficult for one person to open and close because of how tightly the lock fits into the gate's latch. Therefore, the gate was relocked using a chain and padlock. In addition, the point of contact sign was rehung on this gate.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Groundwater Monitoring

6.1.1 Conclusions for the Current Landfill

- Benzene was detected in downgradient wells 087-11, 087-23, and 088-109 at concentrations above the groundwater standard with a maximum concentration of 1.49 µg/L. Chloroethane, 1,1-dichloroethene, and 1,1-dichloroethane were detected in well 088-109 at concentrations above groundwater standards. During 2012, chloroethane concentrations ranged up to 126 µg/L indicating that VOCs continue to emanate from the landfill. However, an analysis of the trends of VOCs indicated the concentrations are stable to decreasing.

- Concentrations of landfill water chemistry parameters and metals such as ammonia and iron in several downgradient wells were above the upgradient values. This suggests that leachate continues to emanate from the landfill, but at low levels.

- Tritium continues to be detected in several wells downgradient of the Current Landfill, but at concentrations well below groundwater standards. These concentrations were consistent with historical observations. There have been no detections of radionuclides above the drinking water standards since 1998.

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

6.1.2 Recommendations for the Current Landfill

The groundwater monitoring well network is adequate at this time. Based on the absence of detections above groundwater standards since 1998, it is recommended that radionuclide monitoring be reduced to sampling wells 087-23, 087-27, 088-21 and 088-109 annually for tritium, strontium-90 and gamma. These wells are downgradient of the Current Landfill and would detect a potential contamination release.

6.1.3 Conclusions for the Former Landfill Area

- The Former Landfill Area is not a significant source of VOC contamination. No VOCs were detected above groundwater standards in 2012. VOC concentrations in the downgradient wells were at or near the minimum detectable limits.
- Landfill-leachate indicators in downgradient wells were detected at concentrations approximating those in the background monitoring wells, indicating that leachate generation is minimal to nonexistent.
- With the exception of iron in well 106-02, leachate indicator parameters and metals concentrations were generally the same when comparing downgradient monitoring wells to upgradient monitoring wells. Well 106-02 has exhibited an increasing trend for iron, but all other parameters are stable at background levels.
- The Former Landfill Area no longer appears to be a source of strontium-90 contamination. Only trace amounts of strontium-90 were detected near the Former Landfill Area with a maximum concentration of 3.18 pCi/L in well 106-45. The strontium-90 detected in wells 097-64, 106-44, 106-45 and 106-64 has been decreasing with time and has been below groundwater standards since 2001.
- The implemented landfill controls are effective, as evidenced by the improved quality of groundwater downgradient of the landfill.

6.1.4 Recommendations for the Former Landfill Area

With the exception of iron in well 106-02, all monitoring wells exhibit concentrations of leachate indicator parameters, metals and VOCs at background levels. In addition, radionuclides have not been detected above standards since 2001. Therefore, it is recommended that the sampling frequency for all Former Landfill monitoring wells be changed to once every two years with the exception of metals in well 106-02. Sampling for metals will continue on an annual basis for well 106-02.

6.2 Soil-Gas Monitoring

6.2.1 Conclusions for the Current Landfill

Methane and hydrogen sulfide levels in wells located along the west landfill boundary and southeast corner have remained stable and have not shown any significant increases or decreases over time.

No gas migration has been observed this year 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 Area

Methane and hydrogen sulfide levels at the Former Landfill Area continue to show no landfill gas.

6.2.4 Recommendations for the Former Landfill Area

The soil-gas monitoring program is adequate at this time. No changes to the monitoring frequency are recommended.

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. To prevent ruts in the landfills caused by the weight of the lawn mowers and moist surface conditions, the cutting of the grass is only conducted when optimal soil conditions are evident. Access to the soil-gas monitoring wells are cleared via mechanical weed whacking.

6.3.2 Former Landfill Area

Monthly inspections and maintenance will continue in accordance with the O&M requirements. To prevent ruts in the landfills caused by the weight of the lawn mowers during periods of above normal precipitation, the cutting of the grass is only conducted when optimal soil conditions are evident. Access to the soil-gas monitoring wells are cleared via mechanical weed whacking.

7.0 REFERENCES

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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	Total Chromium	Hexavalent Chromium	Cyanide	Perchlorate	EPA 900 Gross Alpha/Beta	Isotopic Cs -137	EPA 901 Gamma Spec	EPA 906 Tritium	EPA 905 Sr 90	Blind Duplicate/MS/MSD	Frequency (events/year)
087-09	CLF	Background	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
087-11	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
087-23	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
087-24	CLF	Downgradient	Xa					Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa				Xa	Xa	Xa		2b
087-26	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
087-27	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
088-109	CLF	Downgradient	X					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa	X	4
088-110	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
088-21	CLF	Downgradient	Xb					Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb			Xb				Xa	Xa	Xa		2b
088-22	CLF	Downgradient	Xa					Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa				Xa	Xa	Xa		2b
088-23	CLF	Downgradient	Xa					Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa				Xa	Xa	Xa		2b
086-42	FLF	Background	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	X	Xa		1a
086-72	FLF	Background	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
087-22	FLF	Background	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
097-17	FLF	Downgradient	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
097-277	FLF	Downgradient	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
097-64	FLF	Downgradient	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
106-02	FLF	Downgradient	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa		1a
106-20	FLF	Downgradient																						Xb		2b
106-21	FLF	Downgradient																						Xb		2b
106-30	FLF	Downgradient	Xa			Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa			Xa		Xa		Xa	Xa	Xa	X	1a
106-43	FLF	Downgradient																						Xb		2b
106-44	FLF	Downgradient																						Xb		2b
106-45	FLF	Downgradient																						Xb		2b
106-64	FLF	Downgradient																						Xb		2b

NOTES:

a: Collect in 4th Quarter.

b: Collect in 2nd and 4th Quarters.

Table 2. Current Landfill - Summary of 2012 VOC Data

Analtye	Groundwater Standards (ug/L)	087-09 6/14/2012 (ug/L)		087-09 12/12/2012 (ug/L)		087-11 6/14/2012 (ug/L)		087-11 12/12/2012 (ug/L)		087-23 6/14/2012 (ug/L)		087-23 12/12/2012 (ug/L)		087-24 12/12/2012 (ug/L)		087-26 6/14/2012 (ug/L)		087-26 12/12/2012 (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	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	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	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	0.5	U	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.21	J	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	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	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	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	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	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	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	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	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	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	**1.33**		0.97		**1.26**		0.67		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	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	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	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	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	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	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	0.5	U	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.44	J	0.18	J	1.08		0.52		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	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	5	0.5	U	0.5	U	2.89		1.68		3.72		2.59		0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	0.5	U	0.5	U	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	0.5	U	0.5	U	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	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	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	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	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	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	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	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	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	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	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	0.5	U	0.5	U
m/p xylene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	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	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	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	0.5	U	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U	0.19	J	0.5	U	0.24	J	0.18	J	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	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	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.18	J
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.34	J	0.3	J	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	0.5	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	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	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.31	J	0.23	J	0.45	J	0.24	J	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	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	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	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	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	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	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	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	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	0.5	U	0.5	U
524.2 TVOC	--	0		0		4.97		3.25		7.06		4.56		0.18		0		0.18	

J- Estimated value.
U- Not detected.

Table 2. Current Landfill - Summary of 2012 VOC Data

Analtye	Groundwater Standards (ug/L)	087-27 6/14/2012 (ug/L)		087-27 12/12/2012 (ug/L)		088-109 2/27/2012 (ug/L)		088-109 6/14/2012 (ug/L)		088-109 9/4/2012 (ug/L)		088-109 12/12/2012 (ug/L)		088-110 6/14/2012 (ug/L)		088-110 12/12/2012 (ug/L)		088-21 6/14/2012 (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	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	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	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	0.5	U	0.5	U
1,1-Dichloroethane	5	0.19	J	0.5	U	**6.08**		**18.9**		**15**		3.72		0.36	J	0.75		0.5	U
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.35	J	0.33	J	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	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	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	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	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	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	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	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	0.5	U	0.5	U
Benzene	1	0.92		0.76		0.95	J	0.29	J	0.84		**1.49**		0.5		0.66		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	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	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.1	J	0.5	U	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	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	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	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	0.5	U	0.5	U
Chlorobenzene	5	0.81		1.38		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.39	J	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	0.5	U	0.5	U
Chloroethane	5	1.2		0.96		**126**		**23.8**		**13**		**42.5**		2		3.19		0.5	U
Chloroform	7	0.5	U	0.5	U	0.5	U	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	0.5	U	0.5	U	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	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	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	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	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	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	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	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	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	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	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	0.5	U	0.5	U
m/p xylene	5	1	U	1	U	0.5	U	1	U	0.5	U	1	U	1	U	1	U	1	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	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	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	0.16	J	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U	0.5	U	0.14	J	0.16	J	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	0.24	J	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	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.2	J	0.5	U
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U	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	0.5	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	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	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.36	J	0.27	J	0.5	U	0.5	U	0.5	U	0.5	U	0.2	J	0.33	J	0.5	U
sec-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	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	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	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	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	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	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	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	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	0.5	U	0.5	U
524.2 TVOC	--	3.48		3.37		133.13		43.34		29.31		47.87		3.06		5.92		0	

J- Estimated value.
U- Not detected.

Table 2. Current Landfill - Summary of 2012 VOC Data

Analtye	Groundwater Standards (ug/L)	088-21 12/12/2012 (ug/L)		088-22 12/12/2012 (ug/L)		088-23 12/12/2012 (ug/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	5	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.5	U
Chlorobromomethane	5	0.5	U	0.5	U	0.5	U
Chloroethane	5	0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethylene	5	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	0.5	U	0.5	U
DBCP	0.04	0.5	U	0.5	U	0.5	U
Dibromochloromethane	5	0.5	U	0.5	U	0.5	U
Dibromomethane	5	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	0.5	U	0.5	U	0.5	U
EDB	0.05	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U
m/p xylene	5	1	U	1	U	1	U
Methyl bromide	5	0.5	U	0.5	U	0.5	U
Methyl chloride	5	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	10	0.5	U	0.5	U	0.5	U
Methylene chloride	5	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U
n-Propylbenzene	5	0.5	U	0.5	U	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	5	0.5	U	0.5	U	0.5	U
o-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U
o-Xylene	5	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	5	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	5	0.5	U	0.5	U	0.5	U
Styrene	5	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	5	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	5	0.5	U	0.5	U	0.5	U
Toluene	5	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	0.5	U	0.5	U	0.5	U
524.2 TVOC	--	0		0		0	

J- Estimated value.
U- Not detected.

Table 3. Current Landfill - Summary of 2012 Water Chemistry Data.

Analtye	Groundwater Standards (mg/L)	087-09 6/14/2012 (mg/L)		087-09 12/12/2012 (mg/L)		087-11 6/14/2012 (mg/L)		087-11 12/12/2012 (mg/L)		087-23 6/14/2012 (mg/L)		087-23 12/12/2012 (mg/L)		087-24 6/14/2012 (mg/L)		087-24 12/12/2012 (mg/L)	
Alkalinity (as CaCO3)	--	12.9	J	9.27	U	131	J	113	U	117	J	93.2	U	24.4	J	22.7	U
Ammonia (as N)	2	0.0455		0.076	U	4.61		**2.46**		0.641		0.431		0.111		0.0588	U
Chloride	250	24		34	J	32.7		33.6	J	5.59		16.4	J	16.9		14.9	J
Cyanide	0.2	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U
Nitrate (as N)	10	5.39		1.99		0.033	U	0.033	U	0.18		0.144		0.53		0.507	
Nitrite (as N)	1	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U
Nitrite + Nitrate-N	10	5.3		2.07	J	0.085		0.0473	J	0.085		0.0492	J	0.479		0.489	J
Nitrogen	--	5.38		2.11		4.29		2.91		0.615		0.525		0.479		0.489	
Sulfate	250	7.44		11.6	J	0.885	J	11.6	J	4.58	J	6.86	J	13.5		13.4	J
TDS	--	82.9	J	98.6	J	181	J	197	J	144	J	119	J	74.3	J	67.1	J
Total Kjeldahl Nitrogen	--	0.0785	U	0.0436	J	4.29		2.86	J	0.615		0.476	J	0.035	U	0.033	UJ
TSS	--	11.6		3.6		20.6		5.7		6.85		2.7		0.589	U	0.576	U

J - Estimated value.

U - Not Detected.

Table 3. Current Landfill - Summary of 2012 Water Chemistry Data.

Analtye	Groundwater Standards (mg/L)	087-26 6/14/2012 (mg/L)		087-26 12/12/2012 (mg/L)		087-27 6/14/2012 (mg/L)		087-27 12/12/2012 (mg/L)		088-109 6/14/2012 (mg/L)		088-109 12/12/2012 (mg/L)		088-110 6/14/2012 (mg/L)		088-110 12/12/2012 (mg/L)		088-21 6/14/2012 (mg/L)		088-21 12/12/2012 (mg/L)		088-22 6/14/2012 (mg/L)		088-22 12/12/2012 (mg/L)	
Alkalinity (as CaCO3)	--	23.4	J	31.4	U	192	J	169	U	129	J	122	U	127	J	180	U	35.8	J	35.5	U	16.4	J	17.5	U
Ammonia (as N)	2	0.0575		0.0549	U	3.18		**2.67**		2.18		**2.82**		1.87		**2.89**		0.13		0.0682	U	0.0969		0.0967	U
Chloride	250	17.3		17	J	40.2		40	J	20.3		21.8	J	35.6		41.2	J	65.6		35	J	17.1		16.8	J
Cyanide	0.2	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U
Nitrate (as N)	10	0.487		0.515		0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.29		0.693		0.48		0.609	
Nitrite (as N)	1	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U
Nitrite + Nitrate-N	10	0.497		0.52	J	0.085		0.0496	J	0.085		0.0402	J	0.085		0.056	J	0.188		0.675	J	0.41		0.53	J
Nitrogen	--	0.534		0.57		3.18		3.05		2.16		3.33		1.95		3.68		0.322		0.807		0.455		0.572	
Sulfate	250	13.2		13.6	J	11.6		9.63	J	8.16		5.75	J	18.1		13.1	J	5.98		7.77	J	12.3		12.8	J
TDS	--	55.7	J	78.6	J	317	J	250	J	183	J	229	J	253	J	284	J	170	J	113	J	74.3	J	71.4	J
Total Kjeldahl Nitrogen	--	0.0377	U	0.0497	J	3.18		3	J	2.16		3.29	J	1.93		3.62	J	0.134	U	0.132	J	0.0459	U	0.042	J
TSS	--	0.558	U	0.8	J	30.3		5.1		15.2		14		25		9.5		3.66		5.1		0.588	J	0.909	J

J - Estimated value.

U - Not Detected.

Table 3. Current Landfill - Summary of 2012 Water Chemistry Data.

Analtye	**Groundwater Standards (mg/L)**	**088-23 6/14/2012 (mg/L)**		**088-23 12/12/2012 (mg/L)**	
Alkalinity (as CaCO3)	--	22.4	J	22.7	U
Ammonia (as N)	2	0.088		0.0774	U
Chloride	250	16.9		17.5	J
Cyanide	0.2	0.00167	U	0.00167	U
Nitrate (as N)	10	0.102		0.233	
Nitrite (as N)	1	0.033	U	0.033	U
Nitrite + Nitrate-N	10	0.085		0.0307	J
Nitrogen	--	0.085	U	0.033	U
Sulfate	250	11.6		12	J
TDS	--	71.4	J	74.3	J
Total Kjeldahl Nitrogen	--	0.035	U	0.033	UJ
TSS	--	1.48	J	6	

J - Estimated value.
U - Not Detected.

Table 4. Current landfill - Summary of 2012 Metals Data.

Analtye	**Groundwater Standards (ug/L)**	**087-09 6/14/2012 (ug/L)**		**087-09 12/12/2012 (ug/L)**		**087-11 6/14/2012 (ug/L)**		**087-11 12/12/2012 (ug/L)**		**087-23 6/14/2012 (ug/L)**		**087-23 12/12/2012 (ug/L)**		**087-24 6/14/2012 (ug/L)**		**087-24 12/12/2012 (ug/L)**		**087-26 6/14/2012 (ug/L)**	
Aluminum	200	154	B	178	B	70.2	B	81.6	B	68	U	68	U	68	U	68	U	68	U
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U
Arsenic	10	1.7	U	1.7	U	5.92		6.35		9.59		**10.9**		1.7	U	1.7	U	1.7	U
Barium	1000	17.9	B	16.3	B	31.5	B	20.1	B	32.2	B	25.4	B	10.7	B	9.64	B	23.7	B
Beryllium	3	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	--	7640		9560		20100		15000		6890		5420		6750		6270		6210	
Chromium	50	**885**		**230**		1	U	1	U	2.09	B	1	U	1	U	1	U	1	U
Cobalt	--	1.08	B	1	U	1	U	1	U	5.88	B	5.63	B	2.13	B	1.8	B	1.7	B
Copper	200	13.1	B	3.43	B	3	U	5.68	B	3	U	3	U	3	U	3	U	3	U
Iron	300	**4410**		**1090**		**55400**		**48900**		**58000**		**46900**		30	U	30	U	41.2	B
Lead	25	0.599	B	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Magnesium	35000	3540	B	4410	B	4930	B	2990	B	1890	B	2310	B	4870	B	4490	B	4150	B
Manganese	300	14.2	B	7.88	B	**989**		**1110**		**6340**		**7610**		2	U	2	U	2	U
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	**156**		14.5	B	1.5	U	1.5	U	2.64	B	1.99	B	1.5	U	1.5	U	1.5	U
Potassium	--	602	B	740	BE	6320		3180	BE	1470	B	1110	BE	1400	B	1380	BE	1240	B
Selenium	10	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Silver	50	1	U	1	U	1	U	1.38	B	1.56	B	2.64	B	1	U	1	U	1	U
Sodium	20000	19600		17300		7790		**20800**		7250		5960		12400		10900		12500	
Thallium	0.5	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Vanadium	--	3.42	B	1	U	1.51	B	1	U	1	U	1	U	1	U	1	U	1	U
Zinc	2000	4.42	B	19.2	B	7.42	B	3.83	B	9.17	B	6.62	B	3.3	U	3.3	U	3.3	U

Table 4. Current landfill - Summary of 2012 Metals Data.

Analtye	**Groundwater Standards (ug/L)**	**087-26 12/12/2012 (ug/L)**		**087-27 6/14/2012 (ug/L)**		**087-27 12/12/2012 (ug/L)**		**088-109 6/14/2012 (ug/L)**		**088-109 12/12/2012 (ug/L)**		**088-110 6/14/2012 (ug/L)**		**088-110 12/12/2012 (ug/L)**		**088-21 6/14/2012 (ug/L)**		**088-21 12/12/2012 (ug/L)**	
Aluminum	200	68	U	79.4	B	68	U	68	U	68	U	68	U	68	U	68	U	145	B
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U
Arsenic	10	1.7	U	9.35		6.97		6.73		9.74		**10.6**		9.34		1.7	U	1.7	U
Barium	1000	25.2	B	76.7	B	55.2	B	41.7	B	44.6	B	48.6	B	53.5	B	27.8	B	38.9	B
Beryllium	3	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	--	6630		44700		35100		29300		35000		25300		28800		7060		3770	B
Chromium	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cobalt	--	1.9	B	6.76	B	4.42	B	1.97	B	2.04	B	4.57	B	7.69	B	2.3	B	1.14	B
Copper	200	3.33	B	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Iron	300	95.2	B	**55400**		**47200**		**33000**		**43200**		**52600**		**62400**		**638**		**694**	
Lead	25	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.7	B	0.5	U
Magnesium	35000	4540	B	7860		7360		6180		6640		7270		9100		2730	B	2130	B
Manganese	300	2	U	**1660**		**1530**		**1230**		**1520**		**3280**		**2980**		98.4		173	
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	1.5	U	1.69	B	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	1350	BE	6860		5910	E	6060		6220	E	4360	B	5690	E	1160	B	2700	BE
Selenium	10	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Silver	50	1	U	1.28	B	1.12	B	1	U	1.75	B	1.8	B	2.13	B	1	U	1	U
Sodium	20000	12000		**26900**		18600		10200		11000		**29000**		**22600**		11900		**35700**	
Thallium	0.5	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Vanadium	--	1	U	1.04	B	1	U	1	U	1	U	1	U	1	U	1	U	2.95	B
Zinc	2000	3.3	U	4.95	B	3.3	U	3.3	U	5.07	B	3.68	B	3.3	U	4.19	B	3.99	B

Table 4. Current landfill - Summary of 2012 Metals Data.

Analtye	**Groundwater Standards (ug/L)**	**088-22 6/14/2012 (ug/L)**		**088-22 12/12/2012 (ug/L)**		**088-23 6/14/2012 (ug/L)**		**088-23 12/12/2012 (ug/L)**	
Aluminum	200	130	B	68	U	68	U	68	U
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U
Arsenic	10	1.7	U	1.7	U	2.88	B	1.7	U
Barium	1000	45.1	B	27.1	B	3.41	B	4.35	B
Beryllium	3	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U
Calcium	--	5960		7050		6230		6830	
Chromium	50	1	U	1	U	1	U	1	U
Cobalt	--	1	U	2.45	B	1	U	1	U
Copper	200	3	U	3	U	3	U	3	U
Iron	300	**548**		**627**		**3480**		**5180**	
Lead	25	0.5	U	0.5	U	0.5	U	0.5	U
Magnesium	35000	3220	B	2970	B	1690	B	1940	B
Manganese	300	101		109		**2230**		**1740**	
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	2750	B	1230	BE	1070	B	1210	BE
Selenium	10	1.5	U	1.5	U	1.5	U	1.5	U
Silver	50	1	U	1	U	1	U	1	U
Sodium	20000	**50500**		11100		13500		12000	
Thallium	0.5	0.45	U	0.45	U	0.45	U	0.45	U
Vanadium	--	2.52	B	1	U	1	U	1	U
Zinc	2000	8.85	B	3.3	U	3.3	U	3.3	U

Table 5. Current landfill - Summary of 2012 Radionuclide Data.

Analtye	**Groundwater Standards pCi/L**	**087-09 12/12/2012 pCi/L**				**087-11 12/12/2012 pCi/L**				**087-23 12/12/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-6.04	U	19.2	12.7	-3.27	U	24.2	15.1	-1.99	U	13.2	9.03
Beryllium-7	40000	1.28	U	24.4	13.4	-2.83	U	26	14.7	-12.6	U	28.2	16.7
Cesium-134	80	1.51	U	3.38	2.18	1.73	U	3.88	1.93	0.46	U	3.54	1.88
Cesium-137	120	-0.961	U	2.94	1.72	-1.85	U	3.05	1.92	0.5	U	3.65	2.04
Co-60	200	-0.749	U	2.66	1.54	-0.0549	U	3.32	1.72	0.556	U	3.54	1.82
Cobalt-57	4000	-0.461	U	2.58	1.57	-0.541	U	2.66	1.55	0.792	U	2.88	1.61
Europium-152	841	3.8	U	9.66	5.43	3.33	U	9.67	5.11	1.36	U	10.5	6.33
Europium-154	573	2.75	U	9.32	4.82	0.203	U	9.83	5.3	2.78	U	9.61	5.65
Europium-155	4000	-2.64	U	10.5	6.33	5.58	U	12.4	6.79	6.32	U	12.1	6.64
Manganese-54	2000	-1.38	U	3.03	2.16	-0.287	U	2.95	1.61	1.01	U	3.75	1.99
Sodium-22	400	1.18	U	3.28	1.67	0.0434	U	3.44	1.86	0.953	U	3.37	1.98
Strontium-90	8	0.246	U	0.767	0.437	0.264	U	0.568	0.334	0.0885	U	0.504	0.269
Tritium	20000	-34.1	U	265	151	67.7	U	264	154	83.4	U	256	150
Zinc-65	360	-0.855	U	5.76	3.77	1.64	U	6.77	3.92	0.27	U	6.65	4.22

U - Not detected.

Table 5. Current landfill - Summary of 2012 Radionuclide Data.

Analtye	**Groundwater Standards pCi/L**	**087-24 12/12/2012 pCi/L**				**087-26 12/12/2012 pCi/L**				**087-27 12/12/2012 pCi/L**				**088-109 12/12/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-8.07	U	19.9	12.3	-11.1	U	14	8.54	-11.8	U	22.2	15	0.282	U	6.74	4.05
Beryllium-7	40000	9.53	U	27.3	14.8	-3.54	U	22.7	13	-8.07	U	17.5	10.6	0.771	U	32.1	17.7
Cesium-134	80	0.702	U	3.15	1.64	0.545	U	3.1	1.6	-0.714	U	2.34	1.34	-0.385	U	4.54	2.46
Cesium-137	120	0.978	U	2.84	2.75	-0.864	U	3.21	1.8	2.4	U	2.43	1.62	0.482	U	4.8	2.67
Co-60	200	0.641	U	3.44	1.76	1.38	U	3.53	1.73	-0.157	U	2.49	1.41	-0.171	U	4.82	2.53
Cobalt-57	4000	1.38	U	2.71	1.81	-0.271	U	2.57	1.51	-0.265	U	2.16	1.3	0.137	U	2.66	1.48
Europium-152	841	-3.2	U	8.64	5.11	2.22	U	8.87	4.8	1.5	U	7.07	4.5	-1.77	U	10.3	5.71
Europium-154	573	4.24	U	9.14	4.24	0.675	U	8.39	4.4	0.306	U	6.82	5	0.64	U	13.4	7.15
Europium-155	4000	1.87	U	11.3	6.43	0.342	U	10.2	5.88	2.75	U	9.49	5.52	-1.08	U	9.73	5.46
Manganese-54	2000	0.344	U	3.07	1.66	0.0156	U	2.32	1.22	0.622	U	2.12	1.2	-1.78	U	4.02	2.54
Sodium-22	400	1.1	U	3.2	1.54	0.187	U	2.92	1.54	0.0201	U	2.36	1.75	0.21	U	4.7	2.51
Strontium-90	8	0.477	U	0.647	0.404	0.245	U	0.787	0.449	0.723	U	0.791	0.498	0.25	U	0.794	0.459
Tritium	20000	114	U	251	149	190	U	261	157	304		208	133	476		263	170
Zinc-65	360	1.01	U	6.2	3.63	-4.8	U	6.07	3.88	-2.09	U	4.92	3.8	-3.89	U	8.64	6.16

U - Not detected.

Table 5. Current landfill - Summary of 2012 Radionuclide Data.

Analtye	**Groundwater Standards pCi/L**	**088-110 12/12/2012 pCi/L**				**088-21 12/12/2012 pCi/L**				**088-22 12/12/2012 pCi/L**				**088-23 12/12/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	4.95	U	20.3	12.8	5.96	U	15.8	9.65	3.44	U	23.8	18.6	-4.8	U	23.8	14.9
Beryllium-7	40000	0.655	U	28	15.8	-8.97	U	25.3	17.3	-0.161	U	30.7	17.3	-18.3	U	28.9	18.1
Cesium-134	80	1.36	U	3.37	1.69	1.11	U	3.31	1.87	0.526	U	4.19	2.2	0.763	U	4.11	2.2
Cesium-137	120	-1.5	U	3.04	1.87	-0.76	U	3.17	1.77	-0.632	U	3.81	2.11	-2.39	U	3.58	2.63
Co-60	200	-0.396	U	3.05	1.7	-0.195	U	3.05	1.68	-0.339	U	3.38	2.08	-0.468	U	3.85	2.52
Cobalt-57	4000	-0.219	U	2.86	1.69	-0.333	U	2.67	1.77	2.38	U	2.84	1.7	0.964	U	3.17	1.78
Europium-152	841	-3.22	U	9.31	5.41	-3.75	U	8.92	6.02	4.7	U	11.7	6.2	5.33	U	11.2	5.98
Europium-154	573	2.49	U	8.89	4.44	1.05	U	9.14	4.81	1.04	U	10.9	6.01	-4.03	U	11.1	6.53
Europium-155	4000	0.776	U	12.4	7.18	-0.361	U	11.4	6.63	0.875	U	13.7	7.9	-2.01	U	13.4	7.73
Manganese-54	2000	-1.76	U	2.7	1.62	-0.263	U	3.06	1.68	-1.08	U	3.29	2.24	-0.955	U	3.86	2.25
Sodium-22	400	0.828	U	3.1	1.55	0.496	U	3.27	1.71	0.309	U	3.84	2.22	-1.34	U	3.87	2.26
Strontium-90	8	0.208	U-DL	0.804	0.459	0.502	U	0.525	0.346	0.263	U	0.51	0.304	0.309	U	0.726	0.424
Tritium	20000	376		251	159	11.2	U	262	151	183	U	264	159	344		249	156
Zinc-65	360	2.23	U	6.59	3.76	3.4	U	7.34	4.1	-4.37	U	6.46	5.22	2.03	U	7.98	4.63

U - Not detected.

Table 6. Former landfill - Summary of 2012 VOC Data.

Analtye	Groundwater Standards (ug/L)	086-42 12/20/2012 (ug/L)		086-72 12/20/2012 (ug/L)		087-22 12/20/2012 (ug/L)		097-17 12/20/2012 (ug/L)		097-277 12/20/2012 (ug/L)		097-64 12/20/2012 (ug/L)		106-02 12/20/2012 (ug/L)		106-30 12/20/2012 (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	0.5	U
1,1,1-Trichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.34	J	0.5	U	3.56	
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	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	0.5	U
1,1-Dichloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.31	
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	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	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	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	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	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	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	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	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	0.5	U
Benzene	1	0.5	U	0.5	U	0.5	U	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	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	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	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	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	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	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	0.5	U
Chlorobenzene	5	0.5	U	0.5	U	0.5	U	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	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	0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	0.59		0.34	J	1		0.57		0.29	J	0.5	U	0.19	J
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	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	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	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	0.5	U
Dibromochloromethane	5	0.5	U	0.5	U	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	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	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	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	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	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	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	0.5	U
m/p xylene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	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	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	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	0.5	U
Methylene chloride	5	0.59	U	0.51	U	0.5	U	0.56	U	0.54	U	0.54	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	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	0.5	U
Naphthalene	10	0.5	U	0.5	U	0.5	U	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	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	0.5	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	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	0.5	U
p-Dichlorobenzene	3	0.5	U	0.5	U	0.5	U	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	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	0.5	U
tert-Butylbenzene	5	0.5	U	0.5	U	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	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	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	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.27	J	0.5	U	0.45	J
Trichlorofluoromethane	5	0.5	U	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	0.5	U
524.2 TVOC	--	0		0.59		0.34		1		0.57		0.9		0		6.51	

U - Not detected

J - Estimated value.

Table 7. Former landfill - Summary of 2012 Water Chemistry Data.

Analtye	Groundwater Standards (mg/L)	086-42 12/20/2012 (mg/L)		086-72 12/20/2012 (mg/L)		087-22 12/20/2012 (mg/L)		097-17 12/20/2012 (mg/L)		097-277 12/20/2012 (mg/L)		097-64 12/20/2012 (mg/L)		106-02 12/20/2012 (mg/L)		106-30 12/20/2012 (mg/L)	
Alkalinity (as CaCO3)	--	24.2		4.84		6.98		10.7		7.52		16.7		12.4		21.5	
Ammonia (as N)	2	0.0223	U	0.0352	U	0.0998	U	0.017	U	0.0356	U	0.101	U	0.112	U	0.0699	U
Chloride	250	17.4	J	17.9	J	4.88	J	7.43	J	23.8	J	9.3	J	10.7	J	5.32	J
Cyanide	0.2	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U
Nitrate (as N)	10	0.559	J	0.257	J	1.24	J	0.27	J	1.25	J	1.02	J	0.566		1.33	
Nitrite (as N)	1	0.033	UJ	0.033	UJ	0.033	UJ	0.033	UJ	0.033	U	0.033	UJ	0.033	U	0.033	U
Nitrite + Nitrate-N	10	0.57		0.191		0.382		0.225		0.254		1.1		0.5		1.53	
Nitrogen	--	0.602		0.246	U	0.513		0.278		0.315		1.2		3.23		1.68	
Sulfate	250	16.6	J	12	J		R	6.34	J		R	11.6	J	9.98	J	7.84	J
TDS	--	80	J	68.6	J	32.9	J	42.9	J	62.9	J	68.6	J	34.3	J	60	J
Total Kjeldahl Nitrogen	--	0.033	U	0.0548	U	0.131	U	0.053	U	0.0613	U	0.104	U	2.73		0.149	U
TSS	--	0.603	U	0.61	U	0.585	U	4.31		0.571	U	1.7	J	6.18		1.7	J

J - Estimated value.
U - Not detected.
R - Unusable result.

Table 8. Former Landfill - Summary of 2012 Metals Data.

Analtye	Groundwater Standards (ug/L)	086-42 12/20/2012 (ug/L)		086-72 12/20/2012 (ug/L)		087-22 12/20/2012 (ug/L)		097-17 12/20/2012 (ug/L)		097-277 12/20/2012 (ug/L)		097-64 12/20/2012 (ug/L)		106-02 12/20/2012 (ug/L)		106-30 12/20/2012 (ug/L)	
Aluminum	200	68	U	68	U	68	U	68	U	68	U	68	U	95.7	B	78.7	B
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U
Arsenic	10	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
Barium	1000	13.3	B	23.9	B	16.5	B	9.4	B	13.8	B	20	B	13	B	12.2	B
Beryllium	3	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	--	10600		3980	B	3430	B	4290	B	5410		10900		8620		10000	
Chromium	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cobalt	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Copper	200	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Iron	300	30	U	30	U	30	U	31.8	B	30	U	30	U	**2190**		30	U
Lead	25	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	1.04	B	0.5	U
Magnesium	35000	2860	B	3270	B	2320	B	1800	B	3390	B	2500	B	1710	B	3150	B
Manganese	300	2	U	6.69	B	2.63	B	10.8	B	33.4		6.04	B	7.47	B	10.4	B
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	1700	B	1300	B	1500	B	996	B	1530	B	1680	B	1450	B	1420	B
Selenium	10	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Silver	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Sodium	20000	13900		10400		3950	B	5870		11100		6880		5990		5140	
Thallium	0.5	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Vanadium	--	1	B	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Zinc	2000	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	5.19	B	3.54	B

J - Estimated value.

