BROOKHAVEN NATIONAL LABORATORY
2016 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 2016 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 2016 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 2015. Volatile organic compounds (VOCs) and metals continue to be detected downgradient of the Current Landfill. The most prevalent VOCs detected above standards are chloroethane, 1,1-dichloroethane and benzene, at maximum concentrations of 71 micrograms per liter (µg/L), 18 µg/L and 2 µg/L, respectively. A temporary well investigation and groundwater modeling indicate that these concentrations are naturally attenuating and are not detected at the site boundary above drinking water standards. A downgradient well will be added to the Current Landfill monitoring well network to monitor VOCs. As with previous years, antimony, 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 historically. Maximum concentrations of antimony, arsenic, iron, manganese, and sodium in downgradient wells were 5 µg/L, 15 µg/L, 69,600 µg/L, 3,930 µg/L, and 60,900 µg/L, respectively. These results are an indicator of continued low level leachate generation at this landfill. There were no confirmed detections of radionuclides at the Current Landfill during 2016.

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 2016. A trend of increasing Sr-90 concentrations has been observed in well 097-64 over the past several years from barely detectable levels up to 6.6 pCi/L. This value is below the Sr-90 groundwater standard of 8 pCi/L. Water chemistry parameters and metals concentrations were equivalent to historic background levels.

The groundwater monitoring well networks for the Current and Former Landfill Areas are adequate at this time. Due to the slight increase in Sr-90 concentrations in well 097-64 it is recommended that the sampling frequency be increased from bi-annual to annual for this well and several nearby wells in 2017.

WOODED WETLANDS MONITORING

Because of variability within results in the last few years for both mercury and lead at wooded wetland locations SD-12 and SD-2001, and in response to NYSDEC comments, BNL conducted supplemental sampling at four locations on five foot intervals around the two locations in December 2015 to characterize a roughly 100 square foot area around each location. The results from this

sampling event were within the range historically detected at these locations. In addition, historical surveys have confirmed the survival of tiger salamanders in the Wooded Wetland. Based on this data, the NYSDEC agreed that surface water and sediment sampling of the Wooded Wetland beyond 2016 will be discontinued. The results from the 2016 sampling event were consistent with historic data.

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 which is northwest of the Current Landfill. In response to an NYSDEC recommendation, three temporary soil-gas locations were placed south of the Current Landfill to determine if gases were migrating beyond the existing permanent soil-gas monitoring well network. Results from two rounds of sampling from these temporary locations did not detect any gases migrating south of the Current Landfill. Soil-gas monitoring at the Former Landfill Area indicates that there is no detection of gasses emanating from the landfill. The existing soil gas monitoring well networks are sufficient to monitor both landfill areas.

MAINTENANCE AND REPAIR

Monthly inspections and maintenance continued throughout 2016. The grass was cut twice at each landfill during 2016. Small pine seedlings observed growing on the edge of the Current Landfill were either hand pulled or cut back mechanically. Weeds and small pine seedlings were noted growing in the drainage channels of both landfills throughout the year. During 2016, small animal burrows were repaired at the Former Landfill using jute matting, top soil and seeding. The burrows were not deep enough to penetrate past the protective layer of the caps. Access to the soil-gas monitoring wells are cleared via mechanical weed whacking. Potholes located on the asphalt access road around the Current Landfill were repaired in 2016. The removal of small pines and weeds in the drainage channels will continue in 2017.

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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 (CY) 2016 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 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 twenty-first year of O&M for the Current Landfill, the twentieth year for the Former Landfill and Slit Trench, and the nineteenth 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 January 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 was incorporated into the Current Landfill Monitoring Program and consisted of sampling and analyzing surface water and sediment annually through 2008, and then 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). In response to information provided in the *2015 Environmental Monitoring Report, Current and Former Landfill Areas* and additional tiger salamander information provided upon the request of the NYSDEC, it was agreed that further monitoring of the Wooded Wetlands be limited to visual tiger salamander assessments. No further sediment and surface water samples will be collected and care will be taken by BNL to not disturb the buildup of detritus material in the Wooded Wetland.

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 CY 2002. In July 2006, March 2011 and February 2017 BNL issued the additional five-year review reports 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 starting in 1918. 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 CY 2003. In July 2006, March 2011 and February 2017 BNL issued the additional five-year review reports 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, 2016). 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 annually from monitoring locations surrounding the Former Landfill to evaluate the movement of soil-gas from the landfills.

Wooded Wetland Monitoring. Surface water and sediment 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. Samples were collected in 2016.

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 2016.

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 January 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 December 2016. 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 December 2016 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 November 2014 for VOCs, metals, and water chemistry parameters. A quarterly VOC sampling frequency was maintained for well 088-109, due to the continued presence of elevated levels of chloroethane. Radionuclides were sampled once, in November for wells 087-23, 087-27, 088-21, and 088-109.

Based on changes recommended in the *2012 Environmental Monitoring Report, Current and Former Landfill Areas*, all Former Landfill Area wells except for 106-02 were scheduled to be

sampled every two years. During 2016, all Former Landfill Area monitoring wells were sampled. Water chemistry parameters, VOCs, pesticides, PCBs, metals, and radionuclides were sampled once in wells 086-42, 086-72, 087-22, 097-17, 097-64, 097-277, 106-02, and 106-30. In addition, strontium-90 was sampled once 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 SOPs for groundwater monitoring. The analytical results for groundwater samples collected during 2016 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 quarters, and one duplicate sample was collected during the fourth quarter 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 and the pesticide/PCB results from the Former Landfill Area in 2016. The historical trends in concentrations of key contaminants are assessed and shown graphically in Figures 5 through 12. Summary tables of all 2016 landfill groundwater data are presented in Tables 2 through 11. 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 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 2016 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, 087-27, and 088-110. Chloroethane and 1,1-dichloroethane were detected above the groundwater standards of 5 μg/L in downgradient monitoring well, 088-109, during 2016 (Table 2). Chloroethane was also detected above the groundwater standard in well 088-110. No other VOCs were detected above groundwater standards during 2016.

Figure 5 plots the concentration trends of total VOCs (TVOC), benzene, and chloroethane. As shown, VOCs remained relatively stable at low concentrations except for chloroethane in well 088-109. 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 well 087-11 during the June sampling event, in well 087-27 in the June and December sampling events, and in 088-110 during the December sampling event. The highest detection of benzene was 2 μg/L during the June event in well 087-11. Chloroethane exceeded the 5 μg/L standard in well 088-109 during all four sampling events. The maximum

chloroethane concentration was 71.3 µg/L detected in well 088-109 during the August sampling event, which is well below the historic high of 560 ug/L detected in this well in 1998. 1,1-Dichloroethane was detected above the standard of 5 µg/L in well 088-109 during the June, August and December sampling events. The high concentration of 1,1-dichloroethane was 17.7 µg/L in August 2016.

Monitoring well 088-109 is located immediately east of the Current Landfill, and approximately 3,500 feet north of the BNL site boundary. This well is sampled at a quarterly frequency and typically shows TVOC concentrations below 50 µg/L; however, there have been occasional increases in TVOC concentrations (up to 160 µg/L) noted over the past several years. The increases appear to be due to continuing periodic releases of residual VOCs (primarily chloroethane) from the Current Landfill to the water table. The data does not support a correlation between VOC concentrations and either precipitation or the elevation of the water table. Due to these elevated levels of VOCs, an investigation was conducted during 2016. A total of 15 temporary wells were installed to evaluate the VOCs persisting in this area (Figure 2). Results from these temporary wells are provided in Table 3. Results from this investigation were reported under the OU I South Boundary Monitoring Program in the *2015 Groundwater Status Report* (BNL 2016b). Results indicate elevated levels of chloroethane emanating from the east side of the Current Landfill in the vicinity of well 088-109. The groundwater travel time from the Current Landfill to the BNL site boundary is approximately 12-15 years. Updated modeling results of VOCs obtained from the 2016 temporary well data set, along with data collected from well 088-109, indicate that VOC concentrations from the Current Landfill are predicted to below 5 µg/L TVOC prior to reaching the site boundary. A permanent monitoring well (OUI-MW01-2017) was installed to enhance the monitoring well network (Figure 2).

2.2.1.2 Water Chemistry Parameters

Groundwater samples near the Current Landfill were analyzed semi-annually 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 2016 (Table 1). Due to a chain-of-custody error, chloride was omitted from the June 2016 sampling round. The results are provided in Table 4. Elevated levels of these parameters

can be indicative of the presence of landfill leachate. During 2016, 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 downgradient wells 087-11 and 088-109, as shown in Table 4. The highest concentration of 4.12 mg/L was reported for well 088-109 in December. 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 2016. The highest concentration of chloride was 78.9 mg/L during the December sampling of well 087-24. 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 9.08 to 30.2 mg/L during 2016. The highest alkalinity concentration during 2016 was detected in downgradient, shallow Upper Glacial aquifer well 087-11, at 177 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 2016, all sulfate concentrations remained below the groundwater standard of 250 mg/L. The highest sulfate value reported for 2016 was detected in the December sample from monitoring well 088-23 at a concentration of 19.7 mg/L. This is consistent with historic background levels at the Current Landfill.

TDS and TSS results were similar to those from previous years with the exception of the December TSS result background well 087-09. TDS concentrations in background well 087-09 ranged from 114 mg/L to 117 mg/L The TSS concentration in well 087-09 was 3.33 mg/L. The maximum concentrations observed in downgradient wells were 181 mg/L and 80.8 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.

Due to drought conditions, the water level in background well 087-09 was near the bottom of the screen zone. The initial sample collected in December 2016, stirred up sediment that had built up in the bottom of the well resulting in an unusably turbid sample. The metals sample was recollected in January 2017.

During 2016, chromium, iron, and sodium in the background well, and antimony, arsenic, iron, manganese, and sodium in several downgradient wells were detected above their respective groundwater standards (Table 5).

Aluminum was reported below the standard of 200 µg/L in all downgradient wells. The highest downgradient concentration of aluminum was 183 µg/L detected in the June sampling of well 087-11.

Antimony was reported above the standard of 3 µg/L in downgradient wells 088-110, and 088-21. The highest concentration of antimony was reported in well 088-110 at 4.68 µg/L in June.

Arsenic was reported at above the standard of 10 µg/L in wells 087-11, 087-23, 087-27, 088-109 and 088-110 at a high concentration of 14.5 µg/L in well 087-23. 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, and 088-26. The background concentrations ranged up to 513 µg/L while downgradient concentrations ranged up to 69,600 µg/L (well 087-11). Iron trend graphs are plotted on Figure 7.

Manganese ranged up to 3,930 µg/L in the downgradient wells.

Background sodium levels ranged up to 24,900 µg/L; whereas downgradient levels reached a high of 60,900 µg/L.

Chromium was detected above the standards of 50 µg/L in background well 087-09. Chromium in well 087-09 was detected at concentrations up to 96.9 µg/L. However, chromium was not detected above standard in any of the downgradient wells.

2.2.1.4 Radionuclides

No radionuclides were detected above groundwater standards during 2016 (Table 6). Strontium-90 was the only radionuclide detected during 2016. Strontium-90 was detected significantly below the groundwater standard of 8 pCi/L with a maximum value of 0.878 pCi/L in well 088-21 (Figure 8). Tritium and strontium-90 concentrations have not exceeded groundwater standards in any wells since 1998.

2.2.2 Former Landfill

Based on changes recommended in the *2012 Environmental Monitoring Report, Current and Former Landfill Areas*, all wells were scheduled to be sampled every two years. The Former Landfill Area monitoring wells were sampled during 2016 and are scheduled for their next sampling in 2018.

2.2.2.1 VOCs

There were no detections of VOCs above groundwater standards in Former Landfill Area monitoring wells in 2016 (Table 7). The highest total volatile organic compound (TVOC) concentration was reported in monitoring well 106-30 at 5.19 µg/L. The trends for VOC results are shown on Figure 9.

2.2.2.2 Water Chemistry Parameters

Groundwater samples were analyzed for ammonia, cyanide, TKN, sulfate, nitrite, nitrate, total nitrogen, chloride, alkalinity, TDS and TSS. During 2016, none of the water chemistry parameters exceeded applicable groundwater standards (Table 8). The trends of the alkalinity and chloride results are shown on Figure 10.

2.2.2.3 Metals

The sampling results are summarized in Table 9, and concentration trend plots for iron are shown on Figure 11. All metal detections were below groundwater standards during 2016 except for sodium in background well 086-42 and downgradient well 106-30 and the iron result for well 087-22. The sodium concentration in wells 086-42 and 106-30 were 40,100 µg/L and 30,300 µg/L, respectively. The iron result for well 087-22 was 778 µg/L.

2.2.2.4 Pesticides/PCBs

There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2016. The last detection of pesticides was in July 2002 and the last PCB was detected in December 2008. The sampling results are summarized in Table 10.

2.2.2.5 Radionuclides

Tritium was not detected in any wells during 2016. Strontium-90 was detected in ten wells in 2016 below the groundwater standard of 8 pCi/L. Detections ranged from 0.56 pCi/L in well 086-42 to 6.6 pCi/L in well 097-64. Sr-90 concentrations in well 097-64 have shown an increasing trend over the past several sampling round. Strontium-90 has not been detected above the standard of 8 pCi/L in Former Landfill monitoring wells since May 2001. The 2016 sampling results are summarized in Table 11, and concentration trend plots for strontium-90 are shown on Figure 12. Gross beta activity was detected in six wells up to a concentration of 18.5 pCi/L in well 097-64. This result is consistent with the strontium-90 detected in this well.

3.0 WOODED WETLAND MONITORING

Sampling at the Wooded Wetland was 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. 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.

Based on the recommendations of the the *2015 Environmental Monitoring Report, Current and Former Landfill Areas* (BNL 2016a), the 2016 sampling event concluded the Wooded Wetland surface water and sediment monitoring.

Surface Water

Seven surface water samples from the Southern and Northern Ponds were collected in May 2016. The individual concentrations for all metals and all the average concentrations of metals for samples from the North and South Ponds were below the critical concentrations for the 2016 sampling event (Appendix A, Table 6).

Metals in water are the primary source of absorption by tiger salamanders. No significant change in dissolved metals indicate 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 2016. The results for 2016 indicate that average metals concentrations in sediments in the South Pond are less than the maximum concentration benchmarks (Appendix A, Table 5).

For the North Pond, the average metals concentrations were below the background sediment concentrations for all metals. Mercury had average concentrations slightly above the benchmark maximum sediment concentration (Appendix A, Table 5). The average mercury concentration was 0.19 mg/kg compared to the benchmark maximum sediment concentration of 0.17 mg/kg.

Overall, the 2016 results are consistent with previous years. A complete copy of the *2016 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 2016 and from the Former Landfill in August 2016. Methane, lower explosive limit (LEL), and hydrogen sulfide were measured using a Landtek GEM 2000. 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 12 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 12 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 2016	August 2016
Round 2	June 2016	None
Round 3	September 2016	None
Round 4	December 2016	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 2016. 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 at concentrations exceeding 25 percent of the LEL (or 1.3% methane), active measures may be required to control its migration. This is a BNL administration limit that would trigger further evaluation. In response to an NYSDEC comment on the 2014 Annual Landfills Report, three additional temporary soil gas points were installed in January 2016 southeast of the Current Landfill (Figure 12). The sampling was repeated at the same points in July 2016.

The results of the soil-gas monitoring for 2016 are summarized in Table 13. Appendix A 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. The elevated levels in these areas 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 2016, indicating that the methane accumulation and migration does not extend to this area. Should methane at concentrations exceeding 25 percent of the LEL (or 1.3% methane), extend to these outpost wells on the south side of Brookhaven Avenue, active measures may 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 45 ppm. Elevated values of hydrogen sulfide were detected along the western and southern borders of the Current Landfill. Well SGMW-12A located along the southern 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 to GSGM-4), there is no evidence that hydrogen sulfide is migrating toward the nearest building, the National Weather Service.

The results of the three temporary soil-gas locations are presented on Table 14. Samples were collected in January and July 2016 at two depths, (2.5 ft, and 10 ft below land surface) at each location. These sites (CLF-SG-01 through CLF-SG-03) are located approximately 200 feet downgradient of the Current Landfill (Figure 13). Methane, LEL and hydrogen sulfide were not detected. In addition to the temporary locations, samples were collected from nearby upgradient permanent soil-gas wells SGM-10A through C and SGM-13A and B during both rounds for comparison purposes. Results from the permanent wells indicated concentration ranges for the soil-gas parameters which were consistent with historic data. Therefore, it is concluded that soil-gas parameters are not migrating further south of the Current Landfill.

4.2.1.1 Trend in Soil-Gas Data

Appendix D contains the results of methane monitoring for the Current Landfill from 1996 through 2015. 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 2016, the well clusters were monitored once in August. 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 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 sampling event, there was no methane or hydrogen sulfide detected. Table 15 details the 2016 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. Methane has not been detected since 2005. Hydrogen sulfide gas also was measured during this survey. The hydrogen sulfide was not detected during 2016. Hydrogen sulfide has not been detected since 2007. Appendix D includes the results of methane monitoring in the Former Landfill Area for 1996 through 2015.

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 low levels or the 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 B. Maintenance and repair work completed 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 June and August at the Current and Former Landfills. Small cracks in the asphalt road next to the Current Landfill were noted on the inspection logs. Also, a couple of potholes were noted along the asphalt road next to the Former Landfill. The cracks and potholes do not impact the structural integrity of the road; however there was vegetation growing in some of the cracks. The potholes were repaired in the Summer 2017. Phragmites impinging on the asphalt access road at the Current Landfill were cut back. Small pine seedlings observed growing on the edge of the Former Landfill cap were either hand pulled or cut back mechanically. The seedlings only penetrated the top soil cover. During the June inspection, two animal burrows were observed along the slope of the Former Landfill. One burrow was approximately 18 inches deep but did not penetrate past the protective layer and there were no impacts to the impermeable liner. The burrows were filled in, jute erosion control netting installed, and the area was seeded.

5.2 Drainage Structures

The drainage structures at both the Current and Former Landfill areas were maintained. 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. Annual vegetation removal is scheduled for Spring 2017.

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 the October inspection of the Former Landfill it was noted that some of the caps on the soil-gas sampling wells are beginning to rust. The Field Sampling Team will replace the caps as new caps become available.

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, 087-27, and 088-110 at concentrations above the groundwater standard with a maximum concentration of 2 µg/L. Chloroethane and 1,1-dichloroethane detected in well 088-109 and chloroethane detected in Well 088-110 were the only other VOCs detected above groundwater standards. During 2016, chloroethane and 1,1-dichloroethane concentrations ranged up to 71 µg/L ranged up to 18 µg/L, respectively, indicating that VOCs continue to emanate from the landfill. An analysis of the trends of VOCs indicated the concentrations are stable to decreasing. These concentrations are naturally attenuating and are not detected at the site boundary above the drinking water standard.

- 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.

- Strontium-90 was detected significantly below the groundwater standard of 8 pCi/L with a maximum value of 0.878 pCi/L in well 088-21. 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

Well OUI-MW01-2017 will be added to the Current Landfill monitoring well network to monitor downgradient VOCs. No changes to the monitoring frequency of the remaining wells are needed. Due to the low water table and the excess sediment built up at the bottom of monitoring well 087-09, it is recommended that this well be redeveloped to minimize the effects

of sediment in groundwater samples.

6.1.3 Conclusions for the Former Landfill Area

- The Former Landfill Area is not a source of VOC contamination. No VOCs were detected above groundwater standards in 2016.
- Water chemistry parameters were detected at concentrations approximating those of historic background monitoring well results, indicating that leachate generation is minimal to nonexistent. No results exceeded the applicable groundwater standards.
- All metal detections were below groundwater standards during 2016 except for sodium in background well 086-42 and downgradient well 106-30 and iron in well 087-22. The sodium concentration in wells 086-42 and 106-30 were 40,100 µg/L and 30,300 µg/L, respectively. The iron result for well 087-22 was 778 µg/L.
- Only low amounts of strontium-90 were detected near the Former Landfill Area with a maximum concentration of 6.6 pCi/L in well 097-64. A slow increasing trend of Sr-90 concentrations have been observed in this well over the past several years. Nearby wells 106-02, 106-43, 106-44 and 106-45 showed slight Sr-90 increases in 2016 although all remained well below the 8 pCi/L groundwater standard.
- 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

Increase the sampling frequency from bi-annual to annual for wells 097-64, 106-02, 106-43, 106-44, and 106-45 to monitor for any increasing concentration trends in 2017.

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. In addition, two rounds of soil-gas monitoring at temporary wells located south of the Current Landfill did not detect any gasses migrating in this direction.

6.2.2 Recommendations for the Current Landfill

The soil-gas monitoring program is adequate at this time. Methane gas is still being produced and leachate is continuing to discharge from the landfill. Since no gasses were detected in the temporary wells south of the Current Landfill, sampling at these locations will be discontinued.

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. Methane has not been detected near or above standards since monitoring began in 1996.

6.2.4 Recommendations for the Former Landfill Area

The soil-gas monitoring program is adequate at this time.

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. Access to the soil-gas monitoring wells will be cleared via mechanical weed whacking.

6.3.2 Former Landfill Area

Monthly inspections and maintenance will continue in accordance with the O&M requirements. Access to the soil-gas monitoring wells will be cleared via mechanical weed whacking. Continue removal of small pines and weeds in the drainage channel in Spring 2017.

6.4 Wooded Wetlands

The 2016 results for the Wooded Wetlands samples were consistent with historical values. Based on the recommendations of the *2015 Environmental Monitoring Report, Current and Former Landfill Areas* (BNL 2016a), the 2016 sampling event concluded the Wooded Wetland surface water and sediment monitoring. Per the NYSDEC comments, every effort will be made in the future to allow the Wooded Wetlands to remain undisturbed so that layers of new organic matter can build up and separate the tiger salamanders from the pond sediments. Tiger salamander surveys will continue to be conducted by BNL and reported to the NYSDEC Special Licenses Unit.

7.0 REFERENCES

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Table 1. Analytical Requirements for Groundwater Samples

Well ID	Project	Decision Subunit	EPA 524.2 VOCs	Pesticides Method 608	PCBs Method 608	TSS/TDS	Sufates/Chloride/Alkalinity	TK Nitrogen	Total Nitrogen	Nitrates	Nitrites	Ammonia	TAL Metals	Cyanide	EPA 900 Gross Alpha/Beta	EPA 901 Gamma Spec	EPA 906 Tritium	EPA 905 Sr 90
087-09	CLF	Background	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]				
087-11	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]				
087-23	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]		X[a]	X[a]	X[a]
087-24	CLF	Downgradient	X[a]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]				
087-26	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]				
087-27	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]		X[a]	X[a]	X[a]
088-109	CLF	Downgradient	X			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]		X[a]	X[a]	X[a]
088-110	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]				
088-21	CLF	Downgradient	X[b]			X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]	X[b]		X[a]	X[a]	X[a]
088-22	CLF	Downgradient	X[a]			X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]				
088-23	CLF	Downgradient	X[a]			X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]				
086-42	FLF	Background	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X	X[a]
086-72	FLF	Background	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
087-22	FLF	Background	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
097-17	FLF	Downgradient	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
097-277	FLF	Downgradient	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
097-64	FLF	Downgradient	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
106-02	FLF	Downgradient	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
106-20	FLF	Downgradient																X[b]
106-21	FLF	Downgradient																X[b]
106-30	FLF	Downgradient	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]	X[a]
106-43	FLF	Downgradient																X[b]
106-44	FLF	Downgradient																X[b]
106-45	FLF	Downgradient																X[b]
106-64	FLF	Downgradient																X[b]

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

Table 2. Current Landfill - Summary of 2016 Volatile Organic Compound Data

Analtye	Groundwater Standards (µg/L)	087-09 6/7/2016 (µg/L)		087-09 12/19/2016 (µg/L)		087-11 6/7/2016 (µg/L)		087-11 12/16/2016 (µg/L)		087-23 6/7/2016 (µg/L)		087-23 12/16/2016 (µg/L)		087-24 12/16/2016 (µg/L)		087-26 6/7/2016 (µg/L)	
1,1,1,2-Tetrachloroethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,1-Trichloroethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,2,2-Tetrachloroethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,2-Trichloroethane	1	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1-Dichloroethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1-Dichloroethylene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1-Dichloropropene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,3-Trichlorobenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,3-Trichloropropane	0.04	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,4-Trichlorobenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2-Dichloroethane	0.6	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2-Dichloropropane	1	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,3-Dichloropropane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
2,2-Dichloropropane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene	1	1	U	0.5	U	**2.02**		0.83		0.52	J	0.79		0.5	U	1	U
Benzene, 1,2,4-trimethyl	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene, 1,3,5-trimethyl-	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene, 1-methylethyl-	--	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Bromobenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Bromodichloromethane	50	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Bromoform	50	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Carbon tetrachloride	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Chlorobenzene	5	1	U	0.5	U	0.89	J	0.5	U	1	U	0.73		0.5	U	1	U
Chlorobromomethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Chloroethane	5	1	U	0.5	U	3.46		1.16		2.07		2.07		0.5	U	1	U
Chloroform	7	1	U	0.2	J	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
cis-1,2-Dichloroethylene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
cis-1,3-Dichloropropene	0.4	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Cymene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
DBCP	0.04	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Dibromomethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Dichlorodifluoromethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
EDB	0.05	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Ethene, 1,2-dichloro-, (E)-	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Ethylbenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Hexachlorobutadiene	0.5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
m-Dichlorobenzene	3	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
m/p xylene	5	2	U	1	U	2	U	1	U	2	U	1	U	1	U	2	U
Methyl bromide	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methyl chloride	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methyl tert-butyl ether	10	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methylene chloride	5	2	U	0.5	U	2	U	0.5	U	2	U	0.5	U	0.5	U	2	U
n-Butylbenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
n-Propylbenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Naphthalene	10	0.43	J	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
o-Chlorotoluene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.35	J	0.5	U	1	U
o-Dichlorobenzene	3	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
o-Xylene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
p-Chlorotoluene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
p-Dichlorobenzene	3	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
sec-Butylbenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Styrene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
tert-Butylbenzene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Tetrachloroethylene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Toluene	5	1	U	0.5	U	1	U	0.81		1	U	0.5	U	0.5	U	1	U
trans-1,3-Dichloropropene	0.4	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Trichloroethylene	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Trichlorofluoromethane	5	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Vinyl chloride	2	1	U	0.5	U	1	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Xylene (total)	5																
524.2 TVOC	--	0.43		0.2		6.37		2.8		2.59		3.94		0		0	

Table 2. Current Landfill - Summary of 2016 Volatile Organic Compound Data

Analtye	Groundwater Standards (µg/L)	087-26 12/16/2016 (µg/L)		087-27 6/7/2016 (µg/L)		087-27 12/16/2016 (µg/L)		088-109 3/22/2016 (µg/L)		088-109 6/7/2016 (µg/L)		088-109 8/22/2016 (µg/L)		088-109 12/16/2016 (µg/L)		088-110 6/7/2016 (µg/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,1-Trichloroethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,2,2-Tetrachloroethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1,2-Trichloroethane	1	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1-Dichloroethane	5	0.5	U	1	U	0.5	U	4.1		**9.27**		**17.7**		**7.2**		1	U
1,1-Dichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,1-Dichloropropene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,3-Trichlorobenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,3-Trichloropropane	0.04	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2,4-Trichlorobenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2-Dichloroethane	0.6	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,2-Dichloropropane	1	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
1,3-Dichloropropane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
2,2-Dichloropropane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene	1	0.5	U	**1.42**		**1.22**		0.93		0.54	J	0.69		0.76		1	U
Benzene, 1,2,4-trimethyl	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Benzene, 1-methylethyl-	--	0.5	U	1	U	0.5	U	0.12	J	1	U	0.5	U	0.5	U	1	U
Bromobenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Bromodichloromethane	50	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Bromoform	50	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Carbon tetrachloride	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Chlorobenzene	5	0.5	U	1.79		1.52		0.5	U	1	U	0.5	U	0.5	U	1	U
Chlorobromomethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Chloroethane	5	0.5	U	1	U	2.21		**33**		**39.4**		**71.3**		**57.8**		1	U
Chloroform	7	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
cis-1,2-Dichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
cis-1,3-Dichloropropene	0.4	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Cymene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
DBCP	0.04	1	U	1	U	1	U	0.5	U	1	U	1	U	1	U	1	U
Dibromochloromethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Dibromomethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Dichlorodifluoromethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
EDB	0.05	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Ethylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Hexachlorobutadiene	0.5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
m-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
m/p xylene	5	1	U	2	U	1	U	0.5	U	2	U	1	U	1	U	2	U
Methyl bromide	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methyl chloride	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methyl tert-butyl ether	10	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Methylene chloride	5	0.5	U	2	U	0.5	U	0.5	U	2	U	0.5	U	0.5	U	2	U
n-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
n-Propylbenzene	5	0.5	U	1	U	0.5	U	0.11	J	1	U	0.5	U	0.5	U	1	U
Naphthalene	10	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
o-Chlorotoluene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
o-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
o-Xylene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
p-Chlorotoluene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
p-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
sec-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Styrene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
tert-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Tetrachloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Toluene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
trans-1,3-Dichloropropene	0.4	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Trichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Trichlorofluoromethane	5	0.5	U	1	U	0.5	U	0.5	U	1	U	0.5	U	0.5	U	1	U
Vinyl chloride	2	0.5	U	1	U	0.5	U	0.5	U	1	U	0.33	J	0.5	U	1	U
Xylene (total)	5							3	U								
524.2 TVOC	--	0		3.21		4.95		38.26		49.21		90.02		65.76		0	

Table 2. Current Landfill - Summary of 2016 Volatile Organic Compound Data

Analtye	Groundwater Standards (µg/L)	088-110 12/16/2016 (µg/L)		088-21 6/7/2016 (µg/L)		088-21 12/16/2016 (µg/L)		088-22 12/16/2016 (µg/L)		088-23 12/16/2016 (µg/L)	
1,1,1,2-Tetrachloroethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	5	1.54		1	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	1	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Benzene	1	**1.1**		1	U	0.5	U	0.5	U	0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl-	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Carbon tetrachloride	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	0.68		1	U	0.5	U	0.5	U	0.5	U
Chlorobromomethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Chloroethane	5	**9.7**		1	U	0.5	U	0.5	U	0.5	U
Chloroform	7	0.5	U	1	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
DBCP	0.04	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Dibromomethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
EDB	0.05	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Ethene, 1,2-dichloro-, (E)-	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
m-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	0.5	U
m/p xylene	5	1	U	2	U	1	U	1	U	1	U
Methyl bromide	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Methyl chloride	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Methyl tert-butyl ether	10	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Methylene chloride	5	0.5	U	2	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Naphthalene	10	0.5	U	1	U	0.5	U	0.5	U	0.5	U
o-Chlorotoluene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
o-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	0.5	U
o-Xylene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
p-Chlorotoluene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
p-Dichlorobenzene	3	0.5	U	1	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Styrene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Tetrachloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Toluene	5	0.5	U	1	U	0.36	J	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Vinyl chloride	2	0.5	U	1	U	0.5	U	0.5	U	0.5	U
Xylene (total)	5										
524.2 TVOC	--	13.02		0		0.36		0		0	

Table 3
Current Landfill
Summary of Temporary Well Groundwater Data

Sample Interval (bls)	Geoprobe ID:	CLF-GP-04		CLF-GP-03		CLF-GP-02		CLF-GP-01		CLF-GP-10		CLF-GP-09		CLF-GP-13		CLF-GP-14		CLF-GP-15	
	Sample Date:	1/15/2016		1/14/2016		1/14/2016		1/13/2016		3/23/2016		3/22/2016		4/12-13/2016		4/13/2016		5/18/2016	
	Analysis:	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)
14		19.37	18	20.78	19	114.696	98	116.916	88					75.46	65	2.8	1.2	0.401	<0.5
18		13.82	13	30.69	29	47.825	40	158.122	120	9.92	5.7	131.74	100	117.78	100	27.3	12	0.472	<0.5
22		7.79	7	5.25	4.9	14.071	12	8.66	7.1	5.5	2.5	2.07	1.2	2.62	1.5	2.45	0.93	5.86	0.34
26		0.38	0.38 J	0	<0.5	0.32	0.15	39.601	30	2.17	0.94	0.53	0.37 J	0.73	0.24 J	0.202	0.11 J	0.7	0.17
30		0	<0.5	0	<0.5	0.61	0.34	14.93	11	2.8	1.1	1.15	0.59	0.62	0.26 J	0	<0.5	0.072	<0.5
34										0.19	0.19J	1.34	0.66	0.1	0.1 J	0	<0.5	0	<0.5
38										0.19	<0.5	0.47	0.22 J	0.27	<0.5	0.205	<0.5	0	<0.5
42										0.32	<0.5	0.39	<0.5	0.35	<0.5	0.23	<0.5	0	<0.5
46										0.36	<0.5	0.35	<0.5	0.28	<0.5	0.3	<0.5	0.16	<0.5
50										0.27	<0.5	0.26	<0.5	0.23	<0.5	0.26	<0.5	0.26	<0.5
54										0.29	<0.5	0.38	<0.5						
58										0.33	<0.5	0.54	<0.5						

Sample Interval (bls)	Geoprobe ID:	CLF-GP-12		CLF-GP-11		CLF-GP-08		CLF-GP-07		CLF-GP-06		CLF-GP-05	
	Sample Date:	3/25/2016		3/24/2016		1/11/2016		1/11/2016		1/12/2016		1/12/2016	
	Analysis:	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)	TVOC (µg/L)	Chloroethane (µg/L)
14		0.23	0.11 J	0.856	0.59	0.74	0.38 J	0.29	<0.5	0	<0.5	0.16	<0.5
18		0.09	<0.5	0.8	0.65	0.74	0.3 J	0.15	<0.5	0	<0.5	0.095	<0.5
22		0.35	0.21 J	5.74	4.8	0.43	0.28 J	0.51	<0.5	0	<0.5	0.17	<0.5
26		2.61	0.9	22.047	18	3.31	2.5	1	<0.5	0	<0.5	0.39	0.19 J
30		2.06	0.78	14.68	5.7	30.89	24	0.572	0.34 J	1.4	0.9	4.92	0.49 J
34		12.2	2.9	29.58	18								
38		19.75	3.3	6.21	4.2								
42		4.83	2.5	12.89	8.1								
46		2.28	1.9	12.01	8.3								
50		3	2.5	7.9	5.8								
54		0.31	0.14 J	3.59	2								
58		0.33	0.9	0.205	0.13 J								

Table 4. Current Landfill - Summary of 2016 Water Chemistry Data

Analtye	Groundwater Standards (mg/L)	087-09 6/7/2016 (mg/L)		087-09 12/19/2016 (mg/L)		087-11 6/7/2016 (mg/L)		087-11 12/16/2016 (mg/L)		087-23 6/7/2016 (mg/L)		087-23 12/16/2016 (mg/L)		087-24 6/7/2016 (mg/L)	
Alkalinity (as CaCO3)	--	30.2	J	9.08		177	J	61.5		73.1	J	81.7		17.7	J
Ammonia (as N)	2	0.0623	UJ	0.171		**2.3**	J	1.32		0.46	J	0.062	U	0.017	UJ
Chloride	250			45.5				16.7				12			
Cyanide	0.2	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	2.46	J	0.787		0.066	UJ	0.075	J	0.033	UJ	0.066	HU	0.489	J
Nitrite (as N)	1	0.033	J	0.033	U	0.033	J	0.033	U	0.033	J	0.033	U	0.033	J
Nitrite + Nitrate-N	10	2.77	J	0.849		0.34	J	0.85	U	0.17	J	0.85	U	0.537	J
Nitrogen	--	2.85		1.46		2.55		1.17	J	0.39	J	0.85	U	0.537	
Sulfate	250	10.8	J	15.1		4.61	J	15.8		6.63	J	5.49		11.5	J
Total Kjeldahl Nitrogen	--	0.0803	UJ	0.607		2.55	J	1.17		0.39	J	0.24	U	0.165	UJ
TDS	--	117		114		173		0.15		71.4		NS		45.7	
TSS	--	3.33		--	R	7.47		80.8		5.47		0.18		0.633	U

J - Estimated value.

