



**BROOKHAVEN NATIONAL LABORATORY
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS**

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Executive Summary

This report documents the Operations and Maintenance activities undertaken during calendar year 2018 for the Current Landfill (Area of Concern [AOC] 3) and the Former Landfill Areas. The Former Landfill Areas include the 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, updated November 4, 2017. The landfill caps are functioning as designed and the 2018 monitoring results are consistent with results from previous years.

The groundwater quality at both the Current and Former Landfill Areas remains relatively unchanged from 2017. 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 47 micrograms per liter ($\mu\text{g/L}$), 10 $\mu\text{g/L}$ and 1.7 $\mu\text{g/L}$, respectively. As with previous years, aluminum, arsenic, iron, manganese, and sodium were detected downgradient from the Current Landfill at concentrations above applicable standards. Concentrations of these metals were similar to those detected historically. Maximum concentrations of aluminum, arsenic, iron, manganese, and sodium in downgradient wells were 1,160 $\mu\text{g/L}$, 12 $\mu\text{g/L}$, 110,000 $\mu\text{g/L}$, 561 $\mu\text{g/L}$, and 32,100 $\mu\text{g/L}$, respectively. These results are an indicator of continued low-level leachate generation at this landfill. There were no detections of radionuclides above standards at the Current Landfill during 2018.

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 2018. Strontium-90 concentrations in well 097-64 had shown a low but increasing trend in 2014 and 2016 but have since dropped to non-detectable levels in 2018. Strontium-90 has not been detected above the standard of 8 pCi/L in Former Landfill monitoring wells since 2001. Water chemistry and metals concentrations were equivalent to historic background levels. There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2018 at the Former Landfill.

The groundwater monitoring well networks for the Current and Former Landfill Areas are adequate at this time. VOCs will continue to be monitored quarterly in Current Landfill wells 088-109 and 098-99 and strontium-90 will continue to be monitored annually in the five Former Landfill monitoring wells.

As part of BNL's Per- and Polyfluoroalkyl Substances (PFAS) characterization effort, BNL collected samples of the groundwater in 2018 and 2019 for PFAS analyses. Five of the monitoring wells were sampled in January 2019 and are located downgradient of the Current and Former Landfill Areas. The combined Perfluorooctanesulfonate (PFOS) and Perfluorooctanoic acid (PFOA) results for the five wells are below EPA's lifetime health advisory level of 70 ng/L. The full results of the characterization will be reported in the *2018 Annual Groundwater Status Report*.

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ACRONYMS

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

1.0 INTRODUCTION

This report documents the Operation and Maintenance (O&M) activities and monitoring data collected during calendar year (CY) 2018 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, revised November 4, 2017. The details of the O&M programs are described in the Final Operations and Maintenance Manuals for the Current Landfill (CDM Federal, 1996a) and the Former Landfill Areas (CDM Federal, 1996b).

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

- Monitor the effectiveness of the impermeable caps in protecting groundwater quality;
- Monitor the potential generation and migration of soil-gas; and
- Maintain and monitor the various components of the closure system (landfill caps, drainage structure, and environmental monitoring systems).

This is the twenty-third year of O&M for the Current Landfill, the twenty-second year for the Former Landfill and Slit Trench, and the twenty-first 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 November 4, 2017).

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 *OUI 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 2002. In 2006 and 2011, BNL issued additional five-year review reports which discussed all remediation areas at the

site. Review of Current Landfill O&M data 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 near the Former Landfill is monitored for VOCs, metals, radionuclides, and landfill-leachate parameters.

In 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 2003. In 2006 and 2011, BNL issued the additional five-year review reports which discussed all remediation areas at the site. Review of Former Landfill O&M data 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, 2018). 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.

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. Semi-annual inspections of the landfills are also performed to ensure that institutional controls continue to be maintained.

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 2018.

These activities are discussed in greater detail in Sections 2 through 4 of this report.

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 eleven downgradient wells and one background monitoring well. Well 098-99 (OUI-MW01-2017) was added during 2017 to monitor downgradient VOC concentrations detected in monitoring well 088-109. Figure 2 depicts the location of the monitoring wells. Figure 3 shows the water table contours for this area in January/February 2019. 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
098-99 (OUI-MW01-2017)	39.5-49.5	Intermediate 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 14 shallow monitoring wells (three background and 11 downgradient). The locations of the 14 monitoring wells are presented in Figure 4. The direction of groundwater flow in the OU I area of the site is generally to the south-southeast. Figure 3 shows the January/February 2019 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 are sampled semiannually for VOCs, metals, and water chemistry parameters. The wells are usually sampled in June and November each year. However, due to scheduling delays the second round of samples were not collected until January 2019. A quarterly VOC sampling frequency is maintained for wells 088-109 and 098-99, due to the continued presence of elevated levels of chloroethane. January 2019 samples collected from wells 087-23, 087-27, 088-21, and 088-109 were analyzed for radionuclides.

Former Landfill Area wells are scheduled to be sampled every two years. However, based on the recommendation in the *2016 Environmental Monitoring Report, Current and Former Landfill Areas*, the Sr-90 sampling frequency was increased for wells 097-64, 106-02, 106-43, 106-44, and 106-45 from every two years to annually. In 2018, eight wells were sampled once for VOCs, pesticides/PCBs, general chemistry, metals and radionuclides. The remaining six wells were sampled once for Sr-90. See Table 1 for a summary of analyses performed, by well and sampling round. The wells are usually sampled in December, however due to scheduling delays the samples were not collected until January 2019.

2.1.4 Quality Assurance / Quality Control

The groundwater samples were collected and analyzed in accordance with the quality assurance/quality control (QA/QC) requirements described in the BNL SOPs for groundwater monitoring. The analytical results for groundwater samples collected during 2018 satisfied the data-quality objectives. BNL maintains 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. The results of blank samples collected did not indicate any significant impact on the quality of the results. One duplicate sample was collected from the Current Landfill during the second and fourth quarters. No errors were detected in the duplicate analyses. The results are indicative of consistency with the contract analytical laboratories and the sampling methods, resulting in valid, reproducible data. Matrix spike/matrix spike duplicate (MS/MSD) samples were collected at the same frequency as the duplicates. Two samples for nitrate and nitrite were analyzed outside the technical holding time by a few hours. The data has been qualified as an estimate based on the holding time exceedance. No significant matrix effects were observed. 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 2018. The historical trends in concentrations of key contaminants are assessed and shown graphically in Figures 5 through 12. Summary tables of all 2018 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 non-radiological 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 millirem (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 2018 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 ($\mu\text{g/L}$) in monitoring well 087-11. 1,1-Dichloroethane was detected above the groundwater standards of 5 $\mu\text{g/L}$ in two downgradient monitoring wells, 088-109 and 098-99 during 2018 (Table 2). Chloroethane was detected in wells 088-109 and 088-110 above the groundwater standard of 5 $\mu\text{g/L}$. No other VOCs were detected above groundwater standards during 2018.