B - Value between contract detection limit and instrument detection limit.

U - Not detected.

Table 9. Former Landfill - Summary of 2012 Pesticide/PCB Data

Analtye	Groundwater Standards (ug/L)	086-42 12/20/2012 (ug/L)		086-72 12/20/2012 (ug/L)		087-22 12/20/2012 (ug/L)		097-17 12/20/2012 (ug/L)		097-277 12/20/2012 (ug/L)		097-64 12/20/2012 (ug/L)		106-02 12/20/2012 (ug/L)		106-30 12/20/2012 (ug/L)	
4,4''-DDD	0.3	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
4,4''-DDE	0.2	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
4,4''-DDT	0.2	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Aldrin	0	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
alpha-BHC	0.01	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Aroclor 1016	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1221	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1232	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1242	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1248	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1254	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
Aroclor 1260	0.09	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U
beta-BHC	0.01	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Chlordane	0.05	0.0236	U	0.0255	U	0.0266	U	0.026	U	0.0272	U	0.0272	U	0.51	U	0.0236	U
delta-BHC	0.04	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Dieldrin	0.004	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Endosulfan I	0.009	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Endosulfan II	--	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Endosulfan sulfate	--	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Endrin	0	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Endrin aldehyde	5	0.00377	U	0.00408	U	0.00426	U	0.00417	U	0.00435	U	0.00435	U	0.0816	U	0.00377	U
Heptachlor	0.04	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Heptachlor epoxide	0.03	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Lindane	0.05	0.00189	U	0.00204	U	0.00213	U	0.00208	U	0.00217	U	0.00217	U	0.0408	U	0.00189	U
Toxaphene	0.06	0.0472	U	0.051	U	0.0532	U	0.0521	U	0.0543	U	0.0543	U	1.02	U	0.0472	U

U - Not detected.

Table 10 Former Landfill - Summary of 2012 Radinuclide Data.

Analtye	**Groundwater Standards** pCi/L	**086-42 12/20/2012 pCi/L**				**086-72 12/20/2012 pCi/L**				**087-22 12/20/2012 pCi/L**				**097-17 12/20/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-4.25	U	13.1	8.65	0.572	U	17	11.1	1.44	U	12.6	7.84	-0.247	U	12.5	7.7
Beryllium-7	40000	4.19	U	19.1	12.4	4.55	U	18.3	10.4	13	U	18.4	9.87	-8.94	U	16.1	9.7
Cesium-134	80	-0.021	U	2.18	1.26	1.37	U	1.93	1.53	0.0102	U	1.73	1.05	1.16	U	1.88	0.962
Cesium-137	120	-0.577	U	2.02	1.16	0.273	U	1.84	1.01	-0.155	U	1.73	1.02	0.799	U	1.86	0.981
Co-60	200	1.01	U	2.55	1.32	0.197	U	2	1.12	2.55	J-UI	2.08	1.77	-0.0221	U	1.91	1.05
Cobalt-57	4000	-0.0305	U	1.71	1.02	-0.0647	U	1.7	1.02	0.93	U	1.51	0.845	0.0859	U	1.54	0.879
Europium-152	841	-0.929	U	5.91	3.43	-1.14	U	5.24	3.05	-0.136	U	4.89	2.77	-0.675	U	5.06	2.88
Europium-154	573	0.605	U	5.97	3.19	0.603	U	5.47	3.04	2.84	U	5.62	3.35	0.906	U	4.67	2.43
Europium-155	4000	-0.855	U	7.18	4.27	4.46	U	7.57	4.36	2.73	U	6.31	3.94	-0.564	U	6.21	3.55
Gross Alpha	15	0.45	U	1.84	0.951	0.731	U	1.95	1.11	-0.0184	U	1.98	0.931	-0.121	U	1.89	0.881
Gross Beta	1000	1.13	U	1.76	1.08	-0.159	U	1.46	0.718	3.43	J	2.4	1.61	2.63	J	1.95	1.31
Manganese-54	2000	-0.658	U	1.82	1.07	-0.202	U	1.64	0.924	0.311	U	1.79	1.12	0.00503	U	1.74	0.972
Sodium-22	400	0.234	U	2.11	1.13	0.184	U	1.93	1.07	1.02	U	1.99	1.19	0.321	U	1.65	0.861
Strontium-90	8	0.199	U	0.729	0.403	-0.0302	U	0.784	0.413	0.61	U	0.772	0.489	0.718	U	0.775	0.499
Tritium	20000	200	U	277	167	29.2	U	165	90.2	82.3	U	161	95.6	-6.76	U	162	83.2
Zinc-65	360	-1.89	U	4.07	2.49	-1.17	U	3.57	2.47	0.652	U	3.89	2.15	1.21	U	3.57	2.18

J - Estimated value.
U - Not detected.

Table 10 Former Landfill - Summary of 2012 Radinuclide Data.

Analtye	**Groundwater Standards** pCi/L	**097-277 12/20/2012 pCi/L**				**097-64 12/20/2012 pCi/L**				**106-02 12/20/2012 pCi/L**				**106-20 6/13/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	4.94	U	9.24	5.67	-5.74	U	6.79	4.7	5.27	U	8.83	5.25				
Beryllium-7	40000	5	U	25.7	14.6	-0.115	U	18.3	10.3	-8.59	U	16.8	17.7				
Cesium-134	80	0.489	U	2.78	1.51	0.0591	U	1.97	1.13	0.707	U	1.9	1.21				
Cesium-137	120	-0.283	U	2.58	1.45	-0.62	U	1.9	1.63	0.26	U	1.76	1.01				
Co-60	200	1.15	U	3.16	1.62	0.173	U	2.01	1.12	0.155	U	1.84	0.988				
Cobalt-57	4000	-0.278	U	1.86	1.1	0.338	U	1.58	0.944	-0.197	U	1.5	0.868				
Europium-152	841	-2.89	U	6.6	4.07	-0.0578	U	5.49	3.23	2.21	U	5.18	2.92				
Europium-154	573	-2.73	U	6.12	4.29	2.08	U	5.71	3.48	-0.711	U	5	2.78				
Europium-155	4000	-0.161	U	7.83	4.59	0.566	U	6.33	3.79	2.09	U	6.07	3.41				
Gross Alpha	15	0.836	U	1.84	1.09	-0.591	U	2	0.567	0.251	U	1.87	0.941				
Gross Beta	1000	1.53	J	1.47	0.994	9.07		1.44	1.74	1.26	U	1.5	0.959				
Manganese-54	2000	0.448	U	2.59	1.41	-1.04	U	1.76	1.09	-0.533	U	1.71	0.99				
Sodium-22	400	-0.966	U	2.16	1.52	0.734	U	2.02	1.23	-0.27	U	1.77	0.981				
Strontium-90	8	0.0829	U	0.766	0.401	2.58		0.723	0.632	-0.212	U	0.763	0.324	0.273	U	0.767	0.446
Tritium	20000	114	U	165	102	73.3	U	171	99.8	50	U	165	93.4				
Zinc-65	360	2.71	U	5.6	3.65	-2.28	U	3.96	2.37	-2.09	U	3.44	2.12				

J - Estimated value.
U - Not detected.

Table 10 Former Landfill - Summary of 2012 Radinuclide Data.

Analtye	**Groundwater Standards** pCi/L	**106-20 12/20/2012 pCi/L**				**106-21 6/13/2012 pCi/L**				**106-21 12/20/2012 pCi/L**				**106-30 12/20/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2													3.77	U	13	7.95
Beryllium-7	40000													2.9	U	16.2	9.12
Cesium-134	80													-0.364	U	1.84	1.05
Cesium-137	120													1.39	U	1.67	1.04
Co-60	200													-0.171	U	1.85	1.02
Cobalt-57	4000													-0.362	U	1.49	0.875
Europium-152	841													1.77	U	5.02	2.76
Europium-154	573													-1.82	U	4.22	3.03
Europium-155	4000													-0.542	U	6.23	3.61
Gross Alpha	15													0.535	U	1.88	1.01
Gross Beta	1000													1.69	U	1.79	1.18
Manganese-54	2000													0.526	U	1.76	0.949
Sodium-22	400													-0.633	U	1.49	1.07
Strontium-90	8	0.101	U	0.74	0.413	-0.302	U	0.61	0.29	0.0518	U	0.792	0.434	-0.397	U	0.772	0.412
Tritium	20000													50.3	U	166	93.9
Zinc-65	360													0.669	U	3.61	2.27

J - Estimated value.
U - Not detected.

Table 10 Former Landfill - Summary of 2012 Radinuclide Data.

Analtye	**Groundwater Standards** pCi/L	**106-43 6/13/2012 pCi/L**				**106-43 12/20/2012 pCi/L**				**106-44 6/13/2012 pCi/L**				**106-44 12/20/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2																
Beryllium-7	40000																
Cesium-134	80																
Cesium-137	120																
Co-60	200																
Cobalt-57	4000																
Europium-152	841																
Europium-154	573																
Europium-155	4000																
Gross Alpha	15																
Gross Beta	1000																
Manganese-54	2000																
Sodium-22	400																
Strontium-90	8	0.4	U	0.773	0.46	0.436	U	0.75	0.453	2.56		0.628	0.451	0.0704	U	0.745	0.396
Tritium	20000																
Zinc-65	360																

J - Estimated value.
U - Not detected.

Table 10 Former Landfill - Summary of 2012 Radinuclide Data.

Analtye	**Groundwater Standards** pCi/L	**106-45 6/13/2012 pCi/L**				**106-45 12/20/2012 pCi/L**				**106-64 6/13/2012 pCi/L**				**106-64 12/20/2012 pCi/L**			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2																
Beryllium-7	40000																
Cesium-134	80																
Cesium-137	120																
Co-60	200																
Cobalt-57	4000																
Europium-152	841																
Europium-154	573																
Europium-155	4000																
Gross Alpha	15																
Gross Beta	1000																
Manganese-54	2000																
Sodium-22	400																
Strontium-90	8	3.18		0.769	0.632	0.458	U	0.467	0.314	1.64		0.781	0.593	2.23		0.753	0.694
Tritium	20000																
Zinc-65	360																

J - Estimated value.
U - Not detected.

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**

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-17 PROBE B	**Intermediate**	**8.5**	**11**
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

Current Landfill Outpost Wells		
Site ID	**Depth to Bottom from top PVC (feet)**	**PVC Stick Up from Ground (feet)**
GSGM-1A	**12.00**	**2.50**
GSGM-1B	**21.00**	**2.50**
GSGM-1C	**29.40**	**2.50**
GSGM-2A	**14.25**	**2.50**
GSGM-2B	**20.05**	**2.50**
GSGM-2C	**27.00**	**2.50**
GSGM-3A	**13.91**	**2.50**
GSGM-3B	**17.75**	**2.50**
GSGM-4A	**11.50**	**2.50**
GSGM-4B	**15.20**	**2.50**

Table 11
Soil Gas Monitoring Well Description

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

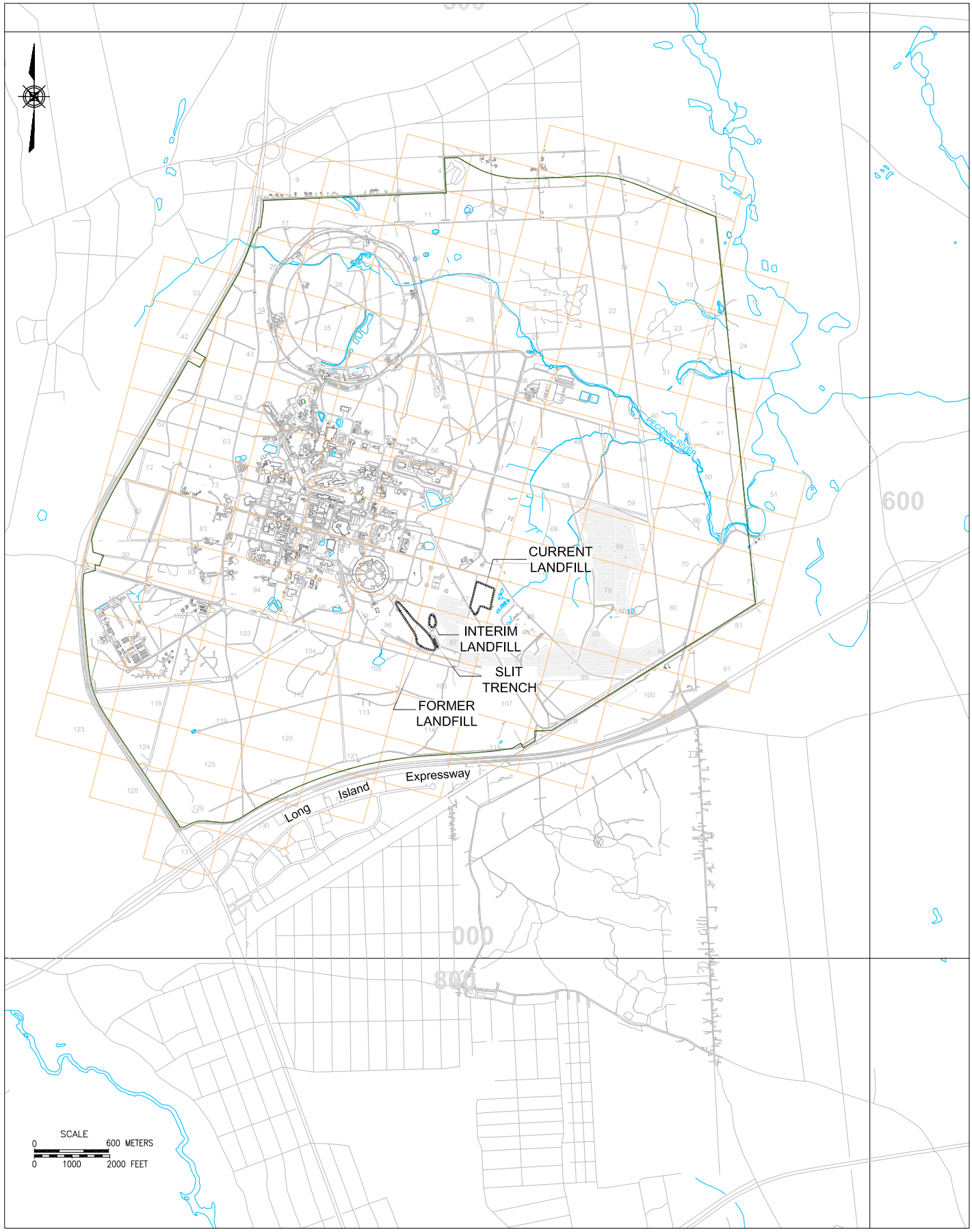
2012 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/7/12	Methane (% By Volume) 6/7/12	Methane (% By Volume) 9/7/12	Methane (% By Volume) 12/5/12	LEL (% By Volume) 3/7/12	LEL (% By Volume) 6/7/12	LEL (% By Volume) 9/7/12	LEL (% By Volume) 12/5/12	Hydrogen Sulfide (ppm by volume) 3/7/12	Hydrogen Sulfide (ppm by volume) 6/7/12	Hydrogen Sulfide (ppm by volume) 9/7/12	Hydrogen Sulfide (ppm by volume) 12/5/12	Soil Gas Monitoring Well
SGMW-01A	15.5	13.6	16.4	15.7	>100	>100	>100	>100	2.0	0.0	0.0	0.0	SGMW-01A
SGMW-01B	13.8	13.0	13.4	11.7	>100	>100	>100	>100	2.0	1.0	1.0	0.0	SGMW-01B
SGMW-01C	11.3	11.2	5.2	12.7	>100	>100	>100	>100	2.0	0	0.0	0.0	SGMW-01C
SGMW-02A	50.9	48.2	49.5	53.8	>100	>100	>100	>100	0.0	0	0.0	0.0	SGMW-02A
SGMW-02B	48.1	49.7	50.2	51.5	>100	>100	>100	>100	7.0	10	7	10	SGMW-02B
SGMW-02C	48.3	50.5	10.5	52.1	>100	>100	>100	>100	4.0	5	0.0	3	SGMW-02C
SGMW-03A	35.2	52.3	55.9	46.2	>100	>100	>100	>100	1	12	10.0	8	SGMW-03A
SGMW-03B	53.4	53.1	55.4	55.2	>100	>100	>100	>100	16	26	2.0	20	SGMW-03B
SGMW-03C	50.4	53.0	26.7	54.8	>100	>100	>100	>100	12.0	24	1.0	24	SGMW-03C
SGMW-04A	27.5	42.1	59.7	42.9	>100	>100	>100	>100	0.0	11	5.0	0.0	SGMW-04A
SGMW-04B	33.6	42.7	52.2	42.7	>100	>100	>100	>100	4.0	5	7.0	7	SGMW-04B
SGMW-04C	23.5	35.7	47.8	32.9	>100	>100	>100	>100	6.0	5	5.0	5	SGMW-04C
SGMW-05A	15.1	34.3	43.4	36.3	>100	>100	>100	>100	0.0	6	8.0	0.0	SGMW-05A
SGMW-05B	22.8	32.7	39.6	19.9	>100	>100	>100	>100	1.0	4	8.0	0.0	SGMW-05B
SGMW-05C	19.1	24.9	43.5	0.0	>100	>100	>100	0.0	3.0	2	9.0	0.0	SGMW-05C
SGMW-06A	30.6	25.0	4.7	0.0	>100	>100	93	0.0	0.0	0.0	0.0	0.0	SGMW-06A
SGMW-06B	31.9	32.7	38.5	0.0	>100	>100	>100	0.0	2.0	6	11.0	0.0	SGMW-06B
SGMW-06C	30.2	30.3	35.9	0.0	>100	>100	>100	0.0	3.0	3	4.0	0.0	SGMW-06C
SGMW-07A	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	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	0.0	0.0	0.0	0.0	0.0	SGMW-08C
SGMW-09A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-09B
SGMW-09C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-09C
SGMW-10A	0.7	12.9	0.0	8.9	14	>100	0	>100	0.0	11	0.0	0.0	SGMW-10A
SGMW-10B	5.8	15.4	22.8	13.6	>100	>100	>100	>100	2.0	6	9	0.0	SGMW-10B
SGMW-10C	5.4	13.0	19.2	0.0	>100	>100	>100	0	4.0	3	6	0.0	SGMW-10C
SGMW-11A	7.2	16.7	29.9	13.7	>100	>100	>100	>100	1.0	16	6	7	SGMW-11A
SGMW-11B	2.7	15.7	27.6	0.0	55	>100	>100	0	0.0	0	15	0.0	SGMW-11B
SGMW-12A	37.8	46.2	53.6	48.9	>100	>100	>100	>100	13.0	29	29	10	SGMW-12A
SGMW-12B	38.7	40.1	48.9	43	>100	>100	>100	>100	2.0	1	3	0.0	SGMW-12B
SGMW-13A	0.0	0.2	19.8	30.3	0.0	4.0	>100	>100	0.0	0.0	2	0.0	SGMW-13A
SGMW-13B	30.4	37.6	49.8	26.9	>100	>100	>100	>100	3.0	1	5	0.0	SGMW-13A
SGMW-14A	0.8	0.0	1.6	0.0	16.0	0.0	>100	0.0	0.0	0.0	0.0	0.0	SGMW-14A
SGMW-14B	0.0	0.9	0.8	1.6	0.0	18.0	17	81.0	0.0	0.0	0.0	0.0	SGMW-14B
SGMW-15A	0.0	0.0	3.4	0.0	0.0	0.0	68	0.0	0.0	0.0	2.0	0.0	SGMW-15A
SGMW-15B	0.0	0.0	0.0	0.3	0.0	0.0	0	8.0	0.0	0.0	0.0	0.0	SGMW-15B
SGMW-16A	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	SGMW-16A
SGMW-16B	0.0	0.0	0.0	0.0	0.0	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	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	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	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	0.0	0.0	0.0	0.0	SGMW-18B
SGMW-19A	4.2	23.2	36.4	17.5	84.0	>100	>100	>100	1.0	11	26.0	1	SGMW-19A
SGMW-19B	1.6	30.8	27.3	0.0	33.0	>100	>100	0.0	0.0	14	0.0	0.0	SGMW-19B
GSGM-1A	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	GSGM-1B
GSGM-1C	0.0	0.1	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	GSGM-4B

Table 13

2012 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 6/19/2012	Methane (% By Volume) 12/5/2012	LEL (% By Volume) 6/19/2012	LEL (% By Volume) 12/5/2012	Hydrogen Sulfide (ppm by volume) 6/19/2012	Hydrogen Sulfide (ppm by volume) 12/5/2012	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	SGMW-12B



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ENVIRONMENTAL PROTECTION DIVISION

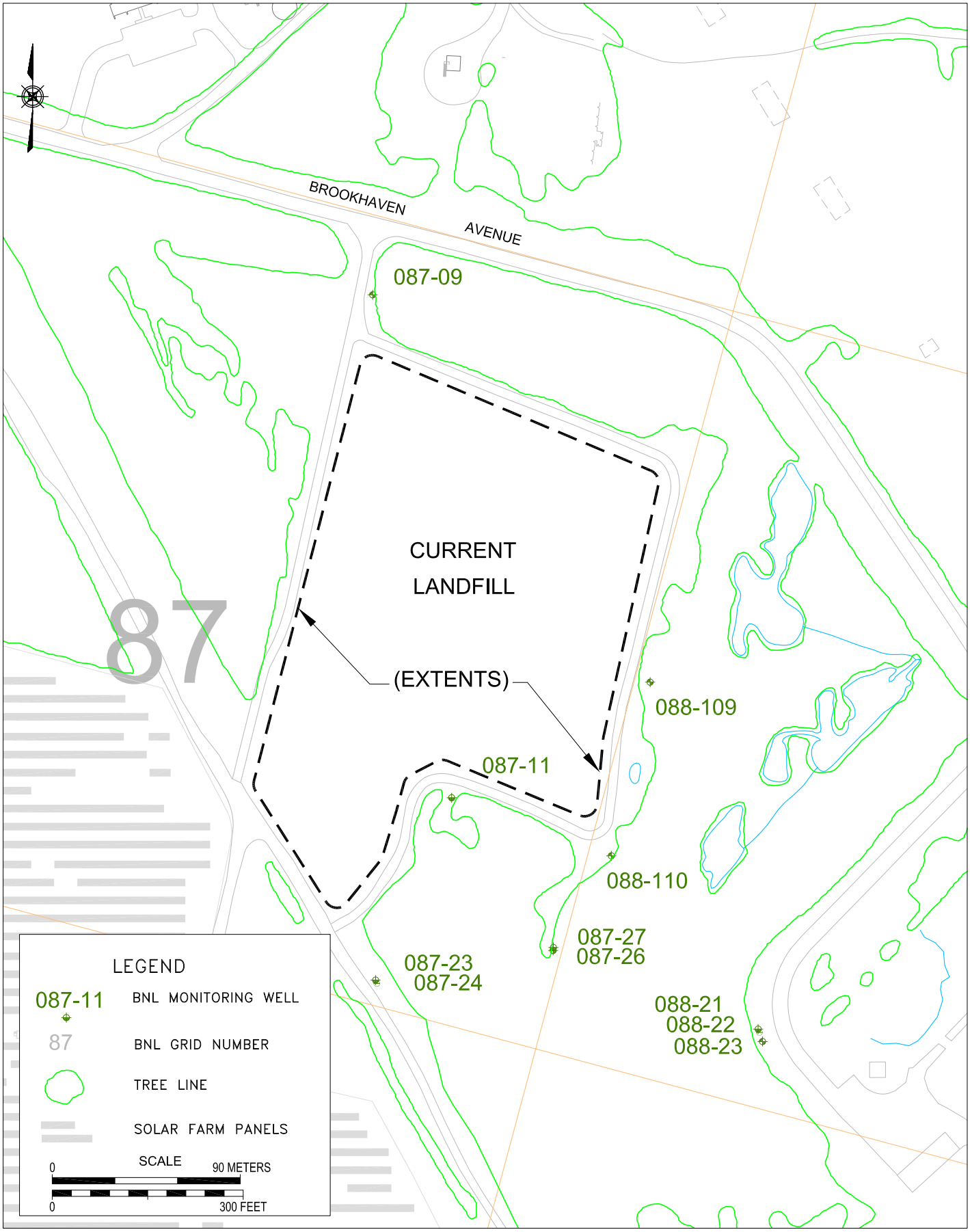
TITLE:

SITE LOCATION MAP

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 1



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ENVIRONMENTAL PROTECTION DIVISION

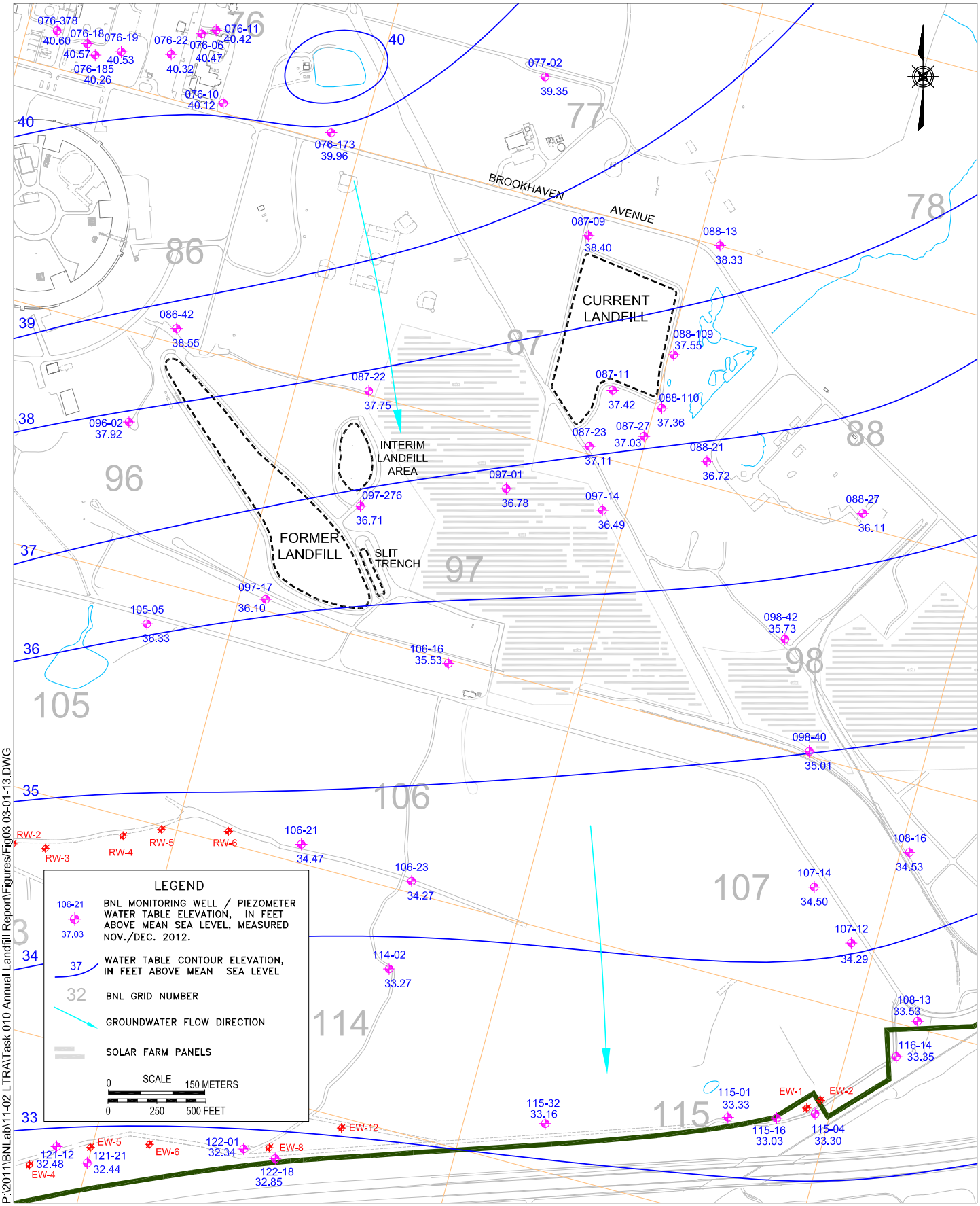
TITLE:

CURRENT LANDFILL MONITORING WELL LOCATIONS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
WRD	RFH	–	–

FIGURE NO.: 2



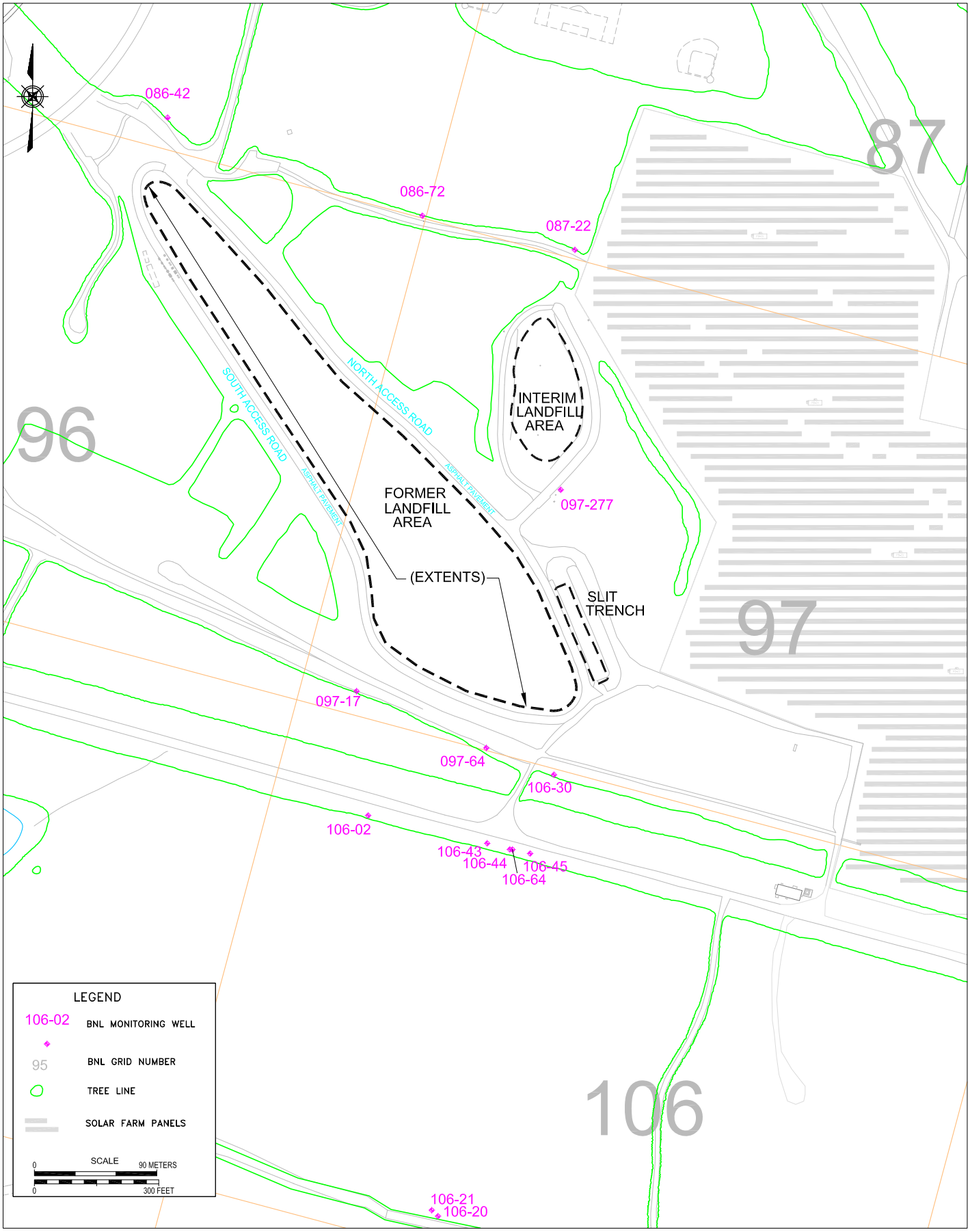
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

WATER TABLE CONTOUR MAP
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 3



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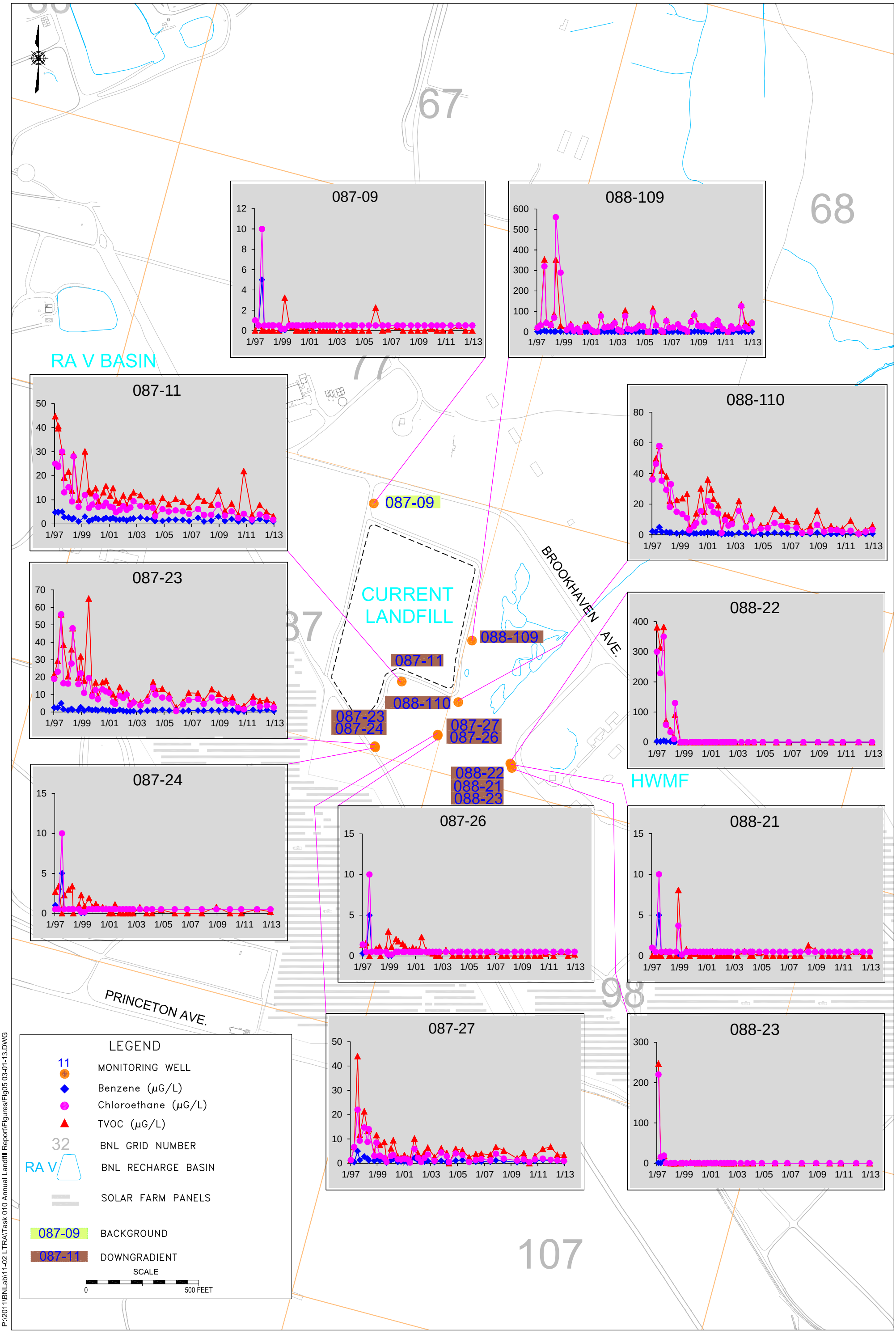
TITLE:

FORMER LANDFILL MONITORING WELL LOCATIONS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 4



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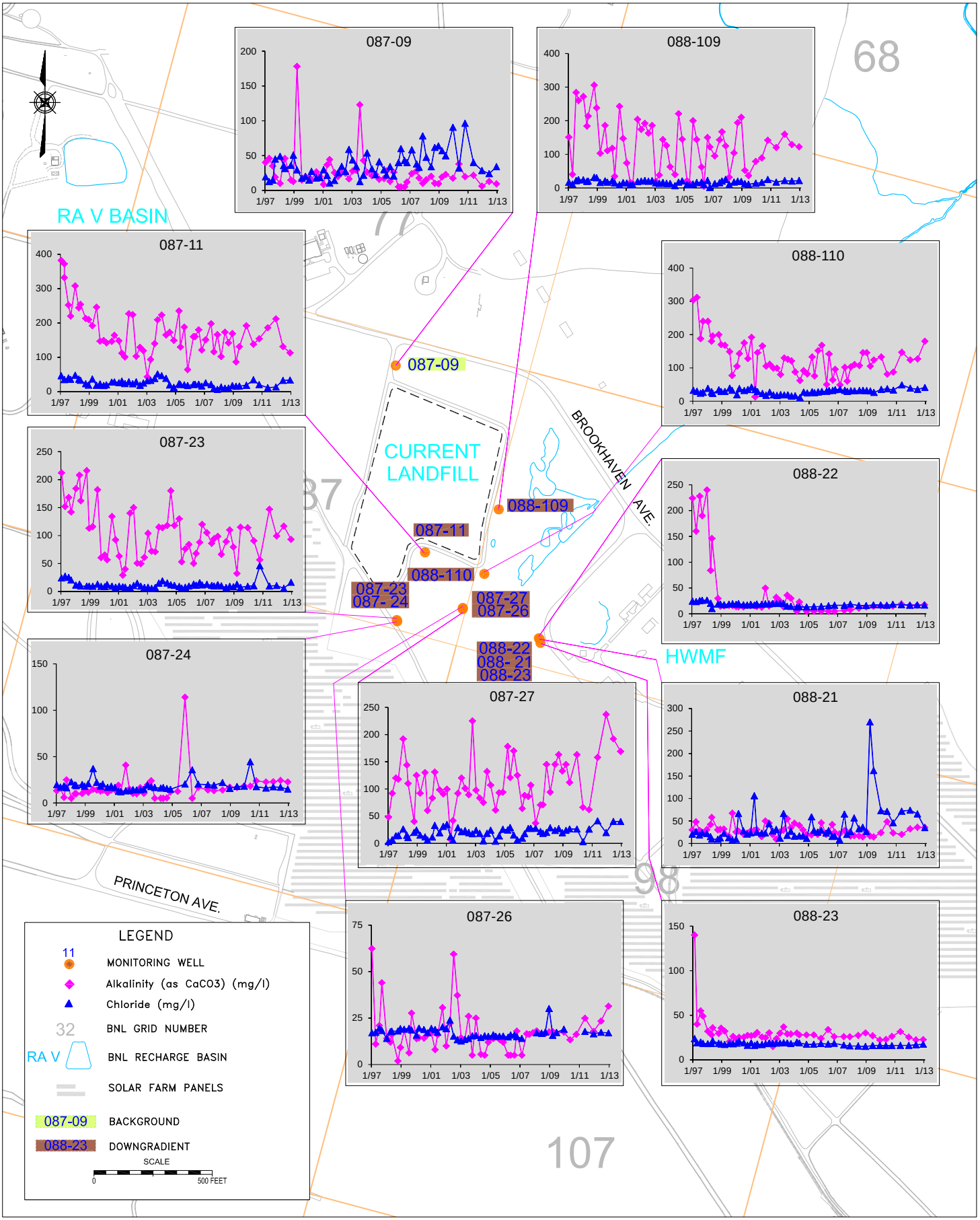
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

CURRENT LANDFILL
VOC TREND PLOTS
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 5



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ENVIRONMENTAL PROTECTION DIVISION

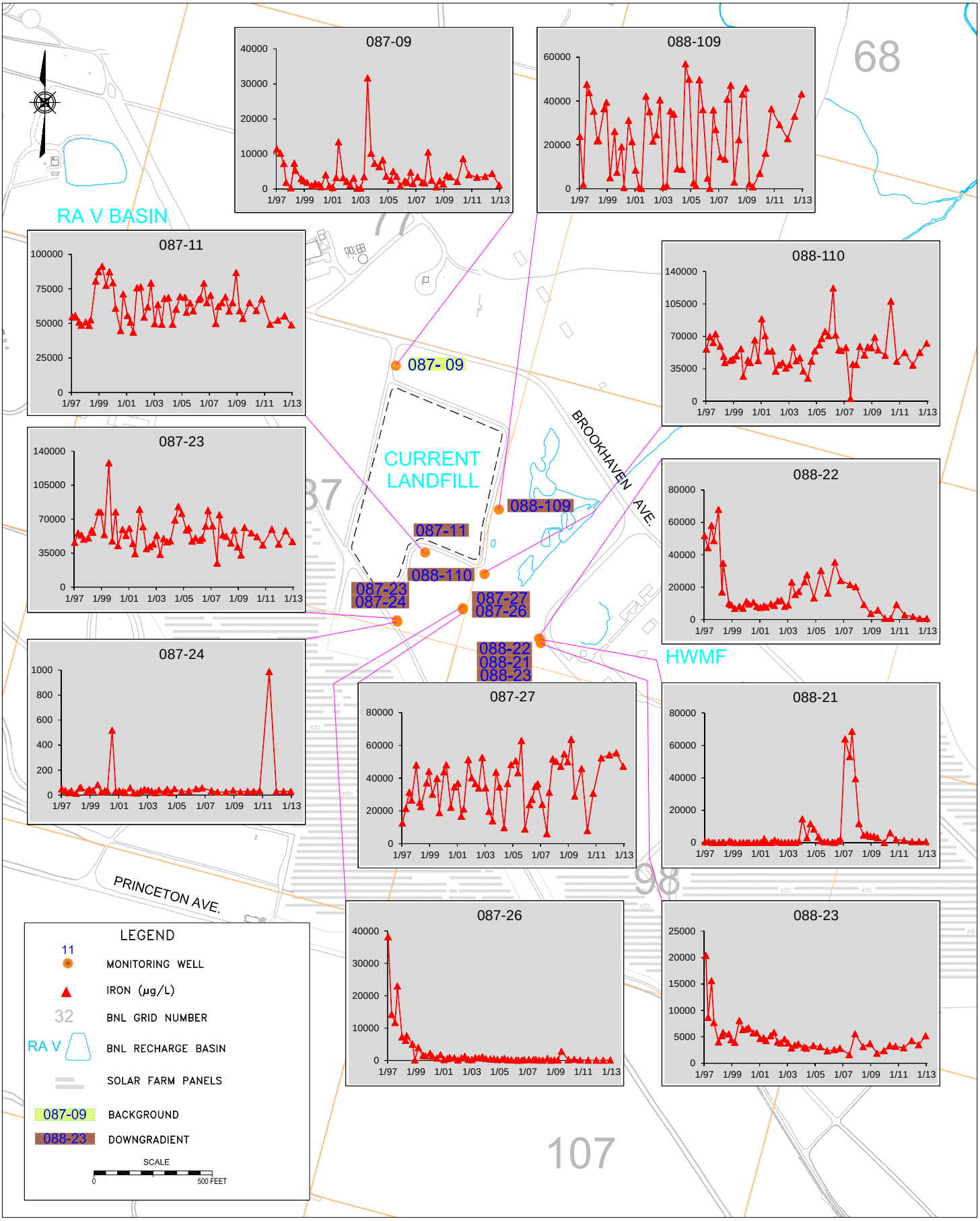
TITLE:

CURRENT LANDFILL ALKALINITY AND CHLORIDE TREND PLOTS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 6



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ENVIRONMENTAL PROTECTION DIVISION

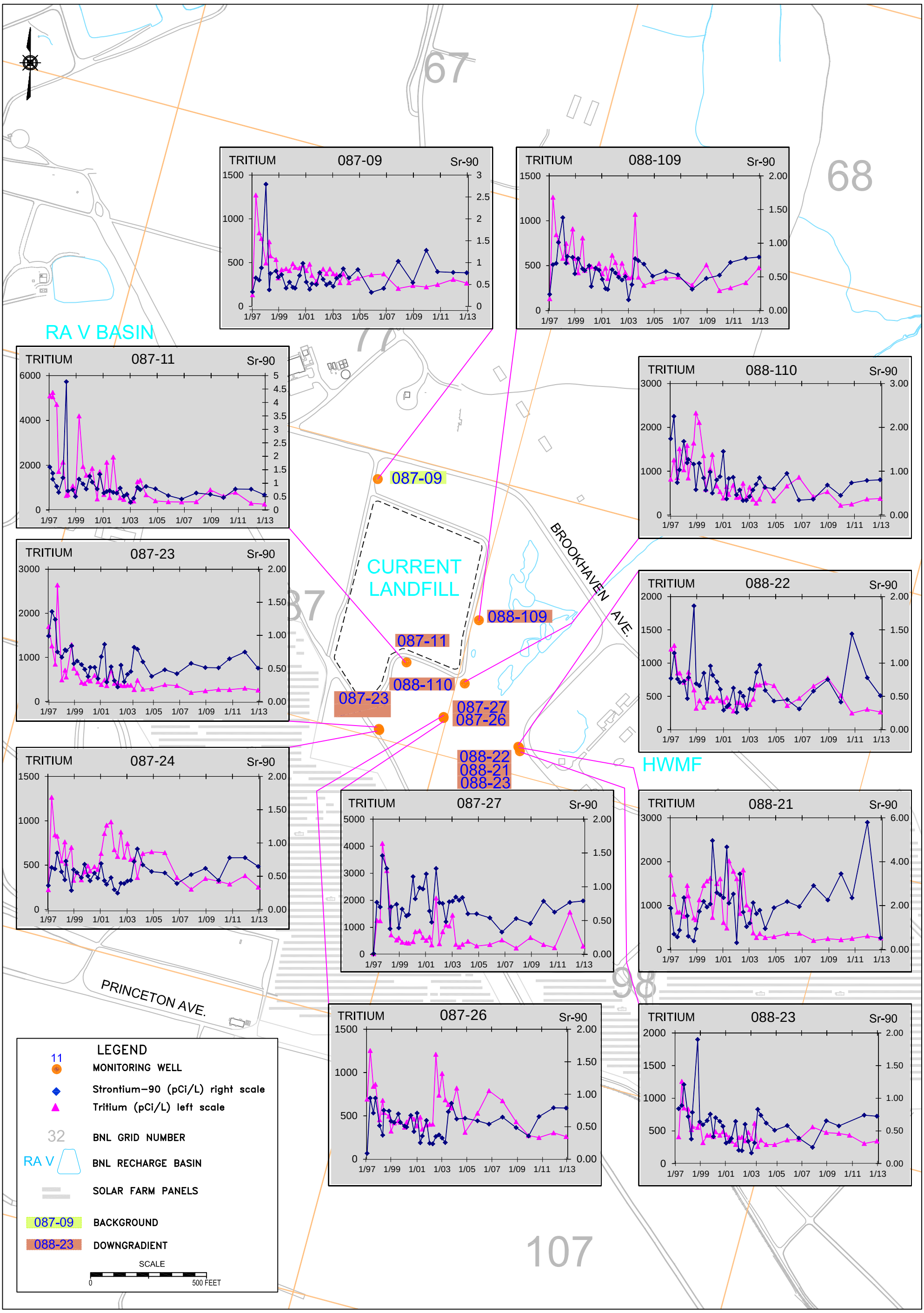
TITLE:

CURRENT LANDFILL IRON TREND PLOTS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 7



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ENVIRONMENTAL PROTECTION DIVISION

TITLE:

CURRENT LANDFILL
TRITIUM AND SR-90 TREND PLOTS
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

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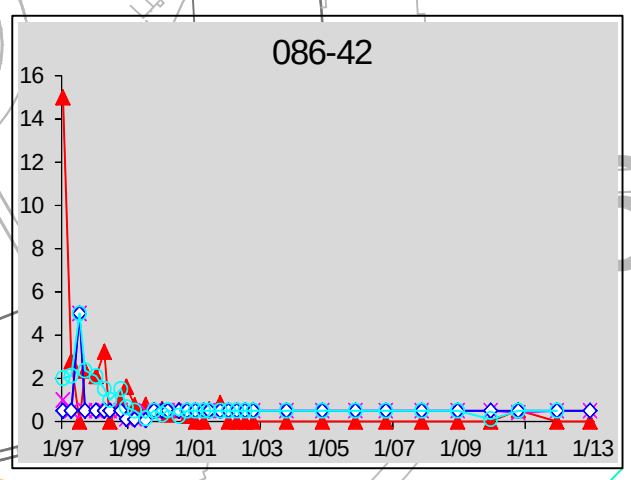
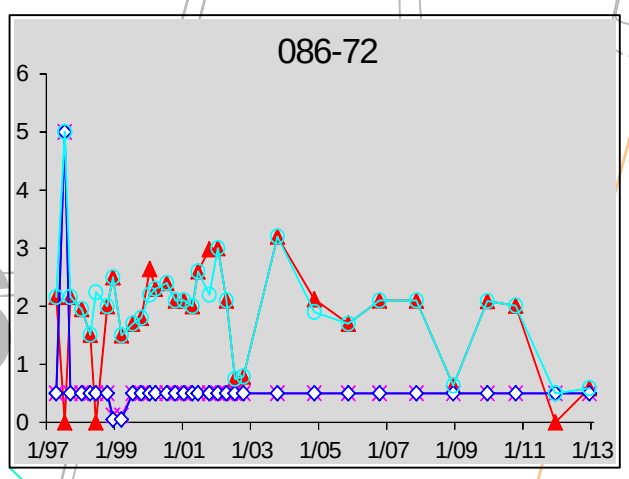
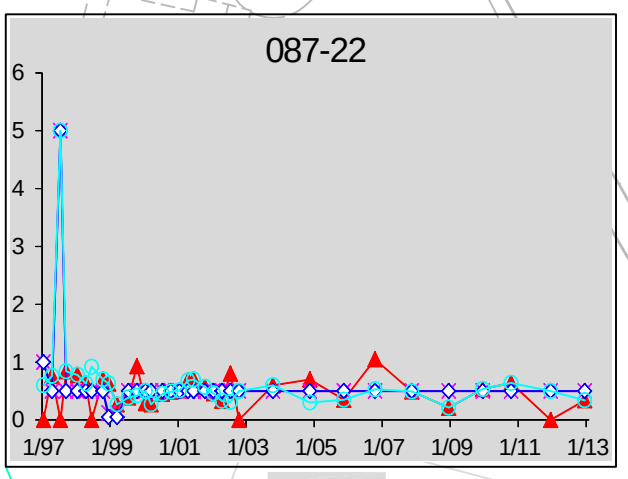
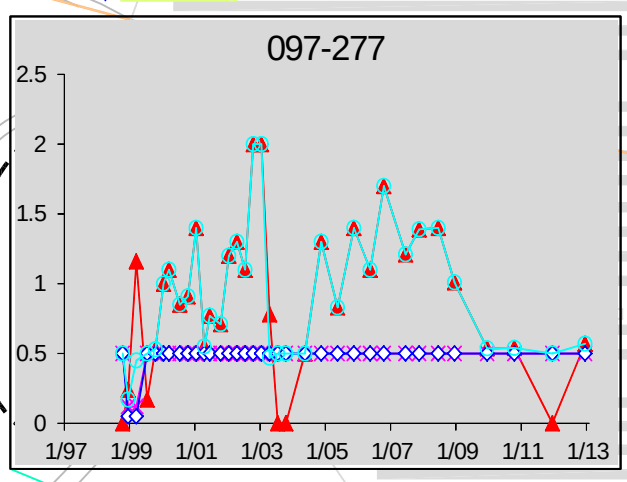
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

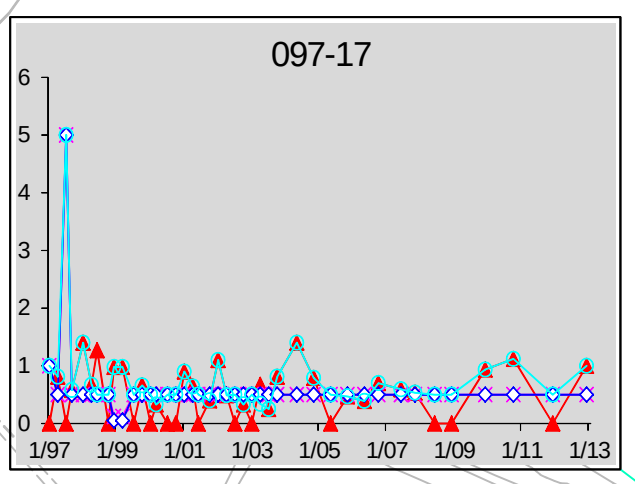
FIGURE NO.: 8

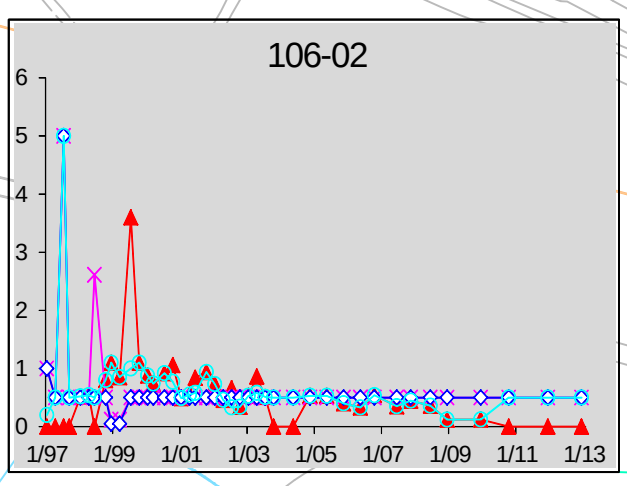












086-42

086-72

087-22

097-277

097-17

097-64

106-30

106-02

INTERIM LANDFILL

FORMER LANDFILL

SLIT TRENCH

GLASS HOLES

97

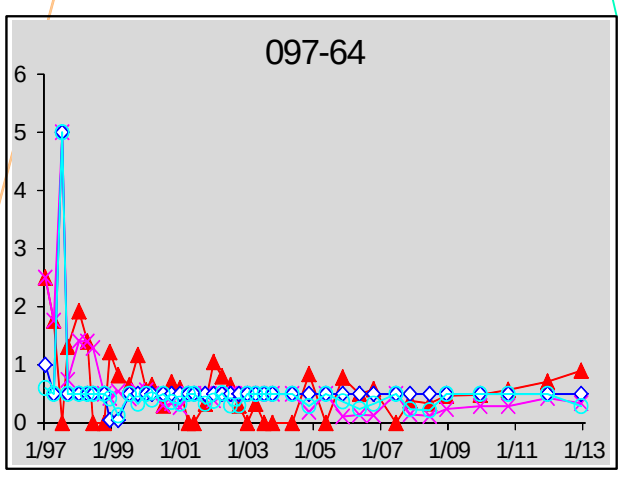
106

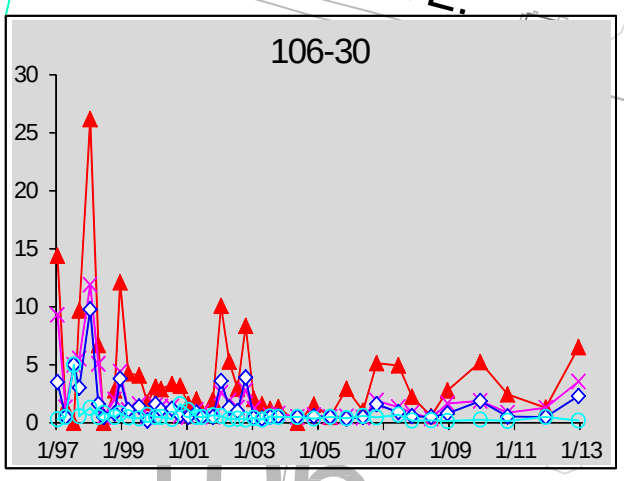
PRINCETON AVE.

LEGEND

- 17 — MONITORING WELL
- 1,1,1–Trichloroethane (µg/L)
- 1,1–Dichloroethane (µg/L)
- Chloroform (µg/L)
- TVOC (µg/L)
- 32 — BNL GRID NUMBER
- RA V — BNL RECHARGE BASIN
- SOLAR FARM PANELS
- 086-42 — BACKGROUND
- 106-02 — DOWNGRADIENT

SCALE 0 250 FEET





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ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FORMER LANDFILL VOC TREND PLOTS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
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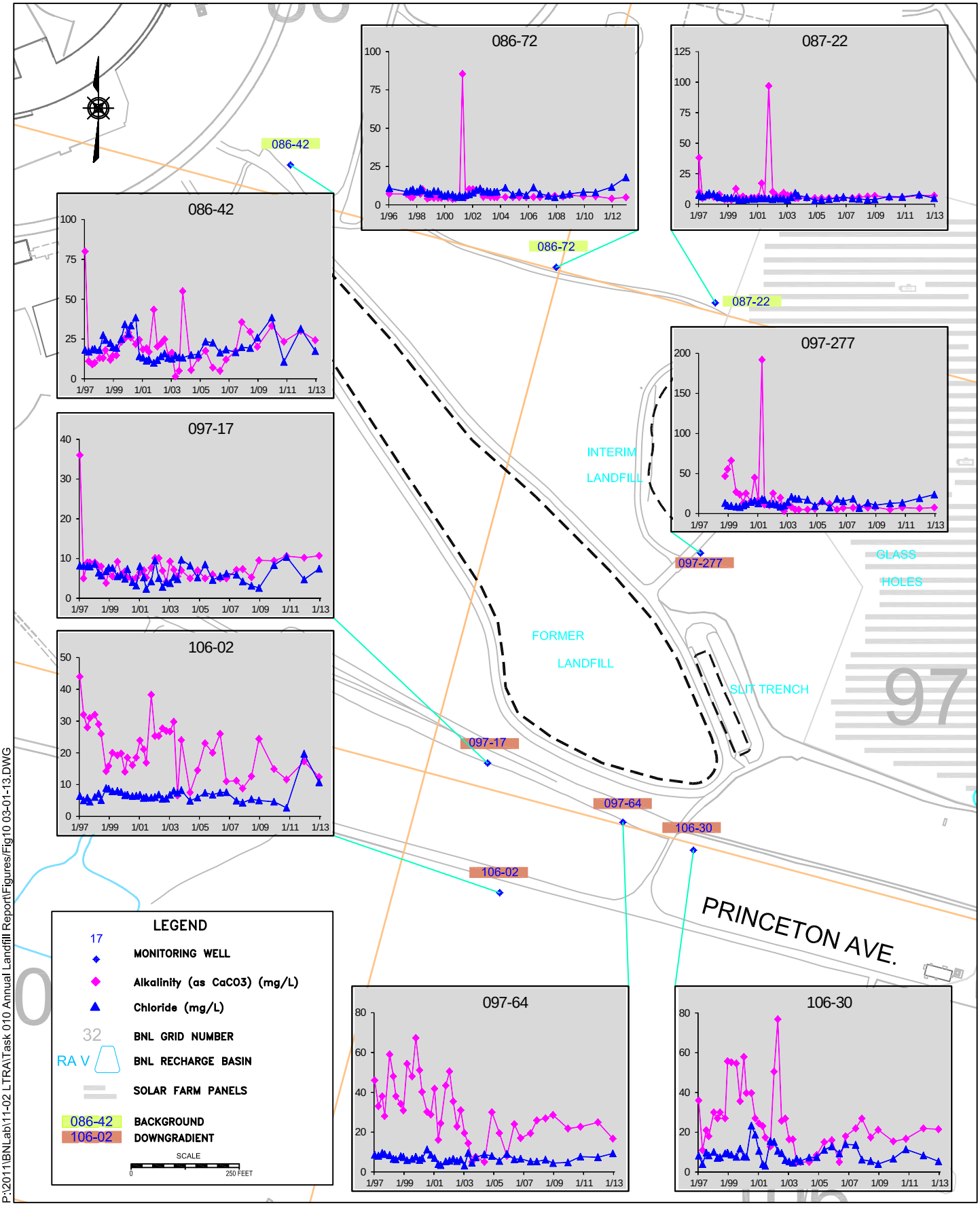
FIGURE NO.: 9



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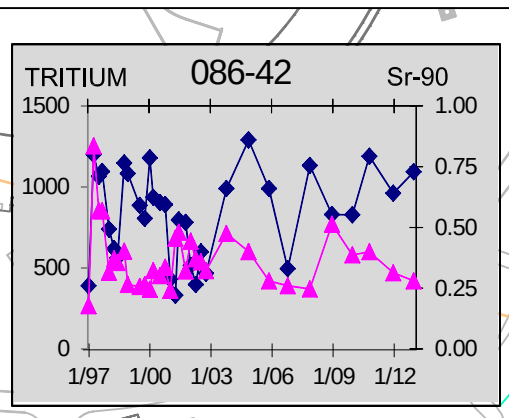
ENVIRONMENTAL PROTECTION DIVISION

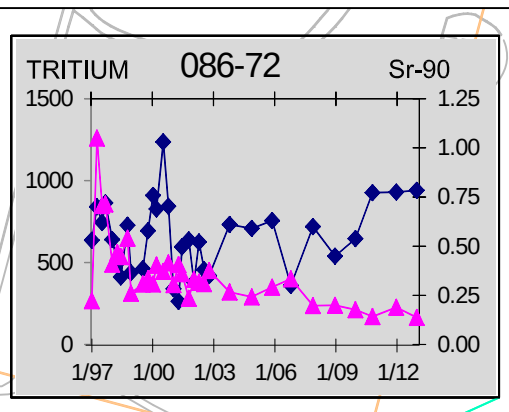
TITLE:

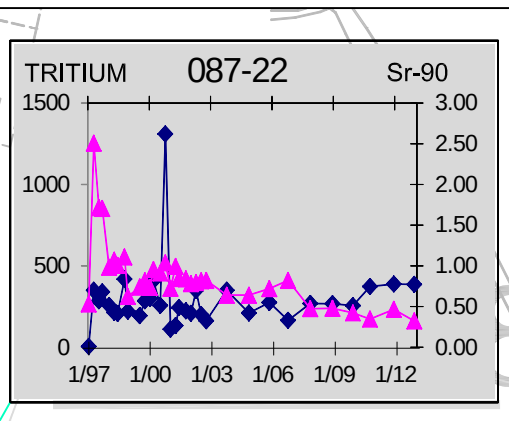
FORMER LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

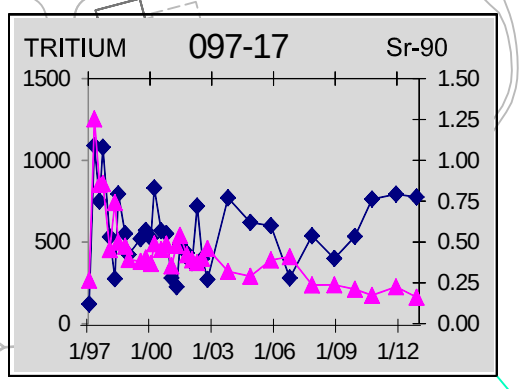
DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

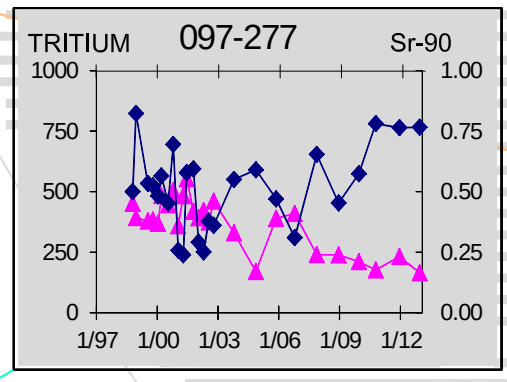
FIGURE NO.: 10

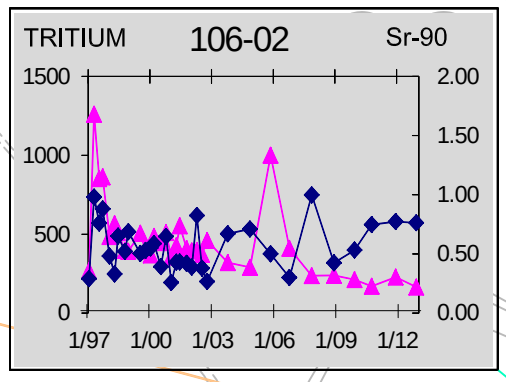


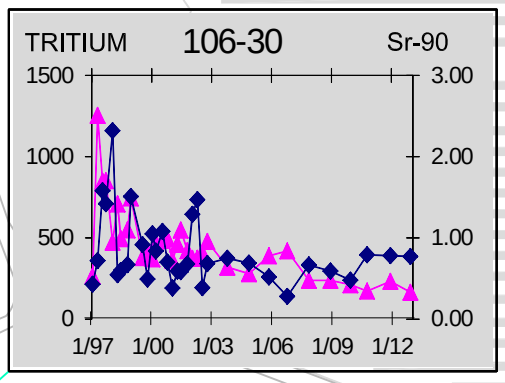


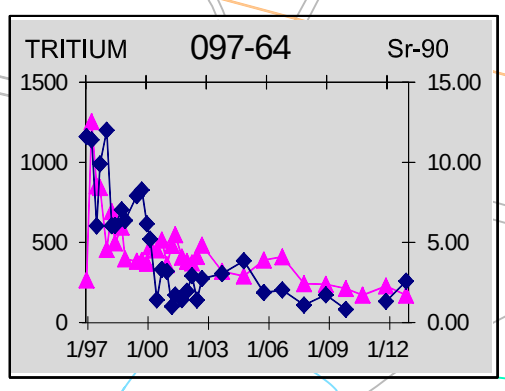


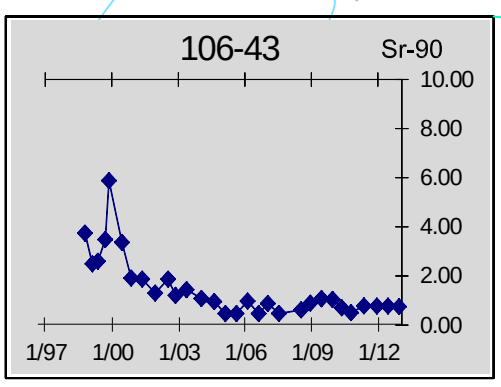


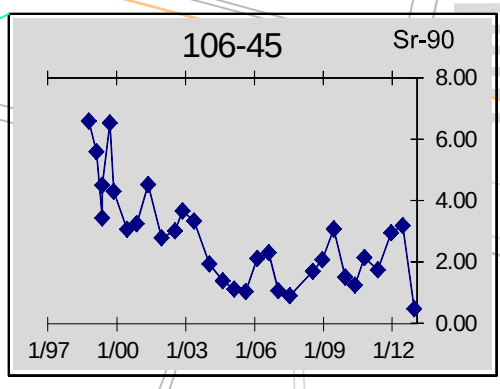


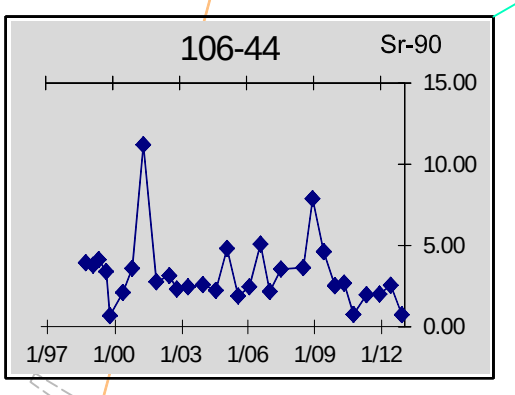


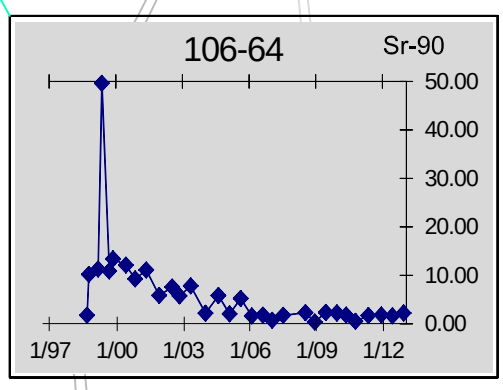


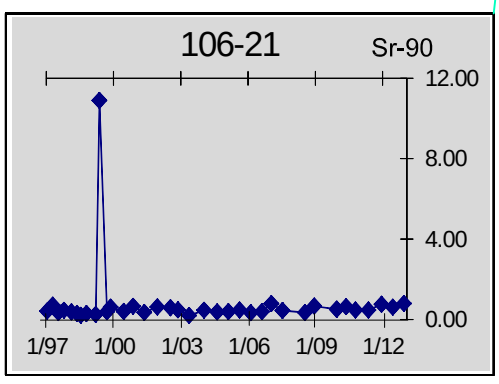


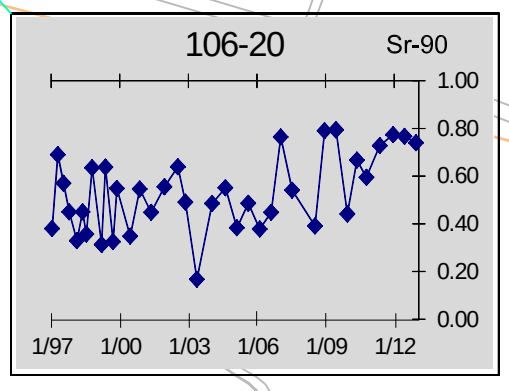












086-42
086-72
087-22
097277
097-17
097-64
106-30
106-02
106-44
106-64
106-43
106-45
106-21
106-20

INTERIM LANDFILL
FORMER LANDFILL
SLIT TRENCH
GLASS HOLES
PRINCETON AVE.