U - Not detected.

Table 4. Current Landfill - Summary of 2016 Water Chemistry Data

Analtye	Groundwater Standards (mg/L)	087-24 12/16/2016 (mg/L)		087-26 6/7/2016 (mg/L)		087-26 12/16/2016 (mg/L)		087-27 6/7/2016 (mg/L)		087-27 12/16/2016 (mg/L)		088-109 6/7/2016 (mg/L)		088-109 12/16/2016 (mg/L)	
Alkalinity (as CaCO3)	--	30.3		21.8	J	23.2		131	J	112		149	J	148	
Ammonia (as N)	2	0.0659	U	0.0444	UJ	0.0475	U	0.819	J	1.24		**2.72**	J	**4.12**	
Chloride	250	78.9				15.2				52				21.4	
Cyanide	0.2	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	0.718		0.488	J	0.495		0.033	UJ	0.0868	HJ	0.066	UJ	0.066	HU
Nitrite (as N)	1	0.033	U	0.033	J	0.033	U	0.033	J	0.033	U	0.033	J	0.033	U
Nitrite + Nitrate-N	10	0.722		0.522	J	0.457		0.34	J	0.85	U	0.85	J	0.85	U
Nitrogen	--	0.722		0.522		0.457		0.711	J	1.18	J	2.81		3.62	
Sulfate	250	12.9		12.7	J	12.9		13.6	J	12.4		9.59	J	8.03	
Total Kjeldahl Nitrogen	--	0.033	U	0.165	UJ	0.033	U	0.711	J	1.18		2.81	J	3.62	
TDS	--	0.199		50		0.0614	U	181		0.276		143		0.193	
TSS	--	10.4		0.633	U	0.933	J	23.2		42.8		28.8		10.6	

J - Estimated value.

U - Not detected.

Table 4. Current Landfill - Summary of 2016 Water Chemistry Data

Analtye	Groundwater Standards (mg/L)	088-110 6/7/2016 (mg/L)		088-110 12/16/2016 (mg/L)		088-21 6/7/2016 (mg/L)		088-21 12/16/2016 (mg/L)		088-22 12/16/2016 (mg/L)		088-23 12/16/2016 (mg/L)	
Alkalinity (as CaCO3)	--	72.3	J	98.8		24.9	J	21.2		20.2		7.06	
Ammonia (as N)	2	0.381	J	0.864		0.0686	UJ	0.0333	U	0.0195	U	0.0499	U
Chloride	250			35.9				22.3		14.7		16.9	
Cyanide	0.2	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U
Nitrate (as N)	10	0.0444	J	0.103	HJ	0.741	J	0.104		0.492		0.152	
Nitrite (as N)	1	0.033	J	0.033	U	0.165	J	0.033	U	0.033	U	0.033	U
Nitrite + Nitrate-N	10	0.17	J	0.85	U	0.854	J	0.0732		0.527		0.017	U
Nitrogen	--	0.461	J	0.85	U	0.854		0.0732	U	0.537		0.033	U
Sulfate	250	19.2	J	17.9		6.54	J	9.75		13		19.7	
Total Kjeldahl Nitrogen	--	0.461	J	0.999		0.033	UJ	0.033	U	0.033	U	0.033	U
TDS	--	126		0.2		173		0.0714	U	0.0829	U	0.0829	U
TSS	--	12.3		35.2		1.11	J	2.13	J	0.76	U	11.3	

J - Estimated value.

U - Not detected.

Table 5. Current Landfill - Summary of 2016 Metals Data

Analtye	Groundwater Standards (µg/L)	087-09 6/7/2016 (µg/L)		087-09 1/25/2017 (µg/L)		087-11 6/7/2016 (µg/L)		087-11 12/16/2016 (µg/L)		087-23 6/7/2016 (µg/L)		087-23 12/16/2016 (µg/L)		087-24 6/7/2016 (µg/L)		087-24 12/16/2016 (µg/L)		087-26 6/7/2016 (µg/L)	
Aluminum	200	**827**		68	U	183	B	76.1	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	UJ	1	U	6.42	J	**12.2**		9.06	J	**14.5**		1.7	UJ	1.7	U	1.7	UJ
Barium	1000	27.4	BJ	25.2	J	27.9	BJ	18.4	B	23.5	BJ	26.9	B	10.2	BJ	25.6	B	22.8	BJ
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	--	15700	J	8300		17600	J	18500		5090	J	5000		6370	J	9920		5630	J
Chromium	50	**96.9**		**83.3**		1.38	B	1	U	1.08	B	1	U	1	U	1	U	1	U
Cobalt	--	1	UJ	1.12	J	2.53	BJ	74.4		8.19	BJ	7.07	B	1.34	BJ	1.24	B	1.34	BJ
Copper	200	9.69	B	3	U	3	U	11.1	B	3	U	3	U	3	U	3	U	3	U
Iron	300	**513**	J	**479**		**65900**	J	**69600**		**37000**	J	**43900**		30	UJ	30	U	200	J
Lead	25	0.5	J	0.5	U	0.5	J	0.5	U	0.5	J	0.603	B	0.5	J	0.5	U	0.5	J
Magnesium	35000	5430	J	2360	J	4270	BJ	3730	B	1510	BJ	1940	B	4260	BJ	6200		4310	BJ
Manganese	300	32.7	J	4.59	J	**1620**	J	**1690**		**3720**	J	**3930**		2	UJ	2	U	2	UJ
Mercury	0.7	0.067	J	0.067	U	0.067	J	0.067	U	0.067	J	0.067	U	0.067	J	0.067	U	0.067	J
Nickel	100	16.7	B	19	J	3.07	B	65.7		2.06	B	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	1390	BJ	1460	J	3040	BJ	1920	B	1020	BJ	907	B	1160	BJ	1850	B	1260	BJ
Selenium	10	1.5	J	2	U	1.5	J	2	U	1.5	J	2	U	1.5	J	2	U	1.5	J
Silver	50	1	UJ	1	U	2.54	BJ	2.06	B	1.72	BJ	1.17	B	1	UJ	1	U	1	UJ
Sodium	20000	**24400**	J	**24900**		14300	J	8300		7530	J	8080		13900	J	**45200**		11700	J
Thallium	0.5	0.45	J	0.6	U	0.45	J	0.6	U	0.45	J	0.6	U	0.45	J	0.6	U	0.45	J
Vanadium	--	1	B	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Zinc	2000	13.9	B	9.74	J	3.86	B	559		3.3	U	3.3	U	3.3	U	3.3	U	4.1	B

Table 5. Current Landfill - Summary of 2016 Metals Data

Analtye	Groundwater Standards (µg/L)	087-26 12/16/2016 (µg/L)		087-27 6/7/2016 (µg/L)		087-27 12/16/2016 (µg/L)		088-109 6/7/2016 (µg/L)		088-109 12/16/2016 (µg/L)		088-110 6/7/2016 (µg/L)		088-110 12/16/2016 (µg/L)		088-21 6/7/2016 (µg/L)		088-21 12/16/2016 (µg/L)	
Aluminum	200	68	U	68	U	101	B	68	U	68	U	68	U	68	U	68	U	155	B
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	**4.68**	B	3.5	U	**3.86**	B	3.5	U
Arsenic	10	1.7	U	7.9	J	**13.2**		**10.2**	J	8.77		**11.7**	J	**12**		1.7	UJ	1.7	U
Barium	1000	21.2	B	32.8	BJ	34.5	B	49.3	BJ	46.7	B	28.6	BJ	30.2	B	28.5	BJ	9.86	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	--	5670		17800	J	20600		26900	J	29700		13300	J	20500		8980	J	3990	B
Chromium	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cobalt	--	1.62	B	2.51	BJ	1	U	2.71	BJ	1	U	1.74	BJ	1	U	1	UJ	1	U
Copper	200	3.69	B	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Iron	300	186		**52000**	J	**66700**		**39200**	J	**45800**		**35800**	J	**65200**		55.6	BJ	**371**	
Lead	25	0.5	U	0.5	J	0.5	U	0.5	J	0.5	U	0.5	J	0.5	U	0.5	J	0.5	U
Magnesium	35000	4190	B	5290	J	5290		6050	J	6040		3730	BJ	5620		4650	BJ	2170	B
Manganese	300	2	U	**1870**	J	**1790**		**1550**	J	**1150**		**2860**	J	**3420**		15.1	J	98	
Mercury	0.7	0.067	U	0.067	J	0.067	U	0.067	J	0.067	U	0.067	J	0.067	U	0.067	J	0.067	U
Nickel	100	1.5	U	1.62	B	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	1240	B	2740	BJ	3370	B	5320	J	6430		2540	BJ	2880	B	1890	BJ	676	B
Selenium	10	2	U	1.5	J	2	U	1.5	J	2	U	1.5	J	2	U	1.5	J	2	U
Silver	50	1	U	1.6	BJ	1.08	B	1.63	BJ	1.11	B	1.8	BJ	1.58	B	1	UJ	1	U
Sodium	20000	10700		**30100**	J	**31100**		13000	J	14900		**24800**	J	20000		**60900**	J	19400	
Thallium	0.5	0.6	U	0.45	J	0.6	U	0.45	J	0.6	U	0.45	J	0.6	U	0.45	J	0.6	U
Vanadium	--	1	U	1	U	3.96	B	1	U	1	U	1	U	1	U	1	U	2.09	B
Zinc	2000	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U	11.8	B	4.34	B	3.3	U

Table 5. Current Landfill - Summary of 2016 Metals Data

Analtye	Groundwater Standards (µg/L)	088-22 12/16/2016 (µg/L)		088-23 12/16/2016 (µg/L)	
Aluminum	200	68	U	68	U
Antimony	3	3.5	U	3.5	U
Arsenic	10	1.7	U	3.45	B
Barium	1000	22.5	B	8.73	B
Beryllium	3	1	U	1	U
Cadmium	5	1	U	1	U
Calcium	--	5750		4780	B
Chromium	50	1	U	1	U
Cobalt	--	2.03	B	2.36	B
Copper	200	3	U	3	U
Iron	300	107		**7470**	
Lead	25	0.5	U	0.5	U
Magnesium	35000	3330	B	2510	B
Manganese	300	10.7	B	**1470**	
Mercury	0.7	0.067	U	0.067	U
Nickel	100	1.5	U	2.98	B
Potassium	--	1220	B	1060	B
Selenium	10	2	U	2	U
Silver	50	1	U	1	U
Sodium	20000	11000		13100	
Thallium	0.5	0.6	U	0.6	U
Vanadium	--	1	U	1	U
Zinc	2000	3.3	U	3.3	U

Table 6. Current Landfill - Summary of 2016 Radionuclide Data

Analtye	Groundwater Standards pCi/L	087-23 12/16/2016 pCi/L				087-27 12/16/2016 pCi/L				088-109 12/16/2016 pCi/L				088-21 12/16/2016 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	0.294	U	4.04	2.43	-3.8	U	14.8	9.29	-2.49	U	10.8	6.75	0.00289	U	4.03	2.66
Beryllium-7	40000	4.5	U	18.4	10.2	-1.63	U	16.3	9.15	-12.3	U	15.2	9.39	-7.09	U	18.8	11.3
Cesium-134	80	-0.179	U	2.9	2.04	-0.412	U	2.1	1.71	0.0766	U	2.09	1.64	-0.764	U	2.68	1.98
Cesium-137	120	-0.425	U	2.48	1.37	0.0399	U	1.94	1.21	0.324	U	1.92	1.06	-0.177	U	2.32	1.26
Co-60	200	0.504	U	2.64	1.36	1.33	U	2.21	1.5	0.292	U	2.02	1.21	-0.156	U	2.48	1.36
Cobalt-57	4000	0.254	U	1.67	0.922	0.358	U	1.75	1.01	-0.925	U	1.65	1.01	-0.256	U	1.63	0.915
Europium-152	841	1.86	U	6.3	3.86	0.199	U	5.65	3.09	0.488	U	5.61	3.09	-0.93	U	6.2	3.59
Europium-154	573	3.32	U	8.27	4.13	0.819	U	5.43	3.13	0.729	U	5.77	3.06	-0.763	U	6.17	3.92
Europium-155	4000	0.199	U	6.36	3.52	-1.8	U	7.53	5.77	1.04	U	7.45	4.31	2.47	U	6.6	3.57
Manganese-54	2000	-0.35	U	2.34	1.3	0.587	U	1.91	1.02	-0.856	U	1.92	1.47	1.01	U	2.33	1.16
Sodium-22	400	0.871	U	2.91	1.49	0.274	U	1.9	1.1	0.283	U	2.04	1.08	-0.252	U	2.18	1.38
Strontium-90	8	0.223	U	0.691	0.396	0.501	U	0.635	0.399	0.646	U	0.782	0.482	0.878	J-N2	0.675	0.464
Tritium	20000	-66.5	U	437	242	-32.3	U	446	250	78.8	U	431	248	-166	U	442	239
Zinc-65	360	1.09	U	5.17	2.68	2.13	U	3.63	4.36	1.5	U	4.06	2.3	2.22	U	5.28	2.91

Table 7. Former Landfill - Summary of 2016 Volatile Organic Compound Data

Analtye	Groundwater Standards (µg/L)	086-42 12/2/2016 (µg/L)		086-72 12/2/2016 (µg/L)		087-22 12/2/2016 (µg/L)		097-17 12/2/2016 (µg/L)		097-277 12/2/2016 (µg/L)		097-64 12/2/2016 (µg/L)		106-02 12/2/2016 (µg/L)		106-30 12/2/2016 (µg/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	0.22	J	0.5	U	2.55	
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	1.5	
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.2	J
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	0.18	J	1.22		0.28	J	1.36		2		0.71		0.44	J	0.62	
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	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	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	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	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	0.18	J	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	0.38	J	0.5	U	0.32	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	--	0.18		1.22		0.28		1.36		2		1.31		0.62		5.19	

Table 8. Former Landfill - Summary of 2016 Chemistry Data

Analyte	Groundwater Standards (mg/L)	086-42 12/2/2016 (mg/L)		086-72 12/2/2016 (mg/L)		087-22 12/2/2016 (mg/L)		097-17 12/2/2016 (mg/L)		097-277 12/2/2016 (mg/L)		097-64 12/2/2016 (mg/L)		106-02 12/2/2016 (mg/L)		106-30 12/2/2016 (mg/L)	
Alkalinity (as CaCO3)	--	42.4		4.03		7.06		7.06		6.05		20.2		12.1		21.2	
Ammonia (as N)	2	0.0412	U	0.034	U	0.323	U	0.0816	U	0.0641	U	0.0926	U	0.128	U	0.0715	U
Chloride	250	97.9	J	14.3	J	10.6	J	9.95	J	17	J	33.9	J	14.4	J	60.2	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	4.67		0.295		1.4		0.688		0.186		0.477		0.372		0.484	
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	4.61		0.289		1.79		0.762		0.174		0.504		0.319		0.469	
Nitrogen	--	4.61		0.289		2.01		0.762		0.174		0.504		1.03		0.469	
Sulfate	250	15.1	J	9.61	J	6.06	J	5.41	J	13	J	10.1	J	9.66	J	27.7	J
Total Kjeldahl Nitrogen	--	0.033	J	0.033	J	0.223	UJ	0.033	J	0.033	J	0.033	J	0.715	J	0.033	J
TDS	--	320		110		94.3		78.6		80		141		109		210	
TSS	--	1	J	3.22		5.44		7		0.633	U	2.13	J	24.8		1.2	J

Table 9. Former Landfill - Summary of 2016 Metals Data

Analtye	Groundwater Standards (µg/L)	086-42 12/2/2016 (µg/L)		086-72 12/2/2016 (µg/L)		087-22 12/2/2016 (µg/L)		097-17 12/2/2016 (µg/L)		097-277 12/2/2016 (µg/L)		097-64 12/2/2016 (µg/L)		106-02 12/2/2016 (µg/L)		106-30 12/2/2016 (µg/L)	
Aluminum	200	68	U	68	U	105	B	198	B	68	U	73.7	B	68	U	82.5	B
Antimony	3	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U	**4.09**	B
Arsenic	10	1.7	U	1.7	U	1.74	B	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
Barium	1000	49.4	B	19.2	B	18.4	B	12.4	B	13.7	B	25.7	B	12.2	B	33.6	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	--	34100		4710	B	4830	B	3240	B	4400	B	11000		6690		20400	
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	34.3	B	**778**		205		30	U	69.3	B	30	U	34.4	B
Lead	25	0.5	U	0.5	U	0.575	B	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Magnesium	35000	8260		2030	B	2390	B	1480	B	2680	B	2490	B	1270	B	4610	B
Manganese	300	2	U	12.6	B	20.3		20.7		36.3		8.99	B	4.09	B	11.4	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	--	2800	B	965	B	1060	B	779	B	1200	B	1520	B	1340	B	1320	B
Selenium	10	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Silver	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Sodium	20000	**40100**	J	9690	J	7190	J	7740	J	11700	J	18300	J	9840	J	**30300**	J
Thallium	0.5	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Vanadium	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Zinc	2000	3.3	U	5.34	B	6.95	B	3.3	U	3.3	U	3.3	U	3.3	U	3.3	U

Table 10. Former Landfill - Summary of 2016 Pesticide/PCB Data

Analyte	Groundwater Standards (ug/L)	086-42 12/2/2016 (ug/L)		086-72 12/2/2016 (ug/L)		087-22 12/2/2016 (ug/L)		097-17 12/2/2016 (ug/L)		097-277 12/2/2016 (ug/L)		097-64 12/2/2016 (ug/L)		106-02 12/2/2016 (ug/L)		106-30 12/2/2016 (ug/L)	
4,4''-DDD	0.3	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
4,4''-DDE	0.2	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
4,4''-DDT	0.2	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Aldrin	0	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
alpha-BHC	0.01	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Aroclor 1016	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1221	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1232	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1242	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1248	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1254	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
Aroclor 1260	0.09	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U
beta-BHC	0.01	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Chlordane	0.05	0.025	U	0.0238	U	0.0258	U	0.026	U	0.0243	U	0.0238	U	0.0255	U	0.0245	U
delta-BHC	0.04	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Dieldrin	0.004	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Endosulfan I	0.009	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Endosulfan II	--	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Endosulfan sulfate	--	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Endrin	0	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Endrin aldehyde	5	0.004	U	0.00381	U	0.00412	U	0.00417	U	0.00388	U	0.00381	U	0.00408	U	0.00392	U
Heptachlor	0.04	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Heptachlor epoxide	0.03	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Lindane	0.05	0.002	U	0.0019	U	0.00206	U	0.00208	U	0.00194	U	0.0019	U	0.00204	U	0.00196	U
Toxaphene	0.06	0.05	U	0.0476	U	0.0515	U	0.0521	U	0.0485	U	0.0476	U	0.051	U	0.049	U

Table 11. Former Landfill - Summary of 2016 Radionuclide Data

Analtye	Groundwater Standards pCi/L	086-42 12/2/2016 pCi/L				086-72 12/2/2016 pCi/L				087-22 12/2/2016 pCi/L				097-17 12/2/2016 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-4.19	U	14	9.3	-1.92	U	10.2	6.06	8.53	U	15.7	9.53	4.92	U	13.4	7.42
Beryllium-7	40000	-2.83	U	15.8	9.17	16.2	U	21.9	23.6	-6.8	U	14.1	8.37	4.74	U	17.1	9.3
Cesium-134	80	-0.336	U	1.76	1.04	0.126	U	2.81	1.56	0.0103	U	1.86	1.06	-0.333	U	1.99	1.18
Cesium-137	120	0.468	U	1.79	0.99	-0.0464	U	2.22	1.22	-0.344	U	1.52	0.891	0.15	U	1.9	1.07
Co-60	200	0.745	U	1.82	0.916	0.626	U	2.89	1.47	-1.59	U	1.73	1.63	-0.436	U	1.72	0.986
Cobalt-57	4000	-0.869	U	1.59	1.01	0.244	U	1.73	0.971	0.451	U	1.55	1.42	-0.254	U	1.45	0.855
Europium-152	841	-3.21	U	4.74	2.84	-0.241	U	5.94	3.54	2.57	U	5.26	2.83	-0.878	U	4.89	2.75
Europium-154	573	-1.5	U	4.26	2.44	-0.311	U	6.89	3.64	0.763	U	5.4	3.21	-0.714	U	4.66	2.6
Europium-155	4000	-0.725	U	7	4.3	-0.496	U	7.24	4.1	1.31	U	6.88	4.08	1.76	U	6.5	3.71
Gross Alpha	15	1.47	J	1.21	0.836	0.151	U	1.29	0.716	5.67		1.73	1.37	6.62		1.95	1.48
Gross Beta	1000	4.96		0.928	0.683	0.785	U	1.18	0.709	5.52		0.951	0.704	3.72	J	0.991	0.679
Manganese-54	2000	-0.617	U	1.58	0.969	0.00408	U	2.35	1.31	0.0487	U	1.74	0.998	0.0291	U	1.69	0.971
Sodium-22	400	-0.565	U	1.51	0.869	-0.11	U	2.43	1.28	0.224	U	1.89	1.13	-0.23	U	1.65	0.92
Strontium-90	8	0.56	J	0.334	0.246	0.0352	U	0.272	0.158	0.00417	U	0.21	0.12	1.22		0.441	0.385
Tritium	20000	174	U	367	217	157	U	377	222	112	U	386	224	107	U	383	222
Zinc-65	360	1.32	UJ(-)B	2.95	1.58	2.29	UJ(-)B	5.33	2.82	2.28	UJ(-)B	3.48	2.37	0.333	UJ(-)B	4	2.16

Table 11. Former Landfill - Summary of 2016 Radionuclide Data

Analtye	Groundwater Standards pCi/L	097-277 12/2/2016 pCi/L				097-64 12/2/2016 pCi/L				106-02 12/2/2016 pCi/L				106-20 12/12/2016 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-0.808	U	3.36	2.26	-3.21	U	11.8	7.68	-1.92	U	4.84	3.1				
Beryllium-7	40000	-3.7	U	17.8	10.6	-3.39	U	19	13.9	0.847	U	14.7	8.36				
Cesium-134	80	0.396	U	2.07	1.09	-0.525	U	2	1.14	-0.321	U	1.5	0.903				
Cesium-137	120	0.981	U	2.19	1.13	0.34	U	2.13	1.16	0.375	U	1.51	0.851				
Co-60	200	-0.192	U	2.09	1.18	0.223	U	2.16	1.21	-0.168	U	1.53	0.868				
Cobalt-57	4000	0.593	U	1.46	1.08	0.854	U	1.79	1.06	0.0404	U	1.21	0.717				
Europium-152	841	-0.12	U	5.05	2.9	-2.07	U	5.29	3.12	-0.652	U	4.22	2.41				
Europium-154	573	-0.718	U	5.79	3.27	3.39	U	5.25	3.34	-1.1	U	3.74	2.17				
Europium-155	4000	-0.969	U	5.44	3.06	2.52	U	7.38	4.74	1.07	U	4.96	2.9				
Gross Alpha	15	-0.92	U	1.57	0.8	4.74		1.41	1.17	-0.000192	U	1.48	0.823				
Gross Beta	1000	0.934	U	1.02	0.619	18.5		1.02	1.02	1.98	J	1	0.639				
Manganese-54	2000	-0.512	U	2.12	1.21	1.83	U	1.94	1.52	0.151	U	1.48	0.804				
Sodium-22	400	-0.498	U	2.06	1.19	1.2	U	1.8	1.18	-0.431	U	1.32	0.77				
Strontium-90	8	0.537	J	0.338	0.252	6.6		0.321	0.66	2.21		0.634	0.538	0.36	U	0.513	0.318
Tritium	20000	-18.8	U	380	212	128	U	382	223	98.8	U	389	225				
Zinc-65	360	1.16	UJ(-)B	4.68	2.49	1.94	UJ(-)B	3.86	4.47	1.7	UJ(-)B	3	2.34				

Table 11. Former Landfill - Summary of 2016 Radionuclide Data

Analtye	Groundwater Standards pCi/L	106-21 12/12/2016 pCi/L				106-30 12/2/2016 pCi/L				106-43 12/12/2016 pCi/L				106-44 12/2/2016 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2					-3.4	U	15.6	10.1								
Beryllium-7	40000					3.87	U	18.8	10.8								
Cesium-134	80					0.283	U	2.08	1.29								
Cesium-137	120					-0.224	U	1.94	1.09								
Co-60	200					0.519	U	2.25	1.17								
Cobalt-57	4000					-0.16	U	1.62	0.991								
Europium-152	841					2.01	U	5.46	3.04								
Europium-154	573					0.659	U	5.95	3.15								
Europium-155	4000					0.271	U	7.23	5.77								
Gross Alpha	15					1.37	U	1.99	1.24								
Gross Beta	1000					3.68	J	1.03	0.724								
Manganese-54	2000					0.305	U	1.9	1.18								
Sodium-22	400					0.268	U	2.09	1.11								
Strontium-90	8	0.178	U	0.761	0.422	1.24		0.603	0.487	2.35		0.606	0.508	3.73		0.481	0.542
Tritium	20000					185	U	391	231								
Zinc-65	360					-2.15	UJ(-)B	3.66	2.29								

Table 11. Former Landfill - Summary of 2016 Radionuclide Data

Analtye	Groundwater Standards pCi/L	106-45 12/12/2016 pCi/L				106-64 12/2/2016 pCi/L			
		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	2.35		0.302	0.399	2.01		0.488	0.447
Tritium	20000								
Zinc-65	360								

Table 12
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 12
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 12
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 13