Benzene exceeded the 1 $\mu\text{g/L}$ standard in well 087-11 during the June 2018 and January 2019 sampling events, with a maximum concentration of 1.7 $\mu\text{g/L}$. Chloroethane exceeded the 5 $\mu\text{g/L}$ standard in well 088-109 during all four sampling events in 2018. The maximum chloroethane concentration of 47 $\mu\text{g/L}$ was detected in well 088-109 during the August sampling event, which is well below the historic high of 560 $\mu\text{g/L}$ detected in this well in 1998. 1,1-Dichloroethane was detected above the standard of 5 $\mu\text{g/L}$ in well 088-109 during all four sampling events and in well 098-99 during the August sampling event. The maximum concentration of 1,1-dichloroethane was 10 $\mu\text{g/L}$ in August in well 088-109. There is no apparent seasonal or water table elevation correlation with VOC concentrations in this well based on an assessment of historical data.

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 of the landfill.

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 2018. The results are provided in Table 3. Elevated levels of these parameters can be indicative of the presence of landfill leachate. During 2018, ammonia was the only water chemistry parameter detected above standards.

Ammonia was detected above the standard of 2 milligrams per liter (mg/L), in downgradient well 087-11 at a concentration of 5.9 mg/L, as shown in Table 3. The levels of ammonia detected in downgradient wells are consistent with historic data.

Chloride was not detected above the standard of 250 mg/L in any wells in 2018. Downgradient well 087-24 had the highest concentration of chloride at 62 mg/L. Figure 6 plots the trends for alkalinity and chloride. The trends for downgradient wells show the low levels of chloride concentrations near 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 34 mg/L to 71 mg/L. The highest alkalinity concentration during 2018 was detected in downgradient, shallow Upper Glacial aquifer well 087-11, at 239 mg/L. There is no groundwater standard for alkalinity. The historical concentration trends plotted in Figure 6 show overall stable to decreasing levels of alkalinity.

During 2018, all sulfate concentrations remained below the groundwater standard of 250 mg/L. The highest sulfate value reported for 2018 was detected in the June sample from monitoring well 088-

110 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. TDS and TSS concentrations in background well 087-09 ranged from 103 mg/L to 109 mg/L, and 0.7 to 6 mg/L, respectively. The maximum concentrations observed in downgradient wells were 331 mg/L and 38 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 087-09 are still lower than in several downgradient wells, suggesting continued leachate migration from the landfill into the groundwater.

During 2018, iron, sodium and manganese in the background well, and aluminum, arsenic, iron, manganese, and sodium in several downgradient wells were detected above their respective groundwater standards (Table 4).

Aluminum was reported above the standard of 200 µg/L in well 087-11 at a maximum concentration of 1,160 µg/L. This result is consistent with sporadic historic results reported for several Current Landfill wells, including background well 087-09.

Arsenic was reported above the standard of 10 µg/L in wells 087-23 and 088-110 at a maximum concentration of 12 µg/L. 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 088-21. The background concentrations ranged up to 1,430 µg/L while downgradient concentrations ranged up to 110,000 µg/L in well 087-11. This well has shown increasing iron concentrations since late 2017. However, this is not inconsistent with the historical increases and decreases evidenced in several of the wells, including the background well. Iron trend graphs are plotted on Figure 7.

Manganese ranged from 4 µg/L to 561 µg/L in background well 087-09, and up to 4,490 µg/L (well 087-23) in the downgradient wells.

Background and downgradient sodium levels ranged up to 32,100 µg/L. Chromium was not detected above the standard of 50 µg/L in any monitoring wells in 2017 and 2018. The maximum chromium concentration was 17 µg/L in background well 087-09.

2.2.1.4 Radionuclides

No radionuclides were detected above groundwater standards for strontium-90 and tritium during the 2018 sample round collected in January 2019 (Table 5). Strontium-90 and tritium were not detected during 2018 and have not exceeded groundwater standards in any wells since 1998. As noted in Section 2.2, there are no groundwater standards for the gamma constituents; therefore, a groundwater screening level was used for comparison purposes. Figure 8 shows the historical strontium-90 and tritium concentration trends for the four wells sampled.

2.2.2 Former Landfill

Based on changes recommended in the *2012 Environmental Monitoring Report, Current and Former Landfill Areas*, monitoring wells are scheduled to be sampled every two years.

However, the Sr-90 sampling frequency for wells 097-64, 106-02, 106-43, 106-44, and 106-45 is annual. All wells were sampled in 2018.

2.2.2.1 VOCs

There were no detections of VOCs above groundwater standards in Former Landfill Area monitoring wells in 2018 (Table 6). The maximum VOC concentration was 2.7 µg/L of chloroform in monitoring well 086-72. The trends for VOC results are shown on Figure 9. There have been no detections of VOCs above standards since 1998.

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 2018, none of the water chemistry parameters exceeded applicable groundwater standards (Table 7). 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 8, and concentration trend plots for iron are shown on Figure 11. All metal detections were below groundwater standards during 2018 except for sodium in background well 086-42 (70,200 µg/L) and iron in well 106-02 (1,180 µg/L).

2.2.2.4 Pesticides/PCBs

There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2018. The last detection of pesticides was in 2002 and the last PCB was detected in 2008. The sampling results are summarized in Table 9.

2.2.2.1 Radionuclides

The sampling results are summarized in Table 10, and concentration trend plots for Strontium-90 and tritium are shown on Figure 12. Tritium was not detected above the MDA in any wells during 2018. Strontium-90 was sampled for in all wells and was detected in two wells in 2018 below the groundwater standard of 8 pCi/L. Strontium-90 was detected in well 106-44 at 2.62 pCi/L and in well 106-64 at 0.96 pCi/L.