LEGEND

17 MONITORING WELL
Strontium-90 (pCi/L) right scale
Tritium (pCi/L) left scale
32 BNL GRID NUMBER
RA V BNL RECHARGE BASIN
SOLAR FARM PANELS
086-42 BACKGROUND
106-02 DOWNGRADIENT

SCALE 0 250 FEET

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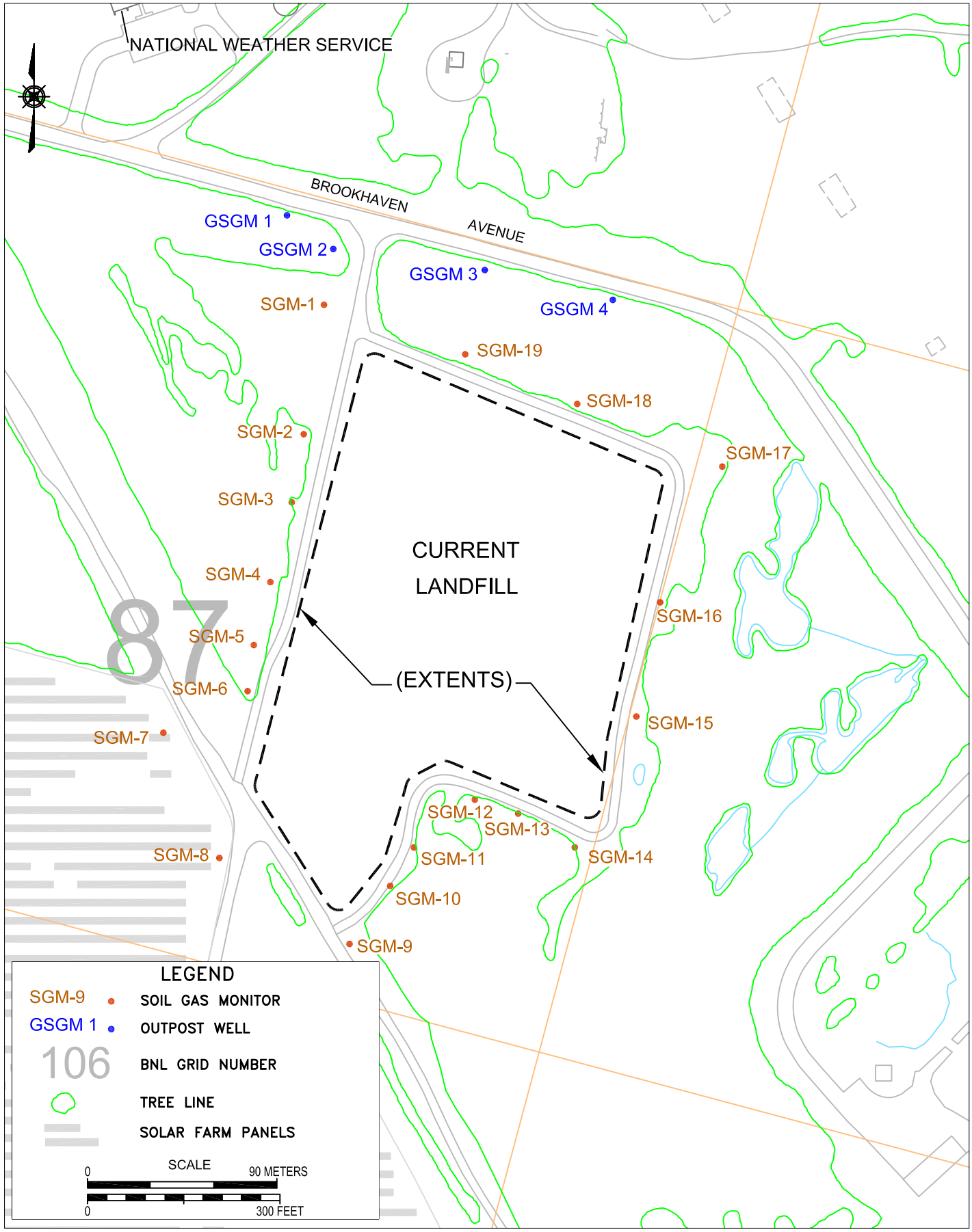
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:
FORMER LANDFILL
TRITIUM AND SR-90 TREND PLOTS
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VS: HS.:	DATE:	PROJECT NO.:
AJZ	–	03/05/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 12



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BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

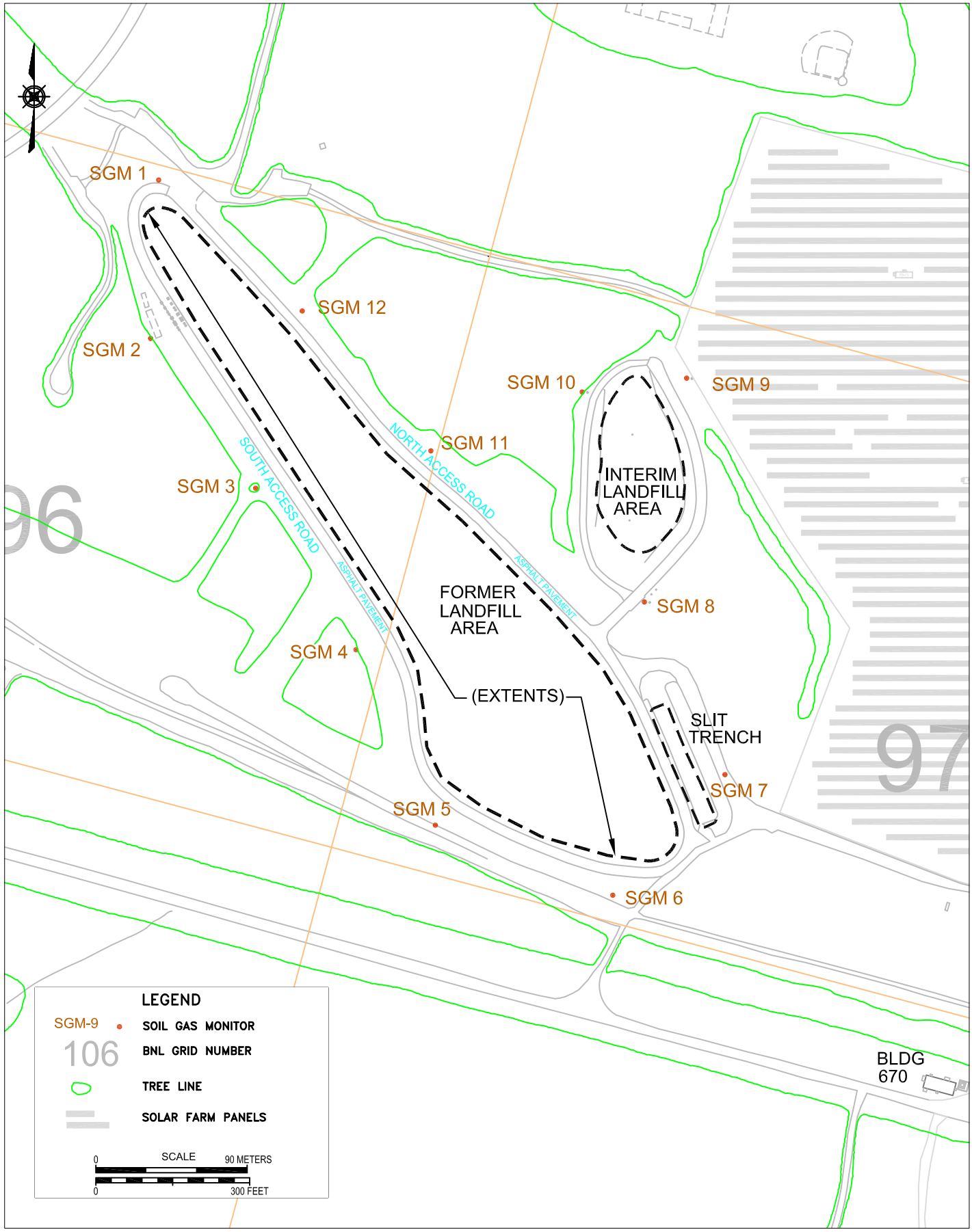
TITLE:

CURRENT LANDFILL SOIL GAS MONITOR LOCATION MAP

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 13



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BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FORMER LANDFILL
SOIL GAS MONITOR LOCATION MAP
2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/01/13	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 14

Appendix A

Wooded Wetland Report

WOODED WETLAND REPORT
2012

1.0 INTRODUCTION

This report summarizes and evaluates the 2012 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 2012 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 biennial (i.e. once every two years) 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 2012 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 (ft) 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 ft, and 1 to 1.5 ft. 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 that

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 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 (two from each pond), and seven sediment samples (four from the South Pond, three from the North Pond) were collected from the Wooded Wetlands Area. The locations are shown in Figure 2. Background and maximum concentration benchmark values for sediment and water are presented in Tables 2A and 2B (CDM 1999a). From 2001 through 2008, and in 2010 and 2012, seven surface water and seven 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 2012 sampling season.

2.0 GENERAL PROCEDURES

2.1 Environmental Sampling Procedures

Sampling was conducted by BNL on May 17, 2012, 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 on the locations where samples were collected in 1994 and 1997. Locations SW/SD-5 and SW/SD-6 were near 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 since 1994.

Water and sediment samples were sent to an off-site certified laboratory for analysis. The samples were submitted for the EPA Target Analyte List (TAL) of total metals by EPA Methods 6010B, and mercury by EPA Methods 7470 for aqueous samples and 7471 for sediment samples. 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 Benchmark Maximum Sediment Concentrations except for manganese. 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 May 2012 from the North and South Ponds. Four sediment and four surface water samples were taken from the South Pond, and three sediment and three surface water samples were collected from the North Pond. Table 1 list 2012 samples with cross-references of the sampling locations since 1994. 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 benchmark maximum contaminant and background concentrations, for each year.

3.1 Sediment

Table 5 summarizes the sediment results for the contaminants of concern, specifically copper, lead, manganese, mercury, and zinc, for the North and South Ponds since 1994. These results are compared with the benchmark maximum and background sediment concentrations from Table 2A.

To evaluate sediment concentrations in the North and South Ponds for metals, 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 2012 results from the four South Pond locations, SD-5, SD-6, SD-16, and SD-17, indicate that the individual concentrations and average concentrations of the metals of concern at these locations are below the benchmark maximum contaminant and background concentrations, except for one location. Sample SD-5 detected manganese at 94.5 mg/kg which is slightly higher than the BNL background concentration of 84.3 mg/kg.

The individual results from the North Pond location SD-11 had metal concentrations above the benchmark maximum sediment concentration for copper, lead and mercury. Location SD-11 reported lead at 98.9 mg/kg which is slightly above the benchmark maximum sediment concentration and the background sediment concentration. In addition to lead, the mercury concentration at location SD-11 was slightly above the benchmark maximum sediment concentration; however it was below the background concentration. The manganese result for SD-12 was above the background value but below the benchmark maximum sediment concentration. The average metals concentrations were below the background sediment concentrations for all metals. Only one metal, mercury, had an average concentration slightly above the benchmark maximum sediment concentration. The average mercury concentration was 0.18 mg/kg compared to the benchmark maximum sediment concentration of 0.17 mg/kg. This result is half that detected in 2010. This result is consistent with historical data.

Overall, the 2012 results are consistent with previous years with all average metals concentrations the lowest detected since 2007.

3.2 Surface-Water

Table 6 presents the results of the 10 metals of concern for each of the seven surface water samples collected during 2012. 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 2B. Four surface water samples came from the South Pond (SW-5S, SW-6, SW-16 and SW-17) and three samples were collected from the North Pond (SW-4, SW-5N and SW-2001).

The individual and average concentrations of metals for all samples from the North and South Ponds were below the critical concentrations for the 2012 sampling event.

4.0 CONCLUSIONS & RECOMMENDATIONS

Overall, the results obtained from the May 2012 sampling indicate that metals in the sediment and the metals of concern in surface water are within the range of variability as compared to previous years' values. The numbers of sediment and water samples collected from the ponds in 2012 were the same as those collected since 2001, so the averages can be directly compared for the parameters analyzed. The 2012 average metals concentrations in sediments were the lowest since 2007 in both the North and South ponds. No substantive effect due to leached metals from the landfill is evident in the sediments or surface water. Therefore, there are no changes to the monitoring program recommended.

Since metals in water are the primary source of absorption by tiger salamanders, no significant change in dissolved metals indicates that the wooded wetland is not experiencing an increase in metals concentration.

All surface water sample concentrations were below the critical concentrations. There is considerable uncertainty inherent in establishing the critical water concentrations for these metals and in assigning the actual risk posed to the 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.

5.0 REFERENCES

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

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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.

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TABLES

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

Sediment Sample Locations														
Pond Sampled	**2012 Samp Designatio**	**2010 Sample Designation**	**2008 Sample Designation**	**2007 Sample Designation**	**2006 Sample Designation**	**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-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-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	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-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	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-12	SD-12	SD-12	SD-12	SD-12	SD-D	NS	SD-12
North	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	SD-13	SD-E	NS	SD-13
North	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	SD-2001	NS	NS	NS	NS

Surface-Water Sample Locations														
Pond Sampled	**2012 Samp Designatio**	**2010 Sample Designation**	**2008 Sample Designation**	**2007 Sample Designation**	**2006 Sample Designation**	**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 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-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	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	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	SW-4	SW-4	SW-4	SW-4	SW-4	NS	NS	SW-4
North	SW-5N	SW-5N	SW-5N	SW-5N	SW-5N	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	NS	NS	NS	NS	NS	SW-E	NS	NS
North	SW-2001	SW-2001	SW-2001	SW-2001	SW-2001	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)	Benchmark 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) **	Benchmark 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	May-06	May-07	May-08	May-10	May-12
SD-5	Aluminum	NS	4,470	11,600	11,000	8,490	10,200	11,300 *	9,200 *	NS	12,600	8450 *N	9850	12500	10100
(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	1 U	2.7	0.485 *	0.992 U	0.612 U
	Arsenic	NS	1.1 B	1.4	1.81	1.39 B	1.66	1.8	1.79	NS	2 B	2.2 B	1.4 U	2.61 B	0.65 B
	Barium	NS	18.4 B	19.4	24.4	25.1 B	26.6	28	26.9	NS	31	19.3 *	23.4 B	31.5	29.2
	Beryllium	NS	0.15 B	0.23 B	0.364 B	0.34 B	0.327 B	0.406 B	0.401 B	NS	0 B	0.22 B	0.34 *	0.301 U	0.552 B
	Cadmium	NS	0.15 B	0.05 B	0.396 B	0.145 B	0.154 B	0.091 U	0.196 B	NS	0 B	0.164 U	0.156 B	0.301 U	0.186 U
	Calcium	NS	915 B	343 B	432 B	554 B	727 *	394 *N	1110 N	NS	459	294	205 U	777	450
	Chromium	NS	6.1	9.9	13.9	11.7	11.6	14	10.6 *	NS	16	10.3 *	11.8 N	14.6	12.3
	Cobalt	NS	1.3 B	1.7 B	3.15 B	3.36 B	1.97	3.53	1.91	NS	3	2	3.2 *	2.44	2.96
	Copper	NS	4.8 B	8.1	9.59	9.03	9.65	11.7	10.5	NS	10 *	7.2 *	11.8	15.8	6.18
	Iron	NS	2,560	7,490	7,590	8,670	6,130	8,820 *N	5,700	NS	6,070 EN	5680 N	9550	6520	8210
	Lead	NS	28	19.4	13.4	13.0	21.1 N	12.7	30.1 *	NS	16 *	22.2 *	13.1 *N	63.4	25.8
	Magnesium	NS	487 B	1150	1890	2,240	1,420	2,080 *N	1,310 *	NS	2,110 *	1320	2330 *EN	1650	2250
	Manganese	NS	41.5	45.1	82.4	123	78.7 *	88.3 *N	109 *	NS	89 *	54.4	93.8 *	74.2	94.5
	Mercury	NS	0.11 U	0.05	0.098	0.053	0.053	0.021	0.052	0.0512	0.047 BN	0.04 B	0.04 *	0.157 B	0.0712 B
	Nickel	NS	4.1 B	5.7	8.02	9.25	6.74	8.17	7.31 *	NS	8 *	5.9	8.3 B*	9.35	8.49
	Potassium	NS	238 B	397 B	653 B	891	602	889 N	734 E*N	NS	956	409 *	715	646	850
	Selenium	NS	1.3 U	0.36 B	0.896	0.508 B	0.827	0.468 U	0.384 B	NS	1 U	0.985 U	0.789 *	1.5 U	0.604 U
	Silver	NS	0.44 U	0.29 B	0.151 U	0.126 U	0.172 U	0.235 U	0.166 U	NS	0 U	1.1	0.156 U	0.31 B	0.287 B
	Sodium	NS	42.2 B	27.2 B	33.6 B	50.2 B	40.8	44.9	34.5	NS	55	18.9 B	26.6 U	42.5 B	57.6
	Thallium	NS	1 U	0.82 U	0.34 U	0.561 U	0.748 U	0.502 U	3.18	NS	1 U	0.821 U	0.09	0.201 B	0.11 U
	Vanadium	NS	15.6 B	17.4	24.1	20.4	21.8	22.5	22.3 *	NS	29 *	18.7 *	20 B	30.7	17.2
	Zinc	NS	22.3	25.1	31.4	29.8	31.9	29.5	26.3 *	NS	34 *	23.1 *	27.6 *	31.7	31.6
	Cyanide	NS	NA	0.489	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	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	May-06	May-07	May-08	May-10	May-12
SD-6	Aluminum	NS	4,920	9,780	1,670	10,500	1,900	1,390 *	2,000 *	NS	2830	1630 *N	1330 *	1070	2370
(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	0.523 U	0.63 B	0.442 U	0.53 U	0.427 U
	Arsenic	NS	0.47 U	1.3 U	0.556 B	1.34	0.535 U	0.372 U	0.366 B	NS	0.785 U	0.785 U	0.433 U	0.607 B	0.266 U
	Barium	NS	15.2 B	21.5	3.57	26.2	4.74	3.27	5	NS	7.1	2.8 *	3.4 *	7.54	5.04
	Beryllium	NS	0.11 B	0.08 B	0.07 U	0.336	0.045 B	0.033 B	0.082 B	NS	0.131 U	0.131 U	0.142 U	0.161 U	0.213 B
	Cadmium	NS	0.2 B	0.17 U	0.105 U	0.057 B	0.064 B	0.074 U	0.067 U	NS	0.131 U	0.131 U	0.142 U	0.161 U	0.129 U
	Calcium	NS	487 B	774 B	88.3 B	279 B	136 *	51.5 *N	133 N	NS	150	51	95.6 N	501	127
	Chromium	NS	6.1	6.5	1.87	13	2.31	1.47	2.33 *	NS	3.6	1.7 *	1.6 *	0.96	2.63
	Cobalt	NS	1.4 B	0.81 B	0.344 B	3.68 B	0.308 B	0.397 B	0.393 B	NS	0.65 B	0.32 B	0.31 B	0.263 B	0.535 B
	Copper	NS	4.8 B	7.8	0.72 B	7.27	1.85	0.549 B	1.37	NS	1.7 *	0.73 B*	0.78 B	2.55	0.531 B
	Iron	NS	2,620	5,710	1,040	8,050	1,060	816 *N	1,280	NS	2080 EN	885 N	961 *N	717	1380
	Lead	NS	19.8	63.5	4.62 B	5.28	9.74 N	1.6	10.3 *	NS	5 *	4.5 *	5.9 *EN	8.54	3.32
	Magnesium	NS	596 B	568 B	250	2,750	245	214 *N	300 *	NS	503 *	192	218 *	155	338
	Manganese	NS	29.3	39.3	10.4	144	13.4 *	9,87 *N	15 *	NS	24 *	8	9.7 *	17.5	13.6
	Mercury	NS	0.1 U	0.18	0.049	0.004 U	0.011 B	0.006 U	0.019	0.0122 B	0.014 BN	0.026 B	0.017 B*	0.00966 B	0.0105 B
	Nickel	NS	4.1 B	5.3	1.28	9.9	1.51	1.05	1.84 *	NS	2.1 *	1.1	1.2	1.48	1.97
	Potassium	NS	273 B	268	103 B	1,240	94	100 N	137 E*N	NS	243	61 *	50.1 *	99	115
	Selenium	NS	1 U	0.95 B	0.328 U	0.374 U	0.359 U	0.381 U	0.227 U	NS	0.785 U	0.785 U	0.722 U	0.76 U	0.439 U
	Silver	NS	0.34 U	0.44 U	0.143 U	0.111 U	0.155 U	0.191 U	0.126 U	NS	0.131 U	0.2 B	0.142 U	0.161 U	0.129 U
	Sodium	NS	35.1 B	96.9 U	11.5 B	50.9 B	18.6	13.9	11 B	NS	21.2	6.5 B	8.8 B	18.5 B	28 B
	Thallium	NS	0.8 U	2.8 B	0.324 U	0.495 U	0.671 U	0.409 U	1.4 U	NS	0.654 U	0.654 U	0.0578 U	0.0912 U	0.0798 U
	Vanadium	NS	11.5 B	20.2 U	3.35 B	16 B	4.85	2.35	4.96 *	NS	5.6 *	2.8 *	3.1 *	2.82	4.02
	Zinc	NS	19.7	26 B	5.86	27.6	6.45	3.98	6.67 *	NS	9.5 *	4.6 *	4.8	7.16	7.01
	Cyanide	NS	NA	1.27	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS

Table 3
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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	May-06	May-07	May-08	May-10	May-12
SD-16	Aluminum	5110 *	NS	NS	1,780	1,240	2,660	716 *	6,120 *	NS	2310	6620 *N	3910 *	6670	3210
	Antimony	8.7 U	NS	NS	0.226 U	0.302 U	0.702 UN	0.568 B	0.859 BN	NS	0.685 U	2 B	0.549 U	0.698 U	0.498 U
	Arsenic	0.59 B	NS	NS	0.566 B	0.377 B	0.582 U	0.357 U	0.411 U	NS	1.03 U	2.3 B	0.74 B	1.33 B	0.436 B
	Barium	7.1 B	NS	NS	5.25	3.6 B	9.13	1.89	28.5	NS	7.7	17.6 *	12.6 *	20	11.5
	Beryllium	0.25 U	NS	NS	0.064 U	0.036 B	0.071 B	0.023 U	0.23 B	NS	0.171 U	0.28 B	0.177 U	0.212 U	0.259 B
	Cadmium	1.2 U	NS	NS	0.096 U	0.031 U	0.132 B	0.071 U	0.292 B	NS	0.171 U	0.233 U	0.38 B	0.212 U	0.151 U
	Calcium	125 B	NS	NS	216 B	137 B	451 *	62 *N	2160 N	NS	144	619	616 N	525	347
	Chromium	5.5	NS	NS	2.41	1.63	3.21	1.44	5.7 *	NS	3.6	6.9 *	3.9 *	7.68	4.14
	Cobalt	1.2 U	NS	NS	0.347 B	0.248 B	0.372 B	0.197 B	1	NS	0.42 B	1.5	0.72 B	1.06	1.03
	Copper	1 B	NS	NS	1.48	0.904 B	3.78	0.389 B	8.14	NS	2.2 *	9.5 *	8	11.7	3.2
	Iron	1,730 *	NS	NS	1,120	817	1320	569 *N	2960	NS	1520 EN	3810 N	2000 *N	2620	2080
	Lead	4.4 NJ	NS	NS	9.99	3.19	16.1 N	1.7	39.5 *	NS	8.8 *	15 *	15.7 *EN	70.1	12.5
	Magnesium	259 B	NS	NS	239 B	185 B	293	109 *N	580 *	NS	357 *	837	378 *	534	532
	Manganese	11.5 *	NS	NS	12.4	9.68	17.7 *	8.07 *N	45 *	NS	16.7 *	41.5	25.8 *	19.6	19.9
	Mercury	0.01 B	NS	NS	0.064	0.003 U	0.033	0.005 U	0.028	0.0336	0.027 BN	0.038 B	0.05 B*	0.0886 B	0.0335 B
	Nickel	7.5 U	NS	NS	1.43	1.2 B	2.01	0.78	4.74 *	NS	1.6 *	4.5	3.2	5.71	3
	Potassium	138 U	NS	NS	113 B	114 B	133	54.5 N	414 E*N	NS	225	240 *	131 *	281	252
	Selenium	0.25 U,	NS	NS	0.365 B	0.334 U	0.391 U	0.366 U	0.323 U	NS	1.03 U	1.4 U	0.891 U	0.997 U	0.542 U
	Silver	1 U	NS	NS	0.131 U	0.099 U	0.168 U	0.183 U	0.18 U	NS	0.171 U	0.78 B	0.177 U	0.321 B	0.167 B
	Sodium	39 B	NS	NS	14.4 B	17 B	22.9	11.5	17 B	NS	26.5	16.7 B	17.9 B	31 B	39.8
	Thallium	0.25 U,	NS	NS	0.295 U	0.442 U	0.73 U	0.393 U	2.03	NS	0.856 U	1.16 U	0.0712 U	0.12 U	0.0986 U
	Vanadium	5.1 B	NS	NS	5.26 B	2.39 B	6.58	1.6	15.1 *	NS	6.2 *	15.8 *	11.4 *	21.4	7.97
	Zinc	4.7 B	NS	NS	7.34	6.48	12.9	2.58	29.1 *	NS	7.3 *	29.9 *	33.5	20.8	18.6
	Cyanide	3.1 U	NS	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS

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LOCATION	CONTAMINANT	SAMPLES COLLECTED													
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
SD-17	Aluminum	3550	NS	3,500	2,840	1,440	1,870	2,870 *	1,080 *	NS	11100	4390 *N	2280 *	9370	2140
(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	0.577 U	1.7 B	0.569 U	0.501 U	0.428 U
	Arsenic	0.25 U	NS	1.1	0.397 B	0.424 B	0.51 U	0.435 B	0.296 U	NS	1.2 B	1.3 B	0.55 B	1.61	0.276 U
	Barium	8.8 B	NS	21.6	6.32	5.34 B	4.96	5.63	2.96	NS	29.4	15.9 *	11.4 *	21	7.24
	Beryllium	0.25 U	NS	0.17 B	0.056 U	0.037 B	0.042 B	0.052 B	0.072 U	NS	0.29 B	0.204 U	0.183 U	0.197 B	0.203 B
	Cadmium	1.3 U	NS	0.11 B	0.092 B	0.075 B	0.055 B	0.077 U	0.069 U	NS	0.28 B	0.27 B	0.3 B	0.152 U	0.13 U
	Calcium	80.4 B	NS	785	240 B	136 B	183 *	137 *N	107 N	NS	636	878	1030 N	488	441
	Chromium	4.4	NS	7.4	2.54	1.98	1.99	2.68	1.21 *	NS	13	4.3 *	2.6 *	9.58	3.69
	Cobalt	1.3 U	NS	1.1 B	0.209 B	0.196 B	0.166 B	0.504 B	0.114 U	NS	1.8	0.85 B	0.62 B	1.45	0.451 B
	Copper	2.9 B	NS	8.2	1.64	1.41 B	1.42	12.6	1.39	NS	7.1 *	8.9 *	5.9	8.09	2.21
	Iron	1,590	NS	1,750	757	740	742	1210 *N	614	NS	3580 EN	2260 N	1580 *N	4280	1390
	Lead	4.1 NJ	NS	21.3	6.98	6.15	5.29 N	4.71	2.49 *	NS	16.1 *	26 *	23.2 *EN	25.3	7.48
	Magnesium	389 B	NS	665 B	157 B	162 B	169	280 *N	128 *	NS	1190 *	379	301 *	827	287
	Manganese	14.8	NS	40.1	10.9	12.3	9.72 *	16 *N	9.49 *	NS	54.6 *	31.3	27 *	36	14.6
	Mercury	0.02 B	NS	0.028 U	0.038	0.003 U	0.014	0.012 B	0.012 B	0.0618	0.037 BN	0.064 B	0.067 B*	0.09 B	0.0244 B
	Nickel	7.6 U	NS	4.3	1.13	1.25 B	1	3.34	0.792 *	NS	5.8 *	3.3	2.7	5.24	1.63
	Potassium	140 U	NS	216 B	88.7 B	91.6 B	83.2	117 N	69.4 E*N	NS	566	146 *	95 *	268	110
	Selenium	0.25 U	NS	0.57 B	0.412 B	0.482 B	0.342 U	0.396 U	0.232 U	NS	0.866 U	1.22 U	0.901 U	0.772 U	0.456 U
	Silver	1 U	NS	0.22 B	0.115 U	0.103 U	0.147 U	0.199 U	0.129 U	NS	0.144 U	0.51 B	0.183 U	0.152 U	0.13 U
	Sodium	16.5 B	NS	31.9 B	9.14 B	19.3 B	17	15.6	5.21 U	NS	42.9	15.8 B	20.8 B	22.1 B	25 B
	Thallium	0.25 U	NS	0.79 U	0.259 U	0.457 U	0.639 U	0.425 U	1.43 U	NS	0.722 U	1.02 U	0.0721 U	0.12 B	0.0829 U
	Vanadium	4.4 B	NS	12.6	4.52 B	2.99 B	3.19	4.09	1.62 *	NS	19.7 *	11.1 *	8.1 *	16.4	4.7
	Zinc	8.8	NS	27.5	7.37	4.6	6.37	6.24	3.4 *	NS	33.7 *	32 *	30.1	29.9	10.2
	Cyanide	3.2 U	NS	0.243	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS

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LOCATION	CONTAMINANT	SAMPLES COLLECTED													
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
SD-11	Aluminum	4030 *	NS	NS	5,070	12,800	11,400	6,920 *	7,570 *	NS	18500	2710 *N	9280 *	9820	18800
	Antimony	10.9 U	NS	NS	0.311 U	0.532 U	1.51 UN	0.688 U	0.761 UN	NS	1.49 U	1.19 U	1.17 U	2.34 B	1.5 U
	Arsenic	0.31 U,	NS	NS	1.07	0.859 B	2.35	1.81	1.27	NS	3.8 B	1.78 U	2 B	3.79	3.44 B
	Barium	9.3 NB	NS	NS	27.1	53.4	61.1	35.4	34.6	NS	72.9	15 *	36 *	44.1	70
	Beryllium	0.31 U	NS	NS	0.134 B	0.291 B	0.342 B	0.232 B	0.281 B	NS	0.53 B	0.297 U	0.378 U	0.331 U	1.07 B
	Cadmium	1.6 U	NS	NS	0.135 B	0.06 B	0.232 B	0.144 B	0.152 B	NS	0.49 B	0.297 U	0.378 U	0.331 U	0.456 B
	Calcium	125 B	NS	NS	225 B	389	1750 *	551 *N	467 N	NS	2220	502	907 N	1380	2520
	Chromium	4.5	NS	NS	4.99	11.6	10.5	6.48	7.1 *	NS	18.5	1.8 *	8.7 *	8.93	15.7
	Cobalt	1.6 U	NS	NS	0.221 B	0.258 B	1.9	0.586 B	0.439 B	NS	2.7	0.593 U	1.1 B	1.27 B	2.58
	Copper	R	NS	NS	5.25	7.06	21.3	7.52	7.55	NS	35.8 *	4.9 *	14.5	18.6	33.7
	Iron	763 *	NS	NS	938	1,260 B	4,920	1,570 *N	1,660	NS	5190 EN	1100 N	2840 *N	3210	6920
	Lead	6.3 N	NS	NS	8.41	13.2	85.7 N	17.8	16.9 *	NS	122 *	16.6 *	44.5 *EN	85.7	98.9
	Magnesium	168 B	NS	NS	118 B	295 B	819	262 *N	293 *	NS	1270 *	112	548 *	457	1210
	Manganese	6.6 *	NS	NS	3.74	9.41	33.9 *	10.5 *N	11.4 *	NS	43.1 *	5.3	21.8 *	19.7	42.5
	Mercury	0.03 B	NS	NS	0.074	0.12	0.198	0.056	0.044	0.0729	0.29 N	0.095 B	0.12 B*	0.122 B	0.304
	Nickel	9.3 U	NS	NS	2	2.77 B	7.51	3.13	3.3 *	NS	12.1 *	1.7	5.4	6.16	12.5
	Potassium	171 U	NS	NS	131 B	308 B	488	285 N	355 E*N	NS	917	90.2 *	285 *	331	614
	Selenium	0.31 B	NS	NS	1.43	2.68	1.59	0.993 B	0.817 B	NS	2.24 U	1.78 U	1.95 U	1.59 U	1.71 B
	Silver	1.2 U	NS	NS	0.198 B	0.175 U	0.363 U	0.338 U	0.2 U	NS	0.373 U	0.297 U	0.378 U	0.492 B	0.956 B
	Sodium	40.9 B	NS	NS	32.2 B	58.4 B	87.2	44.3	21 B	NS	115	19.5 B	52.2 B	52 B	159
	Thallium	0.31 U,	NS	NS	0.723 B	0.779 U	1.57 U	0.724 U	2.22 U	NS	1.86 U	1.48 U	0.32 B	0.191 U	0.296 B
	Vanadium	4.2 B	NS	NS	4.27 B	8.33 B	35.8	9.46	10.3 *	NS	53.3 *	5.9 *	19.8 *	23.4	46.2
	Zinc	R	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS	83 *	13.3 *	32.3	38	78.9
	Cyanide	3.9 U	NS	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS

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LOCATION	CONTAMINANT	SAMPLES COLLECTED													
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
SD-12	Aluminum	7,220 *	NS	30,300	4,420	27,900	20,600	13,600 *	10,500 *	NS	9750	31900 *N	37500 *	16300	19400
(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	0.804 U	7.2	0.96 U	0.944 U	0.976 U
	Arsenic	0.76 B,	NS	5	0.981	6.58 B	4.46	4.17	2.17	NS	1.9 B	7.8	5.8	9.55	3.35
	Barium	17.4 B	NS	85.9	32	77.5	68.2	49.5	46.5	NS	49.8	85.9 *	107 *	53.4	59.3
	Beryllium	0.25 U	NS	0.73 B	0.129 B	0.82 B	0.546 B	0.348 B	0.399 B	NS	0.29 B	0.81 B	1.1 B	0.473 B	0.928 B
	Cadmium	1.2 U	NS	0.54 B	0.148 B	0.724 B	0.241 B	0.199 B	0.096 U	NS	0.43 B	0.31 B	0.48 B	0.286 U	0.296 U
	Calcium	379 B	NS	1,820	964	2,780	2,020 *	2,260 *N	1,870 N	NS	1500	2310	2170 N	2500	2370
	Chromium	7.8	NS	22.1	4.7	27.8	20.3	13.3	10.9 *	NS	10.7	30.3 *	36.1 *	16	19.1
	Cobalt	2.5 B	NS	5.3 B	0.428 B	6.59 B	3.82	3.09	1.65	NS	1.3	7	8.8	4.32	4.37
	Copper	R	NS	44.6	7.41	36.6	26.4	20.2	13.6	NS	11.5 *	38.1 *	48.9	24.4	22.8
	Iron	5,150	NS	22,000	1,840	18,700	11,700	8,940 *N	5,960	NS	5370 EN	21800 N	26800 *N	11800	13700
	Lead	10.4 NJ	NS	86.3	6.11	71.1	59.8 N	42.3	25.5 *	NS	21.8 *	93.6 *	83.4 *EN	113	57.4
	Magnesium	943 B	NS	2220	207 B	3,020	1,610	885 *N	672 *	NS	630 *	3530	3970 *	1760	1960
	Manganese	56 *	NS	125	4.12	147	73.3 *	48.4 *N	33.4 *	NS	23 *	134	148 *	97.3	96.7
	Mercury	0.03 B	NS	0.37	0.074	0.272	0.215	0.214	0.079	0.203	0.3 N	0.2 B	0.32 *	0.225	0.192 B
	Nickel	7.5 U	NS	16.5	2.04	19.6	11.6	7.9	5.5 *	NS	5.1 *	20.2	25.1	11.9	12.4
	Potassium	292 B	NS	766 B	130 B	1,300 B	774	611 N	570 E*N	NS	551	1000 *	881 *	611	608
	Selenium	0.25 U	NS	2.2	1.22	2.01	1.74	1.44	1.23	NS	1.21 U	8.08 U	1.53 U	1.57 B	1.09 B
	Silver	1 U	NS	1.3 B	0.146 B	0.441 U	0.284 U	0.47 U	0.18 U	NS	0.201 U	4.7	0.31 U	0.63 B	0.797 B
	Sodium	29.8 B	NS	106 B	31.4 B	133 B	81.1	69.4	26.5	NS	57.7	81.4	95.4	53.7 B	105
	Thallium	0.25 U	NS	1.8 U	0.323 U	1.03 U	1.23 U	1.01 U	2.46	NS	1.01 U	1.4 B	0.37 B	0.446 B	0.215 B
	Vanadium	10.8 B	NS	54.5	3.49 B	59.9	45.7	31.1	18.7 *	NS	17.2 *	64.7 *	80.6 *	38	41.3
	Zinc	R	NS	123	5.91	137	70.3	38.4	22.3 *	NS	23.4 *	127 *	179	87.1	76.9
	Cyanide	3.1 U	NS	0.708	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS

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LOCATION	CONTAMINANT	SAMPLES COLLECTED													
	Units : mg/Kg	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
SD-13	Aluminum	9,100 *	NS	8,360	2,090	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(SD-E)	Antimony	9.2 U	NS	0.51 U	0.194 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Arsenic	1.2 B,	NS	1 B	0.46 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Barium	22.7 B	NS	21.7	10.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Beryllium	0.26 U	NS	0.08 B	0.055 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cadmium	1.3 U	NS	0.18 B	0.083 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Calcium	640 B	NS	993 B	264 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Chromium	9.1	NS	5.3	2.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cobalt	2.7 B	NS	0.64 B	0.124 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Copper	8.1	NS	9.5	1.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Iron	7,040 *	NS	3,340	781	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Lead	15.8 NJ	NS	39.9 B	5.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Magnesium	1190 B	NS	312	108 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Manganese	85 *	NS	16	3.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Mercury	0.06 B	NS	0.13	0.054	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Nickel	7.9 U	NS	3.2	0.848	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Potassium	300 B	NS	209 B	113 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Selenium	0.26 U	NS	0.89 B	0.502 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Silver	1.1 U	NS	0.35 B	0.113 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Sodium	48.4 B	NS	76.1 B	14.1 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Thallium	0.26 U	NS	1.5 U	0.254 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Vanadium	16.3	NS	14.9	2.99 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Zinc	27.9	NS	17.3	4.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cyanide	3.3 U	NS	0.847	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	May-06	May-07	May-08	May-10	May-12
SD-2001	Aluminum	NS	NS	NS	1,780	46,900	15,800	14,900 *	11,600 *	NS	7030	16300 *N	11800 *	46400	5100
	Antimony	NS	NS	NS	0.226 U	0.821 U	1.32 UN	1.44 B	0.953 BN	NS	0.87 U	4	0.932 U	0.811 U	0.533 U
	Arsenic	NS	NS	NS	0.566 B	9.03	4.21	4.4	2.23	NS	1.5 B	5.3	3.8	11.2	0.844 B
	Barium	NS	NS	NS	5.25	118	52.9	52.1	45.4	NS	56.9	59.1 *	42.7 *	114	37.3
	Beryllium	NS	NS	NS	0.064 U	1.23 B	0.434 B	0.359 B	0.397 B	NS	0.28 B	0.46 B	0.36 B	1.36	0.365 B
	Cadmium	NS	NS	NS	0.096 U	1.07 B	0.277 B	0.249 B	0.102 U	NS	0.27 B	0.242 U	0.301 U	0.481 B	0.161 U
	Calcium	NS	NS	NS	216 B	2,310 B	1,900 *	1,720 *N	1,430 N	NS	1370	1910	1840 N	2500	1230
	Chromium	NS	NS	NS	2.41	45.5	15.7	15.1	11.4 *	NS	7.8	15.3 *	11.2 *	44.6	5.25
	Cobalt	NS	NS	NS	0.347 B	8.87 B	2.98	3.16	1.7	NS	0.93 B	2.9	2.2	9.21	0.8 B
	Copper	NS	NS	NS	1.48	52.9	23.3	21.2	11.6	NS	8.5 *	22.4 *	20.1	67.2	7.13
	Iron	NS	NS	NS	1,120	25,600	8,720	7,180 *N	5,690	NS	2540 EN	9510 N	7130 *N	27700	3410
	Lead	NS	NS	NS	9.99	145	57 N	60.8	29.7 *	NS	9 *	59.3 *	76.9 *EN	137	10
	Magnesium	NS	NS	NS	239 B	3,940	1,210	853 *N	675 *	NS	315 *	1180	837 *	3810	179
	Manganese	NS	NS	NS	12.4	158	69.3 *	41.2 *N	40.4 *	NS	21.3 *	57.9	41 *	166	16.1
	Mercury	NS	NS	NS	0.064	0.727	0.192	0.18	0.098	0.116	0.13 BN	0.14 B	0.23 *	0.735	0.0362 B
	Nickel	NS	NS	NS	1.43	28	10.1	9.12	5.73 *	NS	3.6 *	9.5	7.8	28.5	3.05
	Potassium	NS	NS	NS	113 B	1,780	603	599 N	570 E*N	NS	354	457 *	327 *	1280	152
	Selenium	NS	NS	NS	0.365 B	2.42	1.4	1.31	0.623 B	NS	1.31 U	1.45 U	1.55 U	1.93 B	0.768 B
	Silver	NS	NS	NS	0.131 U	0.689 B	0.316 U	0.441 U	0.192 U	NS	0.218 U	2.1	0.301 U	1.04 B	0.22 B
	Sodium	NS	NS	NS	14.4 B	149 B	74.7	74.9	21.8	NS	51.1	37.5	42.8 B	86.7	37.5 B
	Thallium	NS	NS	NS	0.295 U	1.2 U	1.37 U	0.943 U	3.05	NS	1.09 U	1.6 B	0.27 B	0.405 B	0.101 U
	Vanadium	NS	NS	NS	5.26 B	107	40	41.5	22.6 *	NS	7.9 *	34.7 *	34.5 *	109	7.62
	Zinc	NS	NS	NS	7.34	186	76.6	42.1	24.2 *	NS	17.7 *	57 *	49.9	203	13.1
	Cyanide	NS	NS	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	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	May-06	May-07	May-08	May-10	May-12

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

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	May-06	May-07	May-08	May-10	May-12
SW-5S	Aluminum	38,600	304	1,240	253	385	445 E	429	434	210	301	305	278	199	184
(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	0.5 U	0.5 U	0.5 U	0.6 U	1 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	1.5 U	1.5 U	1.5 U	1.66 U	1.7 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	5	7.8	6.1	6.57	5.52
	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	0.1 U	0.1 U	0.1 U	0.1 U	0.2 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	0.1 U	0.1 U	0.1 U	0.156 B	0.11 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	2,170	3090	3270	7740	3620
	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	1 U	1.3 B	1 U	1.23 B	2 U
	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	0.46 B	0.53 B	0.52 B	0.472 B	0.256 B
	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	1.8	2.8	1.2	2.03	2.57
	Iron	44,000	347	3,740	1,120	1,100	890	779	1,210	832	757	1220	1170	696	390
	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	1.1 B	0.89 B	0.95 B	0.955 B	0.5 U
	Magnesium	12,500	2,460 B	1,560 B	985 B	1,060 B	1,230 B	774 B	848 B	939	768	996 E	1030 E	878	1180
	Manganese	1,410	96.1	383	181	339	227	153	176	21	171	215	217	220	174
	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	0.06 U	0.06 U	0.03 U	0.066 U	0.067 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	1.8 B	2	1.8 B	1.73 B	1.43 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	2,070	2350	2700	2560	2340
	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	2.5 U	2.5 U	1 U	1 U	1.5 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	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	2,550	3200	3580 N	3040	2790
	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	0.4 U	0.4 U	0.3 U	0.3 U	0.45 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	2 U	2 U	2 U	2 U	1.07 B
	Zinc	252	47.5	65.8	8.12 B	12.4 B	13.7 B	34.4	15.4 B	12.2	15.1	28.6	13.6	19	13.7

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	May-06	May-07	May-08	May-10	May-12
SW- 6	Aluminum	NS	762	110,000	503	523	541 E	413	346	539	405	284	372	284	287
(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	0.5 U	0.5 U	0.5 U	0.6 U	1 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	2.4 B	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	NS	13.8 B	507	9.62 B	7.9 B	7.37 B	5.89 B	5.74 B	8	6.5	4.8	6.2	5.61	7.02
	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	0.1 U	0.1 U	0.1 U	0.1 U	0.2 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	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	NS	7,000	28,400	2,660 B	2150 B	2450 B	1540 B	1450 B	2520	1700	1280	2060	2700	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	1.3 B	1 U	1 U	1 U	2 U
	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	0.58 B	0.46 B	0.57 B	0.488 B	0.475 B
	Copper	NS	8.1 B	165	1.92 B	2.48 B	1.55 B	1.91 B	1.39 U	3 U	1.8	1	2.9	1.06	2.64
	Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470	890	928	885	886	668
	Lead	NS	4.4	887	1.38 U	1.47 U	1.24 U	2.4 U	1.72 U	2.5 U	0.89 B	0.51 B	0.81 B	0.65 B	0.631 B
	Magnesium	NS	2,690 B	13200	860 B	810 B	982 B	642 B	624 B	883	717	626 E	710 E	635	943
	Manganese	NS	256	1,280	107	106	133	78.1	71.6	124	89.3	62.4	92.1	76.9	93.1
	Mercury	NS	0.1 U	1	0.085 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 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	2.3	1.6 B	4.1	1.78 B	2.04
	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	1,380	1880	2010	1600	2180
	Selenium	NS	2.4 U	10 B	3.66 U	3.46 B	2.67 U	3.61 B	3.5 B	6 U	2.5 U	2.5 U	1 U	1 U	1.5 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	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	2,660	3430	3750 N	2930	3450
	Thallium	NS	1.9 U	11.3 U	2.11 U	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.3 U	0.45 U
	Vanadium	NS	9.1 B	348	3.19 B	2.94 B	3.33 B	4.71 B	1.51 B	2 B	2 U	2 U	2 U	2 U	1.29 B
	Zinc	NS	53.2	699	16.8 B	14.1 B	14.4 B	29.9	11.5 B	20.4	14	9.8 B	15.2	11.1	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	May-06	May-07	May-08	May-10	May-12
SW- 16	Aluminum	NS	NS	NS	NS	928	521 E	446	543	618	1110	208	245	234	236
	Antimony	NS	NS	NS	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U	0.5 U	0.5 U	0.5 U	0.6 U	1 U
	Arsenic	NS	NS	NS	NS	2.33 U	3.97 U	3.31 U	2.24 U	6 U	1.5 U	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	NS	NS	NS	NS	27.3 B	11.2 B	8.81 B	11.7 B	9.8	11.6	5.4	7	9.1	8.62
	Beryllium	NS	NS	NS	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
	Cadmium	NS	NS	NS	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U	0.11 B	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	NS	NS	NS	NS	5,480	6,040	4,200 B	3,150 B	3,790	3,880	2250	3100	4790	5550
	Chromium	NS	NS	NS	NS	1.31 B	0.723 B	2.07 B	1.26 B	1.5 B	1.9 B	1.1 B	1.1 B	1.26 B	2 U
	Cobalt	NS	NS	NS	NS	0.627 B	0.581 U	1.69 B	0.812 B	1 U	0.88 B	0.41 B	0.41 B	0.947 B	0.426 B
	Copper	NS	NS	NS	NS	3.3 B	2.21 B	3.09 B	1.39 U	3 U	3.7	0.94 B	1.1	2.38	2.3
	Iron	NS	NS	NS	NS	2,320	1,330	1,430	1,480	1,820	2,200	1010	985	2820	643
	Lead	NS	NS	NS	NS	3.86	1.39 B	2.4 U	1.72 U	2.5 U	3.7	0.52 B	0.85 B	1.03 B	1.07 B
	Magnesium	NS	NS	NS	NS	1,420 B	1,580 B	1,120 B	922 B	1,000	1,180	790 E	839 E	1050	1520
	Manganese	NS	NS	NS	NS	156	158	116	83.6	120	136	69	76.3	176	97
	Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
	Nickel	NS	NS	NS	NS	2.81 B	2.23 B	1.64 U	1.03 B	2.1 B	3.2	1.5 B	1.4 B	1.81 B	1.66 B
	Potassium	NS	NS	NS	NS	2,730 B	2,270 B	1,730 B	1,590 B	1,830	1,990	1620	1580	2060	1830
	Selenium	NS	NS	NS	NS	2.93 U	2.67 U	3.39 U	2.81 U	6 U	2.5 U	2.5 U	1 U	1 U	1.5 U
	Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Sodium	NS	NS	NS	NS	2,520 B	2,680 B	2,170 BE	2,400 B	2,700	2,620	3040	2840 N	4360	2660
	Thallium	NS	NS	NS	NS	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.3 U	0.45 U
	Vanadium	NS	NS	NS	NS	4.61 B	2.96 B	5.02 B	3.44 B	4 B	3 B	2 U	2.3 B	2.31 B	1.16 B
	Zinc	NS	NS	NS	NS	15.5 B	14.6 B	34	14.8 B	17.1	28	20.3	10.6	16.4	14.4

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	May-06	May-07	May-08	May-10	May-12
SW-17	Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357	310	163	166	192	168
(SW-A)	Antimony	NS	NS	2 U	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U	0.5 U	0.5 U	0.5 U	0.6 U	1 U
	Arsenic	NS	NS	2.7 U	NS	3.21 B	3.97 U	3.31 U	2.24 U	6 U	1.5 U	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	NS	NS	21.6	NS	36 B	14.6 B	10.3 B	13 B	8.3	6.6	8	8.8	6.82	8.05
	Beryllium	NS	NS	0.14 U	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
	Cadmium	NS	NS	0.34 U	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	NS	NS	8,570	NS	9,120	7,900	6,930	3,920 B	4,820	3,420	3030	4650	4340	8090
	Chromium	NS	NS	3 B	NS	1.73 B	1.16 B	1.69 U	0.984 B	10	1 U	1 U	1 B	1.21 B	2 U
	Cobalt	NS	NS	1.1 B	NS	1.49 B	0.759 B	1.82 B	0.754 B	1 U	0.54 B	0.39 B	0.37 B	0.548 B	0.37 B
	Copper	NS	NS	5	NS	4.2 B	2.21 B	3.26 B	1.39 U	17.6	1.5	0.7 B	0.95 B	1.02	1.84
	Iron	NS	NS	5,410	NS	5430	1650	1120	1170	2320	1130	1010	1020	1550	626
	Lead	NS	NS	6	NS	3.31	2.04 B	2.4 U	1.72 U	2.5 U	1.1 B	0.5 U	0.72 B	0.607 B	0.506 B
	Magnesium	NS	NS	1,950 B	NS	1,950 B	1,780 B	1,530 B	1,050 B	1,130	964	980 E	1120 E	1020	1760
	Manganese	NS	NS	240	NS	469	150	157	102	136	110	71.3	77.9	104	83.9
	Mercury	NS	NS	0.12 U	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
	Nickel	NS	NS	6	NS	3.28 B	2.27 B	1.64 U	1.04 B	6.7	1.8 B	1.5 B	1.1 B	1.58 B	1.17 B
	Potassium	NS	NS	2,480 B	NS	3,310 B	2,400 B	1,960 B	1,550 B	1,910	1,810	1600	1520	1570	1510
	Selenium	NS	NS	2.1 B	NS	3 U	3 U	3 U	3 U	6 U	3 U	2.5 U	1 U	1 U	1.5 U
	Silver	NS	NS	0.89 U	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Sodium	NS	NS	3,610 B	NS	2,560 B	2,470 B	2,050 BE	2,220 B	2,580	2,260	2880	2640 N	4030	2650
	Thallium	NS	NS	6 U	NS	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.3 U	0.45 U
	Vanadium	NS	NS	6.5 B	NS	7.54 B	4.11 B	4.25 B	2.63 B	3.4 B	2 U	2 U	2.1 B	2 U	1 U
	Zinc	NS	NS	31.5	NS	24	14.2 B	30.1	16.6 B	14	17.5	7 B	11.5	9.78 B	7.11 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	May-06	May-07	May-08	May-10	May-12
SW- 4	Aluminum	829	NS	NS	179 B	1,500	1,320 E	326	258	356	461	198	315	217	332
	Antimony	35 U	NS	NS	4.14 U	2.65 U	4.79 U	3.46 U	5.08 U	5.1 B	0.5 U	0.5 U	0.5 U	0.6 U	1 U
	Arsenic	1.3 B	NS	NS	2.09 U	2.33 U	3.97 U	3.31 U	2.24 U	6 U	1.7 B	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	21.9 B	NS	NS	17.4 B	77.9 B	15.1 B	6.39 B	8.11 B	9.9	16.2	8.4	10	14.2	11.2
	Beryllium	1 U	NS	NS	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
	Cadmium	5 U	NS	NS	0.69 U	0.272 U	0.21 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	8,150	NS	NS	16,400	7,230	5,350	3,630 B	4,300 B	4,290	4,000	5180	4880	5540	4710
	Chromium	5UUB	NS	NS	0.87 U	1.62 B	1.62 B	1.99 B	0.795 B	4.4 B	1 U	1 U	1.1 B	1 U	2 U
	Cobalt	5	NS	NS	0.91 U	1.84 B	0.581 U	1.68 B	0.903 B	1 U	0.48 B	0.46 B	0.4 B	0.688 B	0.496 B
	Copper	8.5 B	NS	NS	1.63 U	5.79 B	3.79 B	2.59 B	1.39 U	10.4	3.5	2.7	1.8	1.03	2.54
	Iron	3930	NS	NS	2,600	3,670	1,760	499	996	1,640	702	1190	1100	1500	966
	Lead	NA	NS	NS	1.38 U	5.61	3.53	2.4 U	1.72 U	4.9 B	1.5 B	0.78 B	1.2 B	0.6 B	0.908 B
	Magnesium	4,260 B	NS	NS	2,780 B	2,170 B	1,930 B	1,340 B	1,560 B	1,520	1,490	1850 E	1860 E	2240	1610
	Manganese	146	NS	NS	135	312	69.5	39.6	112	47.2	23.1	36.6	35	47.1	49.8
	Mercury	0.2 B	NS	NS	0.109 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.081 B	0.066 U	0.067 U
	Nickel	30 U	NS	NS	1.29 U	3.5 b	2.14 B	1.64 U	0.69 U	2.2 B	1.3 B	1.8 B	1.4 B	1.5 B	1.44 B
	Potassium	2,130 B	NS	NS	3,350 B	2,980 B	2,200 B	1,380 B	1,560 B	1,920	1,260	1690	1770	1460	1940
	Selenium	1 U	NS	NS	3.66 U	2.93 U	2.67 U	3.84 B	2.81 U	6 U	2.5 U	2.5 U	1 U	1 U	1.5 U
	Silver	4 U	NS	NS	0.94 U	0.871 U	1.15 U	1.8 B	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Sodium	6,850	NS	NS	2,410 B	2,860 B	2,960 B	2,390 BE	2,570 B	2,970	2,320	3920	3690 N	5600	3440
	Thallium	1 U	NS	NS	2.48 B	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.404 B	0.45 U
	Vanadium	9 U	NS	NS	2.05 B	6.95 B	4.03 B	4.06 B	1.38 B	2.6 B	2 U	2 U	2.5 B	2 U	1.38 B
	Zinc	33.3	NS	NS	2.19 U	28	22	55.8	12.2 B	10.7	183	9.9 B	9.4 B	11	11

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	May-06	May-07	May-08	May-10	May-12
SW- 5N	Aluminum	NS	NS	945	179 B	575	238 E	1180	133 B	449	394	186	300	189	130
(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	0.5 U	0.5 U	0.5 U	0.6 U	1 U
	Arsenic	NS	NS	2.7 U	2.09 U	2.33 U	3.97 U	3.31 U	2.24 U	6 U	1.5 U	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	NS	NS	22.8	17.4 B	25.6 B	9.22 B	9.58 B	6.4 B	9.3	6.9	9	9.2	10.4	10.4
	Beryllium	NS	NS	0.14 U	0.46 U	0.158 U	0.185 U	0.21 U	0.158 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
	Cadmium	NS	NS	0.34 U	0.69 U	0.272 U	0.21 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	NS	NS	7,990	16,400	15,700	11,000	10,500	9,730	11,300	7,220	11100	14100	8970	12800
	Chromium	NS	NS	1.4 B	0.87 U	1.06 B	0.532 U	2.12 B	0.558 B	1.7 B	1 U	1 U	1 U	1 U	2 U
	Cobalt	NS	NS	1.1 B	0.91 U	0.515 B	0.581 U	1.78 B	0.541 U	1 U	0.3 B	0.74 B	0.23 B	0.375 B	0.244 B
	Copper	NS	NS	3.2 B	1.63 U	2.28 B	1.3 U	4.09 B	1.39 U	3 U	3.1	1.9	1.4	1.32	1.72
	Iron	NS	NS	6,900	2,600	1,290	598	1,070	564	2,000	776	2030	942	1290	734
	Lead	NS	NS	3.6 B	1.38 U	2.27 B	1.24 U	2.4 U	1.72 U	2.5 U	0.72 B	0.88 B	1.1 B	0.857 B	0.5 U
	Magnesium	NS	NS	2,560 B	2,780 B	2,850 B	2,110 B	2,010 B	2,010 B	2,000	1,760	2580 E	2560 E	2520	2950
	Manganese	NS	NS	146	135	103	33.2	35.2	18	60	33.8	145	32.2	50.3	61.1
	Mercury	NS	NS	0.12 U	0.109 B	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
	Nickel	NS	NS	5 B	1.29 U	1.09 B	0.837 U	1.64 U	0.69 U	1 U	1.1 B	1.5 B	0.9 B	1.24 B	0.945 B
	Potassium	NS	NS	3,910 B	3,350 B	3,160 B	2,210 B	1,600 B	1,370 B	770	1,200	1920	807	908	1430
	Selenium	NS	NS	1.9 U	3.66 U	2.93 U	2.67 U	3.39 U	2.81 U	6 U	2.5 U	2.5 U	1 U	1 U	1.5 U
	Silver	NS	NS	0.89 U	0.94 U	0.871 U	1.15 U	2 B	0.835 U	1.1 B	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Sodium	NS	NS	3,870 B	2,410 B	2,280 B	2,160 B	1,650 BE	1,830 B	2,080	2,090	2680	2330 N	3900	2680
	Thallium	NS	NS	5.6 U	2.48 B	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.3 U	0.45 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	2 U	2 U	2.6 B	2 U	1 U
	Zinc	NS	NS	21.9	2.19 U	4.96 B	4.54 B	25.4	7.02 B	5.9 B	8.4 B	6.6 B	3.3 B	5.23 B	4.66 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	May-06	May-07	May-08	May-10	May-12
SW- E	Aluminum	NS	NS	1,170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Antimony	NS	NS	1.9 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Arsenic	NS	NS	2.7 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Barium	NS	NS	30.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Beryllium	NS	NS	0.14 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cadmium	NS	NS	0.34 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Calcium	NS	NS	8,410	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Chromium	NS	NS	3.9 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cobalt	NS	NS	2.3 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Cooper	NS	NS	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Iron	NS	NS	6,970	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Lead	NS	NS	4.5 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Magnesium	NS	NS	2,610 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Manganese	NS	NS	323	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Mercury	NS	NS	0.12 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Nickel	NS	NS	6.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Potassium	NS	NS	4,140 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Selenium	NS	NS	1.9 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Silver	NS	NS	0.89 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Sodium	NS	NS	3,990 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Thallium	NS	NS	5.6 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Vanadium	NS	NS	7.5 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	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	May-06	May-07	May-08	May-10	May-12
SW- 2001	Aluminum	NS	NS	NS	NS	466	427 E	4090	119 B	412	1720	1230	85.7	224	109
	Antimony	NS	NS	NS	NS	2.65 U	4.79 U	3.46 U	5.08 U	4 U	0.5 U	0.5 U	0.5 U	0.6 U	1 U
	Arsenic	NS	NS	NS	NS	2.33 U	3.97 U	3.31 U	2.24 U	6 U	1.5 U	1.5 U	1.5 U	1.66 U	1.7 U
	Barium	NS	NS	NS	NS	42.9 B	11.2 B	20.9 B	6.54 B	8.3	16.2	12.4	8.9	14.9	10
	Beryllium	NS	NS	NS	NS	0.158 U	0.185 U	0.21 U	0.158 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
	Cadmium	NS	NS	NS	NS	0.272 U	0.21 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
	Calcium	NS	NS	NS	NS	15,300	11,700	10,400	9,780	10,300	11,000	11200	11200	9610	12200
	Chromium	NS	NS	NS	NS	0.977 B	0.532 U	4.52 B	0.503 U	1.6 B	1 U	1.6 B	1 U	1 U	2 U
	Cobalt	NS	NS	NS	NS	0.518 B	0.581 U	2.86 B	0.541 U	1 U	1.4	0.7 B	0.19 B	0.551 B	0.299 B
	Copper	NS	NS	NS	NS	1.94 B	2.74 B	7.14 B	1.39 U	3 U	6.4	3	1.2	2	2.08
	Iron	NS	NS	NS	NS	1,190	753	3,420	558	1,850	1,990	2080	724	853	680
	Lead	NS	NS	NS	NS	1.66 B	1.24 U	8.68	1.72 U	2.5 U	3.2	4	0.5 U	0.871 B	0.5 U
	Magnesium	NS	NS	NS	NS	2,760 B	2,180 B	2,320 B	2,020 B	1,940	2,030	2460 E	2190 E	2480	2350
	Manganese	NS	NS	NS	NS	130	103	105	18.9	60.4	328	98.8	27	181	83.9
	Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.095 U	0.047 U	0.05 U	0.06 U	0.06 U	0.088 B	0.066 U	0.067 U
	Nickel	NS	NS	NS	NS	0.815 U	1.08 B	1.64 U	0.69 U	1.9 B	1.8 B	1.9 B	0.89 B	1.33 B	0.846 B
	Potassium	NS	NS	NS	NS	3,050 B	2,130 B	1,960 B	1,360 B	811	1,580	1660	1160	544	1190
	Selenium	NS	NS	NS	NS	2.93 U	2.67 U	3.39 U	2.81 U	6 U	2.5 U	2.5 U	1 U	1 U	1.5 U
	Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
	Sodium	NS	NS	NS	NS	2,270 B	2,230 B	1,800 BE	1,830 B	2,010	1,430	2380	2400 N	2290	2440
	Thallium	NS	NS	NS	NS	3.88 U	4.99 U	3.64 U	10 U	5 U	0.4 U	0.4 U	0.3 U	0.3 U	0.45 U
	Vanadium	NS	NS	NS	NS	2.32 B	2.13 B	12 B	1.03 B	2.9 B	5.1 B	3 B	2 U	2 U	1 U
	Zinc	NS	NS	NS	NS	4.25 B	5.91 B	72.6	7.05 B	7.7 B	72.5	11.4	8.2 B	17	4.12 B

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

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 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	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Copper	NS	4.8 B	8.1	9.59	9.03	9.65	11.7	10.5	NS	10 *	7.2 *	11.8	15.8	6.18	NS	4.8 B	7.8	0.72 B	7.27	1.85	0.549 B	1.37	NS	1.7 *	0.73 B*	0.78 B	2.55	0.531 B
Lead	NS	28	19.4	13.4	13	21.1 N	12.7	30.1 *	NS	16 *	22.2 *	13.1 *N	63.4	25.8	NS	19.8	63.5	4.62	5.28	9.74 N	1.6	10.3 *	NS	5 *	4.5 *	5.9 *EN	8.54	3.32
Manganese	NS	41.5	45.1	82.4	123	78.7	88.3 *N	109 *	NS	89 *	54.4	93.8 *	74.2	94.5	NS	29.3	39.3	10.4	144	13.4	9.87 *N	15 *	NS	24 *	8	9.7 *	17.5	13.6
Mercury	NS	0.11 U	0.05	0.098	0.053	0.053	0.021	0.052	0.0512	0.047 BN	0.04 B	0.04 *	0.157 B	0.071 B	NS	0.1 U	0.18	0.049	####	0.011 B	0.006 U	0.019	0.012	0.014 BN	0.026 B	0.017 B*	0.0097 B	0.0105 B
Zinc	NS	22.3	25.1	31.4	29.8	31.9	29.5	26.3 *	NS	34 *	23.1 *	27.6 *	31.7	31.6	NS	19.7	26	5.86	27.6	6.45	3.98	6.67 *	NS	9.5 *	4.6 *	4.8	7.16	7.01

	SD-16														SD-17 (SD-A)												
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Copper	1 B	NS	NS	1.48	0.904	3.78	0.389 B	8.14	NS	2.2 *	9.5 *	8	11.7	3.2	2.9 B	NS	8.2	1.64	1.41	1.42	12.6	1.39	NS	7.1 *	8.9 *	5.9	8.09	2.21
Lead	4.4 NJ	NS	NS	9.99	3.19	16.1 N	1.7	39.5 *	NS	8.8 *	15 *	15.7 *EN	70.1	12.5	4.1 NJ	NS	21.3	6.98	6.15	5.29 N	4.71	2.49 *	NS	16.1 *	26 *	23.2 *EN	25.3	7.48
Manganese	11.5	NS	NS	12.4	9.68	17.7	8.07 *N	45 *	NS	16.7 *	41.5	25.8 *	19.6	19.9	14.8	NS	40.1	10.9	12.3	9.72	16 *N	9.49 *	NS	54.6 *	31.3	27 *	36	14.6
Mercury	0.001 B	NS	NS	0.064	0.003	0.033	0.005 U	0.028	0.0336	0.027 *	0.038 B	0.05 B	0.089 B	0.034 B	0.02 B	NS	0.03 U	0.038	####	0.014	0.012 B	0.012 B	0.062	0.037 BN	0.064 B	0.067 B*	0.09 B	0.0244 B
Zinc	4.7 B	NS	NS	7.34	6.48	12.9	2.58	29.1 *	NS	7.3 *	29.9 *	33.5	20.8	18.6	8.8	NS	27.5	7.37	4.6	6.37	6.24	3.4 *	NS	33.7 *	32 *	30.1	29.9	10.2

South Pond Averages

Contaminant													**Max Sediment Conc.[1]**	**Bkg. Sediment Conc.**
units mg/Kg	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	May-10	May-12		
Copper	8.03	3.36	4.7	4.2	6.3	5.4	NS	5.3	6.6	6.62	9.535	3.03025	29	52.5
Lead	34.73	8.75	6.9	13.1	5.2	20.6	NS	11.5	16.9	14.5	41.8	12.3	82.9	97.6
Manganese	41.50	29.03	72.2	29.9	30.6	44.6	NS	46.1	33.8	39.08	36.83	35.65	541	84.3
Mercury	0.09	0.06	0.02	0.03	0.01	0.03	0.04	0.03	0.04	0.04	0.09	0.03	0.17	0.41
Zinc	26.20	12.99	17.1	14.4	10.6	16.4	NS	21.1	22.4	24	22.39	16.8525	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	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Copper	NA	NS	NS	5.25	7.06	21.3	7.52	7.55	NS	35.8 *	4.9 *	14.5	18.6	33.7	NA	NS	45	7.41	37	26.4	20.2	13.6	NS	11.5 *	38.1 *	48.9	24.4	22.8
Lead	6.3 N	NS	NS	8.41	13.2	85.7 N	17.8	16.9 *	NS	122 *	16.6 *	44.5 *EN	85.7	98.9	10.4 NJ	NS	86	6.11	71.1	59.8 N	42.3	25.5 *	NS	21.8 *	93.6 *	83.4 *EN	113	57.4
Manganese	6.6	NS	NS	3.74	9.41	33.9	10.5 *N	11.4 *	NS	43.1 *	5.3	21.8 *	19.7	42.5	56	NS	125	4.12	147	73.3	48.4 *N	33.4 *	NS	23 *	134	148 *	97.3	96.7
Mercury	0.030 B	NS	NS	0.074	0.120	0.198	0.056	0.044	0.0729	0.29 N	0.095 B	0.12 B*	0.122 B	0.304	0.03 B	NS	0.370	0.074	####	0.215	0.214	0.079	0.203	0.3 N	0.2 B	0.32 *	0.225	0.192 B
Zinc	NA	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS	83 *	13.3	32.3	38	78.9	NA	NS	123	5.91	137	70.3	38.4	22.3 *	NS	23.4 *	127 *	179	87.1	76.9

	SD-13 (SD-E)														SD-2001													
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Copper	8.1	NS	9.5	1.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	53	23.3	21.2	11.6	NS	8.5 *	22.4 *	20.1	67.2	7.13
Lead	15.8 NJ	NS	39.9	5.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	145	57 N	60.8	29.7 *	NS	9 *	59.3 *	76.9 *EN	137	10
Manganese	85	NS	16.0	4.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	158	69.3	41.2 *N	40.4 *	NS	21.3 *	57.9	41 *	166	16.1
Mercury	0.08 B	NS	0.13	0.054	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	####	0.192	0.18	0.098	0.116	0.13 BN	0.14 B	0.23 *	0.735	0.0362 B
Zinc	27.9	NS	17.3	4.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	186	76.6	42.1	24.2 *	NS	17.7 *	57 *	49.9	203	13.1

North Pond Averages

Contaminant													**Max Sediment Conc.[1]**	**Bkg. Sediment Conc.**
units mg/Kg	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	May-10	May-12		
Copper	27.1	4.7	32.2	23.7	16.3	10.9	NS	18.6	21.8	27.8	36.7	21.2	29	52.5
Lead	63.1	6.6	76.4	67.5	40.3	24.0	NS	50.9	56.5	68.3	111.9	55.4	82.9	97.6
Manganese	70.5	3.9	104.8	58.8	33.4	28.4	NS	29.1	65.7	70.3	94.3	51.8	541	84.3
Mercury	0.25	0.07	0.37	0.20	0.15	0.07	0.13	0.24	0.15	0.22	0.36	0.18	0.17	0.41
Zinc	70.2	8.6	113.2	69.5	34.3	22.3	NS	41.4	65.8	87.1	109.4	56.3	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 limit
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.
E - Exceeded ICP serial dilution.