2016 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/18/16	Methane (% By Volume) 6/2/16	Methane (% By Volume) 9/14/16	Methane (% By Volume) 12/7/16	LEL (% By Volume) 3/18/16	LEL (% By Volume) 6/2/16	LEL (% By Volume) 9/14/16	LEL (% By Volume) 12/7/16	Hydrogen Sulfide (ppm by volume) 3/18/16	Hydrogen Sulfide (ppm by volume) 6/2/16	Hydrogen Sulfide (ppm by volume) 9/14/16	Hydrogen Sulfide (ppm by volume) 12/7/16	Soil Gas Monitoring Well
SGM-01A	6.4	5.3	0	0	128	106	0.0	0	5.0	1.0	0.0	0.0	SGM-01A
SGM-01B	6.3	5.4	0	0.1	126	108.0	0	2	2.0	0.0	0.0	0.0	SGM-01B
SGM-01C	5.3	4.5	0.6	21.5	106	90.0	13	430	1.0	0.0	0.0	10.0	SGM-01C
SGM-02A	30.9	39.0	8.2	21.5	618	780.0	164	430	0.0	2.0	0.0	10.0	SGM-02A
SGM-02B	33.1	37.6	43.7	35.2	662	752.0	874	704	17.0	17	17.0	40	SGM-02B
SGM-02C	36.0	28.1	44.2	35.3	720	562.0	884.0	706	3.0	0.0	3.0	2.0	SGM-02C
SGM-03A	17.5	24.1	4.6	7.5	350	482.0	92.0	150	2.0	21.0	6.0	3.0	SGM-03A
SGM-03B	42.8	34.6	43.2	38.5	856	692.0	864	770	15	0.0	25.0	21.0	SGM-03B
SGM-03C	41.9	22.2	44.4	34	838	444.0	888.0	680	31.0	1.0	13.0	41.0	SGM-03C
SGM-04A	37.3	37.4	31.8	33.2	746	748.0	636.0	664	0.0	9.0	8.0	1.0	SGM-04A
SGM-04B	35.6	25.9	30.6	29.7	712	518.0	612	594	4.0	9.0	10.0	5.0	SGM-04B
SGM-04C	27.1	16.7	22.5	21.8	542	334.0	450.0	436	5.0	9.0	5.0	4.0	SGM-04C
SGM-05A	25.7	0.0	15.8	18.5	514	0.0	316.0	370	0.0	9.0	1.0	0.0	SGM-05A
SGM-05B	26.0	22.4	19	20.6	520	448.0	100	412	4.0	9.0	7.0	4.0	SGM-05B
SGM-05C	19.1	11.7	14.2	15.8	382	234.0	284.0	316	2.0	9.0	2.0	0.0	SGM-05C
SGM-06A	3.1	0.1	0.2	3.2	62	2.0	4	64	0.0	9.0	0.0	0.0	SGM-06A
SGM-06B	27.9	27.5	24.8	25.2	558	550.0	498	504	4.0	2.0	10.0	5.0	SGM-06B
SGM-06C	25.5	24.9	21.2	22.5	510	498.0	424	450	3.0	1.0	4.0	2.0	SGM-06C
SGM-07A	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	SGM-07A
SGM-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	SGM-07B
SGM-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	SGM-07C
SGM-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	SGM-08A
SGM-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	SGM-08B
SGM-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	SGM-08C
SGM-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	SGM-09A
SGM-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	SGM-09B
SGM-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	SGM-09C
SGM-10A	0.9	0.0	2.4	0.0	18.0	0.0	48	0.0	0.0	0.0	0.0	0.0	SGM-10A
SGM-10B	7.1	9.0	8.0	1.9	142.0	180.0	160	38.0	0.0	0.0	1.0	1.0	SGM-10B
SGM-10C	6.9	8.1	8.2	3.7	138.0	162.0	164	74.0	8.0	0.0	6.0	2.0	SGM-10C
SGM-11A	34.6	10.5	9.3	5.2	692.0	210.0	186	104	8.0	13.0	19	23	SGM-11A
SGM-11B	24.6	10.4	12.2	2.9	492.0	208.0	244	58.0	1.0	3.0	0.0	0.0	SGM-11B
SGM-12A	0.1	35.8	31.5	25.6	2.0	716.0	630	512	0.0	25.0	21.0	45	SGM-12A
SGM-12B	20.7	25.8	32.4	20.8	414.0	516.0	698	416.0	0.0	0.0	4.0	2.0	SGM-12B
SGM-13A	0.0	0.1	16.2	0.1	0.0	2	324	2.0	0.0	0.0	5.0	0.0	SGM-13A
SGM-13B	0.0	24.9	33.5	16.7	0.0	498.0	670.0	334.0	0.0	0.0	5.0	0.0	SGM-13B
SGM-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	SGM-14A
SGM-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	SGM-14B
SGM-15A	2.0	0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGM-15A
SGM-15B	22.4	22.8	30.3	3.5	448.0	456.0	606.0	70.0	9.0	0.0	11.0	0.0	SGM-15B
SGM-16A	0.0	0.0	12.3	0.0	0.0	0.0	296.0	0.0	0.0	0.0	0.0	0.0	SGM-16A
SGM-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	SGM-16B
SGM-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	SGM-17A
SGM-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	SGM-17B
SGM-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	SGM-18A
SGM-18B	0.0	0.0	0.0	21.9	0.0	0.0	0.0	438.0	0.0	0.0	0.0	1.0	SGM-18B
SGM-19A	0.0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	SGM-19A
SGM-19B	0.0	0.0	12.9	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	SGM-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

Table 14. 2016 Supplemental Current Landfill Soil-Gas Monitoring Summary

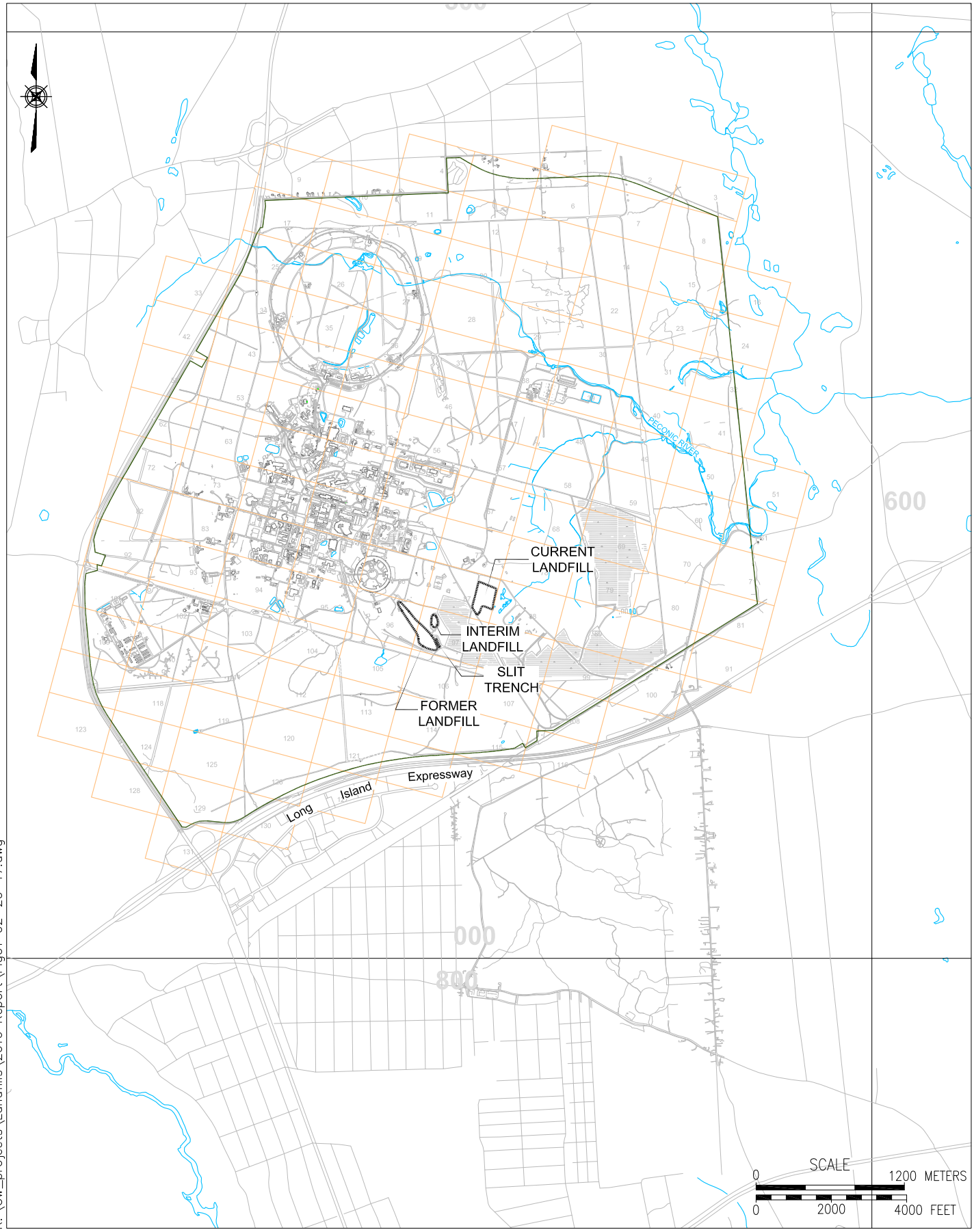
Soil Gas Monitoring Well	Depth (ft bls)	Methane (% By Volume) 1/6/16	Methane (% By Volume) 7/21/16	LEL (% By Volume) 1/6/16	LEL (% By Volume) 7/21/16	Hydrogen Sulfide (ppm by volume) 1/6/16	Hydrogen Sulfide (ppm by volume) 7/21/16
CLF-SG-01	2.5	0	0	0	0	0	0
CLF-SG-01	10	0	0	0	0	0	0
CLF-SG-02	2.5	0	0	0	0	0	0
CLF-SG-02	10	0	0	0	0	0	0
CLF-SG-03	2.5	0	0	0	0	0	0
CLF-SG-03	10	0	0	0	0	0	0
SGM-10 A	2.5	0	0.2	0	5	0	0
SGM-10 B	10.5	2.5	7.6	50	>100	0	0
SGM-10 C	18.5	3.9	5.6	79	>100	7	0
SGM-13 A	2.5	0.8	5.6	15	>100	0	1
SGM-13 B	10.5	15.6	26.8	>100	>100	0	0

ft bls - Feet below land surface.

Table 15

2016 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 8/17/2016	LEL (% By Volume) 8/17/2016	Hydrogen Sulfide (ppm by volume) 8/17/2016	Soil Gas Monitoring Well
SGM-01A	0	0	0	SGM-01A
SGM-01B	0	0	0	SGM-01B
SGM-02A	0	0	0	SGM-02A
SGM-02B	0	0	0	SGM-02B
SGM-03A	0	0	0	SGM-03A
SGM-03B	0	0	0	SGM-03B
SGM-04A	0	0	0	SGM-04A
SGM-04B	0	0	0	SGM-04B
SGM-05A	0	0	0	SGM-05A
SGM-05B	0	0	0	SGM-05B
SGM-06A	0	0	0	SGM-06A
SGM-06B	0	0	0	SGM-06B
SGM-07A	0	0	0	SGM-07A
SGM-07B	0	0	0	SGM-07B
SGM-08A	0	0	0	SGM-08A
SGM-08B	0	0	0	SGM-08B
SGM-09A	0	0	0	SGM-09A
SGM-09B	0	0	0	SGM-09B
SGM-10A	0	0	0	SGM-10A
SGM-10B	0	0	0	SGM-10B
SGM-11A	0	0	0	SGM-11A
SGM-11B	0	0	0	SGM-11B
SGM-12A	0	0	0	SGM-12A
SGM-12B	0	0	0	SGM-12B



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BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

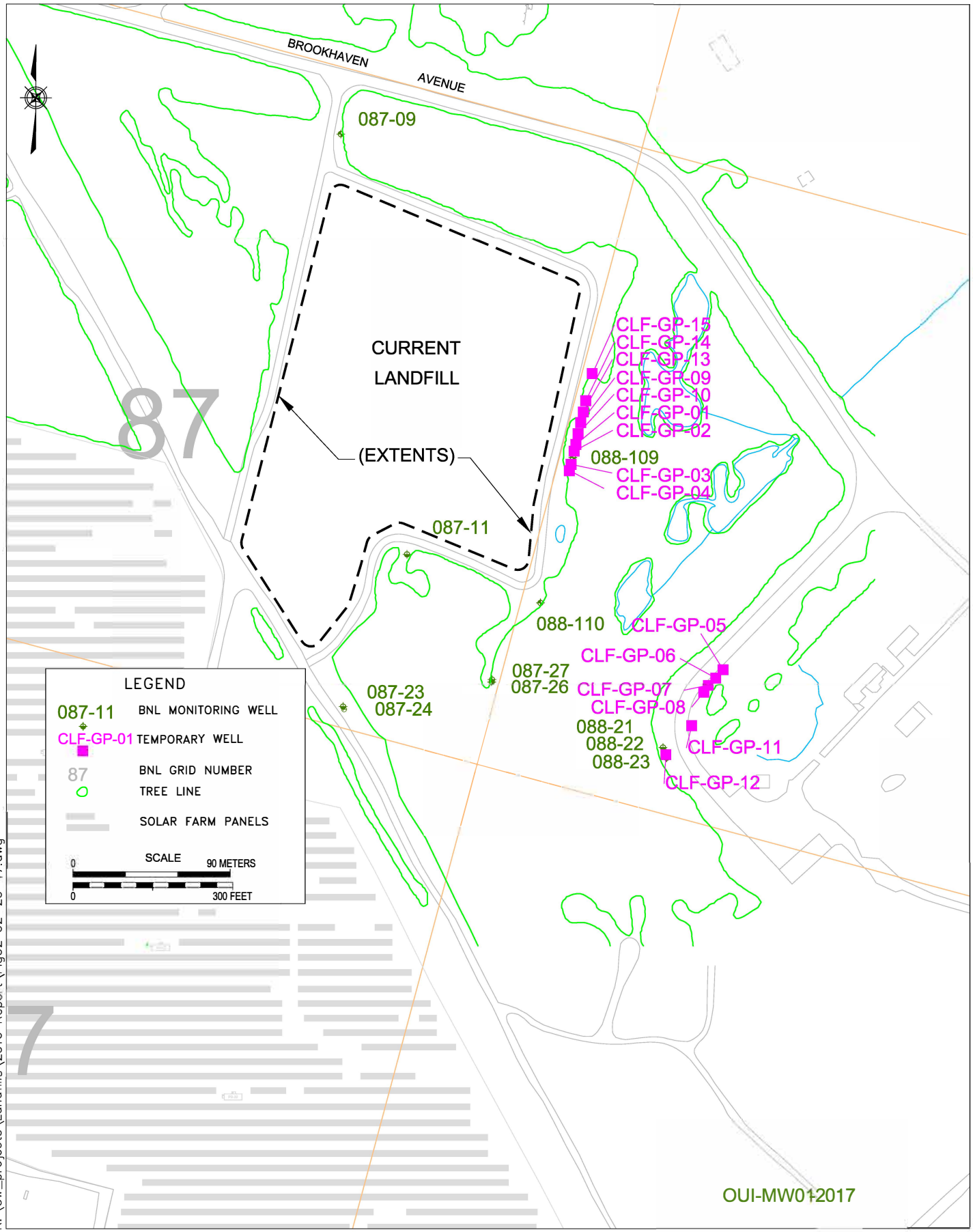
TITLE:

SITE LOCATION MAP

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 1



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BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

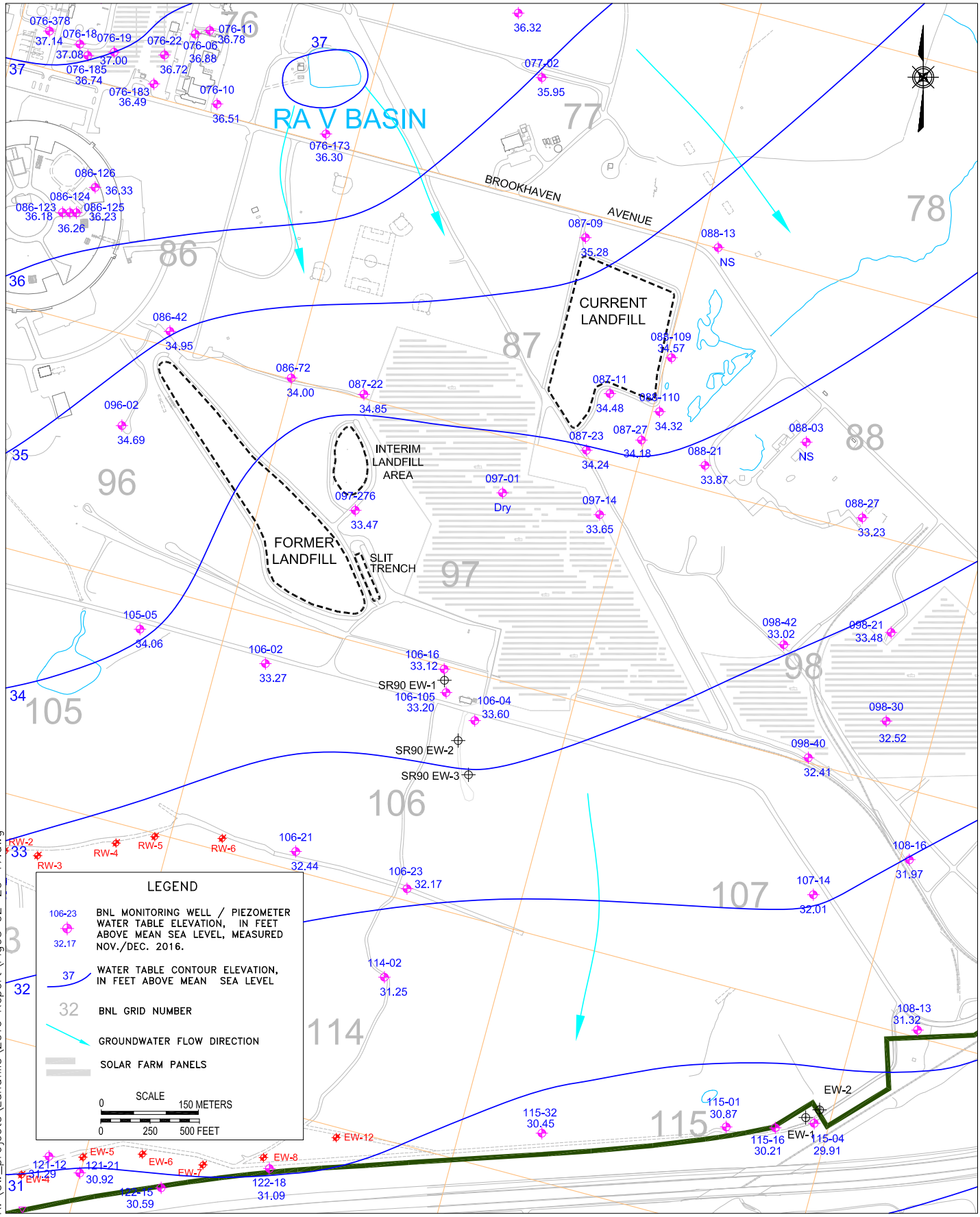
TITLE:

CURRENT LANDFILL MONITORING WELL LOCATIONS

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
WRD	RFH	–	–

FIGURE NO.: 2



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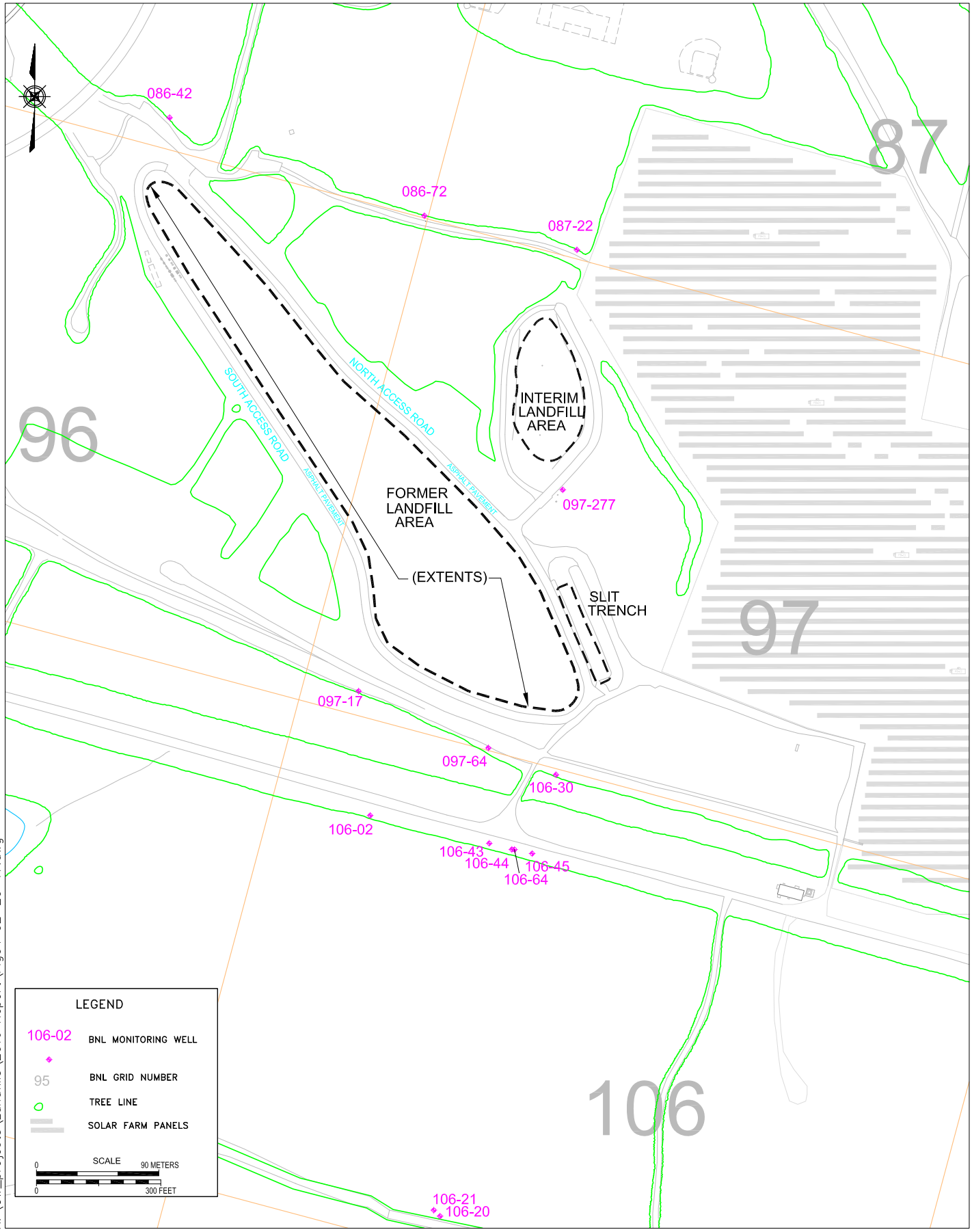
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

WATER TABLE CONTOUR MAP
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 3



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BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

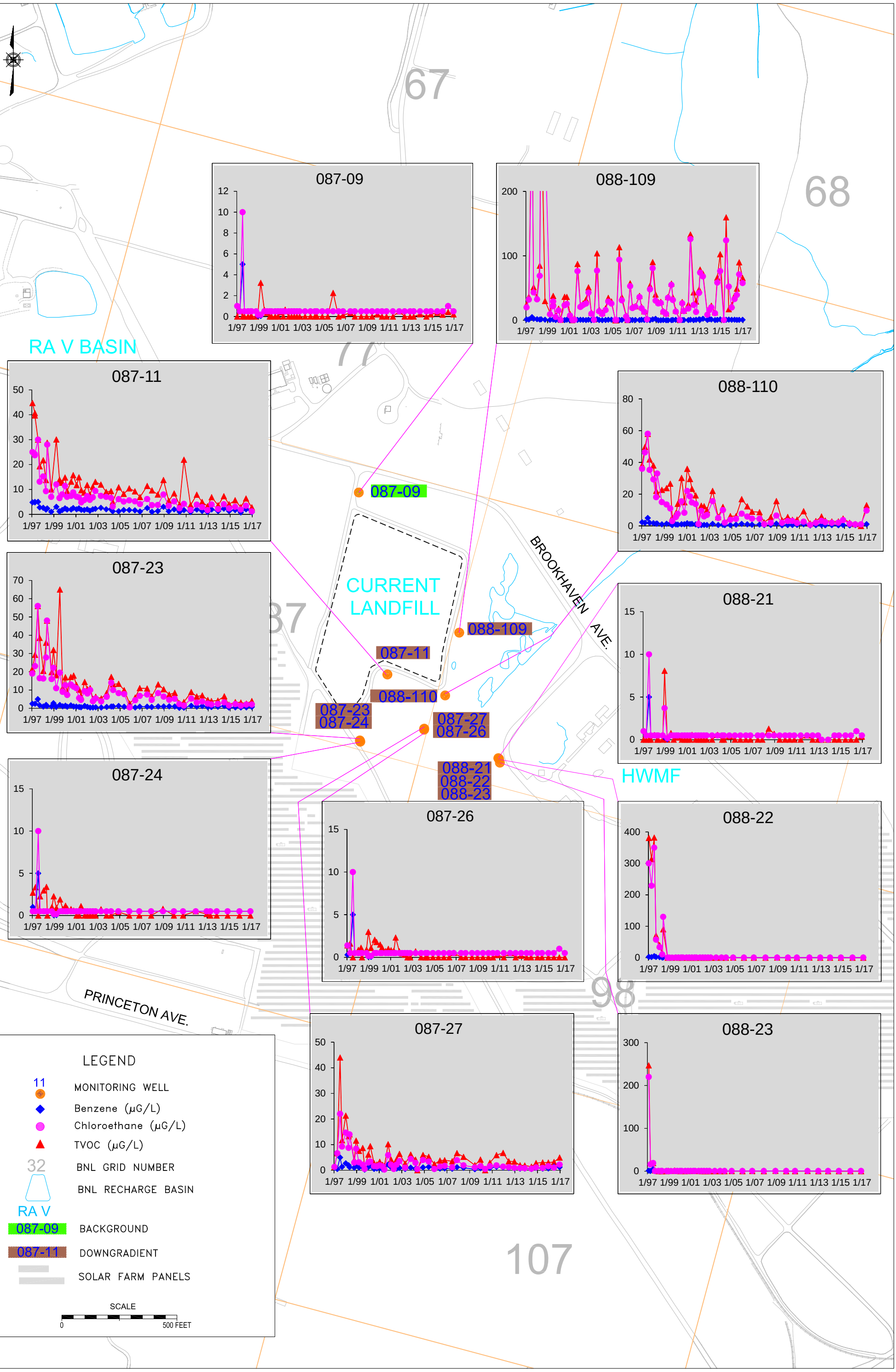
TITLE:

FORMER LANDFILL MONITORING WELL LOCATIONS

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 4



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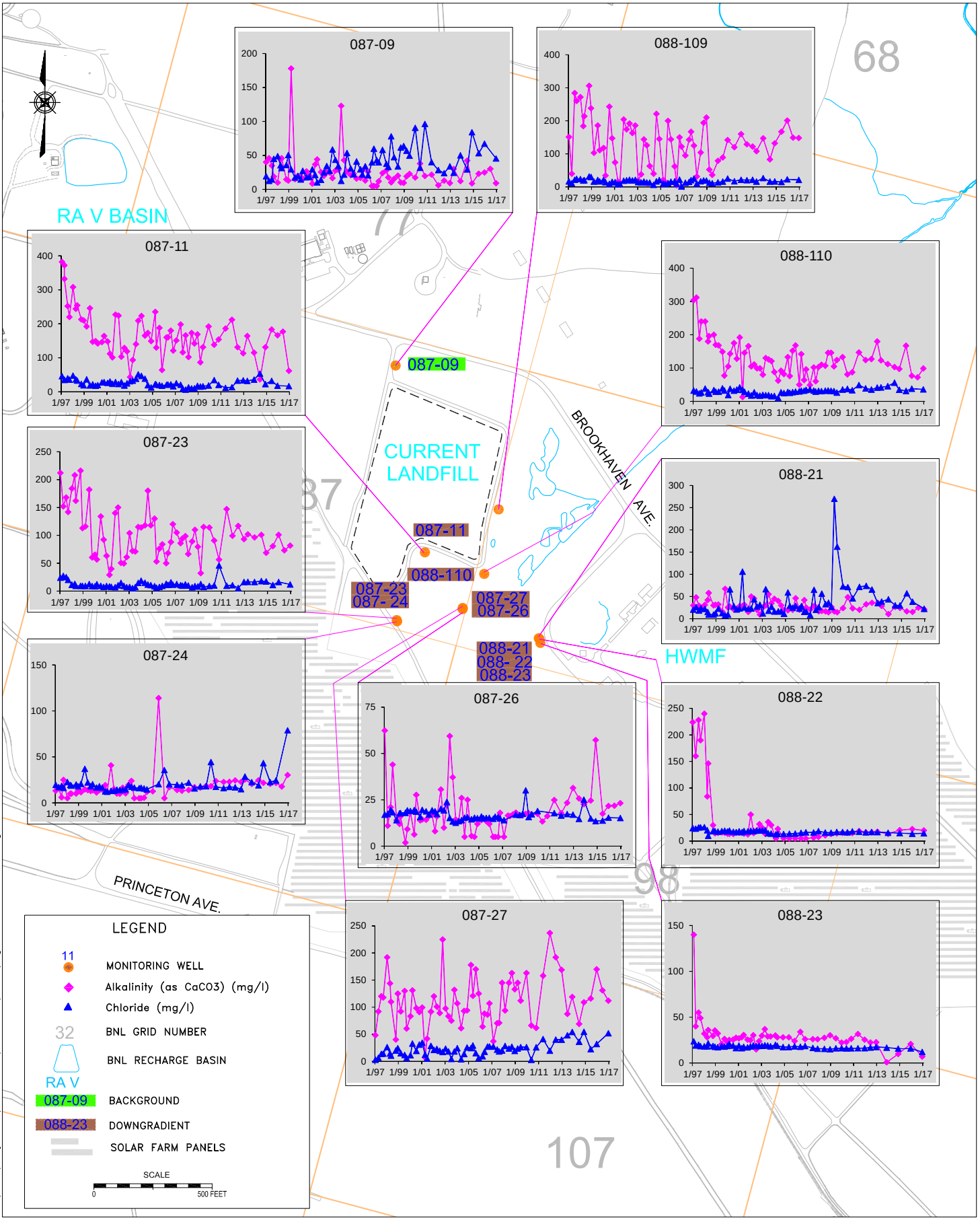
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

CURRENT LANDFILL
VOC TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 5



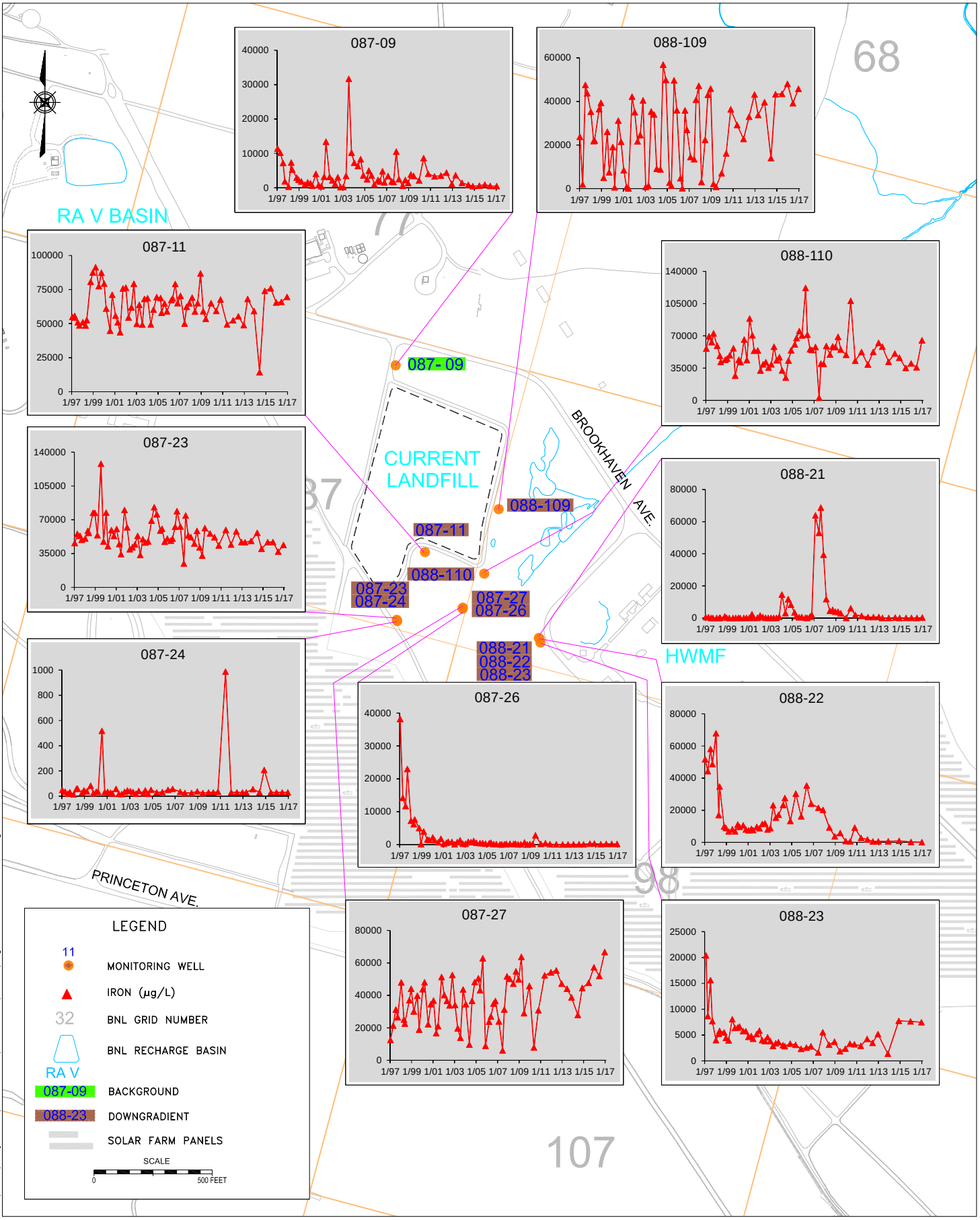
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