Strontium-90 concentrations in well 097-64 have shown a low but increasing trend in 2014 and 2016 but has since dropped off and was not detected in 2018. Strontium-90 has not been detected above the standard of 8 pCi/L in Former Landfill monitoring wells since 2001. There were two estimated detections of gross beta activity in two wells at a concentration of 3.16 pCi/L in well 086-42 and 1.46 pCi/L in well 106-30.

2.2.3 Per- and Polyfluoroalkyl Substances (PFAS) Monitoring.

As part of the Per- and Polyfluoroalkyl Substances (PFAS) source area characterization effort, BNL collected samples of the groundwater in 2018 and 2019 for PFAS analyses. The full results of the characterization will be reported in the *2018 Annual Groundwater Status Report*. However, as part of the Phase 3 characterization, five of the monitoring wells were sampled in January 2019 and are located downgradient of the Current and Former Landfill Areas.

The combined Perfluorooctanesulfonate (PFOS) and Perfluorooctanoic acid (PFOA) results for the five wells are below EPA's lifetime health advisory level of 70 ng/L. The maximum PFOS concentration was 4.7 ng/L in Current Landfill well 088-109. The maximum PFOA detection was 16 ng/L in Current Landfill well 087-11. Table 11 presents the PFAS results for these five wells.

3.0 SOIL-GAS MONITORING

3.1 Soil-gas Monitoring Networks

Soil-gas readings were collected from wells surrounding the Current Landfill in March, June, September, and December 2018 and from the Former Landfill in August 2018. 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%.

3.1.1 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 adjacent to the landfill. Their locations are illustrated on Figure 13.

3.1.2 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.

3.1.3 Sampling Frequency

Soil-gas was monitored for each landfill in the following months.

Sampling Event	Current Landfill	Former Landfill
Round 1	March 2018	August 2018
Round 2	June 2018	None
Round 3	September 2018	None
Round 4	December 2018	None

3.2 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.

3.2.1 Current Landfill

A total of 23 soil-gas monitoring well clusters are positioned around the Current Landfill (Figure 13) and were sampled quarterly during 2018. Potential receptors, or areas where methane can accumulate near 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.

The results of the soil-gas monitoring for 2018 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. In addition, SGM-19 along the northern side of the Current Landfill had elevated LEL readings in all four samples. 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 C).

Outpost wells, GSGM-1 to GSGM-4, located along the south side of Brookhaven Avenue and immediately upgradient of the landfill showed no methane during 2018, 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 50 ppm. Well SGMW-03A located along the west 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. Elevated hydrogen sulfide was also detected in well SGMW-03B, which is screened deeper, at a concentration of 38 ppm. Like methane, receptors to hydrogen sulfide are typically located 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 National Weather Service building.

3.2.1.1 Trend in Soil-Gas Data

Appendix C contains the results of methane and hydrogen sulfide monitoring for the Current Landfill from 1996 through 2017. Generally the levels of methane and hydrogen sulfide in the wells along the northwest landfill boundary and southeast corner have remained elevated but stable.

3.2.2 Former Landfill Area

A total of 12 soil-gas monitoring well clusters are positioned around the Former Landfill Area (Figure 14). During 2018, 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 12 details the 2018 soil-gas monitoring results for the Former Landfill Area. Appendix A contains the field notes recorded during the sampling events.

3.2.2.1 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 has not been detected since 2010. Appendix C includes the results of methane and hydrogen sulfide monitoring in the Former Landfill Area for 1996 through 2017.

Presently, there is no measured pathway for methane gas migration, nor do the concentrations represent an explosive hazard, as shown by the non-detectable 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.

4.0 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.

4.1 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 only cut once in October at the Current and Former Landfills since there was significant precipitation this year and the landfill surface was spongy. The vegetation along the Current Landfill asphalt road edges was partially sprayed with herbicide. Pine seedlings observed growing on the edge of the Former Landfills were hand pulled at the time of inspection. The seedlings only penetrated the top soil cover. An animal burrow on the west slope of the Former Landfill was filled in at the time of inspection. The burrow did not penetrate past the protection layer of the cap. Two faded point of contact signs were replaced on both landfills.

4.2 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. The weeds died off as cold weather set in. If they grow back in sufficient numbers, they will either be cut back or sprayed with herbicide in 2019.

4.3 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.

4.4 Related Structures

No structures required maintenance during 2018.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Groundwater Monitoring

5.1.1 *Conclusions for the Current Landfill*

- Benzene was detected in downgradient well 087-11 at concentrations slightly above the groundwater standard with a maximum concentration of 1.7 µg/L. The other VOCs detected above the groundwater standard were chloroethane and 1,1-dichloroethane during 2018. 1,1-Dichloroethane was detected in two monitoring wells above the standard of 5 µg/L, 088-109 and 098-99. The maximum concentration of 1,1-dichloroethane during 2018 was 10 µg/L. During 2018, chloroethane concentrations ranged up to 47 µg/L indicating that VOCs continue to emanate from the landfill. An analysis of the trends of VOCs indicated the concentrations are stable to decreasing. The maximum TVOC concentration in downgradient monitoring well 098-99 was 6.5 µg/L in August. Volatile organic compounds from the Current Landfill 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 into groundwater. Ammonia was the only water chemistry parameter detected above standards in 2018. It was detected above the standard of 2 mg/L in downgradient well 087-11 at a high of 5.9 mg/L.
- During 2018, iron, sodium, and manganese in the background well, and aluminum, arsenic, iron, manganese, and sodium in several downgradient wells were detected above their respective groundwater standards.
- Strontium-90 and tritium were not detected in 2018. 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.

5.1.2 Recommendations for the Current Landfill

The monitoring well network for the Current Landfill is sufficient. No changes to the network of the sampling frequency are warranted at this time.

5.1.3 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 2018.
- 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 2018 except for sodium in background well 086-42 and iron in well 106-02.
- There were no detections of pesticides or polychlorinated biphenyls (PCBs) during 2018.
- Strontium-90 concentrations in well 097-64 have shown a low (below the standard of 8 pCi/L) but increasing trend in 2014 and 2016 and has since decreased and was not detected in 2018.
- The implemented landfill controls are effective, as evidenced by the improved quality of groundwater downgradient of the landfill.