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	May-06	May-07	May-08	May-10	May-12
Aluminum	NS	304	1,240	253	385	445 E	429	434	210	301	305	278	199	184
Cadmium	NS	0.2 B	0.44 B	0.69 U	0.274 B	0.210 U	0.660 U	0.313 U	1.000 U	0.1 U	0.1 U	0.1 U	0.156 B	0.11 U
Cobalt	NS	1.3 U	1.1 B	0.91 U	0.679 B	0.581 U	1.710 B	0.918 B	1.000 U	0.46 B	0.53 B	0.52 B	0.472 B	2.56 B
Copper	NS	0.9 U	13.4	1.63 U	2.24 B	1.52 B	2.58 B	1.39 U	3 U	1.8	2.8	1.2	2.03	2.57
Iron	NS	347	3,740	1,120	1,100	890	779	1,210	832	757	1220	1170	696	390
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	1.1 B	0.89 B	0.95 B	0.955 B	0.5 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	0.06 U	0.06 U	0.03 U	0.066 U	0.067 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	1.8 B	2	1.8 B	1.73 B	1.43 B
Silver	NS	0.8 U	0.89 U	0.94 U	0.871 U	1.15 U	1.70 U	0.84 U	1.00 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	NS	47.5	65.8	8.12 B	12.4 B	13.7 B	34.4	15.4 B	12.2	15.1	28.6	13.8	19	13.7

Contaminant	SW-6 (SW-C)													
units ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May -04	May-05	May-06	May-07	May-08	May-10	May-12
Aluminum	NS	762	110,000	503	523	541 E	413	346	539	405	284	372	284	287
Cadmium	NS	NA	7.4 B	0.69 U	0.272 U	0.210 U	0.660 U	0.313 U	1.000 U	0.100 U	0.1 U	0.1 U	0.1 U	0.11 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	0.580 B	0.46 B	0.57 B	0.488 B	0.475 B
Copper	NS	8.1 B	165	1.92 B	2.48 B	1.55 B	1.91 B	1.39 U	3 U	1.8	1	2.9	1.06	2.64
Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470	890	928	885	886	668
Lead	NS	4.4	887	1.38 U	1.47 U	1.24 U	2.4 U	1.72 U	2.5 U	0.89 B	0.51 B	0.81 B	0.65 B	0.631 B
Mercury	NS	NA	1	0.085 B	0.057 U	0.04 U	0.10 U	0.05 B	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
Nickel	NS	NA	121	1.93 B	2.07 B	2.07 B	1.64 U	1.07 B	2.5 B	2.3	1.6 B	4.1	1.78 B	2.04
Silver	NS	NA	2.3 B	0.94 U	0.871 U	1.15 U	1.70 U	0.84 U	1.00 U	0.20 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	NS	53.2	699	16.8 B	14.1 B	14.4 B	29.9	11.5 B	20.4	14	9.8 B	15.2	11.1	14

	SW-16													
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Aluminum	NS	NS	NS	NS	928	521 E	446	543	618	1110	208	245	234	236
Cadmium	NS	NS	NS	NS	0.272 U	0.210 U	0.660 U	0.313 U	1 U	0.11 B	0.1 U	0.1 U	0.1 U	0.11 U
Cobalt	NS	NS	NS	NS	0.627 B	0.581 U	1.690 B	0.812 B	1 U	0.88 B	0.41 B	0.41 B	0.947 B	0.426 B
Copper	NS	NS	NS	NS	3.3 B	2.21 B	3.09 B	1.39 U	3 U	3.7	0.94 B	1.1	2.38	2.3
Iron	NS	NS	NS	NS	2,320	1,330	1,430	1480	1820	2200	1010	985	2820	643
Lead	NS	NS	NS	NS	3.86	1.39 B	2.4 U	1.72 U	2.5 U	3.7	0.52 B	0.85 B	1.03 B	1.07 B
Mercury	NS	NS	NS	NS	0.057 U	0.04 U	0.10 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
Nickel	NS	NS	NS	NS	2.81 B	2.23 B	1.64 U	1.03 B	2.1 B	3.2	1.5 B	1.4 B	1.81 B	1.66 B
Silver	NS	NS	NS	NS	0.871 U	1.15 U	1.70 U	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	NS	NS	NS	NS	15.5 B	14.6 B	34	14.8 B	17.1	28	20.3	10.6	16.4	14.4

	SW-17 (SW-A)													
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	
Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357	310	163	166	192	168
Cadmium	NS	NS	0.34 U	NS	0.272 U	0.210 U	0.660 U	0.313 U	1 U	0.100 U	0.1 U	0.1 U	0.1 U	0.11 U
Cobalt	NS	NS	1.1 B	NS	1.49 B	0.759 B	1.820 B	0.754 B	1 U	0.540 B	0.39 B	0.37 B	0.548 B	0.37 B
Copper	NS	NS	5	NS	4.2 B	2.21 B	3.26 B	1.39 U	17.6	1.5	0.7 B	0.95 B	1.02	1.84
Iron	NS	NS	5,410	NS	5,430	1,650	1,120	1170	2320	1,130	1010	1020	1,550	626
Lead	NS	NS	5.7	NS	3.31	2.04 B	2.4 U	1.72 U	2.5 U	1.1 B	0.5 U	0.72 B	0.607 B	0.506 B
Mercury	NS	NS	0.12 U	NS	0.057 U	0.04 U	0.10 U	0.047 U	0.05 U	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
Nickel	NS	NS	5.5	NS	3.28 B	2.27 B	1.64 U	1.04 B	6.7	1.8 B	1.5 B	1.1 B	1.58 U	1.17 B
Silver	NS	NS	0.89 U	NS	0.871 U	1.15 U	1.70 U	0.835 U	1 U	0.20 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	NS	NS	32	NS	24	14.2 B	30.1	16.6 B	14	17.5	7 B	11.5	9.78	7.11 B

South Pond Averages

Contaminant	**Bench-mark[1]**													**Critical**
units ug/L	1994/97	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2010	2012	**Conc.[1]**
Aluminum	**762**	**37,500**	378	**612**	487	445	452	431	532	240	265	227	219	525
Cadmium	0.3	2.73	0.69	0.27	0.21	0.66	0.31	1.00	0.10	0.10	0.10	0.11	0.11	12.8
Cobalt	8.1	8.30	0.91	0.80	0.63	1.64	0.81	1.00	0.62	0.45	0.47	0.61	0.96	15
Copper	18.7	**61.13**	1.78	3.06	1.87	2.71	1.39	6.65	2.20	1.36	1.54	1.62	2.34	50
Iron	**4,400**	**28,883**	**1,630**	**2,525**	1148.75	963	1,114	1,611	1,244	1,042	1,015	1,488	582	1,000
Lead	4.4	**299**	1.38	2.53	1.71	2.40	1.72	2.50	1.70	0.61	0.83	0.81	0.68	14.6
Mercury	0.24	0.42	0.07	0.06	0.04	0.10	0.05	0.05	0.06	0.06	0.03	0.07	0.07	2.7
Nickel	3.5	44.70	1.61	2.52	2.17	1.64	1.08	3.78	2.28	1.65	2.10	1.73	1.58	420
Silver	ND	1.36	0.94	0.87	1.15	1.70	0.84	1.00	0.20	0.20	0.20	0.20	0.20	2.4
Zinc	**64.9**	**265.4**	12.5	16.5	14.23	32.10	14.6	15.9	18.7	16.4	12.8	14.1	12.3	23.8

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

North Pond

Contaminant	SW-4														SW-5N (SW-D)											
units ug/L	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Aluminum	829	NS	NS	193 B	1,500	1320 E	326	258	356	461	198	315	217	332	38,600	NS	945	179 B	575	238 E	1180	133 B	449	394	186	300	189	130
Cadmium	5 U	NS	NS	0.69 U	0.272 U	0.210 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	NA	NS	0.34 U	0.69 U	0.272 U	0.210 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
Cobalt	5 U	NS	NS	0.91 U	1.84 B	0.581 U	1.68 B	0.903 B	1 U	0.48 B	0.46 B	0.4 B	0.688 B	0.496 B	18.7 B	NS	1.1 B	0.91 U	0.515 B	0.581 U	1.78 B	0.541 U	1 U	0.3 B	0.74 B	0.23 B	0.375 B	0.244 B
Copper	8.5 B	NS	NS	1.63 U	5.79 B	3.79 B	2.59 B	1.39 U	3 U	3.5	2.7	1.8	1.03	2.54	56.2	NS	3.2 B	1.63 U	2.28 B	1.3 U	4.09 B	1.39 U	3 U	3.1	1.9	1.4	1.32	1.72
Iron	3,930	NS	NS	2,790	3,670	1,760	499	996	1640	702	1190	1100	1500	966	4,400	NS	6,900	2,600	1,290	598	1070	564	2000	776	2030	942	1290	734
Lead	NA	NS	NS	1.38 U	5.61	3.53	2.4 U	1.72 U	4.9 B	1.5 B	0.78 B	1.2 B	0.6 B	0.908 B	NA	NS	3.6 B	1.38 U	2.27	1.24 U	2.4 U	1.72 U	2.5 U	0.72 B	0.88 B	1.1 B	0.857 B	0.5 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	0.06 U	0.06 U	0.081 B	0.066 U	0.067 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	0.06 U	0.06 U	0.03 U	0.066 U	0.067 U
Nickel	30 U	NS	NS	1.29 U	3.5 B	2.14 B	1.64 U	0.69 U	2.2 B	1.3 B	1.8 B	1.4 B	1.5 B	1.44 B	3.5 B	NS	5 B	1.29 U	1.09 B	0.837 U	1.64 U	0.69 U	1 U	1.1 B	1.5 B	0.9 B	1.24 B	0.945 B
Silver	4 U	NS	NS	0.94 U	0.871 U	1.15 U	1.8 B	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	NS	0.89 U	0.94 U	0.871 U	1.15 U	2 B	0.835 U	1.1 B	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	33	NS	NS	2.19 U	28	22	55.8	12.2 B	10.7	183	9.9 B	9.4 B	11	11	252	NS	21.9	2.19 U	4.96 B	4.54 B	25.4	7.02 B	5.9 B	8.4 B	6.6 B	3.3 B	5.23 B	4.66 B

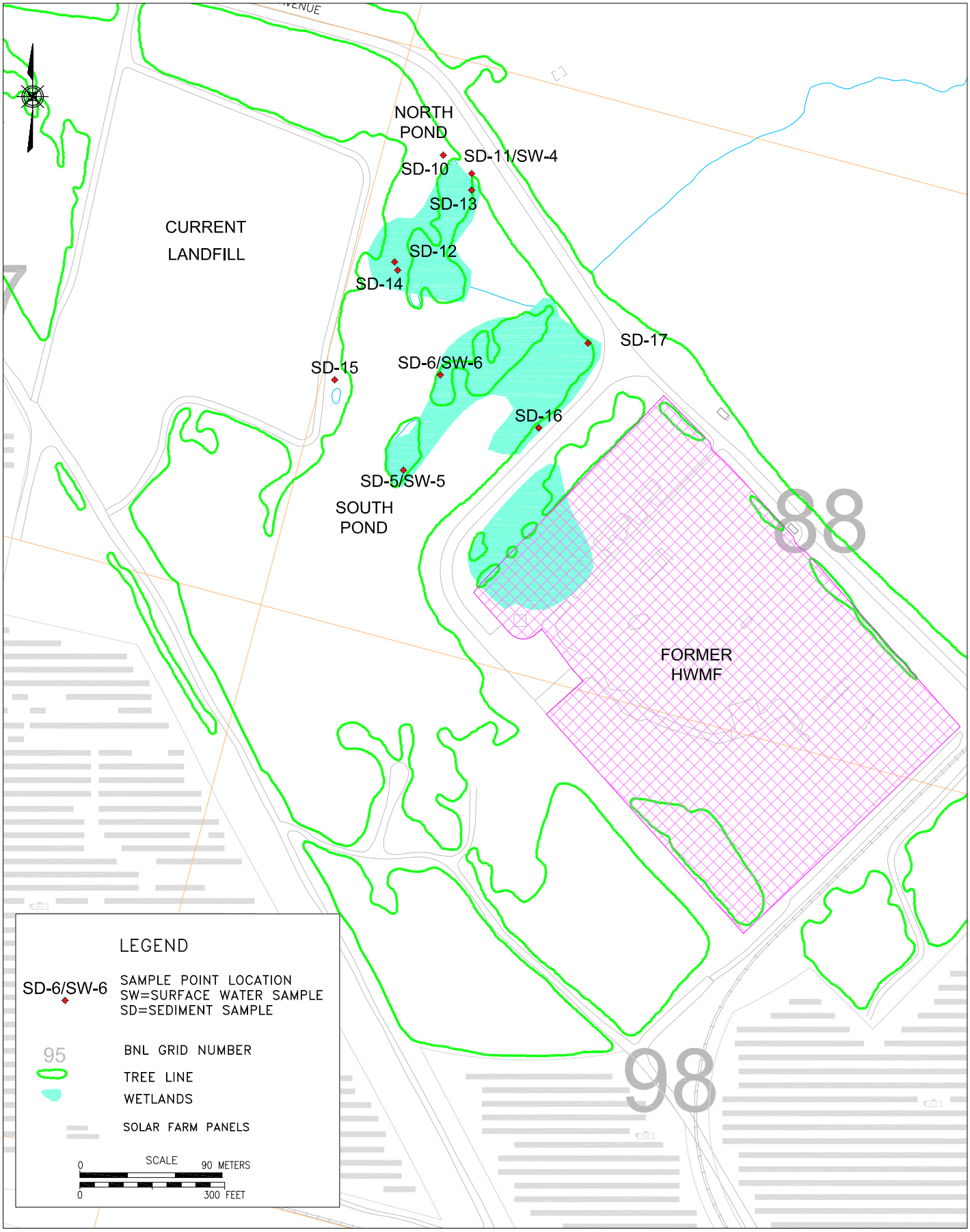
	SW-E														SW-2001													
	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12	1994	1997	Jun-99	Aug-00	Jun-01	May-02	May-03	May-04	May-05	May-06	May-07	May-08	May-10	May-12
Aluminum	NS	NS	1,170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	466	427 E	4090	119 B	412	1720	1230	85.7	224	109
Cadmium	NS	NS	0.34 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.272 U	0.210 U	0.66 U	0.313 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
Cobalt	NS	NS	2.3 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.518 B	0.581 U	2.86 B	0.541 U	1 U	1.4	0.7 B	0.19 B	0.551 B	0.299 B
Copper	NS	NS	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.94 B	2.74 B	7.14 B	1.39 U	3 U	6.4	3	1.2	2	2.08
Iron	NS	NS	6,970	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,190	753	3420	558	1850	1990	2080	724	853	680
Lead	NS	NS	4.5 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.66 B	1.24 U	8.68	1.72 U	2.5 U	3.2	4	0.5 U	0.871 B	0.5 U
Mercury	NS	NS	0.12 U	NS	NS	NS	NS	NS	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	0.06 U	0.06 U	0.088 B	0.066 U	0.067 U
Nickel	NS	NS	6.7	NS	NS	NS	NS	NS	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	1.8 B	1.9 B	0.89 B	1.33 B	0.846 B
Silver	NS	NS	0.89 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.871 U	1.15 U	1.7 U	0.835 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.25 B	5.91 B	72.6	7.05 B	7.7 B	72.5	11.4	8.2 B	17	4.12 B

North Pond Averages

Contaminant	**Bench-mark[1]**													**Critical**
units ug/L	1994/97	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2010	2012	**Conc.[1]**
Aluminum	**762**	**945**	186	**847**	**662**	**1,865**	170	406	858	538	234	210	190	525
Cadmium	0.3	0.34	0.69	0.27	0.21	0.66	0.31	1.00	0.10	0.10	0.10	0.10	0.11	12.8
Cobalt	8.1	1.10	0.91	0.96	0.58	2.11	0.66	1.00	0.73	0.63	0.27	0.54	0.35	15
Copper	18.7	3.20	1.63	3.34	2.61	4.61	1.39	3	4.3	2.5	1.5	1.5	2.1	50
Iron	**4,400**	**6,900**	**2,695**	**2,050**	**1,037**	**1,663**	706	1,830	1,156	1,767	922	1,214	793	1,000
Lead	4.4	3.60	1.38	3.18	2.00	4.49	1.72	3.3	1.81	1.89	0.93	0.78	0.64	14.6
Mercury	0.24	0.12	0.11	0.06	0.04	0.10	0.05	0.05	0.06	0.06	0.07	0.07	0.07	2.7
Nickel	3.5	5.00	1.29	1.80	1.35	1.64	0.69	1.7	1.4	1.73	1.06	1.36	1.08	420
Silver	ND	0.89	0.94	0.87	1.15	1.83	0.84	1.03	0.20	0.20	0.20	0.20	0.20	2.4
Zinc	**64.9**	21.9	2.2	12.40	10.82	**51.27**	8.76	8.10	87.97	9.30	6.97	11.08	6.59	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 locatior
NA Not available
NS Not sampled
U Analyte was analyzed for but not detected
N - Spike sample recovery was not within control limit
J - Estimated value; concentration below method detection limi
* - 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 lim

FIGURES



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BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

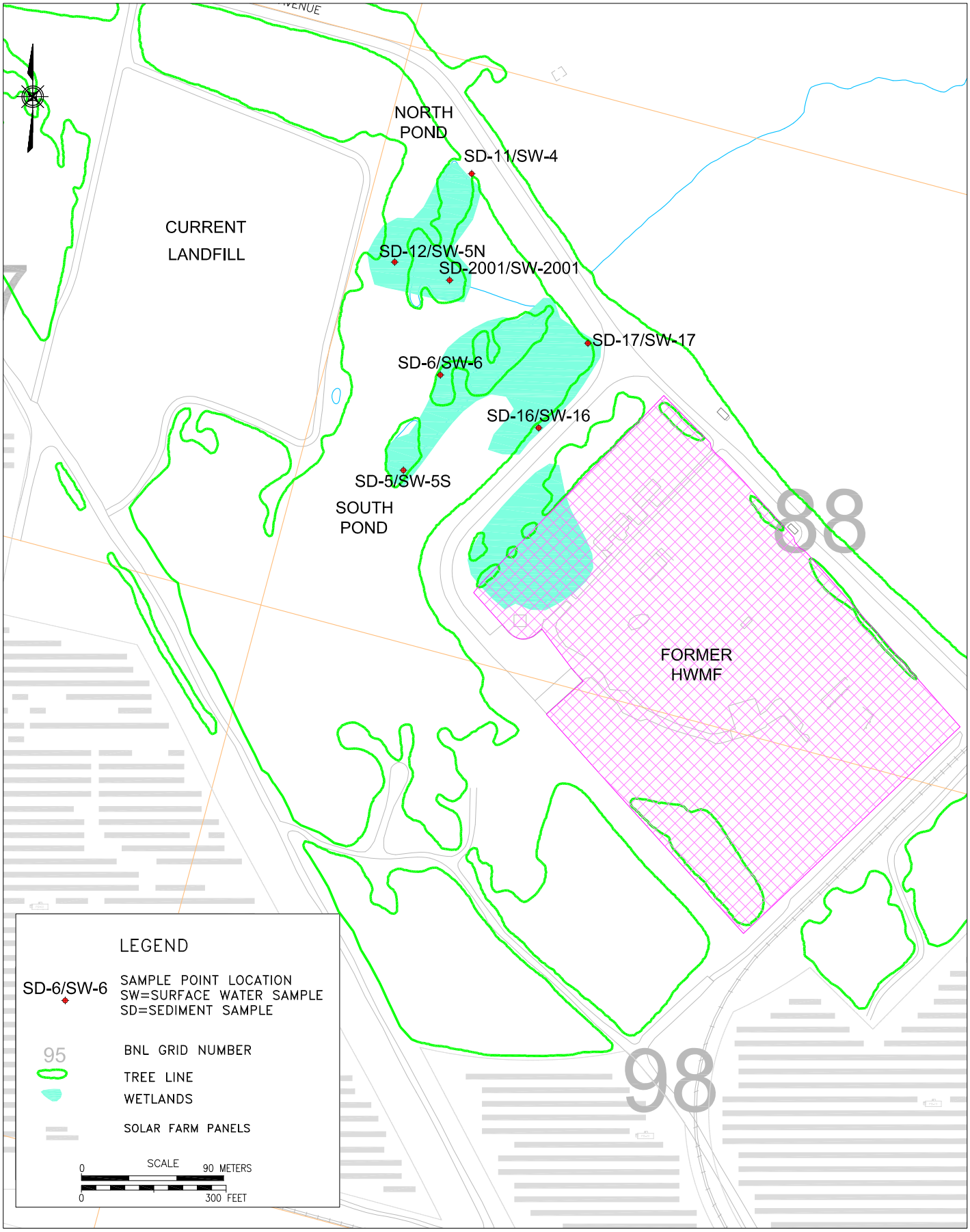
TITLE:

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

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
KCK	–	02/07/13	07928
CHKD:	APPD:	REV.:	NOTES:
JEB	WRD	–	–

FIGURE NO.: 1



R\Gw_projects\Landfills\2012 Report\wooded wetlands Fig2.dwg

BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

TITLE:

WOODED WETLANDS SEDIMENT AND SURFACE WATER SAMPLING LOCATIONS

2012 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
KCK	–	02/07/13	07928
CHKD:	APPD:	REV.:	NOTES:
JEB	WRD	–	–

FIGURE NO.: 2

Appendix B

Soil-gas Sampling Field Notes

(60) 3/7/12 Jim Mulligan Carlchalk at Gas. 2080 Current Landfill 50° 30.38" Hg Sunny Clear

Location	Well ID	CH4%	LEL%	H2S ppm	Comments/Time
Sgm - 1A	087-62	15.5	>100 310	2	0900
1B	087-78	13.8	>100 276	2	0906
1C	087-79	11.3	>100 226	2	0916
2A	087-63	50.9	>100 1018	0	0919
2B	087-80	48.1	>100 962	7	0925
2C	087-81	48.3	>100 966	4	0935
3A	087-64	35.2	>100 704	1	0939
3B	087-82	53.4	>100 1068	16	0946
3C	087-83	50.4	>100 1008	12	0956
4A	087-65	27.5	>100 550	0	0959
4B	087-84	33.6	>100 120	4	1006
4C	087-85	23.5	>100 470	6	1016
5A	087-66	15.8	>100 316	0	1020
5B	087-86	22.8	>100 456	1	1024
5C	087-87	19.1	>100 382	3	1034
6A	087-67	30.6	>100 612	0	1050
6B	087-88	31.9	>100 638	2	1055
6C	087-89	30.2	>100 604	3	1105
7A	087-68	0	0	0	1120
7B	087-90	0	0	0	1126
7C	087-91	0	0	0	1136
8A	087-69	0	0	0	1139
8B	087-92	0	0	0	1145
8C	087-93	0	0	0	1155

(61) 3/7/12 Jim Mulligan 30.11"Hg 60° Sunny Current Landfill 50° Sunny Clear

Location	Well ID	CH4%	LEL%	H2S ppm	Comments/Time
Sgm - 9A	087-70	0.0	0	0	1306
9B	087-94	0.0	0	0	1312
9C	087-95	0.0	0	0	1325
10A	087-71	0.7	14	0	1330
10B	087-96	5.8	>100 116	2	1340
10C	087-97	5.4	>100 108	4	1355
11A	087-72	7.2	>100 144	1	1410
11B	087-98	2.7	55	0	1422
12A	087-73	37.8	>100 756	13	1430
12B	087-99	38.7	>100 774	2	3/7/12 1438
13A	087-74	0.0	0	0	3/8/12 0830
13B	087-100	30.4	>100 608	3	0835
14A	087-75	0.8	16	0	0845
14B	087-101	0.0	0	0	0852
15A	088-111	0.0	0	0	0859
15B	088-114	0.0	0	0	0911
16A	088-112	0.0	0	0	0918
16B	088-115	0.0	0	0	0928
17A	088-113	0.0	0	0	Water in pipe 0935
17B	088-116	0.0	0	0	water in pipe 0945
18A	087-76	0.0	0	0	1000
18B	087-102	0.0	0	0	water in pipe 1010
19A	087-77	4.2	84	1	1019
19B	087-103	1.6	33	0	water in pipe 1028

(62) 3/8/12

Current Landfill
Jim Milligan

:60° Sunny
30.11" Hg

Location	Well ID	CH_4 %	LEL %	H_2S ppm	Time/cmts
GSGM 1A	no ID	0.0	0	0	1030
1B	↓	0.0	0	0	1041
1C	↓	0.0	0	0	1049
2A	↓	0.0	0	0	1055
2B	↓	0.0	0	0	1103
2C	↓	0.0	0	0	1114
3A	↓	0.0	0	0	1120
3B	↓	0.0	0	0	1129
4A	↓	0.0	0	0	1138
4B	↓	0.0	0	0	1145

JM

(63) 6/7/12

Current Landfill
Jim Milligan

Cal check 67° Sunny 29.86" Hg
Go 200 cont[illegible]

Location	Well ID	CH_4 %	LEL %	H_2S ppm	Time
SGM-1A	087-62	13.6	>100 272	0	0850
1B	087-78	13.0	>100 260	1	0855
1C	087-79	11.2	>100 224	0	0905
2A	087-63	48.2	>100 964	0	0909
2B	087-80	49.7	>100 994	10	0916
2C	087-81	50.5	>100 1010	5	0926
3A	087-64	52.3	>100 1046	12	0930
3B	087-82	53.1	>100 1062	26	0937
3C	087-83	53.0	>100 1060	24	0947
4A	087-65	42.1	>100 842	11	0951
4B	087-84	42.7	>100 854	5	0957
4C	087-85	35.7	>100 714	5	1007
5A	087-66	34.3	>100 686	6	1011
5B	087-86	32.7	>100 654	4	1018
5C	087-87	24.9	>100 498	2	1028
6A	087-67	25.0	>100 500	0	1035
6B	087-88	32.7	>100 654	6	1038
6C	087-89	30.3	>100 606	3	1048
7A	087-68	0.0	0	0	1100
7B	087-90	0.0	0	0	1106
7C	087-91	0.0	0	0	1117
8A	087-69	0.0	0	0	1122
8B	087-92	0.0	0	0	1131
8C	087-93	0.0	0	0	1142

(margin note beside 7A–8C: [illegible])

6/7/12

Location	Well ID	CH4 %	LEL %	H2S PPM	Time/Comments
GSGM 9A	087-70	0.0	0	0	1155
9B	087-94	0.0	0	0	1202
9C	087-95	0.0	0	0	1300
10A	087-71	12.9	>100 258	11	1310
10B	087-96	15.4	>100 308	6	1317
10C	087-97	13.0	>100 260	3	1328
11A	087-72	16.7	>100 334	16	1335
11B	087-98	15.7	>100 314	0	1347
12A	087-73	46.2	>100 924	29	1357
12B	087-99	40.1	>100 802	1	1410
13A	087-74	0.2	4	0	1416
13B	087-100	37.6	>100 752	1	1427
14A	087-75	0.0	0	0	1432
14B	087-101	0.9	18	0	1440
15A	088-111	0.0	0	0	1451
15B	088-114	0.0	0	0	1500
16A	088-112	0.0	0	0	1507
16B	088-115	0.0	0	0	water in p.h. 1512
17A	088-113	0.0	0	0	water in p.h. 1518
17B	088-116	0.0	0	0	water in p.h. 1525
18A	087-76	0.0	0	0	1535
18B	087-102	0.0	0	0	water in p.h. 1545
19A	087-77	23.2	>100 464	11	1555
19B	087-103	20.8	>100 416	14	1605

JM (65)

6/7/12

Location	Well ID	CH4 %	LEL %	H2S PPM	Time/Comments
GSGM 1A	No ID	0.0	0	0	1612
1B		0.0	0	0	1619
1C		0.0	0	0	1624
2A		0.0	0	0	1634
2B		0.0	0	0	1642
2C		0.0	0	0	1649
3A		0.0	0	0	1655
3B		0.0	0	0	1710
4A		0.0	0	0	1722
4B		0.0	0	0	1730

(66) JM — Current Landfill — 9/7/2012 Cal check Gem 2000

Location	well ID	CH4 %	LEL %	H2S PPM	Time / comments
SGM-1A	087-62	16.4	>100 328	0	0815
1B	087-78	13.4	>100 268	1	0821
1C	087-79	5.2	>100 104	0	0831
2A	087-63	49.5	>100 990	0	0834
2B	087-80	50.2	>100 1004	7	0840
2C	087-81	10.5	>100 210	0	0850
3A	087-64	55.9	>100 1118	10	0855
3B	087-82	55.4	>100 1108	2	0903
3C	087-83	26.7	>100 534	1	0914
4A	087-65	59.7	>100 1194	5	0917
4B	087-84	52.2	>100 1044	7	0925
4C	087-85	47.8	>100 956	5	0937
5A	087-66	43.4	>100 868	8	0940
5B	087-86	39.6	>100 792	8	0949
5C	087-87	43.5	>100 870	9	0958
6A	087-67	4.7	93 %	0	1009
6B	087-88	38.5	>100 770	11	1012
6C	087-89	35.9	>100 718	4	1019
7A	087-68	0.0	0	0	1030
7B	087-90	0.0	0	0	1037
7C	087-91	0.0	0	0	1047
8A	087-69	0.0	0	0	1058
8B	087-92	0.0	0	0	1106
8C	087-93	0.0	0	0	1118

BP

JM

29.82 in Sunny 85° F — Current Landfill — JM — 9/7/12 (67)

Location	well ID	CH4 %	LEL %	H2S PPM	Time / comments
SGM-9A	087-70	0.0	0	0	1128
9B	087-94	0.0	0	0	1135
9C	087-95	0.0	0	0	1149
10A	087-71	0.0	0	0	1157
10B	087-96	22.8	>100 456	9	1205
10C	087-97	19.2	>100 384	6	1216
11A	087-72	29.9	>100 598	6	1305
11B	087-98	27.6	>100 552	15	1309
12A	087-73	53.6	>100 1072	29	1320
12B	087-99	48.9	>100 978	3	1327
13A	087-74	19.8	>100 396	2	1338
13B	087-100	49.8	>100 996	5	1345
14A	087-75	1.6	>100 32	0	1349
14B	087-101	0.8	17	0	1410
15A	088-111	3.4	68	2	1415
15B	088-114	0.0	0	0	1425
16A	088-112	0.0	0	0	1438
16B	088-115	0.0	0	0	1449
17A	088-113	0.0	0	0	1507
17B	088-116	0.0	0	0	1518
18A	087-76	0.0	0	0	1521
18B	087-102	0.0	0	0	1533
19A	087-77	36.4	>100 728	26	1542
19B	087-103	27.3	>100 546	0	1549

JM

(68)