CURRENT LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 6



BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

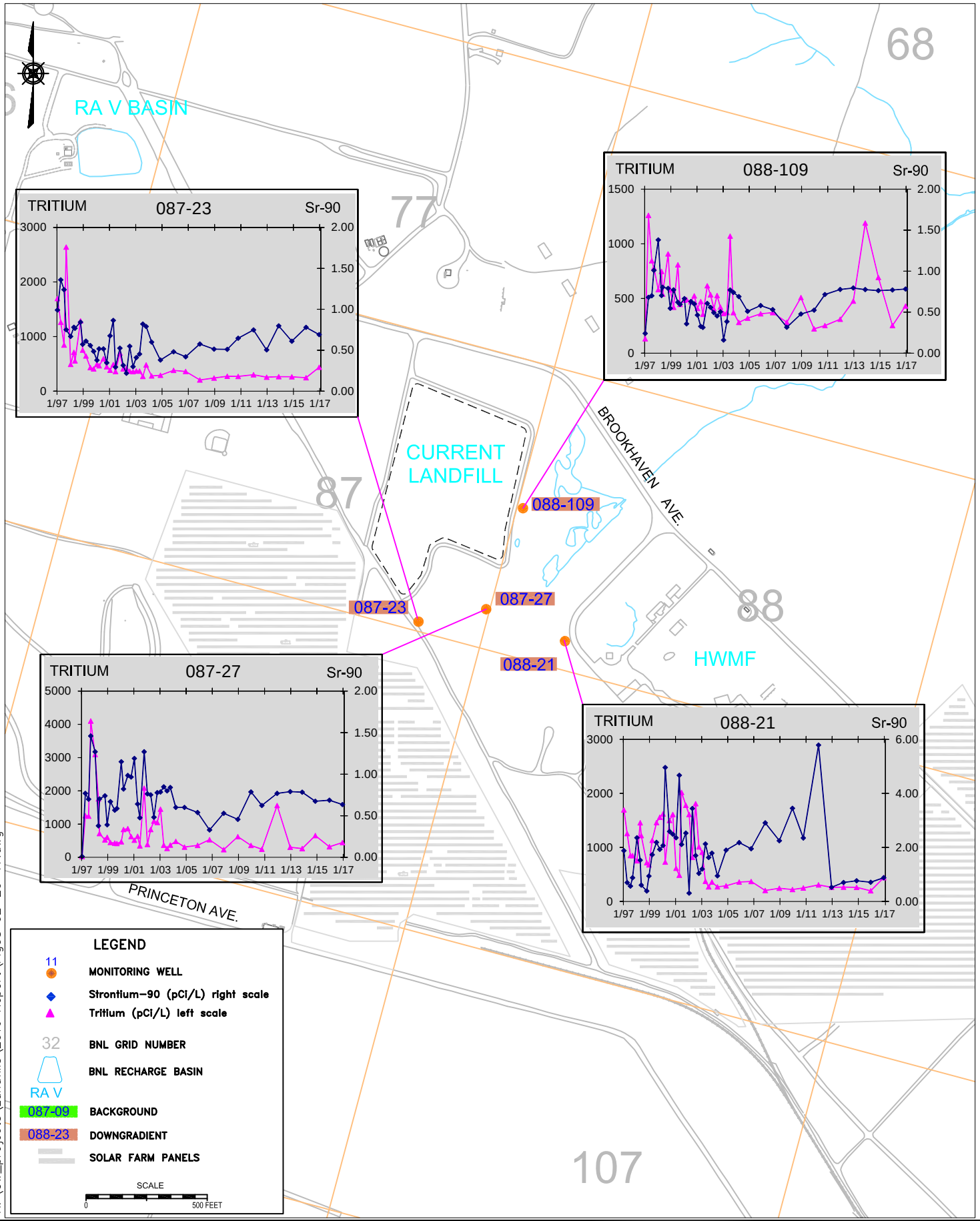
TITLE:

CURRENT LANDFILL IRON TREND PLOTS

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 7



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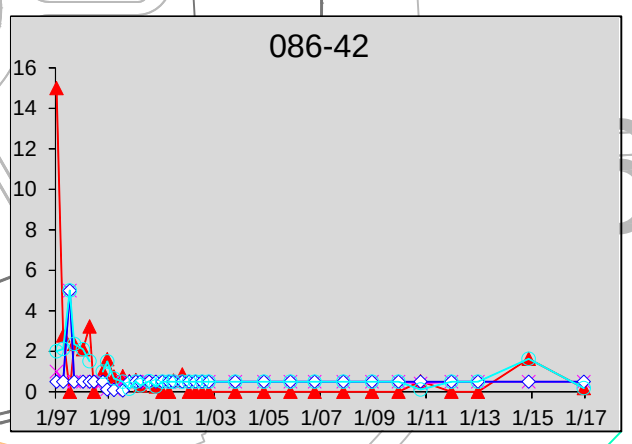
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

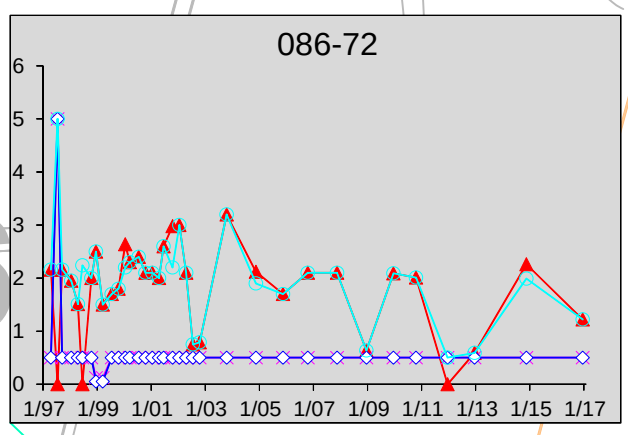
TITLE:

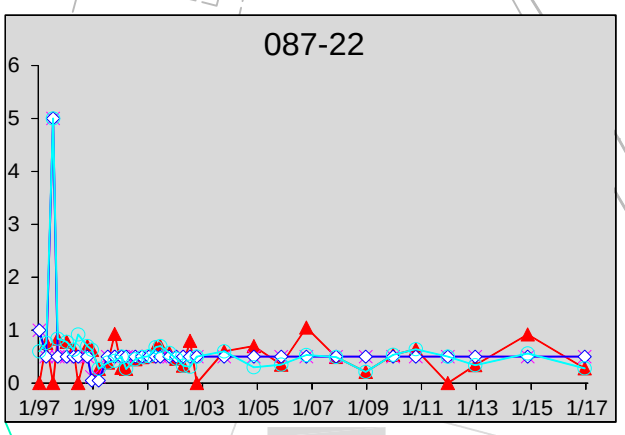
CURRENT LANDFILL
TRITIUM AND SR-90 TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

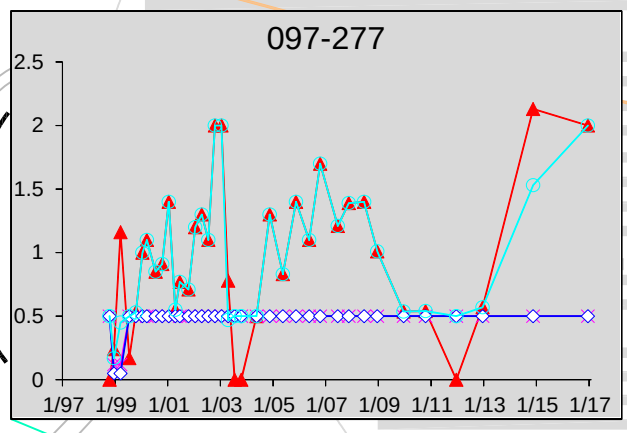
DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

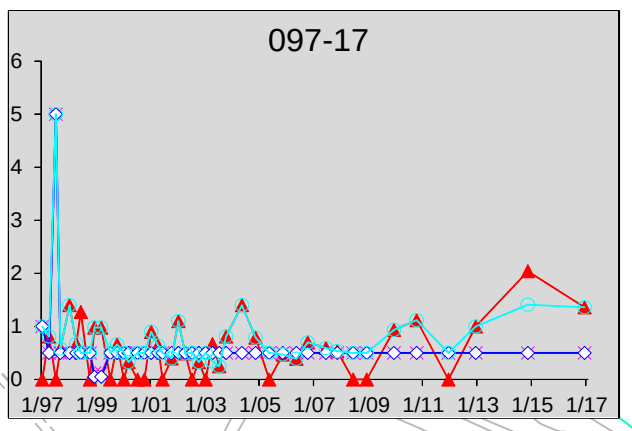
FIGURE NO.: 8

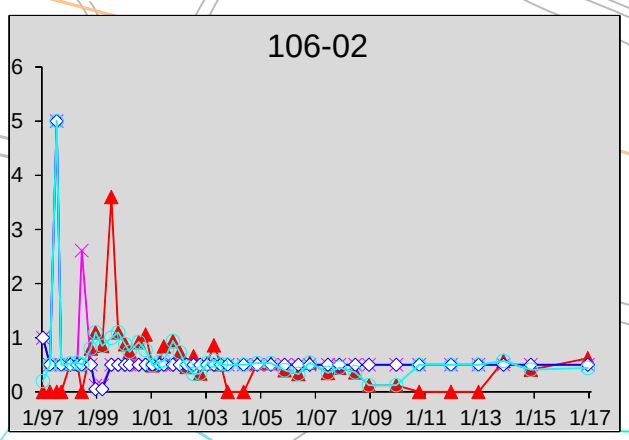


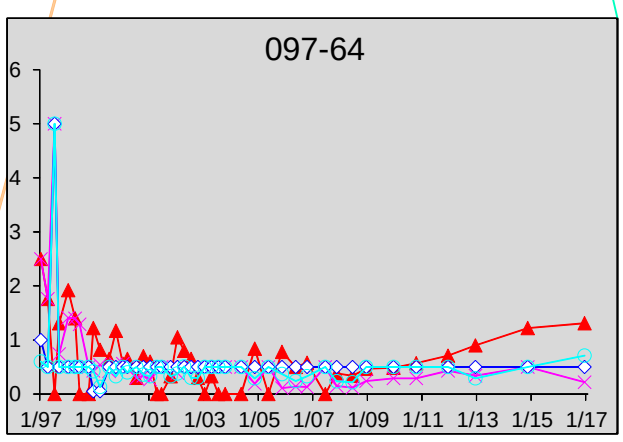


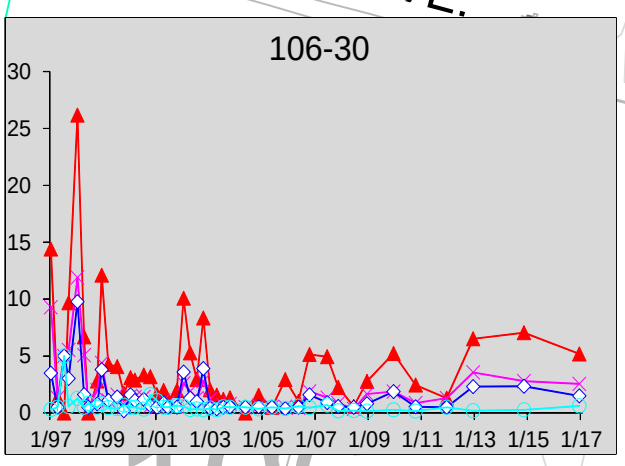












086-42

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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BROOKHAVEN NATIONAL LABORATORY

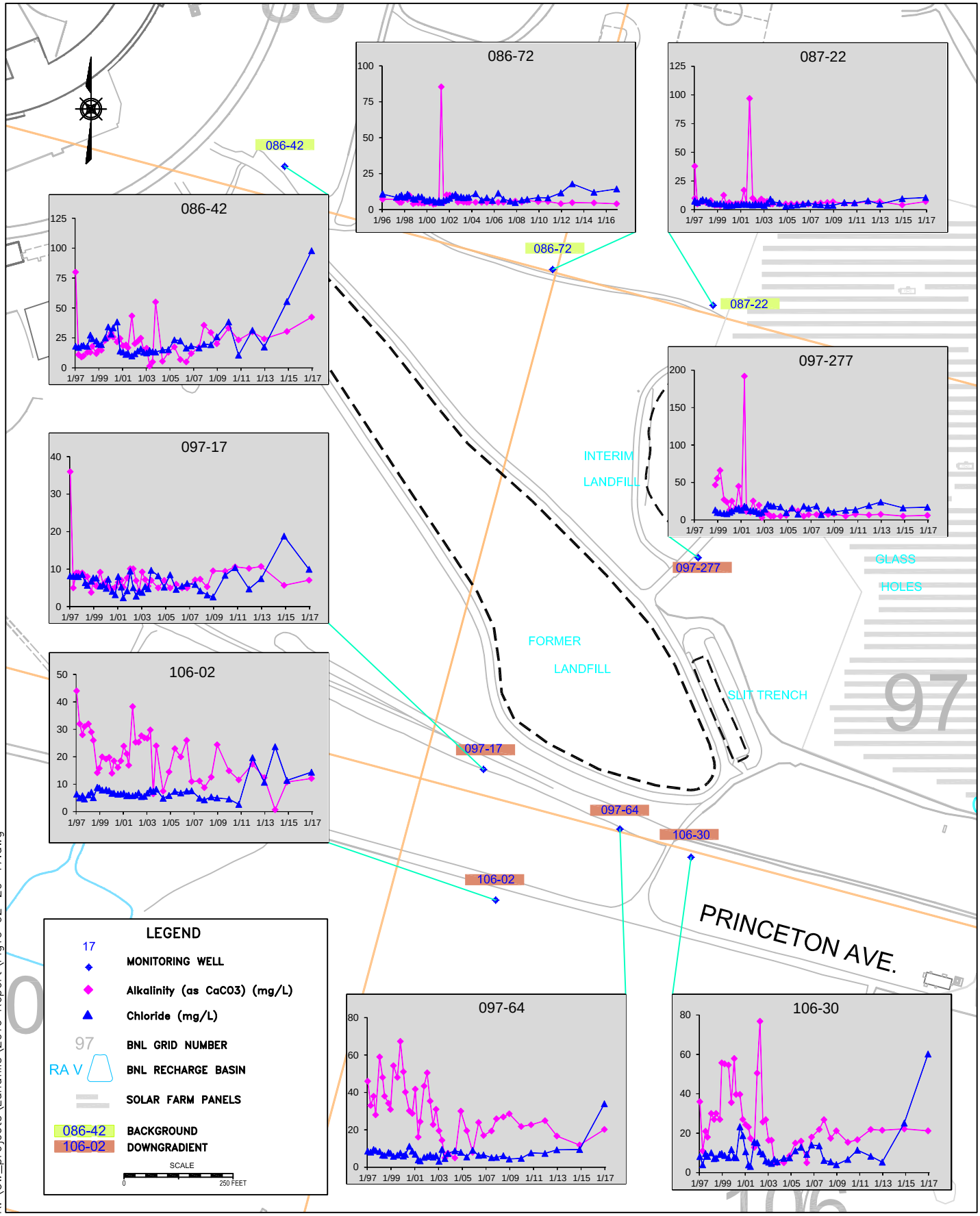
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FORMER LANDFILL
VOC TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 9



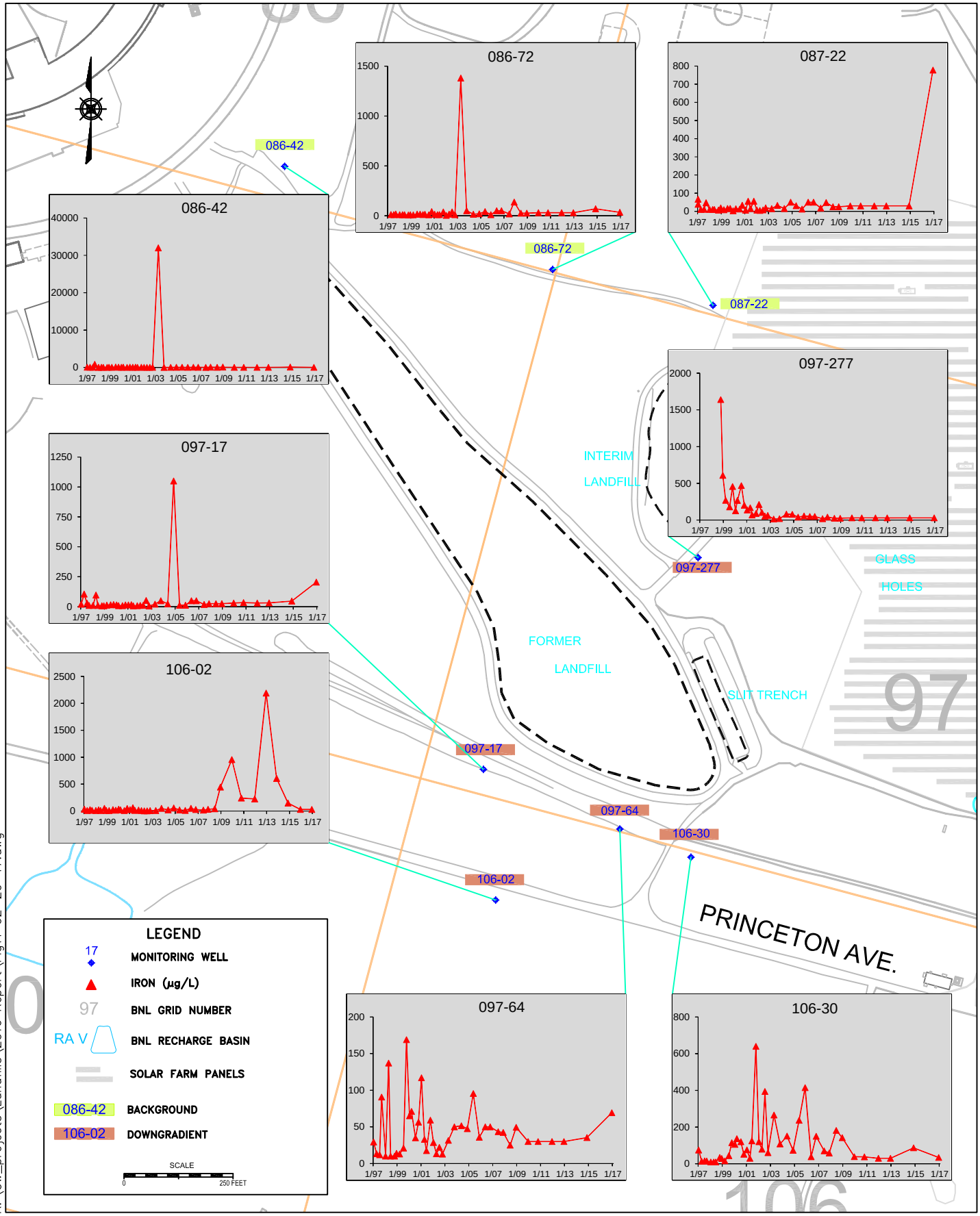
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FORMER LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 10



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BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

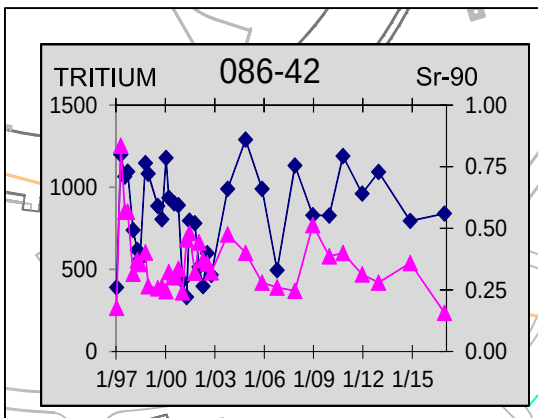
TITLE:

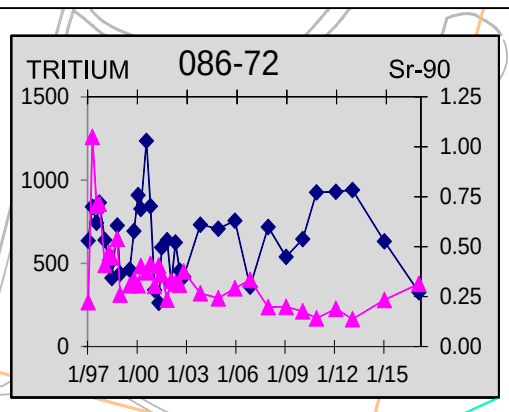
FORMER LANDFILL IRON TREND PLOTS

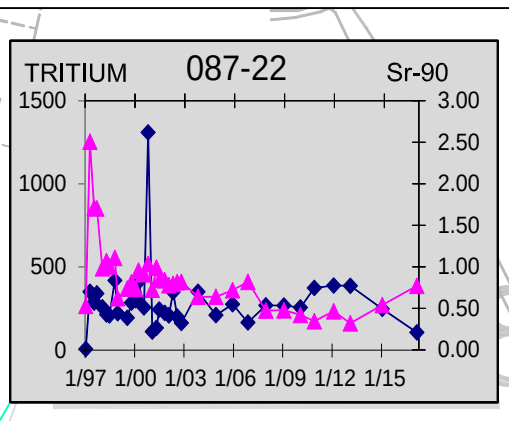
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

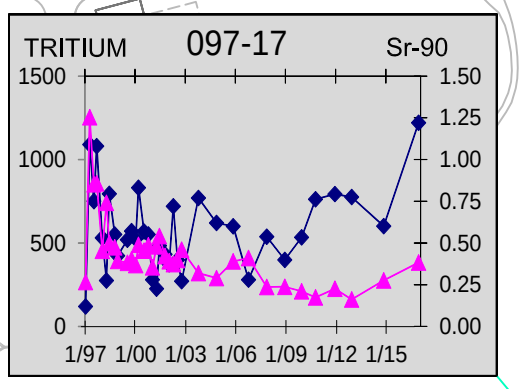
DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

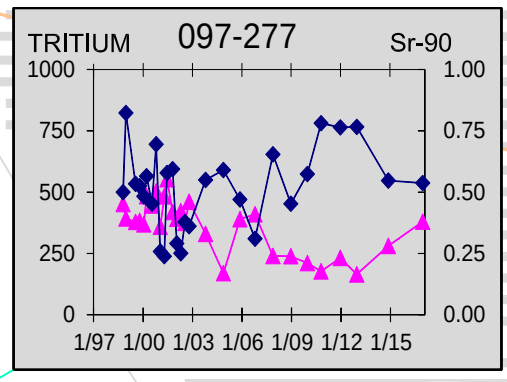
FIGURE NO.: 11

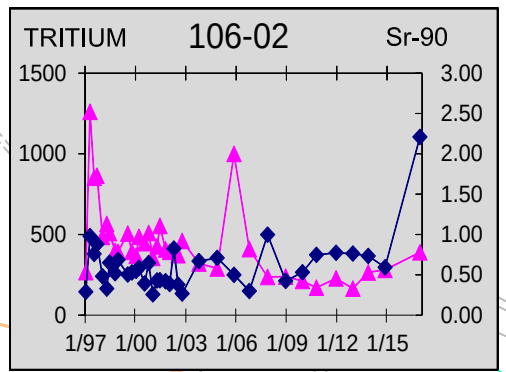


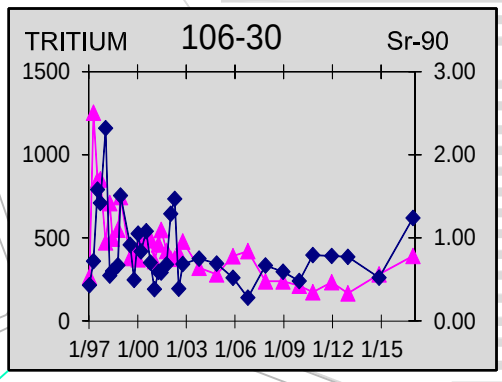


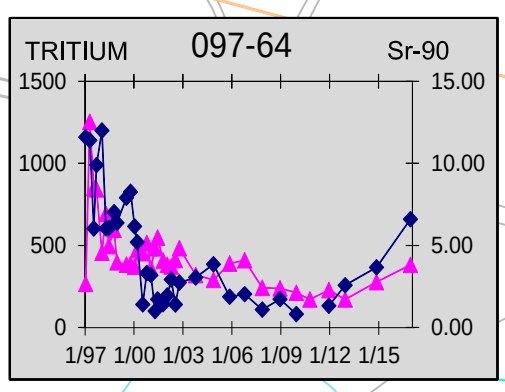


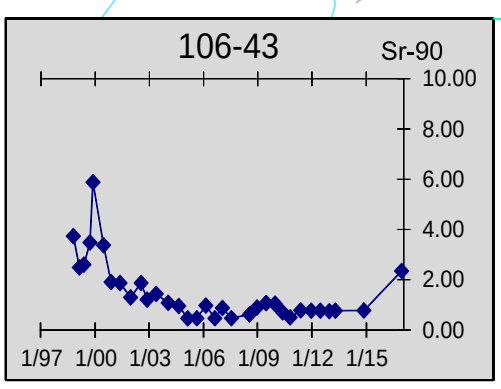


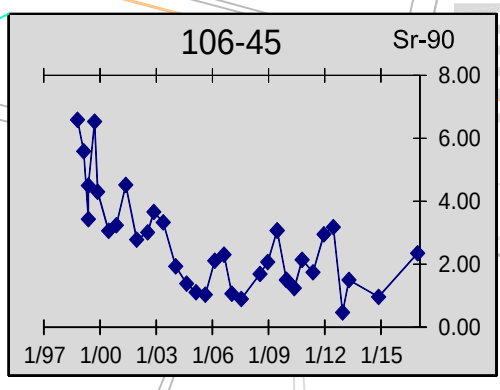


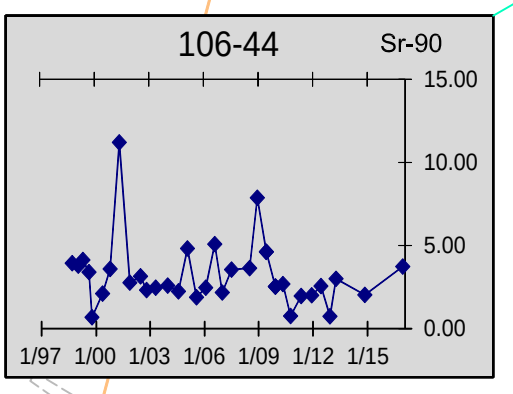


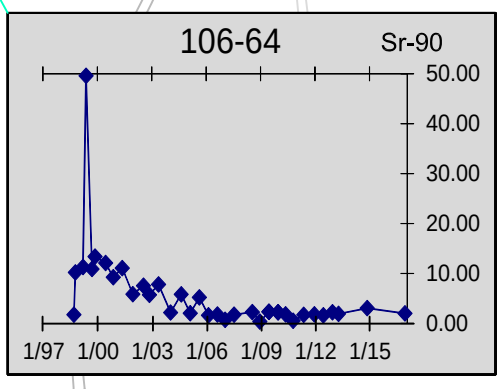


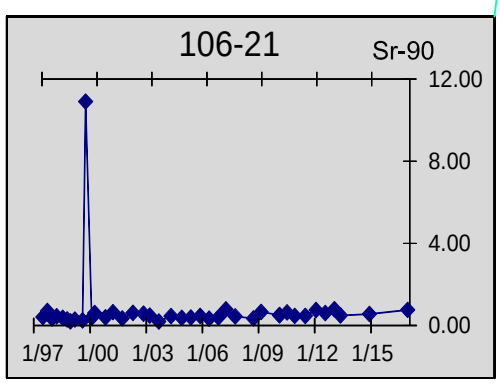


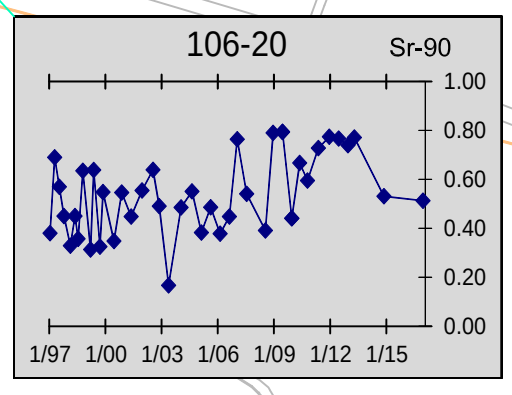












086-42
086-72
087-22
097277
097-17
097-64
106-30
106-02
106-44
106-64
106-43
106-45
106-21
106-20