5.1.4 Recommendations for the Former Landfill Area

- The monitoring well network and sampling schedule for the Former Landfill are sufficient. No changes are warranted at this time.

5.2 Soil-Gas Monitoring

5.2.1 Conclusions for the Current Landfill

Methane and/or hydrogen sulfide levels in wells located along the west landfill boundary, north 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.

5.2.2 Recommendations for the Current Landfill

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

5.2.3 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.

5.2.4 Recommendations for the Former Landfill Area

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

5.3 Maintenance and Repair

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

5.3.1 Current Landfill

Monthly inspections and maintenance will continue in accordance with the O&M requirements. Access to the soil-gas monitoring wells will continue to be cleared via mechanical weed whacking. Continue removal of small pines and weeds in the drainage channel during 2019.

5.3.2 Former Landfill Area

Monthly inspections and maintenance will continue in accordance with the O&M requirements. Access to the soil-gas monitoring wells will continue to be cleared via mechanical weed whacking. Continue removal of small pines and weeds in the drainage channel during 2019.

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Table 1. 2018 Analytical Requirements for Groundwater Samples

Well ID	Project 1	Project 2	Decision Subunit	EPA 524.2 VOCs	Pesticides Method 608	PCBs Method 608	TSS/TDS	Sulfates/Chloride/Alkalinity	TK Nitrogen	Total Nitrogen	Nitrates	Nitrites	Ammonia	TAL Metals	Cyanide	EPA 901 Gamma Spec	EPA 906 Tritium	EPA 905 Sr 90	Frequency (events/year)
087-09	CLF		Background	X ^b			X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b				2b
087-11	CLF		Downgradient	X ^b			X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b				2b
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	2b
087-24	CLF		Downgradient	X ^a			X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b				2b
087-26	CLF		Downgradient	X ^b			X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b				2b
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	2b
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	4
088-110	CLF		Downgradient	X ^b			X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b				2b
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	2b
088-22	CLF		Downgradient	X ^a			X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a				1a
088-23	CLF		Downgradient	X ^a			X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a				1a
098-99	CLF (OUI-MW01-2017)	OU I (South Boundary)	Downgradient	X															4
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 ^a	1a
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	1a
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	1a
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	1a
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	1a
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	1a
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	1a
106-20	FLF		Downgradient															X ^a	1a
106-21	FLF		Downgradient															X ^a	1a
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	1a
106-43	FLF		Downgradient															X ^a	1a
106-44	FLF		Downgradient															X ^a	1a
106-45	FLF		Downgradient															X ^a	1a
106-64	FLF		Downgradient															X ^a	1a

NOTES:

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

Table 2 Current Landfill - Summary of 2018 Volatile Organic Compound Data

Analyte	Groundwater Standards (ug/L)	087-09		087-11		087-23		087-24		087-26		087-27	
		6/4/2018 (ug/L)	1/17/2019 (ug/L)	6/4/2018 (ug/L)	1/18/2019 (ug/L)	6/4/2018 (ug/L)	1/18/2019 (ug/L)	1/18/2019 (ug/L)	6/4/2018 (ug/L)	1/17/2019 (ug/L)	6/4/2018 (ug/L)		
1,1,1,2-Tetrachloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1,2,2-Tetrachloroethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	1	0.5 U	0.5 U	1.63	1.7	0.64	0.45	J	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	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,3,5-trimethyl-	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1-methylethyl-	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	5	0.5 U	0.5 U	0.83	0.95	0.61	0.47	J	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	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	5	0.5 U	0.5 U	3.87	2.08	1.88	1.85		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	7	0.44	J 0.57	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.24	J 0.74	
cis-1,2-Dichloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cymene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EDB	0.05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethene, 1,2-dichloro-, (E)-	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m-Dichlorobenzene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m/p xylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl bromide	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl chloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	10	0.5 U	0.5 U	0.17	J 0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.26	J 0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Dichlorobenzene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Chlorotoluene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Dichlorobenzene	3	0.5 U	0.5 U	0.28	J 0.5 U	0.32	J 0.32	J 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	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	5	0.5 U	0.5 U	0.5 U	3.04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
524.2 TVOC	--	0.44	0.57	6.78	7.77	3.71	3.09		0	0	0.24	0.74	

J = Estimated value.

Table 2 Current Landfill - Summary of 2018 Volatile Organic Compound Data

<i>Analyte</i>	087-27 1/17/2019 (ug/L)	088-109 1/23/2018 (ug/L)	088-109 6/4/2018 (ug/L)	088-109 8/10/2018 (ug/L)	088-109 1/17/2019 (ug/L)	088-110 6/4/2018 (ug/L)	088-110 1/18/2019 (ug/L)	088-21 6/5/2018 (ug/L)	088-21 1/18/2019 (ug/L)	088-22 1/18/2019 (ug/L)	088-23 1/18/2019 (ug/L)
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	1 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	9.69	6.76	10.9	5.51	0.5 U	0.17 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethylene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	1 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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.36 J	0.22 J	0.58	0.2 J	0.69	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,2,4-trimethyl	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,3,5-trimethyl-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1-methylethyl-	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobromomethane	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	22	31.6	47.4	9.62	9.23	2.81	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J	0.5 U
cis-1,2-Dichloroethylene	0.5 U	0.5 U	0.5 U	1 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	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cymene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DBCP	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EDB	0.5 U	0.5 U	0.5 U	1 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)-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m/p xylene	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl bromide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl chloride	0.5 U	0.5 U	0.5 U	1 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	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Dichlorobenzene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethylene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5	0.94 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
524.2 TVOC	0.7	32.05	39.08	70.65	15.33	9.92	3.21	0	0	0.18	0

J = Estimated value.