Current Landfill

9/7/12
JM

Location	Well ID	CH4 %	LEL %	H2S PPM	
GSM 1A	No ID	0.0	0	0	1605
1B		0.0	0	0	1612
1C		0.0	0	0	1621
2A		0.0	0	0	1628
2B		0.0	0	0	1632
2C		0.0	0	0	1641
3A		0.0	0	0	1649
3B		0.0	0	0	1655
4A		0.0	0	0	1708
4B		0.0	0	0	1715

(69)

Current Landfill

12/5/12 Cl. OK
Gem 2000
29.81 "Hg
54° Sunny

Location	Well ID	CH4 %	LEL %	H2S PPM	Time/Comments
GSM - 1A	087-62	15.7	>100 314	0	1300
1B	087-78	11.7	>100 234	0	1307
1C	087-79	12.7	>100 254	0	1318
2A	087-63	53.8	>100 1076	0	1322
2B	087-80	51.5	>100 1030	10	1326
2C	087-81	52.1	>100 1042	3	1337
3A	087-64	46.2	>100 924	8	1344
3B	087-82	55.2	>100 1104	20	1351
3C	087-83	54.8	>100 1096	24	1402
4A	087-65	42.9	>100 858	0	1406
4B	087-84	42.7	>100 854	7	1413
4C	087-85	32.9	>100 658	5	1424
5A	087-66	36.3	>100 726	0	1428
5B	087-86	19.9	>100 398	0	1438
5C	087-87	0	0	0	1447
6A	087-67	0	0	0	1500
6B	087-88	0	0	0	1506
6C	087-89	0	0	0	1513
7A	087-68	0	0	0	1516
7B	087-90	0	0	0	1522
7C	087-91	0.0	0	0	1532
8A	087-69	0.0	0	0	1535
8B	087-92	0.0	0	0	1542
8C	087-93	0.0	0	0	1552

12/5/-12/6/12 — Current Landfill — (70)

	Well ID	CH4 %	LEL %	H2S ppm	Time/comments
9A	087-70	0.0	0	0	1600 R/S/12
9B	087-94	0.0	0	0	1606
9C	087-95	0.0	0	0	1616
10A	087-71	8.9	>100 118	0	1619
10B	087-96	13.6	>100 272	0	1625
10C	087-97	0	0	0	1635
11A	087-72	13.7	>100 274	7	1639
11B	087-98	0	0	0	1644
12A	087-73	48.9	>100 978	10	1650
12B	087-99	43.0	>100 860	0	1659
13A	087-74	30.3	>100 606	0	30.2" Hg 13/12 38.5 mph 0900
13B	087-100	26.9	>100 538	0	0905
14A	087-75	0.0	0	0	0909
14B	087-108	1.6	31%	0	0915
15A	088-111	0.0	0	0	0925
15B	088-114	0.3	8%	0	0935
16A	088-112	0.0	0	0	0938
16B	088-115	0.0	0	0	0947
17A	088-118	0.0	0	0	1000
17B	088-116	0.0	0	0	Water in Aire 1010
18A	087-76	0.0	0	0	water 1018
18B	087-102	0.0	0	0	water 1027
19A	087-77	17.5	>100 350	1	1038
19B	087-103	0.0	0	0	1047

(71) — Current Landfill — 12/6/12

Location	Well ID	CH4 %	LEL %	H2S ppm	Time/comments
GSGM 1A	No ID	0.0	0	0	1105
1B		0.0	0	0	1112
1C		0.0	0	0	1122
2A		0.0	0	0	1135
2B		0.0	0	0	1142
2C		0.0	0	0	1155
3A		0.0	0	0	1200
3B		0.0	0	0	1207
4A		0.0	0	0	1215
4B		0.0	0	0	1223

Cal check of Gem 2000

(27) 6/19/12 J. Milliron

71°

75.% Hum 30.02" Hg

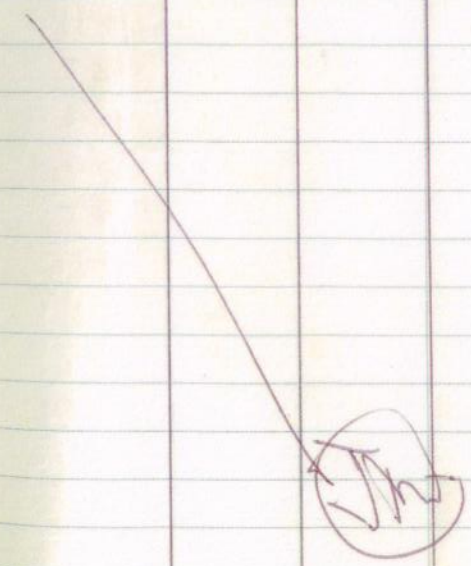
Former Landfill

Location	well ID	CH4 %	LEL %	H2S PPM	Time/comments
SGM 1A	096-41	0.0	0	0	0805
1B	096-42	0.0	0	0	0813
2A	096-43	0.0	0	0	0817
2B	096-44	0.0	0	0	0824
3A	096-45	0.0	0	0	0827
3B	096-46	0.0	0	0	0834
4A	096-47	0.0	0	0	0838
4B	096-48	0.0	0	0	0841
5A	097-50	0.0	0	0	0844
5B	097-51	0.0	0	0	0850
6A	097-52	0.0	0	0	0854
6B	097-53	0.0	0	0	0900
7A	097-54	0.0	0	0	0906
7B	097-55	0.0	0	0	0913
8A	097-56	0.0	0	0	0916
8B	097-57	0.0	0	0	0923
9A	097-58	0.0	0	0	0927
9B	097-59	0.0	0	0	0940

JM

(28) 6/19/12 Former Landfill

Location	well ID	CH4 %	LEL %	H2S PPM	Time/comments
SGM -10A	097-60	0.0	0	0	1020
-10B	097-61	0.0	0	0	1035
11A	097-62	0.0	0	0	1045
11B	097-63	0.0	0	0	1100
12A	096-49	0.0	0	0	1115
12B	096-50	0.0	0	0	1125



Cal Check at 6am 2008 29.91 "Hg

(29) 12/5/12 Jim Milligan 54° sunny

54° Former Landfill

Location	Well ID	CH4%	LeL%	H2S PPM	Time/comments
SGM 1A	096-41	0.0	0	0	0910
1B	096-42	0.0	0	0	0920
2A	096-43	0.0	0	0	0932
2B	096-44	0.0	0	0	0941
3A	096-45	0.0	0	0	0945
3B	096-46	0.0	0	0	1000
4A	096-47	0.0	0	0	1010
4B	096-48	0.0	0	0	1018
5A	097-50	0.0	0	0	1025
5B	097-51	0.0	0	0	1035
6A	097-52	0.0	0	0	1045
6B	097-53	0.0	0	0	1058
7A	097-54	0.0	0	0	1110
7B	097-55	0.0	0	0	1123
8A	097-56	0.0	0	0	1128
8B	097-57	0.0	0	0	1135
9A	097-58	0.0	0	0	1142
9B	097-59	0.0	0	0	1155

(30) 12/5/12 Jim Milligan

54° Former Landfill

Location	Well ID	CH4%	LeL%	H2S PPM	Time/comments
SGM - 10A	097-60	0.0	0	0	1203
-10B	097-61	0.0	0	0	1212
-11A	097-62	0.0	0	0	1221
-11B	097-63	0.0	0	0	1231
12A	096-49	0.0	0	0	1242
12B	096-50	0.0	0	0	1255

Appendix C

Monthly Landfill Site Inspection Forms

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 1-26-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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					
	Crushed-Concrete Access Road	X				X
		X				X

B. Description of Further Action Requirements:

1. Location: Asphalt Roads, Cap, Drainage channels

Observed Conditions: Some Cracking in Road Vegetation Growth on Cap + in Drainage Channels

Recommendations: Vegetation removal was scheduled for Jan 21. However, Due to snow the work was NOT done and is being rescheduled

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 2-29-12

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

Time on Site: ___

Time off Site: ___

Weather Conditions: ___

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: * Vegetation removal commenced on Feburary 25, 2012 and

Observed Conditions: * All vegetation was removed from Drainage ditches and from Edges of landfill.

* Asphalt Roads have some cracking - will continue to monitor

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-21-12

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

Time on Site: ____

Time off Site: ____

Weather Conditions: Sunny 70's

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads -
Observed Conditions: Some Cracking

Recommendations: X Grounds crew used a bobcat to "Scrape" asphalt road around Landfill removing soil & vegetation build-up.

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland
Date of Inspection: 3/29/12
Name of Inspector(s): R. Howe, J. Burke, E. Kramer, D. Paquette, T. Green, K. Schwager
Purpose of Inspection: ☒ Routine (Scheduled Frequency of 2x/yr) ☐ Heavy Rainfall ☐ Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X				Cut grass in spring	
Soil (Cap/Cover/Fill)		X			No burrows observed	X
Other:						
2. Drainage Structures:						
Standing Water	X				Some water in Wetland	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	No water in basin	X
Other:						
3. Monitoring System:						
Soil Gas Wells	X					X
Groundwater Wells	X				Relocked one well	X
Gas Vents	X				Good condit, no nests	X
Other:						
4. Site Access:						
Asphalt Access Road	X					X
Crushed-concrete Access Road	X					X
Fence	X					X
Gates/locks	X				All signs posted	X
Radiological Postings				X		X
Other: Stairs access to cap	X					X

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: Have Facilities and Operations (F&O) complete removal of small pine seedlings on the southeast and northeast edge of cap, cut the landfill grass this spring since it has been dry, and dispose of old plastic pipe by the main gate. F&O cleaned the culverts and asphalt access road of vegetation in early March 2012. The recharge basin has no standing water and has recharged to groundwater since the fall 2011. Wooded wetlands have some standing water. LUIC Factsheet Changes: Wooded Wetlands, Need to include figure of wetland areas.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-26-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads

Observed Conditions: Some Cracking, will continue to monitor

NOTE: Grounds Crew cut Vegetation (Grass) on Landfill

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-30-12

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

Time on Site: ____ ____

Time off Site: ____ ____

Weather Conditions: Clear

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads Edges of Land Fill, Drainage Structures

Observed Conditions: Some Cracking

Edges & Drainage Structures require Weed whacking, Vegetation Killer

Recommendations: Will put Work order in For Vegetation Removal.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-26-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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					
	Subsurface Drainage Pipes/Outfalls	X				X
	Manholes					
	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: Asphalt Roads - Some Cracking

Observed Conditions: Weed Wacking / Vegetation Killer has been done

Recommendations: Continue to Monitor Roads

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-31-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: Cloudy

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads - Some Cracking

Observed Conditions: Some Vegetation Re-growth - Will ~~be~~ have removed Next Month

Recommendations: Continue to Monitor

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-15-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: Sunny

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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					
	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: Asphalt Roads - Some Cracking
Observed Conditions: _____

Recommendations: Continue to Monitor For Futher Cracking

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-20-12

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

Time on Site: ___

Time off Site: ___

Weather Conditions: ___

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads

Observed Conditions: Some Cracking

Recommendations: Continue to Monitor

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland
Date of Inspection: 10/23/12
Name of Inspector(s): R. Howe, J. Burke, V. Racaniello, T. Kneitel, M. Chuc, T. Green, K. Schwager
Purpose of Inspection: ☒ Routine (Scheduled Frequency of 2x/yr) ☐ Heavy Rainfall ☐ Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X					X
Soil (Cap/Cover/Fill)	X				No burrows observed	X
Other:						
2. Drainage Structures:						
Standing Water	X				Little water in wetland	X
Toe Drain	X					X
Drainage Channels	X				No vegetation	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	Little water in basin	X
Other:						
3. Monitoring System:						
Soil Gas Wells	X					X
Groundwater Wells	X					X
Gas Vents	X				Good condit, no nests	X
Other:						
4. Site Access:						
Asphalt Access Road	X					X
Crushed-concrete Access Road				X		X
Fence	X					X
Gates/locks	X				Secured SW gate sign	
Radiological Postings				X		X
Other: Stairs access to cap	X					X

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: Good vegetative growth, no animal burrows or pine seedlings observed, and no vegetation in drainage culvert. Removed small rose bush adjacent to gas vent during inspection. Have Facilities and Operations (F&O) dispose of old plastic pipe by the main gate. Have the EPD Sampling Team put a chain and lock around the SW gate since it doesn't meet flush. The recharge basin and the Wooded Wetlands have little standing water. LUIC Factsheet Changes: Current Landfill, No changes. Wooded Wetlands, Need to revise figure of wetland areas. Under Administrative Controls and References, Revise second bullet to include updated Natural Resource Management Plan (BNL-96320-2011). Update link for Plan reference.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-24-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads

Observed Conditions: Some Cracking

Recommendations: Continue to Monitor

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-27-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Asphalt Roads

Observed Conditions: Some Cracking

Recommendations: Continue to Monitor

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Erin Kramer

Date of Inspection: 12-19-12

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

Time on Site: ____ ____

Time off Site: ____ ____

Weather Conditions: _____

_____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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					
	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: Asphalt Roads

Observed Conditions: Some Cracking

Recommendations: Continue to Monitor

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 1-26-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Cap, Drains - Vegetation Growth

Observed Conditions: _____

Recommendations: Vegetation Removal was scheduled For Jan 21. However Due to Snow the work was NOT done and will have to be rescheduled

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 2-29-12
Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident
Time on Site: _____
Time off Site: _____
Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Cap & Drainage Structures
Observed Conditions: Some Vegetation Growth. Needs Removal

Recommendations: Work for vegetation removal has been scheduled

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-21-12
Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident
Time on Site:
Time off Site:
Weather Conditions: Sunny 70's

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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		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: Drainage Channels
Observed Conditions: Vegetation Growth

Recommendations: Grounds crew removed approximately half the vegetation in drainage channels and is scheduling removal of other half.

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Former Landfill Area (includes the former and interim landfills and slit trench)
Date of Inspection: 3/28/12
Name of Inspector(s): R. Howe, J. Burke, W. Dorsch, V. Racaniello
Purpose of Inspection: ☒ Routine (Scheduled Frequency of 2x/yr) ☐ Heavy Rainfall ☐ Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X				Cut grass in spring	
Soil (Cap/Cover/Fill)	X				Filled-in animal burrow	X
Other:						
2. Drainage Structures:						
Standing Water	X					X
Toe Drain	X					X
Drainage Channels		X			Remove pines/weeds	
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: Stairs		X			Repair loose railing	
4. Site Access:						
Asphalt Access Road	X					X
Crushed-concrete Access Road	X					X
Fence				X		X
Gates/locks				X		X
Radiological Postings				X		X
Other: LUIC Signs	X					X

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: Have Facilities and Operations (F&O) cut landfill grass this spring since it has been dry, complete removal of grasses and small pine seedlings in the drainage channels, repair the railing for the stairs, and remove debris in drainage channel of Slit Trench. Filled-in two small animal burrows on west side of former landfill at time of inspection. There are no LUIC Factsheet Changes.

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-26-12

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

Time on Site:

Time off Site:

Weather Conditions:

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Drainage Channels

Observed Conditions: Grounds removed (cut) most vegetation. There is still a small amount remaining. They also mowed entire landfill.

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-30-12

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

Time on Site:

Time off Site:

Weather Conditions:

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: Edges of Landfill, Drainage Structures
Observed Conditions: Need Weed Whacking, Vegetation Killer Sprayed

Recommendations: Will put in Work order for Above work.

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-26-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: Vegetation Removed From Last Month.

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-31-12

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

Time on Site:

Time off Site:

Weather Conditions: Cloudy

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: All Areas - Some Vegetation Re-growth
Observed Conditions:

Recommendations: Continue To Monitor

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-15-12

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

Time on Site:

Time off Site:

Weather Conditions: Sunny

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: All Areas

Observed Conditions: Some Vegetation Growth

Recommendations: Remove/Spray in September or October

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-20-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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: All Areas

Observed Conditions: Light to Moderate vegetation Growth

Recommendations: Remove vegetation in Fall after Growth has Stopped.

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Former Landfill Area (includes the former and interim landfills and slit trench)
Date of Inspection: 10/18/12
Name of Inspector(s): R. Howe, J. Burke, M. Chue
Purpose of Inspection: ☒ Routine (Scheduled Frequency of 2x/yr) ☐ Heavy Rainfall ☐ Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X				Needs cutting in fall	
Soil (Cap/Cover/Fill)	X				Fill one animal burrow	
Other:						
2. Drainage Structures:						
Standing Water	X					X
Toe Drain	X					X
Drainage Channels	X				Remove pines west drain	
French Drains/Outfalls	X					X
Subsurface Drainage Pipes/Outfalls	X					X
Manholes				X		X
Berms				X		X
Roof Drains				X		X
Recharge Areas	X				Significant vegetation	X
Other:						
3. Monitoring System:						
Soil Gas Wells	X					X
Groundwater Wells	X					X
Gas Vents	X					X
Other: Stairs		X			Repair loose railing	
4. Site Access:						
Asphalt Access Road	X					X
Crushed-concrete Access Road	X					X
Fence				X		X
Gates/locks				X		X
Radiological Postings				X		X
Other: LUIC Signs	X					X

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: Have Facilities and Operations (F&O) cut landfill grass this fall since it has been dry, cut grass around road of Interim Landfill, complete removal of small pine seedlings/weeds in the western drainage channel, fill-in one animal burrow on west side of landfill, repair the railing for the stairs, and remove debris in drainage channel of Slit Trench. Hand pulled several small pine seedlings along western slope of Former and Interim Landfills, and Slit Trench at time of inspection. GARs trailers along Former Landfill is not in use at this time. There are no LUIC Factsheet Changes.

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-24-12

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

Time on Site:

Time off Site:

Weather Conditions:

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: All Areas

Observed Conditions: Light to Moderate Vegetation Growth

Recommendations: PUT work order in to CUT Grass and remove Vegetation

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-27-12

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: Everything OK.

Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 12-19-12
Purpose of Inspection: X Routine ___ Heavy Rainfall ___ Reported Incident
Time on Site: _____
Time off Site: _____
Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition			Further Action Required	
		Excellent	Fair	Poor	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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: Everything OK.
Observed Conditions: _____

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	Methane (% By Volume)			Hydrogen sulfide (ppm By Volume)		
Monitoring Well	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	25.1	30.1	28	19.7	4	0	0	4	SGMW-01B
SGMW-01C	24	29	25	17.7	1	2	1	2	SGMW-01C
SGMW-02A	67.6	65.3	70.4	51.1	92	3	4	8	SGMW-02A
SGMW-02B	64.1	66	68	54.8	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	56	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	45.5	7.8	47.2	15	0	0	1	SGMW-06B
SGMW-06C	46.3	46	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	5	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	25.4	9	0	0	0	SGMW-11B
SGMW-12A	53.7	57.2	50.4	33.9	37	2	1	3	SGMW-12A
SGMW-12B	60.3	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 measuremant 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	19.8	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	56.3	61.3	1228	1188	1228	0	<>	4	SGMW-03B
SGMW-03C	59.9	53.3	59.5	1198	1068	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	864	0	<>	4	SGMW-05B
SGMW-05C	38.7	35	38.3	794	702	768	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	928	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	28	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	426	314	400	1	<>	2	SGMW-10A
SGMW-10B	19.8	26.7	21.1	398	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	9	<>	3	SGMW-11A
SGMW-11B	19.2	25.6	14.6	384	512	294	10	<>	3	SGMW-11B
SGMW-12A	46.6	45.1	47.1	938	902	942	30	<>	8	SGMW-12A
SGMW-12B	44.2	46.5	47.6	884	930	954	6	<>	3	SGMW-12B
SGMW-13A	53.1	0.1	0	1062	2	0	12	<>	0	SGMW-13A
SGMW-13B	0.2	0.2	24.5	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

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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.

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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	19.3	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	49.5	54.0	50	54.4	990	(1080)	(1000)	(1088)	1	3	2	16	SGMW-02A
SGMW-02B	55.1	57.1	56.3	56.2	(1102)	(1142)	(1120)	(1124)	4	20	9	11	SGMW-02B
SGMW-02C	56.0	48.3	56.9	56.0	(1120)	986	(1120)	(1120)	2	0	4	5	SGMW-02C
SGMW-03A	49.3	62.8	54.0	57.6	986	(1256)	(1260)	(1152)	1	6	0	3	SGMW-03A
SGMW-03B	57.0	67.0	60.2	57.4	(1140)	(1340)	(1260)	(1148)	1	4	0	2	SGMW-03B
SGMW-03C	57.3	61.2	62.0	56.7	(1148)	(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	46.9	52.8	48.0	50.0	978	(1056)	922	(1000)	2	2	0	2	SGMW-04B
SGMW-04C	43.0	52.1	43.0	45.2	880	(1042)	858	906	4	0	1	8	SGMW-04C
SGMW-05A	47.7	49.4	47.5	47.2	954	988	950	944	1	0	8	8	SGMW-05A
SGMW-05B	44.8	50.0	48.2	43.0	892	(1000)	964	878	1	0	5	8	SGMW-05B
SGMW-05C	36.7	43.7	40.7	38.7	734	874	814	738	2	1	0	5	SGMW-05C
SGMW-06A	33.0	41.7	16.0	44.0	660	834	320	888	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	8	SGMW-06C
SGMW-07A	0.3	5.9	0.9	0.0	6	116	16	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	19.6	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	(1680)	272	2	20	10	7	SGMW-11A
SGMW-11B	6.8	26.4	54.3	9.2	136	528	(1086)	184	2	21	2	6	SGMW-11B
SGMW-12A	43.9	50.0	64.4	46.5	878	(1200)	(1288)	930	2	63	2	7	SGMW-12A
SGMW-12B	42.8	49.8	48.1	47.0	852	996	962	940	1	0	0	5	SGMW-12B
SGMW-13A	23.4	57.6	63.8	49.8	468	(1152)	(1278)	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	16.8	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	8	0	0	0	0	4	SGMW-18B
SGMW-19A	12.9	38.9	34.9	14.2	258	778	698	284	4	2	16	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	366	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	400	306	0	0	0
SGMW-02A	59.9	52.9	57.9	1208	1050	>1,000	140	67	49
SGMW-02B	58.9	0.0	55.3	1180	0	>1,000	191	1	0
SGMW-02C	0.0	0.0	53.2	0	0	>1,000	1	0	0
SGMW-03A	39.6	51.6	62.9	780	1168	>1,000	6	14	43
SGMW-03B	67.2	66.5	64.7	1344	1330	>1,000	26	21	0
SGMW-03C	0.2	0.0	63.5	4	0	>1,000	1	2	0
SGMW-04A	42.6	3.8	62.0	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	57.5	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	45.3	0	2	906	2	3	0
SGMW-06A	10.4	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	0.9	9.1	52.8	0	2	>1,000	2	3	0
SGMW-07A	0.8	5.1	0.2	12	102	4	4	0	0
SGMW-07B	0	0.3	0.2	0	0	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	10.8	16.9	29.5	216	338	590	4	2	0
SGMW-10B	11.2	18.9	25.5	224	378	512	2	3	0
SGMW-10C	6.0	13.2	18.9	180	264	378	2	2	0
SGMW-11A	6.9	21.5	28.3	178	430	566	16	43	2
SGMW-11B	6.1	19.3	26.9	122	386	540	0	27	36
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	6.9	.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	6	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	36.2	28.0	238	784	672	3	200	0
SGMW-19B	20.3	36.6	28.1	406	736	624	6	53	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	9.6	18.0	276	282	192	354	0	7	10	3	SGMW-01A
SGMW-01B	13.7	11.5	0.2	16.0	274	230	184	334	0	1	2	14	SGMW-01B
SGMW-01C	10.8	8.8	6.5	11.6	216	172	110	234	0	1	1	4	SGMW-01C
SGMW-02A	40.0	49.0	46.2	56.5	920	992	964	(1130)	54	132	141	0	SGMW-02A
SGMW-02B	17.1	26.5	34.0	43.2	342	570	002	864	0	2	6	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	53.8	54.1	41.4	730	(1072)	(1082)	826	6	146	0	16	SGMW-03A
SGMW-03B	57.0	62.4	59.6	65.9	(1140)	(1248)	(1192)	(1318)	13	16	34	12	SGMW-03B
SGMW-03C	54.1	58.6	58.9	60.0	(1082)	(1172)	(1178)	(1200)	0	6	26	0	SGMW-03C
SGMW-04A	40.8	48.9	50.8	48.1	816	938	(1016)	960	0	1	20	3	SGMW-04A
SGMW-04B	44.9	49.0	51.3	10.2	898	460	(1026)	982	2	11	75	37	SGMW-04B
SGMW-04C	36.5	43.5	44.4	42.5	730	870	888	844	25	36	32	36	SGMW-04C
SGMW-05A	39.1	38.8	38.8	42.6	782	772	778	850	6	44	2	34	SGMW-05A
SGMW-05B	37.4	30.4	42.0	41.2	738	788	840	838	1	13	63	20	SGMW-05B
SGMW-05C	20.0	31.0	31.6	34.2	579	620	632	684	8	10	13	12	SGMW-05C
SGMW-06A	30.7	33.8	40.0	41.8	618	672	800	832	2	3	37	2	SGMW-06A
SGMW-06B	36.1	35.0	40.6	43.1	712	716	812	864	11	22	82	22	SGMW-06B
SGMW-06C	36.3	35.2	38.1	42.0	722	704	762	846	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	10.0	15.0	25.5	16.8	212	300	510	336	4	13	1	0	SGMW-10A
SGMW-10B	10.7	14.2	20.0	14.8	214	284	400	292	0	0	6	2	SGMW-10B
SGMW-10C	8.0	12.2	17.1	12.2	160	244	342	246	0	3	1	0	SGMW-10C
SGMW-11A	9.2	14.9	20.7	17.0	184	298	334	338	9	66	125	20	SGMW-11A
SGMW-11B	8.1	14.5	24.7	10.4	122	290	494	208	1	48	162	16	SGMW-11B
SGMW-12A	37.6	43.0	50.4	40.0	752	860	1008	976	16	0	0	34	SGMW-12A
SGMW-12B	35.0	30.0	46.0	46.0	718	780	920	894	4	13	32	16	SGMW-12B
SGMW-13A	35.6	43.5	47.3	47.9	710	870	946	958	63	156	76	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	10.5	20	98	56	212	2	2	0	7	SGMW-14A
SGMW-14B	5.6	11.0	10.4	14.6	112	220	208	296	1	3	0	1	SGMW-14B
SGMW-15A	0.1	0	4.0	0.3	2	0	80	168	0	3	4	4	SGMW-15A
SGMW-15B	0.1	0	44.6	19.1	2	0	890	378	0	4	9	36	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	5.6	15.9	28.5	0.0	116	316	570	0	2	121	18	132	SGMW-19A
SGMW-19B	8.5	19.6	31.2	0.0	100	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	436	2	-	0	-	SGMW-01A
SGMW-01B	18.6	16.2	18.7	19.8	372	324	394	396	3	-	01	-	SGMW-01B
SGMW-01C	18.0	13.9	20.0	17.3	380	262	400	348	3	-	80	-	SGMW-01C
SGMW-02A	58.2	41.2	5.0	22.2	(1164)	324	100	442	14	-	66	-	SGMW-02A
SGMW-02B	55.7	0.0	0.1	0.0	(1140)	0	2	0	32	-	13	-	SGMW-02B
SGMW-02C	60.1	0.0	0	42.7	536	0	0	856	8	-	0	-	SGMW-02C
SGMW-03A	20.8	57.8	55.0	0.0	(1182)	(1156)	(1100)	0	19	-	0	-	SGMW-03A
SGMW-03B	60.1	0.0	54.2	11.7	(1078)	0	(1084)	234	23	-	05	-	SGMW-03B
SGMW-03C	63.9	0.0	0.2	41.0	(1052)	0	4	620	3	-	0	-	SGMW-03C
SGMW-04A	54.1	0.0	0.5	9.4	966	0	10	186	3	-	109	-	SGMW-04A
SGMW-04B	53.0	0.0	0.2	47.0	030	0	4	940	7	-	27	-	SGMW-04B
SGMW-04C	52.6	0.0	0.1	41.5	052	0	2	832	15	-	0	-	SGMW-04C
SGMW-05A	46.3	48.0	54.0	23.4	066	960	(1008)	468	2	-	163	-	SGMW-05A
SGMW-05B	46.0	43.6	53.8	38.6	038	676	(1076)	776	3	-	0	-	SGMW-05B
SGMW-05C	43.1	0.0	41.8	32.3	862	0	836	648	3	-	0	-	SGMW-05C
SGMW-06A	40.3	5.0	15.5		806	116	310	420	1	-	0	-	SGMW-06A
SGMW-06B	42.9	0.0	0.0	20.7	666	0	0	886	3	-	0	-	SGMW-06B
SGMW-06C	43.0	0.0	0.1	44.6	672	0	2	000	2	-	0	-	SGMW-06C
SGMW-07A	0.0	0.0	0.0	45.1	16	0	0	0	1	-	0	-	SGMW-07A
SGMW-07B	0.0	0.0	0.1	0.0	10	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	10.0	22.0	27.9	5.6	360	440	558	112	1	-	0	-	SGMW-10A
SGMW-10B	15.0	17.7	22.0	0.0	316	354	440	0	1	-	0	-	SGMW-10B
SGMW-10C	14.0	16.6	10.2	0.0	280	332	364	0	2	-	0	-	SGMW-10C
SGMW-11A	15.6	28.3	0.4	17.7	312	566	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	50.0	0.3	0.5	1.8	(1018)	6	10	36	1	-	0	-	SGMW-12B
SGMW-13A	30.5	0.0	67.2	66.4	010	0	(1344)	1328	1	-	163	-	SGMW-13A
SGMW-13B	0.0	0.6	0.1	0.0	0	16	2	0	1	-	0	-	SGMW-13A
SGMW-14A	29.4	9.6	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	41.0	28.1	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	30	-	181	-	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 600.

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	6.6	6.8	332	288	136	136	150	2	3	1	SGMW-01A
SGMW-01B	15.6	8.6	8.0	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	0.0	12.7	0.0	454	12	254	0	177	0	0	0	SGMW-02B
SGMW-02C	44.4	0.0	2	4.0	888	0	4	92	0	0	0	0	SGMW-02C
SGMW-03A	25.4	15.2	4.1	0.0	506	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	1.0	748	982	70	36	0	0	0	0	SGMW-04A
SGMW-04B	43.0	50.7	23.2	14.4	860	(1014)	464	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	36.6	41.4	25.2	13.6	730	828	504	272	0	0	0	0	SGMW-05B
SGMW-05C	29.0	24.0	18.6	13.6	580	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	108	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	5.0	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	8.0	25.7	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	0	1	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	6.6	5.4	5	6.7	176	108	100	134	1	3	2	2	SGMW-01A
SGMW-01B	3.0	2.9	3	3.0	60	58	60	76	0	0	0	0	SGMW-01B
SGMW-01C	7.5	5.6	6.5	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	24.7	0.0	6	2	494	0	1	0	0	0	SGMW-02C
SGMW-03A	0.7	36.0	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	0.3	4	214	924	106	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	202	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	22.0	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	0.6	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	0.0	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	70	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	5.0	6.3	29.2	15.7	112	126	584	314	0	1	20	2	SGMW-19A
SGMW-19B	0.0	0.0	31.8	0.1	0	0	630	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.

2006 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 2/24/06	Methane (% By Volume) 6/23/06	Methane (% By Volume) 9/28/06	Methane (% By Volume) 12/27/06	LEL (% By Volume) 2/24/06	LEL (% By Volume) 6/23/06	LEL (% By Volume) 9/28/06	LEL (% By Volume) 12/27/06	Hydrogen Sulfide (ppm by volume) 2/24/06	Hydrogen Sulfide (ppm by volume) 6/23/06	Hydrogen Sulfide (ppm by volume) 9/28/06	Hydrogen Sulfide (ppm by volume) 12/27/06	Soil Gas Monitoring Well
SGMW-01A	8.6	11.9	12.5	11.3	174.0	238	250	226	0	0	6	0	SGMW-01A
SGMW-01B	0.0	0.0	11.0	3.1	0	0	220	62	0	0	1	0	SGMW-01B
SGMW-01C	0.0	0.0	10.5	0.2	0	0	210	4	0	0	5	0	SGMW-01C
SGMW-02A	13.9	16.1	46.9	1.4	282.0	302	938	28	0	0	5	0	SGMW-02A
SGMW-02B	6.8	12.8	33.4	0.2	142.0	256	668	4	0	0	27	0	SGMW-02B
SGMW-02C	0.0	0.6	30.5	0.3	0	16	610	6	0	0	0	0	SGMW-02C
SGMW-03A	19.3	26.6	27.0	0.2	386.0	536	540	4	0	0	8	0	SGMW-03A
SGMW-03B	0.0	11.9	48.5	0.1	0	238	970	2	0	0	12	0	SGMW-03B
SGMW-03C	0.0	1.5	45.0	0.3	0	30	900	6	0	0	7	0	SGMW-03C
SGMW-04A	0.0	16.4	52.1	0.2	0	328	1040	4	0	0	1	0	SGMW-04A
SGMW-04B	10.0	31.6	46.0	0.0	200.0	632	076	0	0	0	2	0	SGMW-04B
SGMW-04C	0.0	22.2	42.1	0.0	0	444	842	0	0	0	0	0	SGMW-04C
SGMW-05A	0.9	16.3	44.0	0.0	20.0	326	696	0	0	0	0	0	SGMW-05A
SGMW-05B	1.4	26.3	41.3	0.0	69.0	526	626	0	0	0	3	3	SGMW-05B
SGMW-05C	0.0	20.7	33.6	0.0	0	414	676	0	0	0	1	0	SGMW-05C
SGMW-06A	0.0	11.5	41.5	0.0	0	230	630	0	0	0	1	0	SGMW-06A
SGMW-06B	0.0	21.3	40.3	0.0	0	426	606	0	0	0	2	0	SGMW-06B
SGMW-06C	0.0	21.7	37.3	0.0	0	434	746	0	0	0	0	0	SGMW-06C
SGMW-07A	0.0	0.0	0.3	0.0	0	0	6	0	0	0	0	0	SGMW-07A
SGMW-07B	0.0	0.0	0.3	0.0	0	0	6	0	0	0	0	0	SGMW-07B
SGMW-07C	0.0	0.0	0.3	0.0	0	0	6	0	0	0	0	0	SGMW-07C
SGMW-08A	0.0	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	2	0	SGMW-08B
SGMW-08C	0.0	0.0	0.0	0.0	0	0	0	0	0	0	2	0	SGMW-08C
SGMW-09A	0.0	0.1	0.0	0.0	0	2	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-09C	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-09C
SGMW-10A	0.0	0.6	15.4	0.0	0	156	300	0	0	0	0	0	SGMW-10A
SGMW-10B	0.0	12.0	18.0	0.0	0	240	360	0	0	0	2	0	SGMW-10B
SGMW-10C	0.0	10.6	10.2	0.0	0	212	324	0	0	0	2	0	SGMW-10C
SGMW-11A	0.0	7.6	15.3	0.0	0	152	306	0	0	0	2	0	SGMW-11A
SGMW-11B	0.0	6.8	14.9	0.0	0	136	290	0	0	0	25	0	SGMW-11B
SGMW-12A	0.0	16.7	41.3	0.0	0	336	026	0	0	0	10	0	SGMW-12A
SGMW-12B	1.1	2.0	0.0	0.0	22	40	0	0	0	0	0	0	SGMW-12B
SGMW-13A	0.0	0.0	0.2	0.0	0	0	4	0	0	0	0	0	SGMW-13A
SGMW-13B	0.0	0.0	0.2	0.0	0	0	4	0	0	0	0	0	SGMW-13A
SGMW-14A	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-14A
SGMW-14B	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-14B
SGMW-15A	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-15A
SGMW-15B	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	SGMW-15B
SGMW-16A	0.0	0.0	0.0	0.0	0	0	0	0	0	0	1	0	SGMW-16A
SGMW-16B	0.0	0.0	0.0	0.0	0	0	0	0	0	0	1	0	SGMW-16B
SGMW-17A	0.0	0.0	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	0	0	0	SGMW-17B
SGMW-18A	0.0	0.0	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	0	0	SGMW-18B
SGMW-19A	10.7	17.3	16.6	23.9	340	348	332	470	0	0	2	5	SGMW-19A
SGMW-19B	1.7	9.4	18.0	0.0	32	188	360	0	0	0	1	0	SGMW-19B
GSGM-1A	0.0	0.0	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	0	0	0	GSGM-1B
GSGM-1C	0.0	0.0	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	0	0	0	GSGM-2A
GSGM-2B	0.0	0.0	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	0	0	0	GSGM-2C
GSGM-3A	0.0	0.0	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	0	0	0	GSGM-3B
GSGM-4A	0.0	0.0	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	0	0	0	GSGM-4B

Measurements in ( ) are calculated, not measured.