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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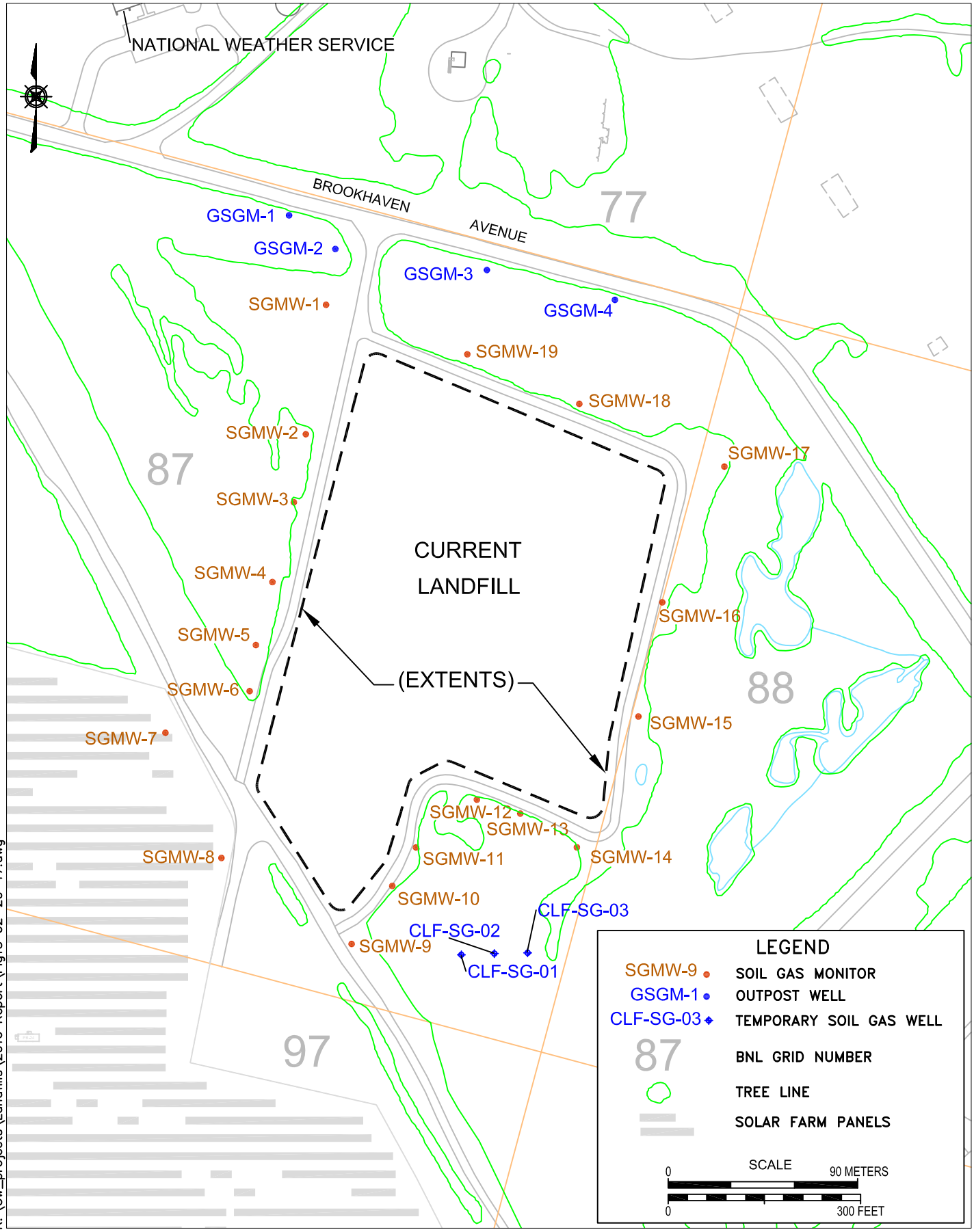
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:
FORMER LANDFILL
TRITIUM AND SR-90 TREND PLOTS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VS: HS.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 12



BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

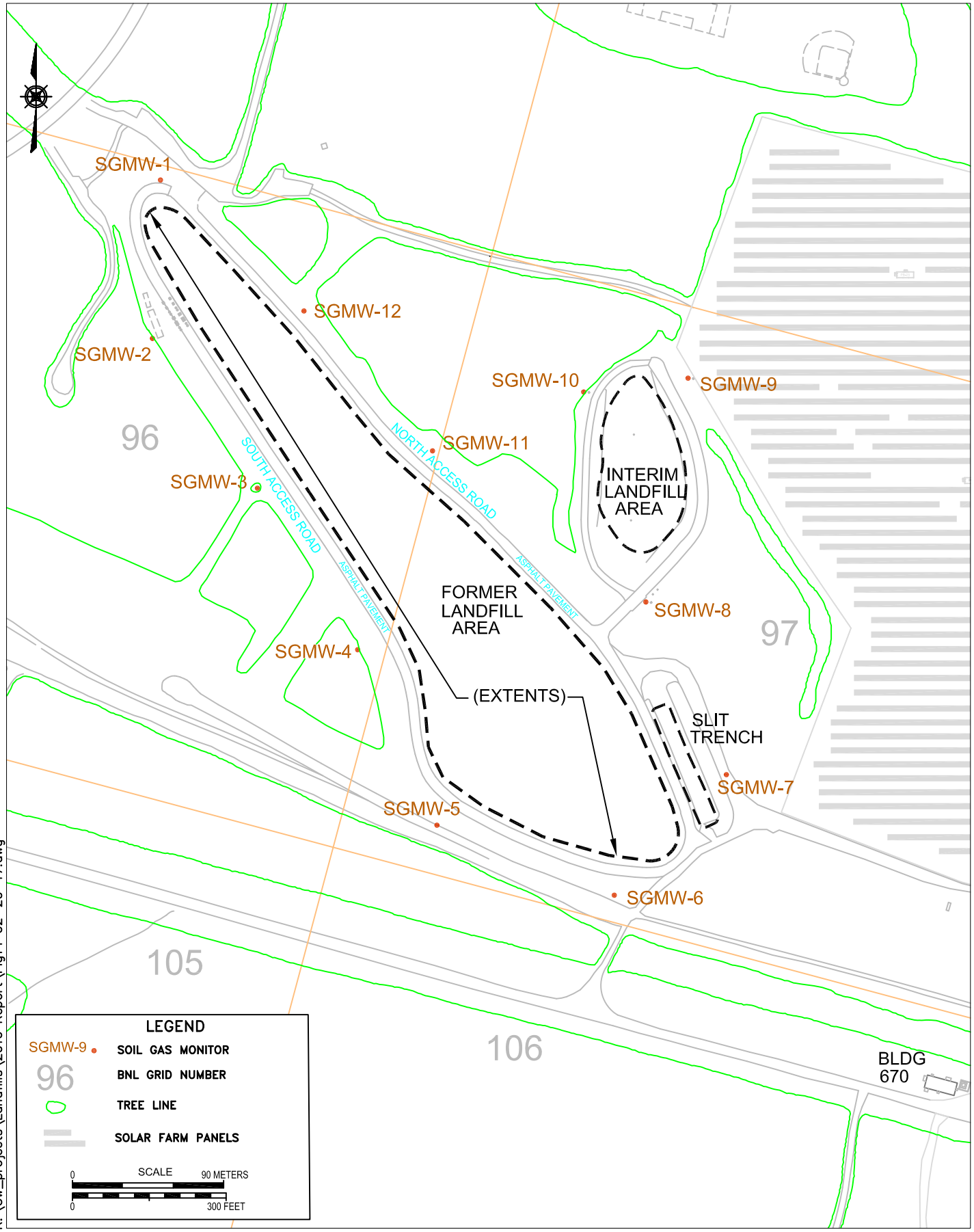
TITLE:

CURRENT LANDFILL SOIL GAS MONITOR LOCATION MAP

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
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
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/17	–
CHKD:	APPD:	REV.:	NOTES:
JEB	RFH	–	–

FIGURE NO.: 14

Appendix A

Wooded Wetland Report

WOODED WETLAND REPORT
2016

1.0 INTRODUCTION

This report summarizes the final sampling event of sediment and surface water sampling collected from the 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 . The wetland consists of two ponds, the North and South ponds. These ponds sit on top of a clay layer that allows them to collect surface runoff water, while the bottoms of the ponds remain above the water table. The 2016 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 2016 from two ponds (North and South) in the Wooded Wetland area. An additional investigation around locations SD-12 and SD-2001 was conducted in 2015 in response to comments from the NYSDEC. Based on the results of that investigation and results from BNL tiger salamander population studies, it was agreed that the 2016 sampling event would conclude the sediment and surface water sampling of the Wooded Wetlands. Every effort will be made in the future to allow the Wooded Wetlands to remain undisturbed so that layers of new organic matter can build up and separate the tiger salamanders from the pond sediments.

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 is typically 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, 2012, 2014, and 2016, seven surface water and seven sediment samples were taken from the ponds (Table 1).

In 2015, eleven sediment samples were collected around three points. Historically, SD-1 and SD-2001 had elevated levels of lead and mercury. Four sample locations were placed around each of these sample points and sediment samples were collected. Additionally, three sediment samples were collected around a piece of ductwork that was located adjacent to the southwest side of the North Pond. Results of this sampling event were discussed in the *2015 Environmental Monitoring Report, Current and Former Landfill Areas* (BNL 2016).

Analytical data for all years routine monitoring are provided in Tables 3 through 6. The following discussions focus on the findings of the 2016 sampling season.

2.0 GENERAL PROCEDURES

2.1 Environmental Sampling Procedures

Sampling was conducted by BNL on May 12, 2016, 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 2016 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 2016 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 2016 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.

The individual results from the North Pond locations SD-11 and SD-2001 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. The copper, lead, manganese, mercury and zinc results for SD-12 were above either the background value and/or the benchmark maximum sediment concentration. The mercury result for SD-12 was above the background value and/or the benchmark maximum sediment concentration. The average metals concentrations were below the background sediment concentrations for all metals. Mercury had an average concentration slightly above the benchmark maximum sediment concentration. The average mercury concentration was 0.19 mg/kg compared to the benchmark maximum sediment concentration of 0.17 mg/kg. This result is consistent with historical data.

Overall, the 2016 results are consistent with previous year's average metals concentrations.

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 2016. 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). All sample concentrations were below the critical concentrations for the 2016 sampling event.

4.0 CONCLUSIONS & RECOMMENDATIONS

Overall, the results obtained from the May 2016 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 2016 were similar to those collected since 2001, so the averages can be directly compared for the parameters analyzed. No substantive effect due to leached metals from the landfill is evident in the sediments or surface water.

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 average 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.

As agreed to in the *2015 Environmental Monitoring Report, Current and Former Landfill Areas* (BNL 2016), the sediment and surface water sampling program will be discontinued. Every effort will be made in the future to allow the Wooded Wetlands to remain undisturbed so that layers of new organic matter can build up and separate the tiger salamanders from the pond sediments.

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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TABLES

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

Sediment Sample Locations																
Pond Sampled	**2016 Sample Designation**	**2014 Sample Designation**	**2012 Sample Designation**	**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-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-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	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-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	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-12	SD-12	SD-D	NS	SD-12
North	NS	NS	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	SD-2001	SD-2001	NS	NS	NS	NS

Surface-Water Sample Locations																
Pond Sampled	**2016 Sample Designation**	**2014 Sample Designation**	**2012 Sample Designation**	**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 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-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	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	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	SW-4	SW-4	NS	NS	SW-4
North	SW-5N	SW-5N	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	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	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	May-14	May-16
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	9530	8630
(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	0.632 U	0.538 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	1.37 B	1.26 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	25.6	18.4
	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	0.562 B	0.263 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	0.197 B	0.163 U
	Calcium	NS	915 B	343 B	432 B	554 B	727 *	394 *N	1110 N	NS	459	294	205 U	777	450	446 N	307
	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	11.2	9.95
	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	2.17	2.5
	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	9.09	7.22
	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	6060 N	5330
	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	27.1	21.3 N
	Magnesium	NS	487 B	1150	1890	2,240	1,420	2,080 *N	1,310 *	NS	2,110 *	1320	2330 *EN	1650	2250	1470	1200
	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	55.9	44.9
	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	0.0773 B	0.0522
	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	7.34	5.71
	Potassium	NS	238 B	397 B	653 B	891	602	889 N	734 E*N	NS	956	409 *	715	646	850	524	417
	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	0.566 U	0.463 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	0.191 U	0.163 U
	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	25 B	43.9
	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	0.149 B	0.148 B
	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	20.3	18.1
	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	31.2	24.2 *
	Cyanide	NS	NA	0.489	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
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	1670	2350
(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	0.402 U	0.442 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	0.359 B	0.502 B
	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	3.33	4.75
	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	0.123 B	0.134 U
	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	0.122 U	0.134 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	57.5 N	119
	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	1.88	3.56
	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	0.367 B	0.774
	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	0.755 B	1.71
	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	936 N	1520
	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	4.34	10.1 N
	Magnesium	NS	596 B	568 B	250	2,750	245	214 *N	300 *	NS	503 *	192	218 *	155	338	214	518
	Manganese	NS	29.3	39.3	10.4	144	13.4 *	9.87 *N	15 *	NS	24 *	8	9.7 *	17.5	13.6	8.99	16.3
	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*	0.0097 B	0.0105 B	0.0129 B	0.0231
	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	1.31	2.49
	Potassium	NS	273 B	268	103 B	1,240	94	100 N	137 E*N	NS	243	61 *	50.1 *	99	115	76.3	125
	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	0.454 U	0.45 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	0.122 U	0.134 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	8.54 U	30.3 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	0.0826 U	0.0818 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	2.69	4.89
	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	4.64	9.44 *
	Cyanide	NS	NA	1.27	NA	NA	NA	NA	NA	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	May-14	May-16
SD-16	Aluminum	5110 *	NS	NS	1,780	1,240	2,660	716 *	6,120 *	NS	2310	6620 *N	3910 *	6670	3210	2690	2900
	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	0.421 U	0.565 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	0.574 B	0.727 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	6.25	10
	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	0.169 B	0.171 U
	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	0.128 U	0.171 U
	Calcium	125 B	NS	NS	216 B	137 B	451 *	62 *N	2160 N	NS	144	619	616 N	525	347	80.3 N	632
	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	3.53	3.12
	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	0.62 B	0.892
	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	2.4	5.19
	Iron	1,730 *	NS	NS	1,120	817	1320	569 *N	2960	NS	1520 EN	3810 N	2000 *N	2620	2080	1690 N	1620
	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	9.83	12.9 N
	Magnesium	259 B	NS	NS	239 B	185 B	293	109 *N	580 *	NS	357 *	837	378 *	534	532	382	321
	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	14.3	20.2
	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	0.0251 B	0.0487
	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	2.08	2.7
	Potassium	138 U	NS	NS	113 B	114 B	133	54.5 N	414 E*N	NS	225	240 *	131 *	281	252	131	175
	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	0.43 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	0.128 U	0.171 U
	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	8.93 U	43.6
	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	0.0782 U	0.0985 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	6.29	8.19
	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	7.24	19.6 *
	Cyanide	3.1 U	NS	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
SD-17	Aluminum	3550	NS	3,500	2,840	1,440	1,870	2,870 *	1,080 *	NS	11100	4390 *N	2280 *	9370	2140	2080	7840
(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	0.461 U	0.516 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	0.322 B	0.944 B
	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	6.44	22.4
	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	0.154 B	0.233 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	0.14 U	0.156 U
	Calcium	80.4 B	NS	785	240 B	136 B	183 *	137 *N	107 N	NS	636	878	1030 N	488	441	297 N	816
	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	2.47	8.4
	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	0.4 B	2.04
	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	1.52	6.86
	Iron	1,590	NS	1,750	757	740	742	1210 *N	614	NS	3580 EN	2260 N	1580 *N	4280	1390	1230 N	4010
	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	5.06	15.8 N
	Magnesium	389 B	NS	665 B	157 B	162 B	169	280 *N	128 *	NS	1190 *	379	301 *	827	287	276	927
	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	13.3	41.4
	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	0.0114 B	0.0439
	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	1.57	4.92
	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	105	260
	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	0.437 U	0.573 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	0.14 U	0.156 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	10.9 B	52.6
	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	0.0795 U	0.133 B
	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	3.41	12.9
	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	8.1	33.4 *
	Cyanide	3.2 U	NS	0.243	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS

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SD-11	Aluminum	4030 *	NS	NS	5,070	12,800	11,400	6,920 *	7,570 *	NS	18500	2710 *N	9280 *	9820	18800	10000	10600
	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	1.24 U	2.26 B
	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	2.7 B	2.07 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	45.6	43.9
	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	0.581 B	0.341 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	0.445 B	0.333 B
	Calcium	125 B	NS	NS	225 B	389	1750 *	551 *N	467 N	NS	2220	502	907 N	1380	2520	1910 N	2040
	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	8.89	9.06
	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	1.19 B	1.93
	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	22.2	18.9
	Iron	763 *	NS	NS	938	1,260 B	4,920	1,570 *N	1,660	NS	5190 EN	1100 N	2840 *N	3210	6920	3190 N	3410
	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	56.9	44.1 N
	Magnesium	168 B	NS	NS	118 B	295 B	819	262 *N	293 *	NS	1270 *	112	548 *	457	1210	540	591
	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	21.9	22.3
	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	0.153 B	0.139
	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	6.33	6.24
	Potassium	171 U	NS	NS	131 B	308 B	488	285 N	355 E*N	NS	917	90.2 *	285 *	331	614	333	339
	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	1.75 B	1.62 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	0.375 U	0.305 U
	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	52.3 B	101
	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	0.248 U	0.276 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	23	20.7
	Zinc	R	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS	83 *	13.3 *	32.3	38	78.9	55.6	72 *
	Cyanide	3.9 U	NS	NS	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
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	18900	34600
(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	0.802 U	0.844 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	7.97	6.85
	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	59.1	88.5
	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	1 B	0.943 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	0.243 U	0.256 B
	Calcium	379 B	NS	1,820	964	2,780	2,020 *	2,260 *N	1,870 N	NS	1500	2310	2170 N	2500	2370	2870 N	2630
	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	19.3	31.8
	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	5	9.1
	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	30.1	46.8
	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	14600 N	20200
	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	135	129 N
	Magnesium	943 B	NS	2220	207 B	3,020	1,610	885 *N	672 *	NS	630 *	3530	3970 *	1760	1960	2140	2910
	Manganese	56 *	NS	125	4.12	147	73.3 *	48.4 *N	33.4 *	NS	23 *	134	148 *	97.3	96.7	102	113
	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	0.43	0.351
	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	14	21
	Potassium	292 B	NS	766 B	130 B	1,300 B	774	611 N	570 E*N	NS	551	1000 *	881 *	611	608	531	797
	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	0.939 B	0.961 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	0.438 B	0.802 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	48.3 B	136
	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	0.424 B	0.552 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	46.7	80.5
	Zinc	R	NS	123	5.91	137	70.3	38.4	22.3 *	NS	23.4 *	127 *	179	87.1	76.9	104	133 *
	Cyanide	3.1 U	NS	0.708	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS

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SD-13	Aluminum	9,100 *	NS	8,360	2,090	NS	NS	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	NS	NS
	Arsenic	1.2 B,	NS	1 B	0.46 B	NS	NS	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	NS	NS
	Beryllium	0.26 U	NS	0.08 B	0.055 U	NS	NS	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	NS	NS
	Calcium	640 B	NS	993 B	264 B	NS	NS	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	NS	NS
	Cobalt	2.7 B	NS	0.64 B	0.124 B	NS	NS	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	NS	NS
	Iron	7,040 *	NS	3,340	781	NS	NS	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	NS	NS
	Magnesium	1190 B	NS	312	108 B	NS	NS	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	NS	NS
	Mercury	0.06 B	NS	0.13	0.054	NS	NS	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	NS	NS
	Potassium	300 B	NS	209 B	113 B	NS	NS	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	NS	NS
	Silver	1.1 U	NS	0.35 B	0.113 U	NS	NS	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	NS	NS
	Thallium	0.26 U	NS	1.5 U	0.254 U	NS	NS	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	NS	NS
	Zinc	27.9	NS	17.3	4.35	NS	NS	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	NS	NS
SD-2001	Aluminum	NS	NS	NS	1,780	46,900	15,800	14,900 *	11,600 *	NS	7030	16300 *N	11800 *	46400	5100	17800	6880
	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	1.22 U	0.768 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	5.47	1.79 B
	Barium	NS	NS	NS	5.25	118	52.9	52.1	45.4	NS	56.9	59.1 *	42.7 *	114	37.3	57.9	44
	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	0.935 B	0.262 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	0.371 U	0.233 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	2870 N	1970
	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	17.6	6.85
	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	2.94	1.5
	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	33.3	11.7
	Iron	NS	NS	NS	1,120	25,600	8,720	7,180 *N	5,690	NS	2540 EN	9510 N	7130 *N	27700	3410	9140 N	4530
	Lead	NS	NS	NS	9.99	145	57 N	60.8	29.7 *	NS	9 *	59.3 *	76.9 *EN	137	10	110	21.3 N
	Magnesium	NS	NS	NS	239 B	3,940	1,210	853 *N	675 *	NS	315 *	1180	837 *	3810	179	1180	321
	Manganese	NS	NS	NS	12.4	158	69.3 *	41.2 *N	40.4 *	NS	21.3 *	57.9	41 *	166	16.1	71.3	29.6
	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	0.335	0.0683
	Nickel	NS	NS	NS	1.43	28	10.1	9.12	5.73 *	NS	3.6 *	9.5	7.8	28.5	3.05	11.5	4.64
	Potassium	NS	NS	NS	113 B	1,780	603	599 N	570 E*N	NS	354	457 *	327 *	1280	152	524	220
	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	2.23 B	1.26 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	0.641 B	0.233 U
	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	76.9 B	76.6
	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	0.376 B	0.183 B
	Vanadium	NS	NS	NS	5.26 B	107	40	41.5	22.6 *	NS	7.9 *	34.7 *	34.5 *	109	7.62	56.7	10.6
	Zinc	NS	NS	NS	7.34	186	76.6	42.1	24.2 *	NS	17.7 *	57 *	49.9	203	13.1	75.7	23.1 *
	Cyanide	NS	NS	NS	NA	NA	NA	NA	NA	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	May-14	May-16

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	May-14	May-16
SW-5S	Aluminum	38,600	304	1,240	253	385	445 E	429	434	210	301	305	278	199	184	263	267
(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	1 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	1.7 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	5.01	4.59
	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	0.2 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	0.11 U	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	2720	3220
	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	2 U	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	0.282 B	0.248 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	1.48	1.77
	Iron	44,000	347	3,740	1,120	1,100	890	779	1,210	832	757	1220	1170	696	390	506	352
	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	0.591 B	0.519 B
	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	851	1190
	Manganese	1,410	96.1	383	181	339	227	153	176	21	171	215	217	220	174	200	204
	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	0.067 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	1.22 B	1.11 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	1990	2250
	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	1.5 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	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	3310	3100
	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	0.45 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	1.29 B	1.62 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	12.1	13.9
SW- 6	Aluminum	NS	762	110,000	503	523	541 E	413	346	539	405	284	372	284	287	363	319
(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	1 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	1.7 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	6.95	5.07
	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	0.2 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	0.11 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	2110	2050
	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	2 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	0.453 B	0.445 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	1.81	1.71
	Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470	890	928	885	886	668	752	384
	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	0.78 B	0.5 U
	Magnesium	NS	2,690 B	13200	860 B	810 B	982 B	642 B	624 B	883	717	626 E	710 E	635	943	698	827
	Manganese	NS	256	1,280	107	106	133	78.1	71.6	124	89.3	62.4	92.1	76.9	93.1	93.5	88.5
	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	0.067 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	1.86 B	1.57 B
	Potassium	NS	2,610 B	9,990 B	1,940 B	2,360 B	1,920 B	1,180 B	1,270 B	2,240	1,380	1880	2010	1600	2180	1890	1770
	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	1.5 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	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	3410	3320
	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	0.45 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	1.91 B	1.39 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	27.6	13.8

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	May-14	May-16
SW- 16	Aluminum	NS	NS	NS	NS	928	521 E	446	543	618	1110	208	245	234	236	335	299
	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	1 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	1.7 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	7.04	5.45
	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	0.2 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	0.11 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	3590	3990
	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	2 U	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	0.422 B	0.221 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	2.22	2
	Iron	NS	NS	NS	NS	2,320	1,330	1,430	1,480	1,820	2,200	1010	985	2820	643	863	387
	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	1.11 B	0.697 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	929	1220
	Manganese	NS	NS	NS	NS	156	158	116	83.6	120	136	69	76.3	176	97	109	43.3
	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	0.067 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	1.58 B	1.37 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	1680	1420
	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	1.5 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	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	3210	3220
	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	0.45 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	2.58 B	1.53 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	25.1	11.9
SW-17	Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357	310	163	166	192	168	319	211
(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	1 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	1.7 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	6.35	6.08
	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	0.2 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	0.11 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	3530	6020
	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	2 U	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	0.358 B	0.2 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	1.57	2.29
	Iron	NS	NS	5,410	NS	5430	1650	1120	1170	2320	1130	1010	1020	1550	626	762	337
	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	1.13 B	0.596 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	958	1570
	Manganese	NS	NS	240	NS	469	150	157	102	136	110	71.3	77.9	104	83.9	82.8	40.4
	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	0.067 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	1.26 B	1.08 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	1420	1260
	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	1.5 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	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	3130	2910
	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	0.45 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	1.55 B	1.24 B
	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	15.3	8.85 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	May-14	May-16
SW- 4	Aluminum	829	NS	NS	179 B	1,500	1,320 E	326	258	356	461	198	315	217	332	339	416
	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	1 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	1.7 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	7.19	7.03
	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	0.2 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	0.11 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	4030	4280
	Chromium	5 JUE	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	2 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	0.339 B	0.299 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	2.08	2.43
	Iron	3930	NS	NS	2,600	3,670	1,760	499	996	1,640	702	1190	1100	1500	966	666	640
	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	1.2 B	1.07 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	1420	1620
	Manganese	146	NS	NS	135	312	69.5	39.6	112	47.2	23.1	36.6	35	47.1	49.8	33.3	27.7
	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	0.067 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	1.21 B	1.24 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	1240	1320
	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	1.5 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	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	3870	4330
	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	0.45 U	0.858 B
	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	1 U	1.93 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	19.2	15.9
SW- 5N	Aluminum	NS	NS	945	179 B	575	238 E	1180	133 B	449	394	186	300	189	130	247	99.6
(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	1 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	1.7 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	7.2	5.62
	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	0.2 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	0.11 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	10500	14200
	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	2 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	0.23 B	0.179 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	2.13	1.14
	Iron	NS	NS	6,900	2,600	1,290	598	1,070	564	2,000	776	2030	942	1290	734	712	360
	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	0.938 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	2000	2870
	Manganese	NS	NS	146	135	103	33.2	35.2	18	60	33.8	145	32.2	50.3	61.1	39.4	33.5
	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	0.067 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	1.2 B	0.5 U
	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	1000	363
	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	1.5 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	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	2530	2070
	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	0.45 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	1.75 B	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	16.6	3.5 U

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	May-14	May-16
SW- E	Aluminum	NS	NS	1,170	NS	NS	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	NS	NS
	Arsenic	NS	NS	2.7 U	NS	NS	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	NS	NS
	Beryllium	NS	NS	0.14 U	NS	NS	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	NS	NS
	Calcium	NS	NS	8,410	NS	NS	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	NS	NS
	Cobalt	NS	NS	2.3 B	NS	NS	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	NS	NS
	Iron	NS	NS	6,970	NS	NS	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	NS	NS
	Magnesium	NS	NS	2,610 B	NS	NS	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	NS	NS
	Mercury	NS	NS	0.12 U	NS	NS	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	NS	NS
	Potassium	NS	NS	4,140 B	NS	NS	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	NS	NS
	Silver	NS	NS	0.89 U	NS	NS	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	NS	NS
	Thallium	NS	NS	5.6 U	NS	NS	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	NS	NS
	Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SW- 2001	Aluminum	NS	NS	NS	NS	466	427 E	4090	119 B	412	1720	1230	85.7	224	109	251	114
	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	1 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	1.7 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	7.16	4.89
	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	0.2 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	0.11 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	9300	11200
	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	2 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	0.325 B	0.127 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	2.08	1.02
	Iron	NS	NS	NS	NS	1,190	753	3,420	558	1,850	1,990	2080	724	853	680	627	414
	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	0.93 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	1870	2260
	Manganese	NS	NS	NS	NS	130	103	105	18.9	60.4	328	98.8	27	181	83.9	86	24.1
	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	0.067 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	1.04 B	0.532 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	975	727
	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	1.5 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	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	2520	2280
	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	0.45 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	1.92 B	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	18.8	3.5 U

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	May-14	May-16

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)															
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	May-14	May-16
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	9.09	7.22
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	27.1	21.3 N
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	55.9	44.9
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	0.077 B	0.0522
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	31.2	24.2 *

Contaminant	SD-16															
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	May-14	May-16
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	2.4	0.892
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	9.83	12.9 N
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	14.3	20.2
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	0.025 B	0.0487
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	7.24	19.6 *

Contaminant	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	May-14	May-16
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	0.755 B	1.71
Lead	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	4.34	10.1 N
Manganese	NS	29.3	39.3	10.4	144	13.4	9.87 *N	15 *	NS	24 *	8	9.7 *	17.5	13.6	8.99	16.3
Mercury	NS	0.1 U	0.18	0.049	0.004	0.011 B	0.006 U	0.019	0.0122	0.014 BN	0.026 B	0.017 B*	0.01 B	0.011 B	0.013 B	0.0231
Zinc	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	4.64	9.44 *

Contaminant	SD-17 (SD-A)															
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	May-14	May-16
Copper	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	1.52	6.86
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	5.06	15.8 N
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	13.3	41.4
Mercury	0.02 B	NS	0.03 U	0.038	0.003	0.014	0.012 B	0.012 B	0.0618	0.037 BN	0.064 B	0.067 B*	0.09 B	0.024 B	0.011 B	0.0439
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	8.1	33.4 *

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	May-14	May-16		
Copper	8.03	3.36	4.7	4.2	6.3	5.4	NS	5.3	6.6	6.62	9.535	3.03025	3.44125	4.1705	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	11.6	15.0	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	23.12	30.70	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	0.03	0.04	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	12.795	21.66	122	158

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

North Pond

Contaminant	SD-11															
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	May-14	May-16
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	22.2	18.9
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	56.9	44.1 N
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	21.9	22.3
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	0.153 B	0.139
Zinc	NA	NS	NS	15.4	16.5	61.7	22.3	20.4 *	NS	83 *	13.3	32.3	38	78.9	55.6	72 *

Contaminant	SD-13 (SD-E)															
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	May-14	May-16
Copper	8.1	NS	9.5	1.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	15.8 NJ	NS	39.9	5.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	85	NS	16.0	4.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mercury	0.08 B	NS	0.13	0.054	NS	NS	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	NS	NS

Contaminant	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	May-14	May-16
Copper	NA	NS	45	7.41	37	26.4	20.2	13.6	NS	11.5 *	38.1 *	48.9	24.4	22.8	30.1	46.8
Lead	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	135	129 N
Manganese	56	NS	125	4.12	147	73.3	48.4 *N	33.4 *	NS	23 *	134	148 *	97.3	96.7	102	113
Mercury	0.03 B	NS	####	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	0.43	0.351
Zinc	NA	NS	123	5.91	137	70.3	38.4	22.3 *	NS	23.4 *	127 *	179	87.1	76.9	104	133 *

Contaminant	SD-2001															
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	May-14	May-16
Copper	NS	NS	NS	NS	53	23.3	21.2	11.6	NS	8.5 *	22.4 *	20.1	67.2	7.13	33.3	11.7
Lead	NS	NS	NS	NS	145	57 N	60.8	29.7 *	NS	9 *	59.3 *	76.9 *EN	137	10	110	21.3 N
Manganese	NS	NS	NS	NS	158	69.3	41.2 *N	40.4 *	NS	21.3 *	57.9	41 *	166	16.1	71.3	29.6
Mercury	NS	NS	NS	NS	0.727	0.192	0.18	0.098	0.116	0.13 BN	0.14 B	0.23 *	0.735	0.036 B	0.335	0.0683
Zinc	NS	NS	NS	NS	186	76.6	42.1	24.2 *	NS	17.7 *	57 *	49.9	203	13.1	75.7	23.1 *

North Pond Averages

NOTES:

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	May-14	May-16		
Copper	27.1	4.7	32.2	23.7	16.3	10.9	NS	18.6	21.8	27.8	36.7	21.2	28.5	25.8	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	100.6	64.8	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	65.1	55.0	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	0.31	0.19	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	78.4	76.0	122	158

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

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

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	May-14	May-16
Aluminum	NS	304	1,240	253	385	445 E	429	434	210	301	305	278	199	184	263	267
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	0.11 U	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	0.282 U	0.248 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	1.48	1.77 B
Iron	NS	347	3,740	1,120	1,100	890	779	1,210	832	757	1220	1170	696	390	506	352 B
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	0.591 B	0.519 B
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	0.067 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	1.22 B	1.11 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	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	12.1	13.9

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	May-14	May-16
Aluminum	NS	762	110,000	503	523	541 E	413	346	539	405	284	372	284	287	363	319
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	0.11 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	0.453 B	0.445 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	1.81	1.71
Iron	NS	692	77,500	2,140	1,250	725	522	595	1,470	890	928	885	886	668	752	384
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	0.78 B	0.5 U
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	0.067 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	1.86 B	1.57 B
Silver	NS	NA	2.3 B	0.94 U	0.871 U	1.15 U	1.70 U	0.84 U	1.00 U	0.20 U	0.2 U	0.2 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	27.6	13.8

Contaminant	SW-16															
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	May-14	May-16
Aluminum	NS	NS	NS	NS	928	521 E	446	543	618	1110	208	245	234	236	335	299
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	0.11 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	0.422 B	0.221 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	2.22	2
Iron	NS	NS	NS	NS	2,320	1,330	1,430	1480	1820	2200	1010	985	2820	643	863	387
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	1.11 B	0.697 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	0.067 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	1.58 B	1.37 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	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	25.1	11.9

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

Contaminant	SW-17 (SW-A)															
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	May-14	May-16
Aluminum	NS	NS	1,260	NS	612	441 E	490	485	357	310	163	166	192	168	319	211
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	0.11 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	0.358 B	0.2 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	1.57	2.29
Iron	NS	NS	5,410	NS	5,430	1,650	1,120	1170	2320	1,130	1010	1020	1,550	626	762	337
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	1.13 B	0.596 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	0.067 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	1.26 B	1.08 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	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	15.3	8.85 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	2014	2016	**Conc.[1]**
Aluminum	762	37,500	378	612	487	445	452	431	532	240	265	227	219	320	274	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	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	0.38	0.28	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	1.77	1.94	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	721	365	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	0.90	0.60	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	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	1.48	1.28	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	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	20.0	12.1	23.8

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

North Pond

Contaminant	SW-4															
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	May-14	May-16
Aluminum	829	NS	NS	193 B	1,500	1320 E	326	258	356	461	198	315	217	332	339	416
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	0.11 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	0.339 B	0.299 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	2.08	2.43
Iron	3,930	NS	NS	2,790	3,670	1,760	499	996	1640	702	1190	1100	1500	966	666	640
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	1.2 B	1.07 B
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	0.067 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	1.21 B	1.24 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	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	19.2	15.9

Contaminant	SW-E															
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	May-14	May-16
Aluminum	NS	NS	1,170	NS	NS	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	NS	NS
Cobalt	NS	NS	2.3 B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper	NS	NS	6.4	NS	NS	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	NS	NS
Lead	NS	NS	4.5 B	NS	NS	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	NS	NS
Nickel	NS	NS	6.7	NS	NS	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	NS	NS
Zinc	NS	NS	38.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Contaminant	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	May-14	May-16
Aluminum	38,600	NS	945	179 B	575	238 E	1180	133 B	449	394	186	300	189	130	247	99.6
Cadmium	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	0.11 U	0.11 U
Cobalt	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	0.23 B	0.179 B
Copper	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	2.13	1.14
Iron	4,400	NS	6,900	2,600	1,290	598	1070	564	2000	776	2030	942	1290	734	712	360
Lead	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	0.938 B	0.5 U
Mercury	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	0.067 U	0.067 U
Nickel	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	1.2 B	0.5 U
Silver	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	0.2 U	0.2 U
Zinc	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	16.6	3.5 U

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

Contaminant	SW-2001															
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	May-14	May-16
Aluminum	NS	NS	NS	NS	466	427 E	4090	119 B	412	1720	1230	85.7	224	109	251	114
Cadmium	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	0.11 U	0.11 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	0.325 B	0.127 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	2.08	1.02
Iron	NS	NS	NS	NS	1,190	753	3420	558	1850	1990	2080	724	853	680	627	414
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	0.93 B	0.5 U
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	0.067 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	1.04 B	0.532 B
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	0.2 U	0.2 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	18.8	3.5 U

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	2014	2016	**Conc.[1]**
Aluminum	762	945	186	847	662	1,865	170	406	858	538	234	210	190	279	210	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	0.11	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	0.30	0.20	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	2.1	1.5	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	668	471	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	1.02	0.69	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	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	1.15	0.76	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	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	18.20	7.63	23.8

NOTES:

[1] Final Focused Ecological Risk Assessment (FERA) for Operable Unit I/VI (CDM 8/98)

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

NA Not available

NS Not sampled

U Analyte was analyzed for but not detected.