Table 2 Current Landfill - Summary of 2018 Volatile Organic Compound Data

<i>Analyte</i>	098-99 1/23/2018 (ug/L)	098-99 6/4/2018 (ug/L)	098-99 8/10/2018 (ug/L)	098-99 1/18/2019 (ug/L)
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	4.87	3.86	5.95	2.01
1,1-Dichloroethylene	0.26 J	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,2,4-trimethyl	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1,3,5-trimethyl-	0.5 U	0.5 U	0.5 U	0.5 U
Benzene, 1-methylethyl-	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	1.07	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethylene	0.19 J	0.37 J	0.5 U	0.22 J
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U
Cymene	0.5 U	0.5 U	0.5 U	0.5 U
DBCP	1 U	1 U	1 U	1 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U
EDB	0.5 U	0.5 U	0.5 U	0.5 U
Ethene, 1,2-dichloro-, (E)-	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U
m-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
m/p xylene	1 U	1 U	1 U	1 U
Methyl bromide	0.5 U	0.5 U	0.5 U	0.5 U
Methyl chloride	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U
o-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U
o-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U
p-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U
p-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethylene	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.32 J	0.59	0.5 U
524.2 TVOC	5.32	5.62	6.54	2.23

J = Estimated value.

Table 3. Current Landfill - Summary of 2018 Water Chemistry Data

Analyte	Groundwater Standards (mg/L)	087-09		087-11		087-23		087-24		
		6/4/2018 (mg/L)	1/17/2019 (mg/L)	6/4/2018 (mg/L)	1/18/2019 (mg/L)	6/4/2018 (mg/L)	1/18/2019 (mg/L)	6/4/2018 (mg/L)	1/18/2019 (mg/L)	
Alkalinity (as CaCO3)	--	33.8	71.4	191	239	54.8	102	26	23.6	
Ammonia (as N)	2	0.0969	0.17	1.65	5.9	0.177	0.613	0.0423	J 0.0395	J
Chloride	250	31.6	33.2	53	49.4	8.86	10.2	16.3	61.9	
Cyanide	0.2	0.00167	U 0.00167	U 0.00167	U 0.00167	U 0.00167	U 0.00167	U 0.00167	U 0.00167	U 0.00167
Nitrate (as N)	10	1.29	0.509	0.066	U 0.033	U 0.531	0.033	U 0.546	0.454	
Nitrite (as N)	1	0.033	U 0.033	U 0.033	U 0.033	U 0.033	U 0.033	U 0.033	U 0.033	U 0.033
Nitrite + Nitrate-N	10	1.55	0.425	0.85	U 0.85	U 0.0847	0.17	U 0.63	0.44	
Nitrogen	--	1.73	0.805	2.11	J 6.1	0.365	0.411	J 0.714	0.44	
Sulfate	250	11.6	9.75	8.17	5.16	7.88	8	13	10.8	
Total Kjeldahl Nitrogen	--	0.186	0.38	2.11	6.1	0.28	0.537	0.0838	J 0.033	U
TDS	--	109	103	331	276	92.9	78.6	78.6	119	
TSS	--	0.7	J 6	23.6	36	2.83	38	0.57	U 0.8	J

U = Not detected.

J = Estimated value.

Table 3. Current Landfill - Summary of 2018 Water Chemistry Data

Analyte	Groundwater Standards (mg/L)	087-26		087-27		088-109		088-110							
		6/4/2018 (mg/L)	1/17/2019 (mg/L)	6/4/2018 (mg/L)	1/17/2019 (mg/L)	6/4/2018 (mg/L)	1/17/2019 (mg/L)	6/4/2018 (mg/L)	1/18/2019 (mg/L)						
Alkalinity (as CaCO3)	--	25	26.2	41	73.8	134	50.6	83	57						
Ammonia (as N)	2	0.0626	0.0458	J	0.222	0.0773	1.97	0.531	0.611	0.328					
Chloride	250	26.6	33.9	8.58	6.75	14.2	11.5	25.5	25.5						
Cyanide	0.2	0.00167	U	0.00167	U	0.00167	U	0.00167	U	0.00167	U				
Nitrate (as N)	10	0.552	0.52	0.0962	J	0.0733	J	0.132	U	0.0882	J	0.249	J	0.033	U
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
Nitrite + Nitrate-N	10	0.587	0.503	0.017	U	0.017	U	0.85	U	0.085	U	0.85	U	0.17	U
Nitrogen	--	0.745	0.503	0.226	0.033	U	2.24	J	0.494	0.85	U	0.17	U		
Sulfate	250	11.9	12.6	11.7	7.7	16.9	15.8	19.7	17.8						
Total Kjeldahl Nitrogen	--	0.158	0.033	U	0.226	0.033	U	2.24	0.494	0.795	0.36				
TDS	--	94.3	64.3	82.9	37.1	204	40	217	77.1						
TSS	--	2.14	J	0.8	J	2.04	J	4.6	J	25.6	12	19.6	20	J	

U = Not detected.

J = Estimated value.

Table 3. Current Landfill - Summary of 2018 Water Chemistry Data

Analyte	Groundwater Standards (mg/L)	088-21 6/5/2018 (mg/L)	088-21 1/18/2019 (mg/L)	088-22 1/18/2019 (mg/L)	088-23 1/18/2019 (mg/L)
Alkalinity (as CaCO3)	--	29.6	31.2	56.8	10.4
Ammonia (as N)	2	0.12	0.063	0.0458 J	0.043 J
Chloride	250	44.4	13.1	21.4	16.6
Cyanide	0.2	0.00167 U	0.00167 U	0.00167 U	0.00167 U
Nitrate (as N)	10	0.143	0.142	0.23	0.159
Nitrite (as N)	1	0.033 U	0.033 U	0.033 U	0.033 U
Nitrite + Nitrate-N	10	0.131	0.118	0.195	0.0874
Nitrogen	--	0.602	0.134	0.195	0.0874 J
Sulfate	250	4.06	2.98	9.59	15.2
Total Kjeldahl Nitrogen	--	0.471	0.033 U	0.033 U	0.033 U
TDS	--	117	3.4 U	77.1	10 J
TSS	--	0.6 J	0.816 J	2.2 J	2.8

U = Not detected.

J = Estimated value.