2007 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 2/24/07	Methane (% By Volume) 5/17/07	Methane (% By Volume) 9/20/07	Methane (% By Volume) 12/20/07	LEL (% By Volume) 2/24/07	LEL (% By Volume) 5/17/07	LEL (% By Volume) 9/20/07	LEL (% By Volume) 12/20/07	Hydrogen Sulfide (ppm by volume) 2/24/07	Hydrogen Sulfide (ppm by volume) 5/17/07	Hydrogen Sulfide (ppm by volume) 9/20/07	Hydrogen Sulfide (ppm by volume) 12/20/07	Soil Gas Monitoring Well
SGMW-01A	10.0	12.2	5.7	3.1	200.0	244	116.0	62	0.0	1.0	0.0	3.0	SGMW-01A
SGMW-01B	6.4	4.5	6.0	1.6	126	90	118.0	32	0.0	1.0	1.0	0.0	SGMW-01B
SGMW-01C	5.9	0.3	5.5	2.0	116	6	110.0	40	0.0	0.0	1.0	0.0	SGMW-01C
SGMW-02A	0.2	0.4	37.5	17.4	4.0	0	750.0	340	0.0	1.0	1.0	0.0	SGMW-02A
SGMW-02B	0.0	17.6	30.8	10.5	0.0	352	616.0	210	0.0	1.0	1.0	0.0	SGMW-02B
SGMW-02C	0.0	0.4	27.0	1.1	0.0	0	540.0	22	0.0	1.0	1.0	0.0	SGMW-02C
SGMW-03A	0.0	25.1	22.4	0.0	0.0	502	448.0	0.0	0.0	1.0	0.0	0.0	SGMW-03A
SGMW-03B	0.9	0.7	40.0	0.0	18	14	800.0	0.0	0.0	2.0	0.0	0.0	SGMW-03B
SGMW-03C	0.2	0.6	39.7	0.0	4	12	794.0	0.0	0.0	2.0	0.0	0.0	SGMW-03C
SGMW-04A	6.4	0.7	43.7	1.0	188	14	874.0	20	0.0	0.0	3.0	0.0	SGMW-04A
SGMW-04B	17.0	0.7	36.5	3.0	340.0	14	760.0	60	0.0	0.0	1.0	0.0	SGMW-04B
SGMW-04C	12.0	0.7	31.5	0.0	240	14	630.0	0.0	0.0	0.0	1.0	0.0	SGMW-04C
SGMW-05A	10.5	0.6	32.6	0.0	210.0	12	652	0.0	0.0	1.0	0.0	0.0	SGMW-05A
SGMW-05B	17.0	0.7	29.4	1.2	340.0	13	588.0	24	0.0	2.0	1.0	0.0	SGMW-05B
SGMW-05C	13.5	0.7	22.4	0.0	270	13	444.0	0.0	0.0	2.0	1.0	0.0	SGMW-05C
SGMW-06A	11.5	0.8	30.7	0.0	230	18	614	0.0	0.0	1.0	1.0	0.0	SGMW-06A
SGMW-06B	14.3	0.6	29.9	0.0	286	12	598	0.0	0.0	1.0	1.0	0.0	SGMW-06B
SGMW-06C	12.9	0.0	26.4	0.0	258	0.0	528	0.0	0.0	0.0	1.0	0.0	SGMW-06C
SGMW-07A	0.0	0.0	0.1	0.1	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	SGMW-07A
SGMW-07B	0.0	0.0	0.1	0.1	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-07C
SGMW-08A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-08A
SGMW-08B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-08B
SGMW-08C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-08C
SGMW-09A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-09A
SGMW-09B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-09B
SGMW-09C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-09C
SGMW-10A	0.4	0.0	0.7	0.0	8	0.0	174	0.0	0.0	0.0	2.0	0.0	SGMW-10A
SGMW-10B	0.0	0.0	10.5	0.0	0.0	0.0	210	0.0	0.0	0.0	1.0	0.0	SGMW-10B
SGMW-10C	0.0	0.0	0.0	0.0	0.0	0.0	180	0.0	0.0	0.0	5.0	0.0	SGMW-10C
SGMW-11A	0.0	0.0	8.5	0.0	0.0	0.0	170	0.0	0.0	0.0	2.0	0.0	SGMW-11A
SGMW-11B	0.0	0.0	8.7	0.0	0.0	0.0	174	0.0	0.0	0.0	22.0	0.0	SGMW-11B
SGMW-12A	0.0	0.0	8.1	27.5	0.0	0.0	162	550	0.0	0.0	2.0	39.0	SGMW-12A
SGMW-12B	0.0	0.0	0.1	27.5	0.0	0.0	172	550	0.0	0.0	2.0	0.0	SGMW-12B
SGMW-13A	0.0	0.3	6.0	0.0	0.0	0.0	120	0.0	0.0	0.0	1.0	0.0	SGMW-13A
SGMW-13B	0.0	0.0	4.0	0.0	0.0	0.0	80	0.0	0.0	0.0	1.0	0.0	SGMW-13A
SGMW-14A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-14A
SGMW-14B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-14B
SGMW-15A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-15A
SGMW-15B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-15B
SGMW-16A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-16A
SGMW-16B	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	SGMW-18B
SGMW-19A	2.5	4.0	27.0	0.0	50	60	540	0.0	0.0	1.0	29.0	0.0	SGMW-19A
SGMW-19B	0.0	0.0	19.2	0.0	0.0	0.0	384	0.0	0.0	0.0	17.0	0.0	SGMW-19B
GSGM-1A	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0	0.0	0.0	G5GM-1C
GSGM-2A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	G5GM-2A
GSGM-2B	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	G5GM-3B
GSGM-4A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	G5GM-4A
GSGM-4B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	GSGM-4B

Measurements in ( ) are calculated, not measured.

2008 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/24/2008	Methane (% By Volume) 7/29/2008	Methane (% By Volume) 9/30/2008	Methane (% By Volume) 12/9/2008	LEL (% By Volume) 3/24/2008	LEL (% By Volume) 7/29/2008	LEL (% By Volume) 9/30/2008	LEL (% By Volume) 12/9/2008	Hydrogen Sulfide (ppm by volume) 3/24/2008	Hydrogen Sulfide (ppm by volume) 7/29/2008	Hydrogen Sulfide (ppm by volume) 9/30/2008	Hydrogen Sulfide (ppm by volume) 12/9/2008	Soil Gas Monitoring Well
SGMW-01A	10.8	3	6.8	11.2	220	96	176	224	3	2	2	0	SGMW-01A
SGMW-01B	9.9	2.9	6.5	11.7	198	58	130	234	0	0.0	0.0	4.0	SGMW-01B
SGMW-01C	9.4	5.7	6.2	9.8	190	112	124	196	0	0	0	4	SGMW-01C
SGMW-02A	34.2	39.1	42.5	37.3	680	788	850	746	11	16	0	0	SGMW-02A
SGMW-02B	3.1	47.2	45	44.3	62	944	900	886	1	12	20	19	SGMW-02B
SGMW-02C	3.2	49.9	52.5	53.3	64	998	1050	1066	1	1	1	3	SGMW-02C
SGMW-03A	13.2	49.1	44	30	264	960	880	600	1	11	6	1	SGMW-03A
SGMW-03B	55.5	53.6	57.8	60.6	1110	1072	1156	142	15	23	36	14	SGMW-03B
SGMW-03C	48.5	51.6	55.9	57.3	970	1032	1110	1146	1	13	26	63	SGMW-03C
SGMW-04A	14.5	43.8	50.6	44.5	290	882	1012	890	1	5	8	0	SGMW-04A
SGMW-04B	40.6	43.4	50.2	44.1	812	870	1004	882	5	16	20	6	SGMW-04B
SGMW-04C	32.7	40.1	45.8	36.1	654	756	916	722	2	0	1	3	SGMW-04C
SGMW-05A	30	36.5	43.7	38.8	600	728	874	776	4	12	5	4	SGMW-05A
SGMW-05B	30.7	35.8	39.7	36.1	614	708	794	722	3	2	6	3	SGMW-05B
SGMW-05C	24	24.6	31.8	28.3	480	502	636	566	3	0	3	2	SGMW-05C
SGMW-06A	18.9	25.3	39.9	40.4	378	510	798	808	0	0	7	0	SGMW-06A
SGMW-06B	30.9	36.4	39.9	40.2	618	724	798	804	1	2	5	7	SGMW-06B
SGMW-06C	28	33.7	37.7	37.3	560	670	754	746	3	0	1	3	SGMW-06C
SGMW-07A	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-07B
SGMW-07C	0	0.3	0	0	0	6	0	0	0	0	0	0	SGMW-07C
SGMW-08A	0	0.3	0	0	0	6	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0.3	0	0	0	6	0	0	0	0	0	0	SGMW-08B
SGMW-08C	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-08C
SGMW-09A	0	0.3	0	0	0	6	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0.4	0	0	0	8	0	0	0	0	0	0	SGMW-09B
SGMW-09C	0	0.3	0	0	0	6	0	0	0	0	0	0	SGMW-09C
SGMW-10A	0	12.2	22.5	8.4	0	244	450	168	0	9	19	1	SGMW-10A
SGMW-10B	0	9.9	19.1	10.3	0	200	382	206	0	0	9	2	SGMW-10B
SGMW-10C	0	9.4	15.7	8.3	0	92	314	166	0	0	13	7	SGMW-10C
SGMW-11A	4	14.9	23	11.9	80	300	450	238	5	23	2	4	SGMW-11A
SGMW-11B	2.3	13.7	21.6	6.9	46	274	430	138	0	3	20	0	SGMW-11B
SGMW-12A	32.1	43.4	52.5	47.1	642	868	1050	942	39	65	92	3	SGMW-12A
SGMW-12B	30.6	32.9	43.7	41.3	612	658	874	826	0	1	10	2	SGMW-12B
SGMW-13A	0	0.5	0.6	0.2	0	10	13	4	0	2	0	0	SGMW-13A
SGMW-13B	0	31.9	42.8	36.7	0	648	856	734	0	2	29	4	SGMW-13A
SGMW-14A	0	0.7	2.1	0.5	0	14	42	10	0	0	0	0	SGMW-14A
SGMW-14B	0	0.3	3	0.5	0	6	61	11	0	0	0	0	SGMW-14B
SGMW-15A	0	0.2	2.2	0	0	4	45	0	0	0	0	0	SGMW-15A
SGMW-15B	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-15B
SGMW-16A	0	0.2	0	0	0	4	0	0	1	0	0	0	SGMW-16A
SGMW-16B	0	0.5	0	0	0	10	0	0	0	0	0	0	1
SGMW-17A	0	0	0	0	0	0	0	0	1	0	0	0	SGMW-17A
SGMW-17B	0	0.4	0	0	0	8	0	0	0	0	0	0	SGMW-17B
SGMW-18A	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-18A
SGMW-18B	0	0.2	0	0	0	4	0	0	0	0	0	0	SGMW-18B
SGMW-19A	14.5	7.5	32.4	0	290	154	648	312	11	3	30	1	SGMW-19A
SGMW-19B	11.5	8.2	28	0	230	164	560	0	8	2	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	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	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.

2009 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/18/2009	Methane (% By Volume) 7/28/2009	Methane (% By Volume) 11/5/2009	Methane (% By Volume) 12/15/2009	LEL (% By Volume) 3/18/2009	LEL (% By Volume) 7/28/2009	LEL (% By Volume) 11/5/2009	LEL (% By Volume) 12/15/2009	Hydrogen Sulfide (ppm by volume) 3/18/2009	Hydrogen Sulfide (ppm by volume) 7/28/2009	Hydrogen Sulfide (ppm by volume) 11/5/2009	Hydrogen Sulfide (ppm by volume) 12/15/2009	Soil Gas Monitoring Well
SGMW-01A	12.6	16.7	15	19.4	>100	>100	>100	>100	0	0	1	3	SGMW-01A
SGMW-01B	12.3	15.4	14.3	19.2	>100	>100	>100	>100	0	0.0	4.0	3.0	SGMW-01B
SGMW-01C	10	13.2	12.3	17.2	>100	>100	>100	>100	0	0	3	1	SGMW-01C
SGMW-02A	50	48.4	50.1	50.9	>100	>100	>100	>100	0	0	0	0	SGMW-02A
SGMW-02B	48.6	55.2	40.2	10.6	>100	>100	>100	>100	8	16	0	0	SGMW-02B
SGMW-02C	50.6	57.8	56.5	59.3	>100	>100	>100	>100	1	7	0	0	SGMW-02C
SGMW-03A	28.9	31.8	270	14.3	>100	>100	>100	>100	0	0	6	0	SGMW-03A
SGMW-03B	55.9	67.5	65.9	72.2	>100	>100	>100	>100	12	25	21	20	SGMW-03B
SGMW-03C	54.7	65.6	59.5	0.2	>100	>100	>100	3	26	32	67	0	SGMW-03C
SGMW-04A	42.1	48.5	44.4	44.9	>100	>100	>100	>100	1	0	2	0	SGMW-04A
SGMW-04B	39.9	53.3	49.1	52.7	>100	>100	>100	>100	4	7	4	7	SGMW-04B
SGMW-04C	31.9	51.9	30.9	48.3	>100	>100	>100	>100	5	3	1	2	SGMW-04C
SGMW-05A	38.1	46.2	43.1	45.2	>100	>100	>100	>100	3	0	4	1	SGMW-05A
SGMW-05B	33.8	43.3	30.8	44.5	>100	>100	>100	>100	3	4	5	7	SGMW-05B
SGMW-05C	26.8	37.1	30.7	0	>100	>100	>100	0	3	3	3	0	SGMW-05C
SGMW-06A	39	42.3	42.6	9.8	>100	>100	>100	>100	0	0	0	0	SGMW-06A
SGMW-06B	39.2	43	42.7	0	>100	>100	>100	0	3	4	6	0	SGMW-06B
SGMW-06C	37.7	42.2	40.6	0	>100	>100	>100	0	3	3	4	0	SGMW-06C
SGMW-07A	0	0.5	0	0	0	10	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-07C	0	0.9	0	0	0	18	0	0	0	0	0	0	SGMW-07C
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-08C	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	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-09C	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-09C
SGMW-10A	1.5	22.7	13.2	0.5	31	>100	>100	10	0	14	5	0	SGMW-10A
SGMW-10B	4.6	19.6	16.1	0.1	93	>100	>100	2	3	3	2	0	SGMW-10B
SGMW-10C	4	17.4	11.2	0.2	80	>100	>100	1	3	4	0	0	SGMW-10C
SGMW-11A	4.5	22.1	17.6	14.7	90	>100	>100	>100	0	20	10	2	SGMW-11A
SGMW-11B	4	21.6	13.3	10.9	80	>100	>100	>100	0	9	1	1	SGMW-11B
SGMW-12A	45.5	51.8	48.7	52.4	>100	>100	>100	>100	24	72	21	15	SGMW-12A
SGMW-12B	39.6	49	51.7	47.3	>100	>100	>100	>100	0	16	0	3	SGMW-12B
SGMW-13A	0	0.5	1	0.1	0	10	21	2	0	3	0	0	SGMW-13A
SGMW-13B	0	42.6	0	0.1	0	>100	1	2	0	4	0	0	SGMW-13A
SGMW-14A	2.8	14	6.2	1.1	57	>100	>100	22	0	3	0	0	SGMW-14A
SGMW-14B	0	0	0	0	0	0	1	0	0	0	0	0	SGMW-14B
SGMW-15A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-15A
SGMW-15B	0	0	0	0.1	0	0	0	2	0	0	0	0	SGMW-15B
SGMW-16A	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-16A
SGMW-16B	0	0	0	0.1	0	0	0	2	0	0	0	0	SGMW-16B
SGMW-17A	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	SGMW-17B
SGMW-18A	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	SGMW-18B
SGMW-19A	14.4	44.9	25.9	33.6	>100	>100	>100	>100	0	31	7	15	SGMW-19A
SGMW-19B	5.9	46.3	26.9	30.6	>100	>100	>100	>100	2	1	12	4	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	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	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	0	GSGM-4B

2010 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/18/10	Methane (% By Volume) 6/9/10	Methane (% By Volume) 9/8/10	Methane (% By Volume) 12/9/10	LEL (% By Volume) 3/18/10	LEL (% By Volume) 6/9/10	LEL (% By Volume) 9/8/10	LEL (% By Volume) 12/9/10	Hydrogen Sulfide (ppm by volume) 3/18/10	Hydrogen Sulfide (ppm by volume) 6/9/10	Hydrogen Sulfide (ppm by volume) 9/8/10	Hydrogen Sulfide (ppm by volume) 12/9/10	Soil Gas Monitoring Well
SGMW-01A	24.1	24.0	14.1	12	>100	>100	>100	>100	0	0	1	1	SGMW-01A
SGMW-01B	24.0	0.0	11.9	10.6	>100	0	>100	>100	3	0.0	1.0	1.0	SGMW-01B
SGMW-01C	23.1	0.0	10.6	8.6	>100	0	>100	>100	5	0	10	0	SGMW-01C
SGMW-02A	55.9	48.2	47.8	41.7	>100	>100	>100	>100	0	0	32	0	SGMW-02A
SGMW-02B	24.9	55.2	55.5	42.5	>100	>100	>100	>100	3	4	20	6	SGMW-02B
SGMW-02C	56.5	0.0	56.9	45.7	>100	0	>100	>100	2	0	1	1	SGMW-02C
SGMW-03A	27.2	47.9	46.5	28.9	>100	>100	>100	>100	1	6	18	0	SGMW-03A
SGMW-03B	63.8	50.4	58.4	55.4	>100	>100	>100	>100	24	0	36	15	SGMW-03B
SGMW-03C	59.5	0.0	58.3	48.3	>100	0	>100	>100	1	0	29	0	SGMW-03C
SGMW-04A	30.9	24.7	48.2	17	>100	>100	>100	>100	0	0	11	0	SGMW-04A
SGMW-04B	49.7	29.4	49.2	35.4	>100	>100	>100	>100	5	0	10	4	SGMW-04B
SGMW-04C	46.6	0.0	45.6	22.2	>100	0	>100	>100	5	0	7	0	SGMW-04C
SGMW-05A	42.9	31.3	40.4	16.1	>100	>100	>100	>100	3	2	11	2	SGMW-05A
SGMW-05B	42.3	39.3	36.9	24.1	>100	>100	>100	>100	5	3	10	2	SGMW-05B
SGMW-05C	37.3	33.2	30.8	20.5	>100	>100	>100	>100	4	4	7	0	SGMW-05C
SGMW-06A	45.3	2.9	42.7	20.8	>100	59	>100	>100	0	0	1	0	SGMW-06A
SGMW-06B	45.0	45.1	41.5	37.4	>100	>100	>100	>100	3	5	10	4	SGMW-06B
SGMW-06C	45.1	0.1	40.8	35.5	>100	3	>100	>100	3	0	9	1	SGMW-06C
SGMW-07A	0.0	0.2	0.0	0	0	4	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	SGMW-07B
SGMW-07C	0.1	0.6	0.0	0	2	12	0	0	0	0	0	0	SGMW-07C
SGMW-08A	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-06A
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	0.0	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	0	0	SGMW-09B
SGMW-09C	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-09C
SGMW-10A	11.1	16.2	18.8	0	>100	>100	>100	0	1	5	17	0	SGMW-10A
SGMW-10B	10.5	14.2	16.2	9	>100	>100	>100	19	3	3	6	0	SGMW-10B
SGMW-10C	9.4	0.0	14.2	2.1	>100	0	>100	41	0	0	11	3	SGMW-10C
SGMW-11A	11.8	16.0	16.8	4.2	>100	>100	>100	8.4	2	10	17	5	SGMW-11A
SGMW-11B	10.1	0.0	18.8	0.7	>100	0	>100	14	0	0	35	5	SGMW-11B
SGMW-12A	51.5	51.9	37.8	28.6	>100	>100	>100	>100	23	67	102	4	SGMW-12A
SGMW-12B	6.0	0.0	1.7	21.3	12	0	33	>100	0	0	1	0	SGMW-12B
SGMW-13A	0.0	0.0	0.8	0.1	0	0	12	2	0	0	0	0	SGMW-13A
SGMW-13B	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-13A
SGMW-14A	2.9	0.0	0.0	0	58	0	0	0	0	0	0	0	SGMW-14A
SGMW-14B	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-14B
SGMW-15A	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-15A
SGMW-15B	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-15B
SGMW-16A	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-16A
SGMW-16B	0.0	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	0	0	SGMW-17A
SGMW-17B	0.0	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	0	0	SGMW-18A
SGMW-18B	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	SGMW-18B
SGMW-19A	41.9	28.9	10.1	9.4	>100	>100	>100	>100	13	21	10	0	SGMW-19A
SGMW-19B	5.5	0.0	14.0	17.9	>100	0	>100	>100	0	0	0	0	SGMW-19B
GSGM-1A	0.0	0.0	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	0	0	0	GSGM-1B
GSGM-1C	0.0	0.0	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	0	0	0	GSGM-2A
GSGM-2B	0.0	0.0	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	0	0	0	GSGM-2C
GSGM-3A	0.0	0.0	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	0	0	0	GSGM-3B
GSGM-4A	0.0	0.0	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	0	0	0	GSGM-4B

2011 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/3/11	Methane (% By Volume) 6/7/11	Methane (% By Volume) 9/27/11	Methane (% By Volume) 12/15/11	LEL (% By Volume) 3/3/11	LEL (% By Volume) 6/7/11	LEL (% By Volume) 9/27/11	LEL (% By Volume) 12/15/11	Hydrogen Sulfide (ppm by volume) 3/3/11	Hydrogen Sulfide (ppm by volume) 6/7/11	Hydrogen Sulfide (ppm by volume) 9/27/11	Hydrogen Sulfide (ppm by volume) 12/15/11	Soil Gas Monitoring Well
SGMW-01A	12.2	10.6	10.1	15.2	>100	>100	>100	>100	3.0	0.0	0.0	4	SGMW-01A
SGMW-01B	8.9	10.1	9.2	14.6	>100	>100	>100	>100	0.0	2.0	0.0	3.0	SGMW-01B
SGMW-01C	9.1	0.9	0.3	12.7	>100	>100	>100	>100	0.0	3	0.0	1	SGMW-01C
SGMW-02A	28.3	43.6	45.2	17.3	>100	>100	>100	>100	1.0	4	0.0	1	SGMW-02A
SGMW-02B	2.2	43.3	50.0	51.8	44	>100	>100	>100	0.0	15	30	27	SGMW-02B
SGMW-02C	33.8	45.2	40.6	56.8	>100	>100	>100	>100	4.0	3	0.0	4	SGMW-02C
SGMW-03A	1.9	39.4	40.1	25.2	38	>100	>100	>100	0	7	9.0	10	SGMW-03A
SGMW-03B	44.7	52.8	42.5	50	>100	>100	>100	>100	28	41	0.0	20	SGMW-03B
SGMW-03C	35.8	53.4	0	48.3	>100	>100	0	>100	0.0	60	0.0	39	SGMW-03C
SGMW-04A	3.5	42.2	49.6	24.4	70	>100	>100	>100	0.0	14	7.0	0	SGMW-04A
SGMW-04B	20.3	41.1	40.1	32.5	>100	>100	>100	>100	2.0	6	1.0	10	SGMW-04B
SGMW-04C	18.4	35.4	0	29.2	>100	>100	0	>100	9.0	7	0.0	5	SGMW-04C
SGMW-05A	3.3	33.5	39.5	36.3	67	>100	>100	>100	0.0	9	9.0	1	SGMW-05A
SGMW-05B	2.0	30.5	37.6	31.1	42	>100	>100	>100	0.0	6	1.0	7	SGMW-05B
SGMW-05C	16.5	24.3	0	25.1	>100	>100	0	>100	1.0	4	0.0	4	SGMW-05C
SGMW-06A	0.1	34.2	1.9	31.1	3	>100	39	>100	0.0	0.0	0.0	0	SGMW-06A
SGMW-06B	31.2	33.5	19.6	33.8	>100	>100	>100	>100	1.0	10	0.0	9	SGMW-06B
SGMW-06C	29.7	31.4	33	32.0	>100	>100	>100	>100	5.0	6	0.0	5	SGMW-06C
SGMW-07A	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	SGMW-07B
SGMW-07C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	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	0.0	0.0	0.0	0.0	0.0	SGMW-08C
SGMW-09A	0.1	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-09A
SGMW-09B	0.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-09B
SGMW-09C	0.1	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-09C
SGMW-10A	0.1	10.5	22.0	18	2	>100	>100	>100	0.0	3	27	5	SGMW-10A
SGMW-10B	1.0	12.5	19.2	16.6	20	>100	>100	>100	0.0	4	10	7	SGMW-10B
SGMW-10C	0.3	10.7	10.0	14.0	6	>100	>100	>100	0.0	3	7	7	SGMW-10C
SGMW-11A	0.1	11.2	23.0	19.8	2	>100	>100	>100	1.0	2	20	5	SGMW-11A
SGMW-11B	0.0	8.3	22.1	15.2	0	>100	>100	>100	0.0	2	18	1	SGMW-11B
SGMW-12A	23.0	39.5	49.5	55	>100	>100	>100	>100	0.0	95	11.2	100	SGMW-12A
SGMW-12B	21.3	31.1	41.3	44.7	>100	>100	>100	>100	0.0	15	17	3	SGMW-12B
SGMW-13A	0.0	0.0	0.1	0.0	0.0	0.0	3	0.0	0.0	1	0	0.0	SGMW-13A
SGMW-13B	0.0	0.0	39.1	0.0	0.0	0.0	>100	0.0	0.0	1	27	0.0	SGMW-13A
SGMW-14A	0.0	0.0	0.3	0.0	0.0	0.0	8	0.0	0.0	2	0.0	0.0	SGMW-14A
SGMW-14B	0.1	0.0	2.1	0.0	2.0	0.0	42	0.0	0.0	1	0.0	0.0	SGMW-14B
SGMW-15A	0.0	0.0	1.1	0.0	0.0	0.0	23	0.0	0.0	1	0.0	0.0	SGMW-15A
SGMW-15B	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	SGMW-15B
SGMW-16A	1.0	0.0	0.0	0.0	20	0.0	0	0.0	1.0	0.0	0.0	0.0	SGMW-16A
SGMW-16B	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	1	0.0	0.0	SGMW-16B
SGMW-17A	0.0	0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0	0.0	SGMW-18A
SGMW-18B	0.0	0.0	0.0	0.1	0.0	0.0	0	2	0.0	0.0	0.0	0.0	SGMW-18B
SGMW-19A	1.0	14.0	28.5	21.4	3.0	>100	>100	>100	0.0	1	0.0	3	SGMW-19A
SGMW-19B	0.3	12.2	27.2	0.1	6.0	>100	>100	0.0	0.0	1	0.0	0.0	SGMW-19B
GSGM-1A	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	GSGM-4B

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

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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	8	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 measuremants 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	83	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

2006 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 2/20/06	Methane (% By Volume) 6/23/06	Methane (% By Volume) 9/28/06	Methane (% By Volume) 12/26/06	LEL (% By Volume) 2/20/06	LEL (% By Volume) 6/23/06	LEL (% By Volume) 9/28/05	LEL (% By Volume) 12/26/06	Hydrogen Sulfide (ppm by volume) 2/20/06	Hydrogen Sulfide (ppm by volume) 6/23/06	Hydrogen Sulfide (ppm by volume) 9/28/05	Hydrogen Sulfide (ppm by volume) 12/26/06	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	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	1	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	1	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	1	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-12B

2007 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 2/24/07	Methane (% By Volume) 5/17/07	Methane (% By Volume) 9/22/07	Methane (% By Volume) 12/20/07	LEL (% By Volume) 2/24/07	LEL (% By Volume) 5/17/07	LEL (% By Volume) 9/22/07	LEL (% By Volume) 12/20/07	Hydrogen Sulfide (ppm by volume) 2/24/07	Hydrogen Sulfide (ppm by volume) 5/17/07	Hydrogen Sulfide (ppm by volume) 9/22/07	Hydrogen Sulfide (ppm by volume) 12/20/07	Soil Gas Monitoring Well
SGMW-01A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-01A
SGMW-01B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-01B
SGMW-02A	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-03A
SGMW-03B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	SGMW-03B
SGMW-04A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-04A
SGMW-04B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-04B
SGMW-05A	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-07A
SGMW-07B	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	0.0	0.0	0.0	0.0	SGMW-08B
SGMW-09A	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-09B
SGMW-10A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-10A
SGMW-10B	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	0.0	0.0	0.0	0.0	1.0	0.0	SGMW-12A
SGMW-12B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-12B

2008 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/17/2008	Methane (% By Volume) 7/30/08	Methane (% By Volume) 9/29/2008	Methane (% By Volume) 12/9/2008	LEL (% By Volume) 3/17/2008	LEL (% By Volume) 7/30/08	LEL (% By Volume) 9/29/2008	LEL (% By Volume) 12/9/2008	Hydrogen Sulfide (ppm by volume) 3/17/2008	Hydrogen Sulfide (ppm by volume) 7/30/08	Hydrogen Sulfide (ppm by volume) 9/29/2008	Hydrogen Sulfide (ppm by volume) 12/9/2008	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	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

2009 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Voluma) 3/18/2009	Methane (% By Volume) 7/30/2009	Methane (% By Volume) 12/17/2009	LEL (% By Volume) 3/18/2009	LEL (% By Volume) 7/30/2009	LEL (% By Volume) 12/17/2009	Hydrogen Sulfide (ppm by volume) 3/18/2009	Hydrogen Sulfide (ppm by volume) 7/30/2009	Hydrogen Sulfide (ppm by volume) 12/17/2009	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	0	0	0	SGMW-12B

2010 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 6/7/2010	Methane (% By Volume) 12/9/2010	LEL (% By Volume) 6/7/2010	LEL (% By Volume) 12/9/2010	Hydrogen Sulfide (ppm by volume) 6/7/2010	Hydrogen Sulfide (ppm by volume) 12/9/2010	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	1	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	SGMW-12B

2011 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 6/7/2011	Methane (% By Volume) 12/13/2011	LEL (% By Volume) 6/7/2011	LEL (% By Volume) 12/13/2011	Hydrogen Sulfide (ppm by volume) 6/7/2011	Hydrogen Sulfide (ppm by volume) 12/13/2011	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	SGMW-01A
SGMW-01B	0	0	0	0	0	0	SGMW-01B
SGMW-02A	0	0	0	0	0	0	SGMW-02A
SGMW-02B	0	0	0	0	0	0	SGMW-02B
SGMW-03A	0	0	0	0	0	0	SGMW-03A
SGMW-03B	0	0	0	0	0	0	SGMW-03B
SGMW-04A	0	0	0	0	0	0	SGMW-04A
SGMW-04B	0	0	0	0	0	0	SGMW-04B
SGMW-05A	0	0	0	0	0	0	SGMW-05A
SGMW-05B	0	0	0	0	0	0	SGMW-05B
SGMW-06A	0	0	0	0	0	0	SGMW-06A
SGMW-06B	0	0	0	0	0	0	SGMW-06B
SGMW-07A	0	0	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	SGMW-07B
SGMW-08A	0	0	0	0	0	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	SGMW-08B
SGMW-09A	0	0	0	0	0	0	SGMW-09A
SGMW-09B	0	0	0	0	0	0	SGMW-09B
SGMW-10A	0	0	0	0	0	0	SGMW-10A
SGMW-10B	0	0	0	0	0	0	SGMW-10B
SGMW-11A	0	0	0	0	0	0	SGMW-11A
SGMW-11B	0	0	0	0	0	0	SGMW-11B
SGMW-12A	0	0	0	0	0	0	SGMW-12A
SGMW-12B	0	0	0	0	0	0	SGMW-12B