N - Spike sample recovery was not within control limits

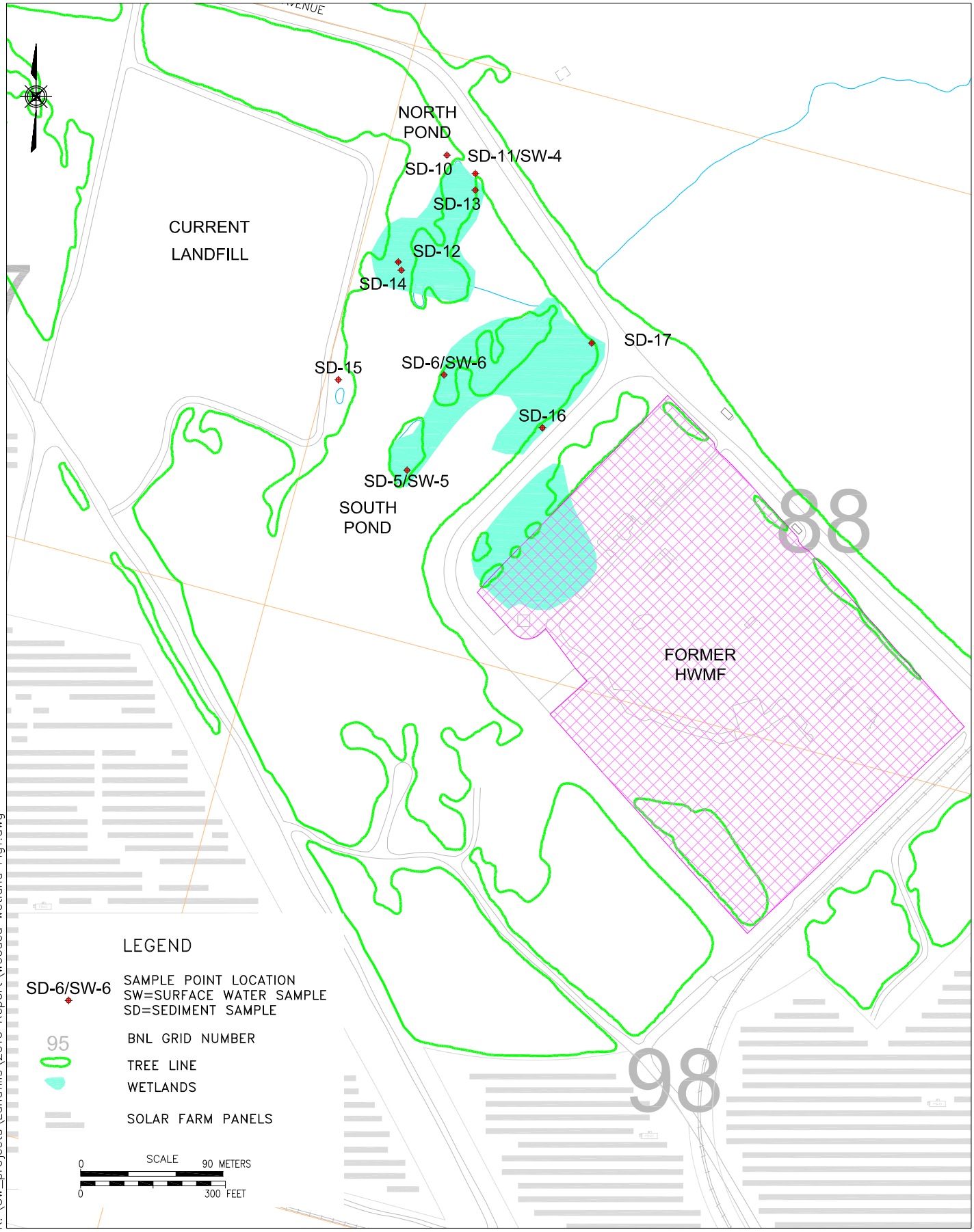
J - Estimated value; concentration below method detection limit.

* - Duplicate precision is not within control limits.

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

Shaded results exceededthe Critical Concentration.

FIGURES



BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

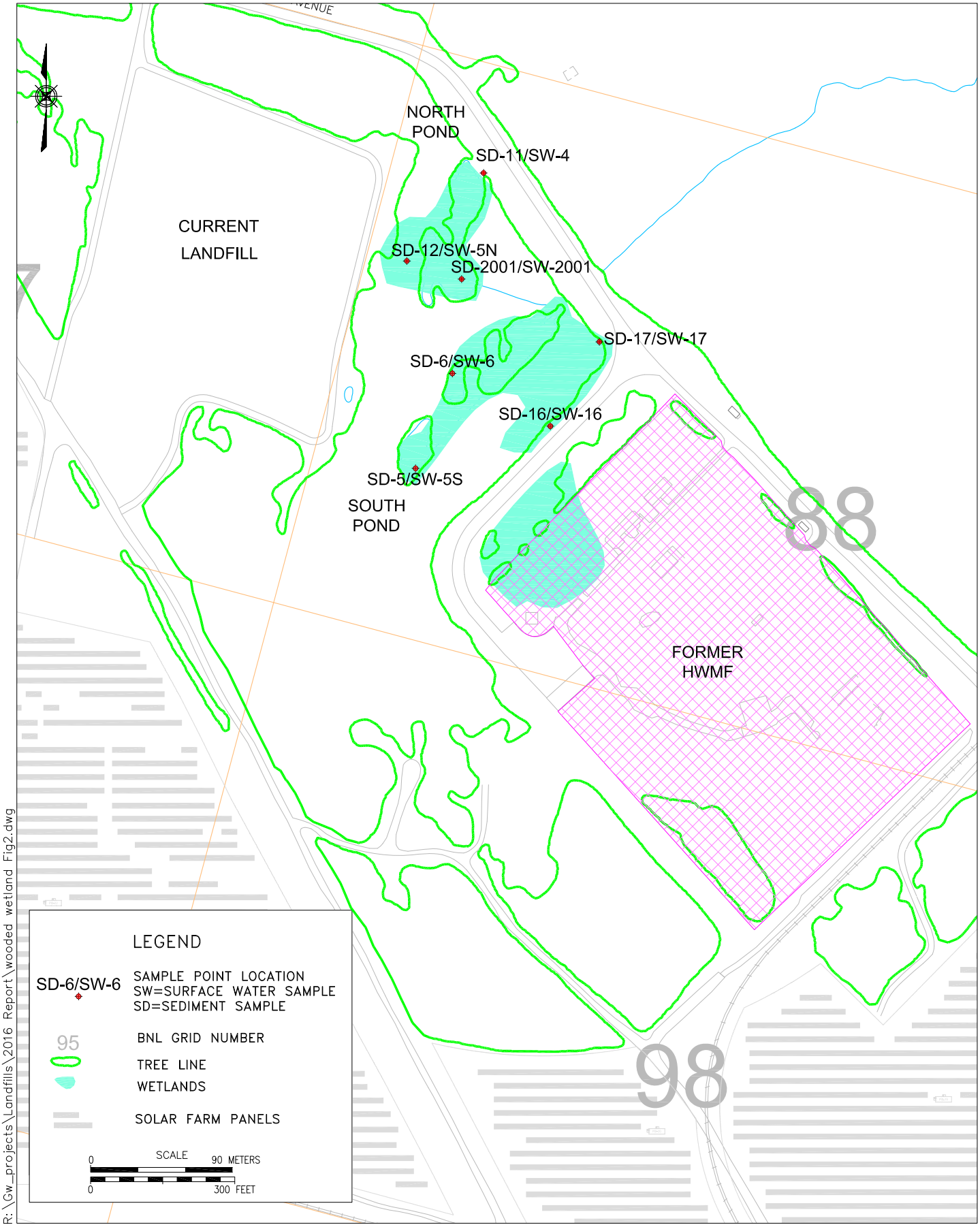
TITLE:

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

2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/15	–
CHKD:	APPD:	REV.:	NOTES:
JEB	WRD	–	–

FIGURE NO.: 1



R:\Gw_projects\Landfills\2016 Report\wooded wetland Fig2.dwg

BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:
WOODED WETLANDS
SEDIMENT AND SURFACE WATER
SAMPLING LOCATIONS
2016 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/20/15	–
CHKD:	APPD:	REV.:	NOTES:
JEB	WRD	–	–

FIGURE NO.: 2

Appendix B

Soil-gas Sampling Field Notes

Location (108)	3/17/16/3/18/11 Well ID	CH4%	Lel%	H2S ppm	Time/comments
1A	087-62	6.4	>100 128	5	0900
1B	087-78	6.3	>100 126	2	0908
1C	087-79	5.3	>100 106	1	0920
2A	087-63	30.9	>100 618	0	0928
2B	087-80	33.1	>100 662	17	0936
2C	087-81	36.0	>100 720	3	0945
3A	087-64	17.5	>100 350	2	0950
3B	087-82	42.8	>100 856	15	1000
3C	087-83	41.9	>100	31	1010
4A	087-65	37.3	>100 746	0	1006
4B	087-84	35.6	>100 712	4	1013
4C	087-85	27.1	>100 542	5	1025
5A	087-66	25.7	>100 514	0	1035
5B	087-86	26.0	>100 520	4	1039
5C	087-87	19.1	>100 382	2	1050
6A	087-67	3.1	61	0	1106
6B	087-88	27.9	>100 558	4	1114
6C	087-89	25.5	>100 510	3	1124
7A	087-68	0	0	0	0905
7B	087-90	0	0	0	0910
7C	087-91	0	0	0	0922
8A	087-69	0	0	0	0930
8B	087-92	0	0	0	0939
8C	087-93	0	0	0	0948

3/17/11 Location	Well ID	CH4%	Lel%	H2S ppm	Time (109)
SCAN-9A	087-70	0.1	2%	0	1136
9B	087-94	0.0	0	0	1143
9C	087-95	0.0	0	0	1155
10A	087-71	0.9	18	0	1310
10B	087-96	7.1	>100 142	0	1320
10C	087-97	6.9	>100 138	8	1330
11A	087-72	34.6	>100 692	8	1336
11B	087-98	24.6	>100	1	1344
12A	087-73	0.1	3%	0	1352
12B	087-99	20.7	>100 414	0	1359
13A	087-74	0	0	0	1403
13B	087-100	0	0	0	1410
14A	087-75	0	0	0	1415
14B	087-101	2.4	>100	9	1422
15A	088-111	2.0	41%	0	1429
15B	088-114	22.4	>100 448	9	1434
16A	088-112	0	0	0	1440
16B	088-115	0	0	0	water 1448
17A	088-113	0	0	0	water 1453
17B	087-116	0	0	0	water 1457
18A	087-76	0	0	0	water 1506
18B	087-102	0	0	0	1510
19A	087-77	0	0	0	1518
19B	087-103	1.4	28	0	1526

108

60° 30% [illegible] 29.65 Hg 8? 3/17–3/18/16

		LEL FD	CH_4 %	LEL %	H_2 ppm	
6.5GM	1A	NO FD	0	0	0	1020
	1B	↓	0	0	0	1029
	1C		0	0	0	1039
	2A		0	0	0	1618
	2B		0	0	0	1609
	2C		0	0	0	3/17/16 1600
	3A		0	0	0	1550
	3B		0	0	0	1546
	4A		0	0	0	1539
↓	4B	↓	0	0	0	1535

S/P

		60° 30%	CH4%	LEL%	H2S ppm	
		Wind SO				
SGM	1A	NO TD	0	0	0	1020
	1B		0	0	0	1029
	1C		0	0	0	1039
	2A		0	0	0	1618
	2B		0	0	0	1609
	2C		0	0	0	1600
	3A		0	0	0	1550
	3B		0	0	0	1546
	4A		0	0	0	1539
	4B		0	0	0	1535

Location	Well ID	CH4%	LEL%	H2S ppm	Time
SGM - 1A	087-62	5.3	>100 108	1	0900
1B	087-78	5.4	>100 108	0	0906
1C	087-79	4.5	90%	0	0916
2A	087-63	39	>100 780	2	0919
2B	087-80	37.6	>100 752	17	0922
2C	087-81	28.1	>100 562	0	0930
3A	087-64	24.1	>100 482	21	0940
3B	087-82	34.6	>100 692	0	0946
3C	087-83	22.2	>100 444	1	0956
4A	087-65	37.4	>100 748	0	1008
4B	087-84	25.9	>100 518	0	1010
4C	087-85	16.7	>100 334	0	1020
5A	087-66	0	0	0	1028
5B	087-86	22.4	>100 449	0	1038
5C	087-87	11.7	>100 234	0	1050
6A	087-67	0.1	3	0	1100
6B	087-88	27.5	>100 550	2	1108
6C	087-89	24.9	>100 498	1	1119
7A	087-68	0	0	0	0830
7B	087-90	0	0	0	0843
7C	087-91	0	0	0	0855
8A	087-69	0	0	0	0920
8B	087-92	0	0	0	0932
8C	087-93	0	0	0	0947

(112) 6/1/16 Current Loading DM

Location	Week ID	CH4 %	LEL %	H2S	Time/comments
SGM 9A	087-70	0	0	0	1302
9B	087-94	0	0	0	1308
9C	087-95	0	0	0	1318
10A	087-71	0	0	0	1323
10B	087-96	90	>100 180	0	1329
10C	087-97	8.1	>100 162	0	1340
11A	087-72	10.5	>100 210	13	1346
11B	087-98	10.4	>100 208	3	1400
12A	087-73	35.8	>100 716	25	1406
12B	087-99	25.8	>100 516	0	1419
13A	087-74	0.1	2	0	1433
13B	087-100	24.9	>100 498	0	1439
14A	087-75	0	0	0	1444
14B	087-101	0	0	0	1450
15A	088-111	0	0	0	1500
15B	088-114	22.8	>100 456	0	1508
16A	088-112	0	0	0	1513
16B	088-115	0	0	0	1522 water
17A	088-113	0	0	0	1529
17B	088-116	0	0	0	1536 water
18A	087-76	0	0	0	1540
18B	087-102	0	0	0	1546 water
19A	087-77	0	0	0	1553
19B	087-103	0	0	0	1559

70° 29.55 "Hg 6/2/16 DM (113)
68% Humidity.

Location	Week ID	CH4 %	LEL %	H2S	Time/comments
GSAM 1A	No ID	0	0	0	1115
1B		0	0	0	1110
1C		0	0	0	1100
2A		0	0	0	1032
2B		0	0	0	1029
2C		0	0	0	1020
3A		0	0	0	1005
3B		0	0	0	1015
4A		0	0	0	0950
4B		0	0	0	0959

(114) 9/14/16 Current Landfill 29.93 "Hg 86°

Location	Well ID	CH4 %	LEL %	H2S	Comments
SGM-1A	087-62	0	0	0	0900
1B	087-78	0	0	0	0906
1C	087-79	0.6	13	0	0917
2A	087-63	8.2	>100 164	0	0920
2B	087-80	43.7	>100 874	17	0935
2C	087-81	44.2	>100 884	3	0940
3A	087-64	4.6	100 92	6	0946
3B	087-82	43.2	>60 864	25	1000
3C	087-83	44.4	>100 888	13	1010
4A	087-65	31.8	>100 636	8	1015
4B	087-84	30.6	>100 612	10	1020
4C	087-85	22.5	>100 450	5	1030
5A	087-66	15.8	>100 316	1	1035
5B	087-86	19.0	>100	7	1040
5C	087-87	14.2	>100 284	2	1103
6A	087-67	0.2	4	0	1110
6B	087-88	24.8	>100 496	10	1117
6C	087-89	21.2	>100 424	4	1125
7A	087-68	0	0	0	1030
7B	087-90	0	0	0	1038
7C	087-91	0	0	0	1047
8A	087-69	0	0	0	1005
8B	087-92	0	0	0	1010
8C	087-93	0	0	0	1020

9/15/16

(125) 9/14/16 Current Landfill

Location	Well ID	CH4 %	LEL %	H2S ppm	Time
SGM-9A	087-70	0	0	0	1301
9B	087-94	0	0	0	1310
9C	087-95	0	0	0	1319
10A	087-71	2.4	48	0	1341
10B	087-96	8.0	> 160	1	1346
10C	087-97	8.2	> 164	6	1356
11A	087-72	9.3	> 186	19	1405
11B	087-98	12.2	> 244	0	1415
12A	087-73	31.5	> 630	21	1425
12B	087-99	32.4	> 648	4	1435
13A	087-74	16.2	> 324	5	1438
13B	087-100	33.5	> 670	5	1448
14A	087-75	0	0	0	1450
14B	087-101	0	0	0	1457
15A	087-111	0	0	0	1501
15B	088-114	30.3	> 606	11	1509
16A	088-112	12.3	>100 246	0	1519
16B	088-115	0	0	0	1526 VAV
17A	088-113	0	0	0	1534
17B	088-116	0	0	0	1540 VAV
18A	087-76	0	0	0	1544
18B	087-102	2.7	>100 54	0	1550 VAV
19A	087-77	0	0	0	1558
19B	087-103	2.4	50	0	1609

(116) 70°F 30.18" Hg

Current weather

Cal check of Gem 2000.5

9/18/16

Location	Well ID	CH4	LEL%	H2S	Cont. Run
GSGM 1A	No ID	0	0	0	1206
1B	↓	0	0	0	1159
1C	↓	0	0	0	1150
2A	↓	0	0	0	1140
2B	↓	0	0	0	1135
2C	↓	0	0	0	1128
3A	↓	0	0	0	1118
3B	↓	0	0	0	1108
4A	↓	0	0	0	1050
4B	↓	0	0	0	1040

(116) 70°F 30.18" Hg Event Landfill — Cal check of Gem 2.0 @ 1515/16

Location	Well ID	CH4	CO2	H2S	Comments
GCSM-1A	No ID	0	0	0	1206
1B		0	0	0	1159
1C		0	0	0	1150
2A		0	0	0	1140
2B		0	0	0	1135
2C		0	0	0	1128
3A		0	0	0	1118
3B		0	0	0	1108
4A		0	0	0	1050
4B		0	0	0	1040

Cal check of Gem 2.0 ✓

Current Landfill — 8/4 12:18 (117)

Location	Well ID	CH4%	CO2%	H2S	Comments
SCSM-1A	087-62	0	0	0	0909
1B	087-78	0.1	3%	0	0920
1C	087-79	0.7	14%	0	0930
2A	087-63	21.5	>100 430	10	0938
2B	087-80	35.2	>100 704	40	0948
2C	087-81	35.3	>100 706	2	1006
3A	087-64	7.5	>100 150	3	1015
3B	087-82	38.5	>100 770	21	1025
3C	087-83	34	>100 680	41	1035
4A	087-65	33.2	>100 664	1	1046
4B	087-84	29.7	>60	5	1055
4C	087-85	21.8	>100 436	4	1110
5A	087-66	18.5	>100 370	0	1400
5B	087-86	20.6	>100 412	4	1406
5C	087-87	15.8	>100 316	0	1416
6A	087-67	3.2	>100 64	0	1420
6B	087-88	25.2	>100 504	5	1430
6C	087-89	22.5	>100 450	2	1441
7A	087-68	0	0	0	1020
7B	087-90	0	0	0	1026
7C	087-91	0	0	0	1036
8A	087-69	0	0	0	1040
8B	087-92	0	0	0	1046
8C	087-93	0	0	0	1054

12/1

(118)

12/6/17 - 12/7

Location	Well ID	Current Landfill CH4 %	Current Landfill LEL %	H2S	Time/comments
Stem 9A	087-70	0	0	0	1106
9B	087-94	0	0	0	1112 12/7
9C	087-95	0	0	0	1122
10A	087-71	0	0	0	1450
10B	087-96	1.9	39	1	1456
10C	087-97	3.7	74	2	1508 12/6
11A	087-92	5.2	>100 104	23	1515
11B	087-98	2.4	59	0	1523
12A	087-73	25.6	>100 512	45	1528
12B	087-99	20.8	>100 416	2	1534
13A	087-74	0.1	2	0	1540
13B	087-100	16.7	>100 334	0	1547
14A	087-75	0	0	0	1553
14B	087-101	0	0	0	1559
15A	088-111	0	0	0	0905 12/7
15B	088-114	35	69	0	0915
16A	088-112	0	0	0	0919
16B	088-115	0	0	0	0925 water
17A	088-113	0	0	0	0935 water
17B	088-116	0	0	0	0942 water
18A	087-76	0	0	0	0949 water
18B	087-102	24.9	>100 438	1	0955
19A	087-77	0	0	0	1000
19B	087-103	0	0	0	1006

Weather on 12/7 Outside 29.92 "Hg 47°F

12/7

(119)

Location	Well ID	Current Landfill CH4 %	Current Landfill LEL %	H2S	Time
GSG-1A	No ID	0	0	0	1409
1B		0	0	0	1359
1C		0	0	0	1352
2A		0	0	0	1344
2B		0	0	0	1338
2C		0	0	0	1330
3A		0	0	0	1320
3B		0	0	0	1328
4A		0	0	0	1305
4B		0	0	0	1313

8/17/16 81°F Former Landfill JM 29.85 "Hg

(39)

Cal check CGA Lee

Location	Well ID	CH4 %	LEL %	H2S PPM	Time / Cont'd
SGM 1A	096-41	0	0	0	0945
1B	096-42	0	0	0	1000
2A	096-43	0	0	0	1006
2B	096-44	0	0	0	1010
3A	096-45	0	0	0	1019
3B	096-46	0	0	0	1029
4A	096-47	0	0	0	1036
4B	096-48	0	0	0	1048
5A	097-50	0	0	0	1054
5B	097-51	0	0	0	1105
6A	097-52	0	0	0	1113
6B	097-53	0	0	0	1122
7A	097-54	0	0	0	1130
7B	097-55	0	0	0	1136
8A	097-56	0	0	0	1142
8B	097-57	0	0	0	1149
9A	097-58	0	0	0	1309
9B	097-59	0	0	0	1315

8/17/16 JM

8/17/16 JM Former Landfill (40)

Gem 2000 *

Location	Well ID	CH4 %	LEL	H2S	
SGM -10A	097-60	0	0	0	1340
-10B	097-61	0	0	0	1348
-11A	097-62	0	0	0	1356
-11B	097-63	0	0	0	1400
-12A	096-49	0	0	0	1410
-12B	096 50	0	0	0	1420

JM 8/17/16

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: January 2016

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					
	Cap					
	Gas Vents					
2.0	**Drainage Structures:**					
	Toe Drain					
	Drainage Channels					
	French Drains/Outfalls					
	Subsurface Drainage Pipes/Outfalls					
	Manholes					
	Recharge Areas					
	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: * Could not do Inspection. Snow Covering Landfill & Culverts

Observed Conditions:

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 2-25-16

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: NONE

1. Location: _____

Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-31-16

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 Road

Observed Conditions: Needs to be scraped with Bob Cat

Recommendations: Will call Grounds

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-27-16

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

Time on Site: _____

Time off Site: _____

Weather Conditions: _____

A. Inspection Checklist

	Component	Observed Condition: Excellent	Fair	Poor	Further Action Required: Yes	No
1.0	**Landfill Cap:**					
	Vegetation	X	X		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				
	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: Cap, Channels, Asphalt

Observed Conditions: Need Grass Mowed, Weed Whack Edges, Spray drainage ditches with Weed Killer

Recommendations: Will Call Grounds For Maintenance Work

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-31-16

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 Road

Observed Conditions: Vegetation Growing through Asphalt

Recommendations: Will contact Grounds

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland
Date of Inspection: 6/28/16
Name of Inspector(s): R. Howe, J. Burke, D. Paquette
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 6/25/16	X
Soil (Cap/Cover/Fill)		X			Fill-in ruts, seed	
Other: _____						
2. Drainage Structures:						
Standing Water	X				Dry	X
Toe Drain	X					X
Drainage Channels	X				Control vegetation	
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				Some need clearing	
Groundwater Wells	X					X
Gas Vents	X				No bee nests	X
Other: __						
4. Site Access:						
Asphalt Access Road	X				Seal asphalt cracks	
Crushed-concrete Access Road				X		X
Fence	X					X
Gates/locks	X				secured	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: The grass on the cap was cut last week. An area of minor erosion on the west slope needs to be filled-in and seeded by Facilities and Operations (F&O). Vegetation in the south and west drainage culvert needs to be sprayed, and other vegetation along the east road mechanically cut. The Wooded Wetland had little water. Signs in place and all gates locked. LUIC Factsheet Changes: No changes for Current Landfill or Wooded Wetlands.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-29-16

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

Time on Site: ____ ____

Time off Site: ____ ____

Weather Conditions: Clear/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				
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				
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

1. Location: Landfill, Edges, Culverts, Roads

Observed Conditions: Excessive Vegetation Growth

Recommendations: Will Contact Grounds to weed wack, spray and Scrape Vegetation

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-26-16
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	X				X
	Recharge Areas	X				X
	Monitoring System:					
	Soil Gas Wells	X				X
	Groundwater Wells					
4.0	**Site Access:**					
	Asphalt Access Road	X				X
	Crushed-Concrete Access Road					

B. Description of Further Action Requirements:

1. Location: _____
Observed Conditions: All OK. Vegetation Removal done by Grounds Crew.

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-25-16
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					
	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: All OK
Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-27-16

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
	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: Landfill, Edges & Drainage channels

Observed Conditions: Some excessive vegetation Growth

Recommendations: Monitor

BROOKHAVEN NATIONAL LABORATORY
LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland
Date of Inspection: 10/24/16
Name of Inspector(s): R. Howe, J. Burke, D. Paquette, W. Dorsch, E. Kramer
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				Grass @ good height	X
Soil (Cap/Cover/Fill)	X				One possible burrow	
Other: _____						
2. Drainage Structures:						
Standing Water	X				None	X
Toe Drain	X					X
Drainage Channels	X				Minor veg in channels	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				Basin dry	X
Other: _____						
3. Monitoring System:						
Soil Gas Wells		X			One needs veg clearing	
Groundwater Wells	X				Locked	X
Gas Vents	X				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	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: The grass on the cap was cut in August and is good for the winter. A sand pile on the north slope appears to be the result of a groundhog. Facilities and Operations were requested to add jute matting, top soil, and seed. The Wooded Wetland was dry. All three signs are in place and gates locked. LUIC Factsheet Changes: No changes for Current Landfill or Wooded Wetlands.

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-26-16
Purpose of Inspection: ___ Routine ___ Heavy Rainfall ___ Reported Incident
Time on Site: _____
Time off Site: _____
Weather Conditions: _____

A. Inspection Checklist

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

B. Description of Further Action Requirements:

1. Location: Sand Pile on North Slope. Ground Hog hole needs to be Filled
Observed Conditions: One Soil Gas Well needs Vegetation cleared.