Table 4. Current Landfill - Summary of 2018 Metals Data

Analyte	Groundwater Standards (µg/L)	087-09 6/4/2018		087-09 1/17/2019		087-11 6/4/2018		087-11 1/18/2019		087-23 6/4/2018		087-23 1/18/2019		087-24 6/4/2018		087-24 1/18/2019		087-26 6/4/2018	
		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)		(ug/L)	
Aluminum	200	68	U	68	U	68	U	1160		68	U	82.4	B	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	2	U	2.06	B	8.51		9.9		7.73		12		2	U	2	U	2	U
Barium	1000	23.6	B	36.7	B	26.7	B	48.2	B	28.2	B	45	B	8.1	B	23.5	B	27.9	B
Beryllium	3	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	--	11900		23100		22000		28700		6100		10000		6120		12800		6690	
Chromium	50	17		14.7		1	U	1	U	1.67	B	1	U	1	U	1	U	1	U
Cobalt	--	1	U	2.07	B	8.45	B	10.4	B	7.74	B	19.4	B	1	U	1	U	1.34	B
Copper	200	3	U	3.71	B	10.8	B	6.94	B	3	U	3	U	3	U	3	U	3	U
Iron	300	37.1	BE	1430		91800	E	110000		18600	E	46700		31.2	BE	30	U	593	E
Lead	25	0.5	U	0.5	U	0.599	B	0.532	B	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Magnesium	35000	3300	B	4600	B	4960	B	5540		2250	B	3470	B	3800	B	7760		4980	B
Manganese	300	4.22	BE	561		2990	E	2160		4200	E	4490		2	UE	2	U	6.08	BE
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	8.21	B	5.94	B	1.5	U	2.42	B	2.5	B	4.49	B	1.5	U	1.5	U	1.5	U
Potassium	--	1320	BE	3180	B	2190	BE	3940	B	744	BE	1430	B	1010	BE	1750	B	1500	BE
Selenium	10	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Silver	50	1	U	1	U	3.72	B	2.25	B	1.09	B	1.36	B	1	U	1	U	1	U
Sodium	20000	20300	E	21600		27100	E	31800		5040	E	8970		11100	E	29500		15500	E
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	0.6	U
Vanadium	--	1	U	1	U	3.89	B	1	U	1	U	1	U	1	U	1	U	1	U
Zinc	2000	3.3	U	5.54	B	16.3	B	11.5	B	4.19	B	5.48	B	3.3	U	3.3	U	3.3	U

Table 4. Current Landfill - Summary of 2018 Metals Data

Analyte	Groundwater Standards (µg/L)	087-26		087-27		087-27		088-109		088-109		088-110		088-110		088-21		088-21	
		1/17/2019 (ug/L)		6/4/2018 (ug/L)		1/17/2019 (ug/L)		6/4/2018 (ug/L)		1/17/2019 (ug/L)		6/4/2018 (ug/L)		1/18/2019 (ug/L)		6/5/2018 (ug/L)		1/18/2019 (ug/L)	
Aluminum	200	68	U	68	U	68	U	68	U	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	2	U	3.33	B	2.24	B	6.69		3.17	B	11.1		7.59		2	U	2	U
Barium	1000	32.2	B	7.95	B	8.21	B	49.8	B	19.6	B	29.1	B	30.4	B	12.4	B	3.74	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	--	7380		9490		17000		23600		18300		17500		14900		5230		4190	B
Chromium	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cobalt	--	1	U	1	U	1	U	6.84	B	4.55	B	3.7	B	2.33	B	1	U	1	U
Copper	200	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Iron	300	204		5730	E	3330		47900	E	11700		48600	E	35600		74.9	B	103	
Lead	25	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Magnesium	35000	5250		4320	B	9080		7340		5880		5300		4590	B	2630	B	2080	B
Manganese	300	2.52	B	479	E	874		2730	E	1050		2640	E	2620		34.6		15.5	
Mercury	0.7	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U	0.067	U
Nickel	100	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	--	1600	B	1370	BE	1290	B	3590	BE	1750	B	2210	BE	2190	B	1020	B	517	B
Selenium	10	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Silver	50	1	U	1	U	1	U	2.27	B	1	U	2.12	B	1.13	B	1	U	1	U
Sodium	20000	21400		5020	E	5780		10400	E	8280		15500	E	19100		32100		16200	
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	0.6	U
Vanadium	--	1	U	1	U	1	U	1.11	B	1	U	1.75	B	1	U	1	U	1	U
Zinc	2000	3.3	U	3.35	B	3.3	U	4.51	B	4.84	B	4.41	B	3.3	U	3.3	U	3.3	U

Table 4. Current Landfill - Summary of 2018 Metals Data

<i>Analyte</i>	Groundwater Standards (µg/L)	088-22 1/18/2019 (ug/L)		088-23 1/18/2019 (ug/L)	
Aluminum	200	68	U	68	U
Antimony	3	3.5	U	3.5	U
Arsenic	10	2.26	B	2.12	B
Barium	1000	63	B	4.64	B
Beryllium	3	1	U	1	U
Cadmium	5	1	U	1	U
Calcium	--	14200		5060	
Chromium	50	1	U	1	U
Cobalt	--	1.25	B	1.24	B
Copper	200	3	U	3	U
Iron	300	529		1580	
Lead	25	0.5	U	0.5	U
Magnesium	35000	8690		2270	B
Manganese	300	81.7		314	
Mercury	0.7	0.067	U	0.067	U
Nickel	100	1.5	U	2.88	B
Potassium	--	2080	B	827	B
Selenium	10	2	U	2	U
Silver	50	1	U	1	U
Sodium	20000	13500		13100	
Thallium	0.5	0.6	U	0.6	U
Vanadium	--	1	U	1	U
Zinc	2000	3.32	B	3.3	U

U = Not detected.

B = Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

E = Used when the reported value is estimated because of the presence of interference.