Recommendations: Call Grounds To Fill Hole & remove Vegetation

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-26-16

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	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 OK

Observed Conditions: _____

_____

_____

Recommendations: _____

_____

_____

_____

_____

_____

_____

_____

_____

BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 12-28-16

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
	Gas Vents	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 OK

Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: January 2016

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					
	Cap					
	Gas Vents					
2.0	**Drainage Structures:**					
	Toe Drain					
	Drainage Channels					
	French Drains/Outfalls					
	Subsurface Drainage Pipes/Outfalls					
	Manholes					
	Recharge Areas					
3.0	**Monitoring System:**					
	Soil Gas Wells					
	Groundwater Wells					
4.0	**Site Access:**					
	Asphalt Access Road					
	Crushed-Concrete Access Road					

B. Description of Further Action Requirements:

1. Location:

Observed Conditions: * Could not do Inspection. Snow Covering Landfills & Culverts

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 2-25-16

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: None

1. Location: _____

Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 3-31-16
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, Edges of Cap
Observed Conditions: Small Pine Tree on Cap, Edges

Recommendations: Will Contact Grounds

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-27-16

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				
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				
	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: Landfill Edges, Channels

Observed Conditions: Need Mowing, Weed Whacking to Spray Vegetation Killer

Recommendations: Will Call Grounds For Maintenance

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 5-31-16
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					
	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: Drainage Channels
Observed Conditions: Excess Vegetation in Channels

Recommendations: Will Contact Grounds to Spray Vegetation Killer

BROOKHAVEN NATIONAL LABORATORY
SITE INSPECTION FORM

Location (AOC): Former Landfill Area (includes the former and interim landfills and slit trench)
Date of Inspection: 6/23/16
Name of Inspector(s): R. Howe, V. Racaniello, 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				Grass needs cutting	
Soil (Cap/Cover/Fill)		X			Fill in animal burrows	
Other: _____						
2. Drainage Structures:						
Standing Water	X				No water	X
Toe Drain	X					X
Drainage Channels		X			Vegetation in channels	
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				No bee nests	X
Other: _____	X					X
4. Site Access:						
Asphalt Access Road		X			Pothole repaired	
Crushed-concrete Access Road		X				X
Fence				X		X
Gates/locks				X		X
Radiological Postings				X		X
Other: LUIC Signs	X				All signs in place	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: Former Landfill, Interim Landfill, and Slit Trench caps are in excellent condition. Two burrows observed on west slope of Former Landfill need to be filled-in. Facilities and Operations (F&O) was notified 6/27/16. One burrow is ~ 18" deep but doesn't penetrate past the protective layer. The grass on all three landfills was cut late May, but needs to be cut again. F&O needs to remove small pine seedlings on west slope of Former Landfill and the Slit Trench, spray vegetation in drainage channels, and fill small asphalt pothole. The Nonproliferation and National Security Department has abandoned potential upgrades to the Radiation Detector Test and Evaluation Center facility located adjacent to the Former Landfill. LUIC Factsheet Changes: None.

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-29-16

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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: LANDFILL, Edges, Culverts

Observed Conditions: Excessive Vegetation Growth

Recommendations: Will Contact Grounds about Vegetation Removal

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-26-16

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				
4.0	**Site Access:**					
	Asphalt Access Road	X				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: All Areas weed whacking + mowing done by Grounds

Observed Conditions:

Recommendations:

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-25-16

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: _____

Observed Conditions: _____

Recommendations: _____

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 9-27-16
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: Landfill & Drainage Channels
Observed Conditions: Some excess Vegetation Growth

Recommendations: Monitor

BROOKHAVEN NATIONAL LABORATORY
SITE INSPECTION FORM

Location (AOC): Former Landfill Area (includes the former and interim landfills and slit trench)
Date of Inspection: 10/26/16
Name of Inspector(s): R. Howe, V. Racaniello, M. Chuc, D. Paquette, A. Steinhauff, E. Kramer
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				Good height	X
Soil (Cap/Cover/Fill)	X				No burrows	X
Other: _____						
2. Drainage Structures:						
Standing Water	X				No water	X
Toe Drain	X					X
Drainage Channels		X			Minor veg in channels	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				Significant vegetation	X
Other: _____						
3. Monitoring System:						
Soil Gas Wells		X			Rusting cap handles	
Groundwater Wells	X					X
Gas Vents	X				No nests	X
Other: _____	X					X
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				All signs in place	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: Former Landfill, Interim Landfill, and Slit Trench caps are in excellent condition. No animal burrows were observed on any landfills. The previously repaired burrows are in excellent condition with no erosion. The grass on all three landfills was cut in August and shouldn't need to be cut again until spring. There is some vegetation in the drainage channels, which can be addressed in the spring. The small asphalt pothole identified during the spring inspection was repaired. All contact signs were in place. Some of the handles on the soil gas sampling wells were rusted. Contact the Sampling Team to see if they need replacement. LUIC Factsheet Changes: None.

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 10-26-16

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			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: Drainage Channels

Observed Conditions: Minor vegetation Growth

Recommendations: Monitor

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-28-16

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				
	Crushed-Concrete Access Road	X				X

B. Description of Further Action Requirements:

1. Location: Drainage channels

Observed Conditions: Minor Vegetation Growth

Recommendations: Growth slowing/stopping due to seasonal change. Will assess in spring

BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM

Name of Inspector(s): ~~[illegible]~~ Eric Kramer

Date of Inspection: 12-28-16

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: All 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	55	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	71.6	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	2.6	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	0	<>
GSGM-3B	NA	0	<>	<>
GSGM-4A	NA	0	0	<>
GSGM-4B	NA	0	0	<>

<> No measurement was recorded.

NA Well was not yet installed.

1997 CURRENT LANDFILL SOIL GAS MONITORING SUMMARY TABLE

1998 Environmental Monitoring Report

Current and Former Landfills - Brookhaven National Laboratory

Soil Gas Monitoring Well	Methane (% By Volume)			Hydrogen sulfide (ppm By Volume)		
	March-97	August-97	November-97	March-97	August-97	November-97
SGMW-01A	33.4	17.1	16.4	5	5	8
SGMW-01B	32.5	17.2	15.8	1	4	7
SGMW-01C	34.2	15.9	14.5	1	0	1
SGMW-02A	62.4	47.7	53.2	40	39	137
SGMW-02B	64.7	57	56.7	9	17	43
SGMW-02C	62.6	56.6	55.6	2	0	0
SGMW-03A	65.2	55.7	52.2	3	24	15
SGMW-03B	67.5	55.8	57	7	5	9
SGMW-03C	62.5	55.8	57	3	6	7
SGMW-04A	57.6	53.9	52.5	6	52	6
SGMW-04B	58.2	52.5	55.8	7	29	25
SGMW-04C	58.2	52.5	54.5	6	14	15
SGMW-05A	55.2	47.5	50.5	6	44	29
SGMW-05B	54.4	43.3	45.5	10	21	20
SGMW-05C	53.6	37.5	38.7	3	1	2
SGMW-06A	42.6	44	42.9	7	33	3
SGMW-06B	45	43.5	44.4	10	16	17
SGMW-06C	46	42	43.1	7	13	15
SGMW-07A	10.1	2.3	0	3	0	0
SGMW-07B	8.8	0	0	5	0	6
SGMW-07C	9.9	4.1	0.2	3	0	9
SGMW-08A	0	0	0	1	0	5
SGMW-08B	0	0	0	0	0	9
SGMW-08C	0	0	0	0	0	10
SGMW-09A	0.3	0	0	0	0	15
SGMW-09B	3.4	0	0	0	0	14
SGMW-09C	4.6	0.8	1	0	0	12
SGMW-10A	20.5	28	19	1	19	13
SGMW-10B	19.8	24.5	24	1	0	5
SGMW-10C	0	21.7	20.6	0	0	18
SGMW-11A	24.5	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	36.9	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	25.3	26.1	24.2	20.4	5	0	0	0	SGMW-01A
SGMW-01B	26.1	30.1	28	18.7	4	0	0	4	SGMW-01B
SGMW-01C	24	29	26	17.7	1	2	1	2	SGMW-01C
SGMW-02A	67.8	65.3	70.4	51.1	62	3	4	0	SGMW-02A
SGMW-02B	64.1	69	66	54.8	93	6	5	4	SGMW-02B
SGMW-02C	61.6	64.7	65	53.1	11	0	0	0	SGMW-02C
SGMW-03A	20.4	00	76.6	2.3	19	3	2	1	SGMW-03A
SGMW-03B	76.8	74	74	61.1	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	64.2	65	0.4	0	7	4	0	SGMW-04A
SGMW-04B	60.0	65.0	68	38.1	6	4	3	0	SGMW-04B
SGMW-04C	60.6	57.6	57.6	0	17	6	2	0	SGMW-04C
SGMW-05A	48.1	62.4	60	40.0	3	6	5	2	SGMW-05A
SGMW-05B	64	52.1	55.4	47.7	3	4	3	3	SGMW-05B
SGMW-05C	48	50.3	48	41.5	0	3	2	0	SGMW-05C
SGMW-06A	27.2	44.1	38.3	17.6	2	7	0	0	SGMW-06A
SGMW-06B	44.0	46.5	7.0	47.2	15	0	0	1	SGMW-06B
SGMW-06C	46.3	48	0.4	0	0	0	3	0	SGMW-06C
SGMW-07A	2.2	0.9	7.2	0	0	2	4	0	SGMW-07A
SGMW-07B	0	0.6	7	0	0	4	3	0	SGMW-07B
SGMW-07C	4.0	0.5	0.6	0.1	1	0	0	0	SGMW-07C
SGMW-08A	0	0	0	0	3	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	0	0	0	0	SGMW-09A
SGMW-09B	0.7	1.4	1.2	0	2	0	0	0	SGMW-09B
SGMW-09C	3	2.7	2.5	0.7	6	2	1	0	SGMW-09C
SGMW-10A	17.0	30.7	30	36.2	0	0	0	0	SGMW-10A
SGMW-10B	23.5	28.4	30.3	26	2	0	0	0	SGMW-10B
SGMW-10C	20.7	24	25	23.7	0	0	0	0	SGMW-10C
SGMW-11A	22.0	31	30.4	17.0	16	0	0	0	SGMW-11A
SGMW-11B	10.0	20	26.3	36.4	0	0	0	0	SGMW-11B
SGMW-12A	53.7	57.2	60.4	33.0	37	2	1	3	SGMW-12A
SGMW-12B	60.3	0.2	3	38.2	11	3	4	0	SGMW-12B
SGMW-13A	7	61.6	59	0	0	0	0	0	SGMW-13A
SGMW-13B	0.1	0.1	0	0	0	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	1	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	0.7	60	0	0	1	SGMW-19A
SGMW-19B	38.7	1	1	12	6	1	1	1	SGMW-19B

Soil Gas Monitoring Well	Methane (% By Volume) February-00	Methane (% By Volume) May-00	Methane (% By Volume) August-00	Methane (% By Volume) December-00
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-00	Hydrogen sulfide (ppm By Volume) May-00	Hydrogen sulfide (ppm By Volume) August-00	Hydrogen sulfide (ppm By Volume) December-00	Soil Gas Monitoring Well
0	0	0	0	GSGM-1A
1	0	0	0	GSGM-1B
0	0	0	0	GSGM-1C
0	0	0	0	GSGM-2A
0	0	1	0	GSGM-2B
2	0	0	0	GSGM-2C
0	0	0	0	GSGM-3A
0	0	0	0	GSGM-3B
0	0	0	0	GSGM-4A
2	0	0	0	GSGM-4B

* Values are calculated, not measured.
<> No measurement was recorded.

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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	18.5	17.0	18.0	390	360	394	0	0	2	SGMW-01A
SGMW-01B	18.6	18.1	18.6	370	382	372	0	0	3	SGMW-01B
SGMW-01C	17.2	14.2	18.7	344	200	334	0	0	1	SGMW-01C
SGMW-02A	52.4	62.0	55.0	1040	1062	1110	13	5	25	SGMW-02A
SGMW-02B	64.4	65	58.7	1060	1100	1134	3	6	11	SGMW-02B
SGMW-02C	55.3	55.2	57.6	1108	1104	1150	0	0	3	SGMW-02C
SGMW-03A	56.8	41.5	2.9	1102	830	60	3	0	1	SGMW-03A
SGMW-03B	61.4	60.3	61.3	1220	1180	1226	0	0	4	SGMW-03B
SGMW-03C	59.9	59.3	59.5	1198	1086	1190	0	0	3	SGMW-03C
SGMW-04A	53.6	0	39.1	1070	0	782	0	0	2	SGMW-04A
SGMW-04B	53.5	63.6	62.0	1070	1070	1058	0	0	7	SGMW-04B
SGMW-04C	62.4	55.2	60.7	1040	1104	974	2	0	9	SGMW-04C
SGMW-05A	47.0	51.1	47.4	940	1022	944	0	0	0	SGMW-05A
SGMW-05B	48	61.5	48	800	1030	884	0	0	4	SGMW-05B
SGMW-05C	39.7	36	38.5	794	702	768	0	0	4	SGMW-05C
SGMW-06A	41.1	0.1	38.2	820	2	764	0	0	2	SGMW-06A
SGMW-06B	43.2	43.2	48.0	882	882	834	0	0	7	SGMW-06B
SGMW-06C	43.1	0	48.6	882	0	820	0	0	6	SGMW-06C
SGMW-07A	3.3	0.1	0	66	2	0	0	0	2	SGMW-07A
SGMW-07B	0.9	0	0	18	0	0	0	0	2	SGMW-07B
SGMW-07C	4.4	0.17	1.3	88	34	28	0	0	2	SGMW-07C
SGMW-08A	0	0	0	0	0	0	0	0	2	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	2	SGMW-08B
SGMW-08C	0	0	0	0	0	0	0	0	3	SGMW-08C
SGMW-09A	0	0	0	0	0	0	0	0	3	SGMW-09A
SGMW-09B	0	0	0	0	0	0	0	0	3	SGMW-09B
SGMW-09C	0	0	0.1	0	0	2	0	0	3	SGMW-09C
SGMW-10A	21.4	16.7	20	420	314	400	1	0	2	SGMW-10A
SGMW-10B	19.8	20.7	21.1	398	632	420	0	0	3	SGMW-10B
SGMW-10C	17.8	22.8	18.1	360	454	824	0	0	3	SGMW-10C
SGMW-11A	18.3	21.2	18.8	388	824	388	0	0	3	SGMW-11A
SGMW-11B	19.2	25.8	14.8	384	812	284	10	0	3	SGMW-11B
SGMW-12A	48.8	45.1	47.1	838	902	842	30	5	8	SGMW-12A
SGMW-12B	44.2	48.5	47.8	884	838	854	8	0	3	SGMW-12B
SGMW-13A	53.4	0.1	0	1002	2	0	12	0	0	SGMW-13A
SGMW-13B	0.2	0.2	24.6	4	4	482	0	0	2	SGMW-13B
SGMW-14A	7.8	5.9	7.1	152	118	142	0	0	5	SGMW-14A
SGMW-14B	0	22.8	3.4	0	452	68	0	0	2	SGMW-14B
SGMW-15A	0	1.8	2.9	0	32	58	0	0	3	SGMW-15A
SGMW-15B	0	0.1	0	0	2	0	0	0	2	SGMW-15B
SGMW-16A	0	0.1	0	0	2	0	0	0	2	SGMW-16A
SGMW-16B	0	0.1	0	0	2	0	0	0	2	SGMW-16B
SGMW-17A	screen in water table	0.1	0	0	2	0	0	0	2	SGMW-17A
SGMW-17B	screen in water table	0.1	0	0	2	0	0	0	2	SGMW-17B
SGMW-18A	0	0.1	0	0	2	0	0	0	2	SGMW-18A
SGMW-18B	0	1	0.4	0	20	0	0	0	1	SGMW-18B
SGMW-19A	25.1	23	20.0	802	460	480	16	0	10	SGMW-19A
SGMW-19B	30.1	27.9	20.5	802	544	410	8	0	12	SGMW-19B

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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	0	GSGM-1A
GSGM-1B	0	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	0	2	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	1	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	1	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	GSGM-4B

<= No measurement was recorded.

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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	18.0	402	410	422	368	0	0	4	0	SGMW-01A
SGMW-01B	19.3	20.3	11.5	14.2	386	408	232	268	1	0	1	0	SGMW-01B
SGMW-01C	17.5	13.7	11.6	13.0	350	276	220	260	0	0	1	0	SGMW-01C
SGMW-02A	48.6	64.0	60	54.4	990	(1000)	(1000)	(1000)	1	3	9	16	SGMW-02A
SGMW-02B	55.1	57.1	56.3	58.3	(1102)	(1142)	(1120)	(1124)	4	20	8	11	SGMW-02B
SGMW-02C	58.0	48.3	56.0	56.0	(1120)	886	(1120)	(1120)	2	0	4	0	SGMW-02C
SGMW-03A	48.3	62.0	64.0	67.0	886	(1250)	(1200)	(1182)	1	5	0	3	SGMW-03A
SGMW-03B	67.0	67.0	60.2	67.4	(1140)	(1240)	(1200)	(1240)	1	4	0	2	SGMW-03B
SGMW-03C	57.3	61.2	63.0	58.7	(1148)	(1224)	(1240)	(1134)	1	4	0	4	SGMW-03C
SGMW-04A	30.7	61.0	2.0	51.0	614	(1050)	52	(1120)	1	4	1	1	SGMW-04A
SGMW-04B	48.8	62.0	48.0	50.0	970	(1088)	972	(1200)	3	2	0	3	SGMW-04B
SGMW-04C	43.0	52.1	43.0	45.2	900	(1042)	858	900	4	0	1	0	SGMW-04C
SGMW-05A	47.7	46.4	47.6	47.2	954	980	950	944	1	0	0	0	SGMW-05A
SGMW-05B	44.0	50.0	48.2	43.0	892	(1080)	884	870	1	0	5	0	SGMW-05B
SGMW-05C	36.7	43.7	40.7	38.7	734	874	814	736	3	1	0	0	SGMW-05C
SGMW-09A	33.0	41.7	18.0	44.0	660	834	370	880	0	4	0	2	SGMW-09A
SGMW-09B	43.0	45.6	48.0	48.0	860	916	960	920	1	2	2	3	SGMW-09B
SGMW-09C	44.3	45.2	33.7	45.0	880	908	674	910	0	1	1	0	SGMW-09C
SGMW-07A	0.2	.5.0	0.0	0.0	0	118	10	0	0	0	1	1	SGMW-07A
SGMW-07B	0	0.0	0.0	0.0	0	12	0	0	0	0	1	2	SGMW-07B
SGMW-07C	2.8	3.0	1.8	0.6	52	60	30	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	0	3	SGMW-09B
SGMW-09C	0	0	0	0.0	0	0	0	0	1	0	0	3	SGMW-09C
SGMW-10A	0.3	30.1	23.7	17.0	106	623	474	340	1	3	2	3	SGMW-10A
SGMW-10B	13.6	21.7	20.1	16.6	270	424	672	318	1	0	2	2	SGMW-10B
SGMW-10C	10.8	19.5	22.2	12.0	212	390	444	260	1	0	2	3	SGMW-10C
SGMW-11A	10.1	27.1	64.0	13.0	202	542	(1080)	272	2	20	10	7	SGMW-11A
SGMW-11B	6.8	28.4	56.2	0.2	136	626	(1080)	184	2	21	2	0	SGMW-11B
SGMW-12A	43.9	60.0	64.4	48.6	878	(1200)	(1200)	930	2	63	2	7	SGMW-12A
SGMW-12B	43.8	48.0	48.1	47.0	858	988	962	940	1	0	0	6	SGMW-12B
SGMW-13A	23.4	57.8	63.0	40.0	468	(1152)	(1270)	800	1	0	2	2	SGMW-13A
SGMW-13A	45.1	0	0	48.2	902	0	0	964	1	0	0	67	SGMW-13A
SGMW-14A	2.7	20.2	46.0	12.1	54	404	318	242	1	0	8	7	SGMW-14A
SGMW-14B	0	0	0	23.3	0	0	0	446	1	6	0	31	SGMW-14B
SGMW-15A	2.0	0	1.0	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	0.1	0.0	0	2	0	0	0	0	0	4	SGMW-18B
SGMW-19A	12.9	28.9	34.0	14.2	258	778	680	284	4	2	10	13	SGMW-19A
SGMW-19B	19.7	34.0	32.0	18.0	394	682	660	360	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 Sitewide 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	22.3	23.1	18.5	440	462	800	2	11	0
SGMW-01B	2.8	0.0	17.1	434	0	384	0	0	0
SGMW-01C	16.3	20.4	19.3	326	408	368	0	57	49
SGMW-02A	59.8	62.0	67.9	1200	1258	>1,000	140	101	0
SGMW-02B	60.0	0.0	66.9	1100	0	>1,000	1	0	0
SGMW-02C	0.0	0.0	63.2	0	0	>1,000	5	14	43
SGMW-03A	30.0	61.0	62.0	780	1160	>1,000	20	21	0
SGMW-03B	67.2	66.6	64.7	1344	1330	>1,000	1	2	0
SGMW-03C	0.2	0.0	63.5	4	0	>1,000	2	4	32
SGMW-04A	42.0	0.0	62.0	850	70	>1,000	3	15	14
SGMW-04B	50.6	63.0	61.0	1010	1072	>1,000	3	2	0
SGMW-04C	0.0	0.2	60.0	0	4	>1,000	1	2	0
SGMW-05A	46.0	40.2	57.6	912	804	>1,000	3	2	0
SGMW-05B	43.0	0.2	53.0	870	4	>1,000	5	3	0
SGMW-05C	0.0	0.1	48.3	0	2	800	2	3	0
SGMW-06A	10.4	0.3	64.4	208	100	>1,000	2	4	84
SGMW-06B	0.0	0.2	63.0	0	4	>1,000	2	4	6
SGMW-06C	0.0	0.1	62.0	0	2	>1,000	3	3	0
SGMW-07A	0.0	0.1	0.2	0	152	4	4	0	0
SGMW-07B	0	0.0	0.2	0	0	4	2	2	0
SGMW-07C	0.0	0.0	1.1	10	0	24	3	1	0
SGMW-08A	0	0	.2	0	0	4	4	1	0
SGMW-08B	0	0	.3	0	0	4	2	2	0
SGMW-08C	0	0	0	0	0	0	2	1	0
SGMW-09A	0	.2	0	0	4	0	1	5	0
SGMW-09B	0	.2	0	0	4	0	1	2	0
SGMW-09C	0	.2	0	0	4	0	0	0	0
SGMW-10A	10.0	16.0	20.0	210	330	800	4	2	0
SGMW-10B	11.2	10.0	25.6	224	370	812	2	5	0
SGMW-10C	0.0	13.2	19.0	180	264	370	2	2	0
SGMW-11A	0.0	21.0	20.3	170	430	800	10	43	2
SGMW-11B	0.1	19.3	25.0	122	880	840	0	27	30
SGMW-11C	49.0	53.4	53.7	980	1088	1074	1	96	108
SGMW-12A	44.4	0.2	60.1	886	4	1002	3	0	101
SGMW-12B	10.3	56.1	55.7	220	1302	1114	0	6	0
SGMW-12C	0.0	.2	0	0	4	0	0	2	0
SGMW-13A	17.4	0.2	7.4	348	124	160	0	4	0
SGMW-14A	0	0	0	0	0	0	2	4	0
SGMW-14B	0.0	0	0.0	0	0	0	2	0	0
SGMW-15A	0	0	0	0	0	0	1	0	0
SGMW-15B	0	0	0	0	0	0	0	4	0
SGMW-16A	0	0	0	0	0	0	0	1	0
SGMW-16B	0	0	0	0	0	0	0	0	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	200	0
OGMW-100	0	0	0.0	230	784	672	0	83	0
SGMW-19A	31.0	30.2	20.0	409	730	824	0	0	0
SGMW-19B	20.3	30.0	20.1	0	0	0	0	0	0
OSGM-1A	0	0	0	0	0	0	0	0	0
OSGM-1B	0	0	0	0	0	0	0	0	0
OSGM-1C	0	0	0	0	0	0	1	0	0
OSGM-2A	0	0	0	0	0	0	0	0	0
OSGM-2B	0	0	0	0	0	0	1	0	0
OSGM-2C	0	0	0	0	0	0	0	0	0
OSGM-3A	0	0	0	0	0	0	0	0	0
OSGM-3B	0	0	0	0	0	0	1	0	0
OSGM-4A	0	0	0	0	0	0	0	0	0
OSGM-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	0.0	16.0	270	202	102	354	0	7	10	3	SGMW-01A
SGMW-01B	13.7	11.5	0.2	16.9	274	230	164	334	0	1	2	14	SGMW-01B
SGMW-01C	10.0	0.6	5.6	11.0	310	172	110	234	0	1	1	4	SGMW-01C
SGMW-02A	48.0	48.0	40.2	50.6	020	002	004	(1130)	64	132	141	0	SGMW-02A
SGMW-02B	17.1	20.5	34.0	43.7	342	670	002	004	0	2	11	40	SGMW-02B
SGMW-02C	37.6	43.8	52.0	51.7	760	078	(1040)	(1034)	0	24	68	77	SGMW-02C
SGMW-03A	36.5	53.6	64.1	41.4	730	(1072)	(1002)	020	0	148	0	16	SGMW-03A
SGMW-03B	57.0	62.4	60.0	66.0	(1140)	(1240)	(1162)	(1316)	13	18	34	12	SGMW-03B
SGMW-03C	54.1	60.6	68.0	60.0	(1062)	(1172)	(1170)	(1200)	0	0	28	0	SGMW-03C
SGMW-04A	40.8	46.8	50.0	48.1	010	030	(1010)	000	0	1	20	3	SGMW-04A
SGMW-04B	44.6	48.0	51.3	10.2	000	400	(1020)	002	2	11	76	37	SGMW-04B
SGMW-04C	36.5	43.5	44.1	42.5	730	070	000	044	25	30	32	38	SGMW-04C
SGMW-05A	39.1	38.8	38.0	42.6	702	772	770	050	0	44	2	34	SGMW-05A
SGMW-05B	37.4	38.4	42.0	41.2	738	700	040	036	1	13	63	20	SGMW-05B
SGMW-05C	28.8	31.0	31.8	34.2	870	020	032	004	0	10	13	12	SGMW-05C
SGMW-06A	30.7	33.6	40.0	41.5	010	072	000	632	2	3	37	2	SGMW-06A
SGMW-06B	36.1	35.0	40.0	43.1	710	710	012	864	11	22	62	32	SGMW-06B
SGMW-06C	38.3	35.2	38.1	42.0	733	704	702	840	6	10	21	12	SGMW-06C
SGMW-07A	0.2	0.4	0.0	0.0	4	6	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	1	0	0	SGMW-08A
SGMW-08B	0.2	0	0	0.0	4	6	0	0	1	1	0	0	SGMW-08B
SGMW-08C	0.2	0	0	0.0	4	0	0	0	0	2	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	29.5	10.0	212	200	610	330	4	13	1	0	SGMW-10A
SGMW-10B	10.7	14.2	20.0	14.8	214	204	408	292	0	0	5	2	SGMW-10B
SGMW-10C	8.0	12.2	17.1	12.2	160	244	342	248	0	3	1	0	SGMW-10C
SGMW-11A	0.3	14.8	20.2	17.0	194	208	334	336	0	88	125	20	SGMW-11A
SGMW-11B	0.1	14.5	24.7	10.4	122	200	404	208	1	40	162	10	SGMW-11B
SGMW-12A	37.0	43.0	60.4	48.0	752	800	1000	970	16	0	0	34	SGMW-12A
SGMW-12B	35.8	38.0	48.0	45.0	710	765	020	894	4	13	32	16	SGMW-12B
SGMW-13A	35.6	43.6	47.3	47.0	710	070	040	050	83	158	70	3	SGMW-13A
SGMW-13B	33.7	42.3	46.2	47.1	674	940	024	042	2	4	22	5	SGMW-13B
SGMW-14A	1.0	4.8	2.8	10.6	20	00	60	212	3	2	0	7	SGMW-14A
SGMW-14B	5.8	11.0	10.4	14.0	117	220	208	208	1	3	0	1	SGMW-14B
SGMW-15A	0.1	0	4.0	8.3	2	0	80	160	0	3	2	4	SGMW-15A
SGMW-15B	0.1	0	44.6	18.1	2	0	000	376	0	4	0	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	0.7	0	0.1	0.0	4	0	2	0	0	4	4	2	SGMW-18A
SGMW-18B	0.4	0	0.3	0.0	6	0	4	0	0	3	3	4	SGMW-18B
SGMW-19A	5.8	15.0	26.6	0.0	116	210	570	0	2	121	19	132	SGMW-19A
SGMW-19B	8.5	18.6	31.2	0.0	160	302	074	0	4	32	30	0	SGMW-19B
GSGM-1A	0	0	0	0	0	0	0	0	5	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	2	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	19.7	19.8	372	324	394	396	3	~	81	~	SGMW-01B
SGMW-01C	18.0	13.9	20.0	17.3	360	282	400	348	3	~	80	~	SGMW-01C
SGMW-02A	58.2	41.2	5.0	22.2	(1164)	324	100	442	14	~	68	~	SGMW-02A
SGMW-02B	55.7	0.0	0.1	0.0	(1140)	0	2	0	32	~	13	~	SGMW-02B
SGMW-02C	59.1	0.0	0	42.7	536	0	0	858	9	~	0	~	SGMW-02C
SGMW-03A	26.8	57.8	55.0	0.0	(1182)	(1156)	(1100)	0	19	~	0	~	SGMW-03A
SGMW-03B	69.1	0.0	54.2	11.7	(1078)	0	(1084)	234	23	~	95	~	SGMW-03B
SGMW-03C	63.9	0.0	0.2	41.0	(1052)	0	4	820	3	~	0	~	SGMW-03C
SGMW-04A	54.1	0.0	0.5	9.4	966	0	10	186	3	~	109	~	SGMW-04A
SGMW-04B	53.9	0.0	0.2	47.0	938	0	4	940	7	~	27	~	SGMW-04B
SGMW-04C	52.6	0.0	0.1	41.5	862	0	2	832	15	~	0	~	SGMW-04C
SGMW-05A	48.3	48.0	54.9	23.4	966	960	(1098)	468	2	~	163	~	SGMW-05A
SGMW-05B	46.9	43.8	53.8	38.8	938	876	(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	5.8	15.5		806	116	310	420	1	~	0	~	SGMW-06A
SGMW-06B	42.9	0.0	0.0	20.7	858	0	0	896	3	~	0	~	SGMW-06B
SGMW-06C	43.6	0.0	0.1	44.8	872	0	2	900	2	~	0	~	SGMW-06C
SGMW-07A	0.8	0.0	0.0	45.1	16	0	0	0	1	~	0	~	SGMW-07A
SGMW-07B	0.9	0.0	0.1	0.0	18	0	2	0	2	~	0	~	SGMW-07B
SGMW-07C	4.0	0.0	0.1	0.0	80	0	2	0	0	~	0	~	SGMW-07C
SGMW-08A	0.0	0	0.1	0.0	0	0	2	0	0	~	27	~	SGMW-08A
SGMW-08B	0.0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-08B
SGMW-08C	0.0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-08C
SGMW-09A	0	0	0.1	0.0	0	0	2	0	0	~	13	~	SGMW-09A
SGMW-09B	0	0	0	0.0	0	0	0	0	0	~	0	~	SGMW-09B
SGMW-09C	0.1	0	0.1	0.0	2	0	2	0	0	~	0	~	SGMW-09C
SGMW-10A	18.0	22.0	27.9	5.6	360	440	558	112	1	~	0	~	SGMW-10A
SGMW-10B	15.8	17.7	22.0	0.0	316	354	440	0	1	~	0	~	SGMW-10B
SGMW-10C	14.0	16.6	18.2	0.0	280	332	364	0	2	~	0	~	SGMW-10C
SGMW-11A	15.6	29.3	0.4	17.7	312	586	8	356	1	~	0	~	SGMW-11A
SGMW-11B	13.7	26.0	0.1	0.0	274	520	2	0	13	~	0	~	SGMW-11B
SGMW-12A	60.0	47.6	64.7	0.0	(1200)	952	(1294)	0	0	~	0	~	SGMW-12A
SGMW-12B	50.9	0.3	0.5	1.8	(1018)	6	10	36	1	~	0	~	SGMW-12B
SGMW-13A	30.5	0.0	67.2	66.4	610	0	(1344)	1328	1	~	163	~	SGMW-13A
SGMW-13B	0.0	0.8	0.1	0.0	0	16	2	0	1	~	0	~	SGMW-13A
SGMW-14A	29.4	9.8	8.3	0.0	588	196	2	0	10	~	0	~	SGMW-14A
SGMW-14B	0.2	0	0.1	0.1	4	0	2	2	1	~	0	~	SGMW-14B
SGMW-15A	0.1	0	0.1	0.0	2	0	2	0	1	~	54	~	SGMW-15A
SGMW-15B	0	0	0.1	0.0	0	0	2	0	0	~	0	~	SGMW-15B
SGMW-16A	0.1	0	0	0.0	2	0	0	0	1	~	0	~	SGMW-16A
SGMW-16B	0	0	0	0.0	0	0	0	0	3	~	0	~	SGMW-16B
SGMW-17A	0	0	0	0.0	0	0	0	0	3	~	0	~	SGMW-17A
SGMW-17B	0	0	0	0.0	0	0	0	0	2	~	0	~	SGMW-17B
SGMW-18A	0.1	0	0	0.0	2	0	0	0	2	~	0	~	SGMW-18A
SGMW-18B	0	0.1	0.0	0.0	0	2	0	0	0	~	0	~	SGMW-18B
SGMW-19A	41.8	29.1	40.0	27.0	838	582	800	540	0	~	0	~	SGMW-19A
SGMW-19B	44.0	0.7	33.2	29.5	880	14	664	592	39	~	191	~	SGMW-19B
GSGM-1A	0.1	0	0	0	2	0	0	0	0	~	0	~	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-1B
GSGM-1C	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-1C
GSGM-2A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2A
GSGM-2B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2B
GSGM-2C	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-2C
GSGM-3A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-3A
GSGM-3B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-3B
GSGM-4A	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-4A
GSGM-4B	0	0	0	0	0	0	0	0	0	~	0	~	GSGM-4B

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

2004 Current Landfill Soil Gas Monitoring Summary

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

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

2005 Current Landfill Soil Gas Monitoring Summary Table

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

Measurements in ( ) are calculated, not measured.

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	18.1	46.9	1.4	282.0	362	938	28	0	0	9	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	0.8	30.5	0.3	0	16	610	6	0	0	0	0	SGMW-02C
SGMW-03A	19.3	26.8	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	48.8	0.0	200.0	632	976	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	44.8	0.0	20.0	326	896	0	0	0	0	0	SGMW-05A
SGMW-05B	1.4	26.3	41.3	0.0	89.0	526	826	0	0	0	3	3	SGMW-05B
SGMW-05C	0.0	20.7	33.8	0.0	0	414	676	0	0	0	1	0	SGMW-05C
SGMW-06A	0.0	11.5	41.5	0.0	0	230	830	0	0	0	1	0	SGMW-06A
SGMW-06B	0.0	21.3	40.3	0.0	0	426	806	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	9.8	15.4	0.0	0	196	308	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	16.2	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	9.8	14.9	0.0	0	196	298	0	0	0	25	0	SGMW-11B
SGMW-12A	0.0	16.7	41.3	0.0	0	336	826	0	0	0	18	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	16.7	17.3	16.6	23.9	340	348	332	478	0	0	2	5	SGMW-19A
SGMW-19B	1.7	9.4	18.0	0.0	32	186	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	128	90	118.0	32	0.0	1.0	1.0	0.0	SGMW-01B
SGMW-01C	5.9	0.3	5.5	2.0	118	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	8	750.0	348	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	8	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	8.4	0.7	43.7	1.0	168	14	874.0	20	0.0	0.0	3.0	0.0	SGMW-04A
SGMW-04B	17.0	0.7	38.5	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	16	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	8.7	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	9.0	0.0	0.0	0.0	180	0.0	0.0	0.0	8.0	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	6.1	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	80	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	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

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	8.8	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	1118	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	48.8	55.2	40.2	10.6	>100	>100	>100	>100	8	18	0	0	SGMW-02B
SGMW-02C	50.8	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	38.9	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	38.8	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-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	0.0	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	0.6	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	8.9	8.3	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	50.8	51.8	44	>100	>100	>100	0.0	15	30	27	SGMW-02B
SGMW-02C	33.8	45.2	48.6	56.8	>100	>100	>100	>100	4.0	3	0.0	4	SGMW-02C
SGMW-03A	1.9	39.4	48.1	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	28.3	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	32.8	>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	22.8	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	16.0	14.8	6	>100	>100	>100	0.0	3	7	7	SGMW-10C
SGMW-11A	0.1	11.2	23.8	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	14.8	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

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

2013 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/13/13	Methane (% By Volume) 6/4-5/2013	Methane (% By Volume) 9/17-18/13	Methane (% By Volume) 11/19-20/2013	LEL (% By Volume) 3/13/13	LEL (% By Volume) 6/4-5/2013	LEL (% By Volume) 9/17-18/13	LEL (% By Volume) 11/19-20/2013	Hydrogen Sulfide (ppm by volume) 3/13/13	Hydrogen Sulfide (ppm by volume) 6/4-5/2013	Hydrogen Sulfide (ppm by volume) 9/17-18/13	Hydrogen Sulfide (ppm by volume) 11/19-20/2013	Soil Gas Monitoring Well
SGMW-01A	22.7	18.0	13.2	8.5	>100	>100	>100	>100	3.0	2.0	2.0	0.0	SGMW-01A
SGMW-01B	22.0	13.0	3.6	7.7	>100	>100	88	>100	2.0	1.0	0.0	0.0	SGMW-01B
SGMW-01C	19.9	18.1	9.4	5.6	>100	>100	>100	>100	2.0	0.0	0.0	0.0	SGMW-01C
SGMW-02A	59.1	55.2	59.8	41.9	>100	>100	>100	>100	1.0	3.0	0.0	1.0	SGMW-02A
SGMW-02B	23.5	54.2	53.8	49.5	>100	>100	>100	>100	0.0	29	2.0	11	SGMW-02B
SGMW-02C	55.6	0.0	0.1	50.9	>100	0.0	0.0	>100	4.0	0.0	0.0	3.0	SGMW-02C
SGMW-03A	32.3	53.7	28.3	30.8	>100	>100	>100	>100	0.0	9.0	2.0	1.0	SGMW-03A
SGMW-03B	60.8	43.2	0.0	34.2	>100	>100	0.0	>100	31	0.0	0.0	0.0	SGMW-03B
SGMW-03C	57.4	0.0	0.0	0.1	>100	0.0	0.0	2.0	28.0	0.0	0.0	0.0	SGMW-03C
SGMW-04A	50.6	45.7	39	39.9	>100	>100	>100	>100	0.0	8.0	1.0	0.0	SGMW-04A
SGMW-04B	49.7	33.5	0.0	32.8	>100	>100	0.0	>100	4.0	2.0	0.0	0.0	SGMW-04B
SGMW-04C	46.8	0.0	0.0	0.0	>100	0.0	0.0	0.0	5.0	0.0	0.0	0.0	SGMW-04C
SGMW-05A	43.3	33.6	7.1	0.6	>100	>100	>100	12	0.0	2.0	0.0	0.0	SGMW-05A
SGMW-05B	41.4	34.3	28	20.8	>100	>100	>100	>100	4.0	1.0	0.0	0.0	SGMW-05B
SGMW-05C	35.0	22.4	0.0	0.0	>100	>100	0.0	0.0	2.0	0.0	0.0	0.0	SGMW-05C
SGMW-06A	9.8	0.0	0.8	0.0	>100	0.0	17	0.0	0.0	0.0	0.0	0.0	SGMW-06A
SGMW-06B	38.7	0.2	34.7	0.1	>100	4.0	>100	2.0	3.0	0.0	7.0	0.0	SGMW-06B
SGMW-06C	38.0	27.8	31.3	0.0	>100	>100	>100	0.0	3.0	0.0	3.0	0.0	SGMW-06C
SGMW-07A	0.0	0.0	12.8	0.0	0.0	0.0	>100	0.0	0.0	0.0	5.0	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	16.2	7.8	12.4	0.0	>100	>100	>100	0.0	3.0	3.0	9.0	0.0	SGMW-10A
SGMW-10B	16.0	13.7	16.2	2.0	>100	>100	>100	56	5.0	0.0	4.0	0.0	SGMW-10B
SGMW-10C	13.6	11.7	14.1	0.1	>100	>100	>100	2.0	3.0	0.0	1.0	0.0	SGMW-10C
SGMW-11A	12.7	13.8	19.2	8.2	>100	>100	>100	>100	3.0	8.0	14	6.0	SGMW-11A
SGMW-11B	11.4	10.8	15.3	10.7	>100	>100	>100	>100	0.0	0.0	0.0	17.0	SGMW-11B
SGMW-12A	53.5	46.1	42.5	25.9	>100	>100	>100	>100	12.0	14	8.0	0.0	SGMW-12A
SGMW-12B	42.2	36.7	46.0	2.0	>100	>100	>100	5.0	0.0	0.0	0.0	0.0	SGMW-12B
SGMW-13A	0.2	19.5	42.2	0.1	4.0	>100	>100	2.0	0.0	5.0	6.0	0.0	SGMW-13A
SGMW-13B	43.3	0.0	22.0	0.1	>100	0.0	>100	2.0	0.0	0.0	0.0	0.0	SGMW-13A
SGMW-14A	8.9	0.0	0.0	0.0	>100	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	27.8	14.6	1.4	0	>100	>100	28	0.0	6.0	5.0	0.0	0.0	SGMW-19A
SGMW-19B	28.0	0.0	0.0	0.0	>100	0.0	0.0	0.0	0.0	0.0	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

2014 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 2/25-26/14	Methane (% By Volume) 6/10/14	Methane (% By Volume) 9/3/14	Methane (% By Volume) 12/16-17/14	LEL (% By Volume) 2/25-26/14	LEL (% By Volume) 6/10/14	LEL (% By Volume) 9/3/14	LEL (% By Volume) 12/16-17/14	Hydrogen Sulfide (ppm by volume) 2/25-26/14	Hydrogen Sulfide (ppm by volume) 6/10/14	Hydrogen Sulfide (ppm by volume) 9/3/14	Hydrogen Sulfide (ppm by volume) 12/16-17/14	Soil Gas Monitoring Well
SGMW-01A	12.8	16.2	7.9	11.5	>100	>100	>100	>100	1.0	0.0	0.0	2.0	SGMW-01A
SGMW-01B	12.1	13.2	0	11	>100	>100	0	>100	1.0	0.0	0.0	1.0	SGMW-01B
SGMW-01C	10.4	8.9	0	9.5	>100	>100	0	>100	1.0	0.0	0.0	0.0	SGMW-01C
SGMW-02A	45.7	49.7	44.9	45.9	>100	>100	>100	>100	0.0	2.0	0.0	0.0	SGMW-02A
SGMW-02B	11.3	45.5	47.3	33.3	>100	>100	>100	>100	0.0	13	2.0	3	SGMW-02B
SGMW-02C	26.2	47.0	30.8	30.5	>100	>100	>100	>100	4.0	3.0	1.0	1.0	SGMW-02C
SGMW-03A	15.6	31.8	26.1	19.4	>100	>100	>100	>100	0.0	12.0	8.0	2.0	SGMW-03A
SGMW-03B	44.5	46.4	0.0	54.6	>100	>100	0.0	>100	20	0.0	0.0	22.0	SGMW-03B
SGMW-03C	42.1	49.6	0.0	51.7	>100	>100	0.0	>100	16.0	36.0	0.0	45.0	SGMW-03C
SGMW-04A	37.1	48.8	40.8	43.9	>100	>100	>100	>100	0.0	6.0	2.0	0.0	SGMW-04A
SGMW-04B	34.4	44.6	0.0	41.2	>100	>100	0.0	>100	4.0	8.0	0.0	8.0	SGMW-04B
SGMW-04C	25.3	39.5	0.0	33.4	>100	>100	0.0	>100	5.0	6.0	0.0	4.0	SGMW-04C
SGMW-05A	27.0	35.3	1.2	31.6	>100	>100	25	>100	0.0	0.0	0.0	0.0	SGMW-05A
SGMW-05B	25.9	26.5	0	31.3	>100	>100	0	>100	3.0	5.0	0.0	3.0	SGMW-05B
SGMW-05C	19.4	22.8	0.0	24.1	>100	>100	0.0	>100	2.0	2.0	0.0	1.0	SGMW-05C
SGMW-06A	0.4	0.1	0	0.2	8.0	3.0	0	>100	0.0	0.0	0.0	0.0	SGMW-06A
SGMW-06B	30.1	33.3	0	31.8	>100	>100	0	>100	1.0	8.0	0.0	5.0	SGMW-06B
SGMW-06C	29.9	31.8	0	29.5	>100	>100	0	>100	2.0	3.0	0.0	2.0	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	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	6.8	18.5	9.2	13.1	>100	>100	>100	>100	1.0	8.0	6.0	13.0	SGMW-10A
SGMW-10B	7.2	16.7	15.0	13.6	>100	>100	>100	>100	0.0	1.0	0.0	8.0	SGMW-10B
SGMW-10C	6.1	13.8	19.4	11.2	>100	>100	>100	>100	3.0	0.0	0.0	9.0	SGMW-10C
SGMW-11A	3.1	16.1	16.5	12.5	62.0	>100	>100	>100	0.0	10.0	0	8.0	SGMW-11A
SGMW-11B	1.4	15.8	0.0	9.9	28.0	>100	0	0	0.0	3.0	0.0	0.0	SGMW-11B
SGMW-12A	34.2	41.5	36.8	44.4	>100	>100	>100	>100	9.0	0.0	9.0	27.0	SGMW-12A
SGMW-12B	27.5	28.5	33.1	33.8	>100	>100	>100	>100	0.0	0.0	0.0	1.0	SGMW-12B
SGMW-13A	0.2	0.6	17.4	17.1	4.0	13	>100	>100	0.0	0.0	0.0	0.0	SGMW-13A
SGMW-13B	20.2	0.0	0.0	28.0	>100	0.0	0.0	>100	0.0	0.0	0.0	0.0	SGMW-13A
SGMW-14A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SGMW-14A
SGMW-14B	0.0	0.0	0.0	3.2	0.0	0.0	0.0	64.0	0.0	0.0	0.0	0.0	SGMW-14B
SGMW-15A	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-15A
SGMW-15B	6.0	0.0	0.0	33.7	>100	0.0	0.0	>100	0.0	0.0	0.0	2.0	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	0.3	22.6	0.0	10.2	0.0	>100	0.0	>100	0.0	14.0	0.0	1.0	SGMW-19A
SGMW-19B	0.4	0.0	0.0	9.8	0.0	0.0	0.0	>100	0.0	0.0	0.0	1.0	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

2015 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 3/25/15	Methane (% By Volume) 6/23/15	Methane (% By Volume) 9/29-30/16	Methane (% By Volume) 12/3-4/2015	LEL (% By Volume) 3/25/15	LEL (% By Volume) 6/23/15	LEL (% By Volume) 9/29-30/16	LEL (% By Volume) 12/3-4/2015	Hydrogen Sulfide (ppm by volume) 3/25/15	Hydrogen Sulfide (ppm by volume) 6/23/15	Hydrogen Sulfide (ppm by volume) 9/29-30/16	Hydrogen Sulfide (ppm by volume) 12/3-4/2015	Soil Gas Monitoring Well
SGM-01A	16.1	9.7	0.4	2.5	322	194	8	50	2.0	1.0	0.0	0.0	SGM-01A
SGM-01B	0.1	9.5	1.3	2.3	3.0	190.0	26	46	0.0	1.0	0.0	0.0	SGM-01B
SGM-01C	12.0	7.8	1.2	0.4	240.0	156.0	24	10	0.0	0.0	0.0	0.0	SGM-01C
SGM-02A	44.6	39.8	13.9	27.4	892.0	796.0	278	548	0.0	0.0	0.0	46.0	SGM-02A
SGM-02B	30.1	43.3	42.6	38.8	602.0	866.0	852	736	6.0	11	14.0	2	SGM-02B
SGM-02C	0.0	44.3	44.3	26.3	0.0	886.0	886.0	526	0.0	1.0	2.0	0.0	SGM-02C
SGM-03A	30.2	37.2	10.2	24.4	604.0	794.0	204.0	488	1.0	13.0	6.0	9.0	SGM-03A
SGM-03B	30.7	48.8	44.2	17.2	614.0	976.0	884	344	0	17.0	23.0	1.0	SGM-03B
SGM-03C	0.6	50.0	44.5	10.5	14.0	1000.0	890.0	210	0.0	13.0	21.0	0.0	SGM-03C
SGM-04A	38.3	40.9	31.8	36	766.0	818.0	636.0	320	0.0	6.0	5.0	1.0	SGM-04A
SGM-04B	32.6	37.9	29.5	24.9	652.0	758.0	590	498	0.0	5.0	9.0	0.0	SGM-04B
SGM-04C	0.1	31.0	21.3	10.3	2.0	620.0	426.0	806	0.0	6.0	5.0	1.0	SGM-04C
SGM-05A	0.7	27.8	19.7	0	15.0	556.0	394.0	0	0.0	0.0	0.0	0.0	SGM-05A
SGM-05B	25.7	27.2	19.8	23.4	514.0	544.0	396	468	0.0	3.0	6.0	0.0	SGM-05B
SGM-05C	0.1	20.8	14.3	12.3	3.0	416.0	286.0	846	0.0	2.0	2.0	0.0	SGM-05C
SGM-06A	0.1	0.0	0.2	0.0	3.0	0.0	4	0	0.0	0.0	0.0	0.0	SGM-06A
SGM-06B	31.6	30.8	25.6	9.7	632.0	616.0	512	194	0.0	6.0	10.0	0.0	SGM-06B
SGM-06C	30.7	27.9	21.7	0.0	614.0	558.0	434	0	1.0	2.0	4.0	0.0	SGM-06C
SGM-07A	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	SGM-07A
SGM-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	SGM-07B
SGM-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	SGM-07C
SGM-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	SGM-08A
SGM-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	SGM-08B
SGM-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	SGM-08C
SGM-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	SGM-09A
SGM-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	SGM-09B
SGM-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	SGM-09C
SGM-10A	2.4	9.6	6.9	0.0	48.0	192.0	138	0	0.0	9.0	5.0	0.0	SGM-10A
SGM-10B	4.4	12.5	9.4	6.4	88.0	250.0	188	128	0.0	0.0	2.0	0.0	SGM-10B
SGM-10C	4.2	10.9	8.5	4.0	84.0	218.0	170	80	0.0	0.0	4.0	0.0	SGM-10C
SGM-11A	2.6	10.7	10.2	9.4	52.0	219.0	204	188	0.0	0.0	16	9.0	SGM-11A
SGM-11B	0.8	12.6	11.2	7.3	18.0	252.0	224	146	0.0	0.0	1.0	0.0	SGM-11B
SGM-12A	35.6	38.6	31.3	37.2	712.0	712.0	626	744	3.0	16.0	18.0	34.0	SGM-12A
SGM-12B	31.2	35.6	33.5	10.6	624.0	712.0	670	212	0.0	1.0	2.0	1.0	SGM-12B
SGM-13A	0.1	9.0	17.7	0.0	2.0	180	354	0	0.0	0.0	1.0	0.0	SGM-13A
SGM-13B	0.0	33.1	22.5	7.0	0.0	662.0	450.0	140	0.0	7.0	13.0	0.0	SGM-13B
SGM-14A	0.0	0.5	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	SGM-14A
SGM-14B	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	SGM-14B
SGM-15A	0.0	0.0	15.0	0.0	0.0	0.0	300.0	0.0	0.0	0.0	0.0	0.0	SGM-15A
SGM-15B	0.0	0.0	15.2	9.4	0.0	0.0	304.0	187.0	0.0	0.0	0.0	0.0	SGM-15B
SGM-16A	0.0	0.0	16.4	0.0	0.0	0.0	328.0	0.0	0.0	0.0	0.0	0.0	SGM-16A
SGM-16B	0.0	0.0	--	0.0	0.0	0.0	--	0.0	0.0	0.0	--	0.0	SGM-16B
SGM-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	SGM-17A
SGM-17B	0.0	0.0	--	0.0	0.0	0.0	--	0.0	0.0	0.0	--	0.0	SGM-17B
SGM-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	SGM-18A
SGM-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	SGM-18B
SGM-19A	0.0	1.2	0.0	0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0	SGM-19A
SGM-19B	0.0	4.0	0.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	SGM-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

oil Gas oring Well	Methane (% By Volume) February-98	Methane (% By Volume) May-98	Methane (% By Volume) August-98	Methane (% By Volume) December-98
V-01A	0	0	0	0
V-01B	0.1	0	0	0
V-02A	0	0	0	0
V-02B	0.1	0	0	0
V-03A	0	0	0	0
V-03B	0	0	0	0.1
V-04A	0	0.1	0	0
V-04B	0	0	0	0
V-05A	0	0	0	0
V-05B	0	0	0	0
V-06A	0	0	0	0
V-06B	0	0	0	0
V-07A	<>	<>	<>	<>
V-07B	<>	<>	<>	<>
V-08A	0	0	0	0
V-08B	0	0	0	0
V-09A	0	0	0	0
V-09B	0	0	0	0
V-10A	0	0	0	0
V-10B	0	0	0	0
V-11A	0	0	0	0
V-11B	0	0	0	0
V-12A	0	0	0	0
V-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	1	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	1	0	SGMW-12B

SGM07 was not accessible

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

Soil Gas Monitoring Well	Methane (% By Volume) June-99	Methane (% By Volume) October-99	Methane (% By Volume) December-99	LEL (% By Volume) June-99	LEL (% By Volume) October-99	LEL (% By Volume) December-99	Hydrogen sulfide (ppm By Volume) June-99	Hydrogen sulfide (ppm By Volume) October-99	Hydrogen sulfide (ppm By Volume) December-99	Soil Gas Monitoring Well
SGMW-01A	0	0	0	0	0	0	0	0	1	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	0.1	0	0	2	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	3	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	1	SGMW-06A
SGMW-06B	0	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	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	1	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	1	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

** No measurement was recorded.

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

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
	0	0	0	0	0	0	0	0	2	5	1	1	SGMW-01A
	0	0	0	0	0	0	0	0	0	0	2	2	SGMW-01B
	0	0	0	0	0	0	0	0	2	0	0	2	SGMW-02A
	0	0	0	0	0	0	0	0	0	0	0	1	SGMW-02B
	0	0	0	0	0	0	0	0	0	1	1	2	SGMW-03A
	0	0	0	0	0	0	0	0	0	0	1	3	SGMW-03B
	0	0	0	0	0	0	0	0	0	0	1	3	SGMW-04A
	0	0	0	0	0	0	0	0	0	0	1	4	SGMW-04B
	0	0	0	0	0	0	0	0	0	1	1	4	SGMW-05A
	0	0	0	0	0	0	0	0	1	1	2	3	SGMW-05B
	0	0	0	0	0	0	0	0	0	0	1	3	SGMW-06A
	0	0	0	0	0	0	0	0	0	0	1	4	SGMW-06B
	0	0	0	0	0	0	0	0	0	0	1	0	SGMW-07A
	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-07B
	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08A
	0	0	0	0	0	0	0	0	0	0	0	0	SGMW-08B
	0	0	0	0	0	0	0	0	0	2	1	0	SGMW-09A
	0	0	0	0	0	0	0	0	0	0	1	0	SGMW-09B
	0	0	0	0	0	0	0	0	0	0	1	0	SGMW-10A
	0	0	0	0	0	0	0	0	0	0	0	5	SGMW-10B
	0	0	0	0	0	0	0	0	0	1	0	5	SGMW-11A
	0	0	0	0	0	0	0	0	0	0	1	1	SGMW-11B
	0	0	0	0	0	0	0	0	0	1	1	1	SGMW-12A
	0	0	0	0	0	0	0	0	2	0	1	2	SGMW-12B

gment 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
W-01A	0	0	0	0	0	0	3	N/A	1
W-01B	0	0	0	0	0	0	3	N/A	1
W-02A	0	0	0.1	0	0	0.2	4	N/A	2
W-02B	0	0	0	0	0	0	5	N/A	2
W-03A	0	0	0.1	0	0	0.2	4	N/A	3
W-03B	0	0	0.1	0	0	0.2	4	N/A	2
W-04A	0	0	0	0	0	0	5	N/A	0
W-04B	0	0	0	0	0	0	5	N/A	0
W-05A	0	0	0	0	0	0	6	N/A	0
W-05B	0	0	0	0	0	0	5	N/A	0
W-06A	0	0	0	0	<>	0	6	N/A	0
W-06B	0	0	0	0	<>	0	5	N/A	0
W-07A	0	0	0	0	<>	0	5	N/A	0
W-07B	0	0	0	0	<>	0	6	N/A	0
W-08A	0	0	0	0	<>	0	7	N/A	0
W-08B	0	0	0	0	<>	0	6	N/A	0
W-09A	0	0	0	0	0	0	3	N/A	0
W-09B	0	0	0	0	0	0	6	N/A	0
W-10A	0	0	0	0	0	0	8	N/A	0
W-10B	0	0	0	0	0	0	7	N/A	0
W-11A	0	0	0	0	0	0	4	N/A	0
W-11B	0	0	0	0	0	0	6	N/A	0
W-12A	0	0	0	0	0	0	7	N/A	0
W-12B	0	0	0	0	0	0	6	N/A	0

measurement was collected due to other work in the area.

2007 Former Landfill Soil Gas Monitoring Summary

ll Gas oring Well	Methane (% By Volume) March-02	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
MW-01A	0	0	0	0	0	0	0	0	2	0	0	0	SGMW-01A
MW-01B	0	0	0	0	0	0	0	0	0	0	1	0	SGMW-01B
MW-02A	0	0	0	0	0	0	0	0	0	1	0	3	SGMW-02A
MW-02B	0	0	0	0	0	0	0	0	3	1	1	2	SGMW-02B
MW-03A	0	0	0	0	0	0	0	0	1	1	1	6	SGMW-03A
MW-03B	0	0	0	0	0	0	0	0	1	0	0	5	SGMW-03B
MW-04A	0	0	0	0	0	0	0	0	2	0	0	5	SGMW-04A
MW-04B	0	0	0	0	0	0	0	0	2	0	0	4	SGMW-04B
MW-05A	0	0	0	0	0	0	0	0	2	0	0	7	SGMW-05A
MW-05B	0	0	0	0	0	0	0	0	2	1	0	6	SGMW-05B
MW-06A	0	0	0	0	0	0	0	0	2	1	0	7	SGMW-06A
MW-06B	0	0	0	0	0	0	0	0	0	1	1	5	SGMW-06B
MW-07A	0	0	0	0	0	0	0	0	1	1	0	3	SGMW-07A
MW-07B	0	0	0	0	0	0	0	0	2	0	0	7	SGMW-07B
MW-08A	0	0	0	0	0	0	0	0	2	0	1	8	SGMW-08A
MW-08B	0	0	0	0	0	0	0	0	2	0	1	6	SGMW-08B
MW-09A	0	0	0	0	0	0	0	0	2	0	2	9	SGMW-09A
MW-09B	0	0	0	0	0	0	0	0	2	0	2	8	SGMW-09B
MW-10A	0	0	0	0.1	0	0	0	0	2	0	2	7	SGMW-10A
MW-10B	0	0.2	0	0.1	0	0	0	0	2	0	0	7	SGMW-10B
MW-11A	0	0.7	0	0	0	0	0	0	2	0	0	7	SGMW-11A
MW-11B	0	0.2	0	0.1	0	0	0	0	2	0	1	6	SGMW-11B
MW-12A	0	0.2	0	6	0	0	0	0	2	0	2	8	SGMW-12A
MW-12B	0	0	0	0.1	0	0	0	0	2	0	2	9	SGMW-12B
MW-13A	0	0	0	0.1	0	0	0	0	2	0	2	8	SGMW-13A
MW-13B	0	0	0	0.1	0	0	0	0	2	0	2	8	SGMW-13B

2003 Former Landfill Soil Gas Monitoring Summary

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

July measurements taken with a Landtec GEM 500
~ H2S pod not operational.

2004 Former Landfill Soil Gas Monitoring Summary

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

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

2005 Former Landfill Soil Gas Monitoring Summary Table

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

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) 9/28/06	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) 9/28/06	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 Volume) 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

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

2013 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 6/6/2013	Methane (% By Volume) 11/21/2013	LEL (% By Volume) 6/6/2013	LEL (% By Volume) 11/21/2013	Hydrogen Sulfide (ppm by volume) 6/6/2013	Hydrogen Sulfide (ppm by volume) 11/21/2013	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

2014 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 6/10/2014	LEL (% By Volume) 6/10/2014	Hydrogen Sulfide (ppm by volume) 6/10/2014	Soil Gas Monitoring Well
SGMW-01A	0	0	0	SGMW-01A
SGMW-01B	0	0	0	SGMW-01B
SGMW-02A	0	0	0	SGMW-02A
SGMW-02B	0	0	0	SGMW-02B
SGMW-03A	0	0	0	SGMW-03A
SGMW-03B	0	0	0	SGMW-03B
SGMW-04A	0	0	0	SGMW-04A
SGMW-04B	0	0	0	SGMW-04B
SGMW-05A	0	0	0	SGMW-05A
SGMW-05B	0	0	0	SGMW-05B
SGMW-06A	0	0	0	SGMW-06A
SGMW-06B	0	0	0	SGMW-06B
SGMW-07A	0	0	0	SGMW-07A
SGMW-07B	0	0	0	SGMW-07B
SGMW-08A	0	0	0	SGMW-08A
SGMW-08B	0	0	0	SGMW-08B
SGMW-09A	0	0	0	SGMW-09A
SGMW-09B	0	0	0	SGMW-09B
SGMW-10A	0	0	0	SGMW-10A
SGMW-10B	0	0	0	SGMW-10B
SGMW-11A	0	0	0	SGMW-11A
SGMW-11B	0	0	0	SGMW-11B
SGMW-12A	0	0	0	SGMW-12A
SGMW-12B	0	0	0	SGMW-12B

2015 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 8/20/2015	LEL (% By Volume) 8/20/2015	Hydrogen Sulfide (ppm by volume) 8/20/2015	Soil Gas Monitoring Well
SGM-01A	0	0	0	SGM-01A
SGM-01B	0	0	0	SGM-01B
SGM-02A	0	0	0	SGM-02A
SGM-02B	0	0	0	SGM-02B
SGM-03A	0	0	0	SGM-03A
SGM-03B	0	0	0	SGM-03B
SGM-04A	0	0	0	SGM-04A
SGM-04B	0	0	0	SGM-04B
SGM-05A	0	0	0	SGM-05A
SGM-05B	0	0	0	SGM-05B
SGM-06A	0	0	0	SGM-06A
SGM-06B	0	0	0	SGM-06B
SGM-07A	0	0	0	SGM-07A
SGM-07B	0	0	0	SGM-07B
SGM-08A	0	0	0	SGM-08A
SGM-08B	0	0	0	SGM-08B
SGM-09A	0	0	0	SGM-09A
SGM-09B	0	0	0	SGM-09B
SGM-10A	0	0	0	SGM-10A
SGM-10B	0	0	0	SGM-10B
SGM-11A	0	0	0	SGM-11A
SGM-11B	0	0	0	SGM-11B
SGM-12A	0	0	0	SGM-12A
SGM-12B	0	0	0	SGM-12B