Table 5. Current Landfill - Summary of 2018 Radionuclide Data

Analyte	Groundwater Standards pCi/L	087-23 1/18/2019 pCi/L				087-27 1/17/2019 pCi/L				088-109 1/17/2019 pCi/L				088-21 1/18/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	4.46	U	15.1	8.33	-0.388	U	3.1	1.95	-2.66	U	5.57	3.58	16.5	U	22.3	12.8
Beryllium-7	40000	-0.219	U	15.4	8.68	-2.13	U	14.4	8.37	5.16	U	13.5	7.53	-4.58	U	19.7	11.2
Cesium-134	80	0.0552	U	1.95	1.12	0.308	U	2.31	1.24	0.0814	U	1.6	0.877	0.148	U	2.8	1.56
Cesium-137	120	-0.201	U	1.83	1.07	-0.388	U	1.95	1.16	-0.329	U	1.55	0.933	-0.395	U	2.64	1.52
Co-60	200	-0.173	U	1.99	1.27	2.67	J-UI	2.08	2	1.57	U	1.75	1.51	-0.201	U	2.77	1.5
Cobalt-57	4000	0.019	U	1.52	0.887	0.217	U	1.31	0.771	-0.511	U	1.22	0.749	0.0764	U	2.2	1.28
Europium-152	841	-0.194	U	5.23	2.91	-1.18	U	4.94	2.84	1.64	U	4.45	2.46	-0.598	U	7.31	4.04
Europium-154	573	-2.08	U	5.33	3.14	-0.429	U	5.91	3.32	-0.293	U	4.37	2.49	3.32	U	8.21	3.98
Europium-155	4000	1.25	U	6.61	3.78	1.46	U	5.02	2.91	-3.36	U	5.03	4.45	2.91	U	9.84	7.69
Manganese-54	2000	-0.0636	U	1.69	0.917	0.822	U	2.21	1.16	-0.325	U	1.48	0.836	0.0621	U	2.28	1.27
Sodium-22	400	-0.73	U	1.87	1.1	0.0938	U	2.06	1.13	-0.0718	U	1.55	0.876	1.13	U	2.87	1.39
Strontium-90	8	0.289	U	0.457	0.274	0.593	U	0.759	0.469	0.63	U	0.693	0.425	0.239	U	0.381	0.229
Tritium	20000	-117	U	365	197	-238	U	436	228	-198	U	431	229	-41.7	U	360	199
Zinc-65	360	2.39	U	3.72	1.96	-0.323	U	4.07	3.65	0.154	U	3.41	2.18	-3.11	U	4.68	3.28

U = Not detected.

J = Associated numerical value is an estimated quantity.

UI = (Uncertain identification for gamma spectroscopy) - Radionuclide peaks that are detected but fail to meet the positive identification criteria.

Table 6. Former Landfill - Summary of 2018 Volatile Organic Compound Data

Analyte	Groundwater Standards (µg/L)	086-42		086-72		087-22		097-17		097-277		097-64		106-02		106-30	
		1/22/2019 (ug/L)	U	1/22/2019 (ug/L)	U	1/22/2019 (ug/L)	U	1/23/2019 (ug/L)	U	1/22/2019 (ug/L)	U	1/23/2019 (ug/L)	U	1/23/2019 (ug/L)	U	1/23/2019 (ug/L)	U
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	0.31	J	0.5	U	1.06	
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	0.18	J
1,1-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	0.04	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,2-Dichloropropane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,2,4-trimethyl	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1,3,5-trimethyl	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene, 1-methylethyl-	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	50	0.5	U	0.5	U	0.5	U	0.5	U	0.57		0.5	U	0.5	U	0.5	U
Bromoform	50	0.5	U	0.5	U	0.5	U	0.5	U	0.3	J	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	0.25	J	2.66		0.52		0.5	U	1.09		0.5	U	0.34	J	0.17	J
cis-1,2-Dichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cymene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
DBCP	0.04	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	0.8		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	0.5	U	0.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethylene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
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	--	0.25		2.66		0.52		0		2.76		0.31		0.34		1.41	

U = Not detected

Table 7. Former Landfill - Summary of 2018 Water Chemistry Data

Analyte	Groundwater Standards (mg/L)	086-42		086-72		087-22		097-17		097-277		097-64		106-02		106-30	
		1/22/2019 (mg/L)		1/22/2019 (mg/L)		1/22/2019 (mg/L)		1/23/2019 (mg/L)		1/22/2019 (mg/L)		1/23/2019 (mg/L)		1/23/2019 (mg/L)		1/23/2019 (mg/L)	
Alkalinity (as CaCO3)	--	44.4		4.6		4.8		10.6		5.6		9.4		8.8		14.2	
Ammonia (as N)	2	0.0541		0.0607		0.0901		0.0336	J	0.047	J	0.017	U	0.017	U	0.0424	J
Chloride	250	100		12		8.78		3.13		34		4.69		17.8		6.3	
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	2.06	H	0.0854	J	0.69		0.292		0.417	H	0.203		0.283		0.109	
Nitrite (as N)	1	0.033	HU	0.033	U	0.033	U	0.033	U	0.033	HU	0.033	U	0.033	U	0.033	U
Nitrite + Nitrate-N	10	2.54		0.113		0.675		0.24		0.459		0.14		0.295		0.0694	
Nitrogen	--	2.6		0.113		0.675		0.273		0.459		0.14		0.295		0.0694	J
Sulfate	250	21.4		8.13		9.37		7.7		12.5		8.54		13.4		19.5	
Total Kjeldahl Nitrogen	--	0.0595	J	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U	0.033	U
TDS	--	209		27.1		14.3	J	41.4		80		55.7		88.6		60	
TSS	--	5.7		3.5		1.6	J	1.5	J	0.57	U	0.57	U	13.2		1	J

U = Not detected.

J = Estimated value.

H = Analytical holding time was exceeded. The analysis was performed within a couple of hours of the holding time expiring. The associated numerical value is an estimated quantity based on holding time exceedance.

Table 8. Former Landfill - Summary of 2018 Metals Data

Analyte	Groundwater Standards (ug/L)	086-42		086-72		087-22		097-17		097-277		097-64		106-02		106-30	
		1/22/2019 (ug/L)		1/22/2019 (ug/L)		1/22/2019 (ug/L)		1/23/2019 (ug/L)		1/22/2019 (ug/L)		1/23/2019 (ug/L)		1/23/2019 (ug/L)		1/23/2019 (ug/L)	
Aluminum		133	B	69.5	B	105	B	68	U	68	U	73.2	B	127	B	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
Arsenic	10	2.6	B	2.65	B	2.53	B	2.72	B	2.42	B	2.59	B	2.42	B	2.75	B
Barium	1000	28.7	B	14.4	B	16.6	B	6.94	B	23.1	B	20.3	B	15.5	B	10.2	B
Beryllium	3	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Calcium	--	11500		4020	B	2910	B	3300	B	6100		4200	B	7860		6010	
Chromium	50	3.94	B	1	U	1.06	B	1	U	1	U	1	U	1.23	B	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	14.7	B	3	U	3	U
Iron	300	246		78	B	236		30	U	30	U	30	U	1180		30	U
Lead	25	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	1.31	B	0.5	U
Magnesium	35000	2780	B	1780	B	1600	B	1170	B	3790	B	988	B	1640	B	1460	B
Manganese	300	13.8	B	7.38	B	7.44	B	4.58	B	23		8.74	B	10.7	B	3.41	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	23.2	B	1.5	U	1.5	U
Potassium	--	2570	BE	882	BE	998	BE	660	B	1310	BE	866	B	1410	B	1270	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	70200		7390		6200		4100	B	16200		4720	B	9900		9650	
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	1.16	B	1	U	1	U	1	U	1.04	B	1	U
Zinc	2000	7.92	B	3.87	B	6.09	B	3.3	U	3.3	U	3.3	U	12.7	B	3.3	U

U = Not detected.

B = Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

E = Used when the reported value is estimated because of the presence of interference.

Table 9. Former Landfill - Summary of 2018 Pesticide/PCB Data

Analyte	Groundwater Standards (ug/L)	086-42		086-72		087-22		097-17		097-277		097-64		106-02		106-30	
		1/22/2019 (ug/L)		1/22/2019 (ug/L)		1/22/2019 (ug/L)		1/23/2019 (ug/L)		1/22/2019 (ug/L)		1/23/2019 (ug/L)		1/23/2019 (ug/L)		1/23/2019 (ug/L)	
4,4''-DDD	0.3	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
4,4''-DDE	0.2	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
4,4''-DDT	0.2	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Aldrin	0	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
alpha-BHC	0.01	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
beta-BHC	0.01	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Chlordane	0.05	0.234	U	0.238	U	0.238	U	0.236	U	0.236	U	0.236	U	0.234	U	0.25	U
delta-BHC	0.04	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Dieldrin	0.004	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Endosulfan I	0.009	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Endosulfan II	--	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Endosulfan sulfate	--	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Endrin	0	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Endrin aldehyde	5	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Endrin ketone	5	0.0374	U	0.0381	U	0.0381	U	0.0377	U	0.0377	U	0.0377	U	0.0374	U	0.04	U
Heptachlor	0.04	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Heptachlor epoxide	0.03	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Lindane	0.05	0.0187	U	0.019	U	0.019	U	0.0189	U	0.0189	U	0.0189	U	0.0187	U	0.02	U
Methoxychlor	35	0.187	U	0.19	U	0.19	U	0.189	U	0.189	U	0.189	U	0.187	U	0.2	U
Toxaphene	0.06	0.467	U	0.476	U	0.476	U	0.472	U	0.472	U	0.472	U	0.467	U	0.5	U

U = Not detected.

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	086-42 1/22/2019 pCi/L				086-72 1/22/2019 pCi/L				087-22 1/22/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	1.93	U	16.3	10.6	0.422	U	17.4	10.9	-0.445	U	11.6	6.44
Beryllium-7	40000	-2.83	U	17.2	9.92	-1.42	U	16.4	9.55	4.01	U	16.1	8.68
Cesium-134	80	-0.0701	U	2.12	1.2	0.718	U	2.21	1.17	-0.346	U	2.02	1.25
Cesium-137	120	-0.442	U	2.11	1.23	0.196	U	2.05	1.11	-0.337	U	1.96	1.14
Co-60	200	0.71	U	2.32	1.15	0.55	U	2.21	1.18	0.23	U	2.22	1.19
Cobalt-57	4000	0.136	U	1.91	1.06	0.864	U	1.81	1.06	0.725	U	1.51	1.17
Europium-152	841	0.676	U	6.09	3.39	-1.16	U	5.64	3.27	-3.47	U	5.21	3.42
Europium-154	573	-0.343	U	6.04	3.23	-0.326	U	5.91	3.35	-0.0152	U	5.83	3.16
Europium-155	4000	3.69	U	8.26	4.9	0.602	U	7.45	4.44	-1.83	U	6.47	3.77
Gross Alpha	15	0.815	U	1.98	1.15	0.0562	U	1.99	1.02	1.03	U	1.93	1.18
Gross Beta	1000	3.16	J	1.43	1.03	0.343	U	1.38	0.786	1.05	U	1.88	1.13
Manganese-54	2000	-3.3	U	1.74	1.97	0.689	U	1.94	1.02	-0.571	U	1.77	1.07
Sodium-22	400	-0.448	U	2.12	1.17	-0.458	U	2.06	1.2	-0.0333	U	2.04	1.11
Strontium-90	8	-0.0055	U	0.409	0.231	0.116	U	0.79	0.457	-0.172	U	0.753	0.425
Tritium	20000	17.5	U	367	207	-125	U	348	187	-19	U	365	204
Zinc-65	360	-0.542	U	4.2	2.59	1.07	U	4.29	2.6	-0.226	U	4.45	2.79

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	097-17 1/23/2019 pCi/L				097-277 1/22/2019 pCi/L				097-64 1/23/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	1.71	U	9.01	5.41	-1.96	U	16.2	9.5	-6.6	U	12	10.1
Beryllium-7	40000	0.25	U	14.4	8.08	-3.92	U	17.5	10.3	-4.48	U	13.8	7.99
Cesium-134	80	1.18	U	2	1.05	-0.333	U	2.31	1.3	-1.06	U	1.62	1.02
Cesium-137	120	0.708	U	1.71	2.72	-0.959	U	2.05	1.18	-0.0113	U	1.78	1
Co-60	200	0.272	U	1.71	1.82	0.397	U	2.46	1.34	-0.638	U	1.78	1.02
Cobalt-57	4000	-0.627	U	1.44	0.865	0.637	U	1.93	1.14	0.349	U	1.51	0.873
Europium-152	841	-0.172	U	5.05	2.8	3.35	U	6.57	3.58	2.16	U	5.07	3.91
Europium-154	573	0.939	U	5.68	3.02	0.0776	U	6.37	3.56	0.329	U	5.44	2.87
Europium-155	4000	1.41	U	6.14	3.51	0.572	U	7.82	4.66	-2.25	U	6.16	4.68
Gross Alpha	15	-0.054	U	1.93	1.02	-0.704	U	1.96	0.825	-0.792	U	1.99	0.828
Gross Beta	1000	1.46	U	1.52	0.954	0.99	U	1.24	0.768	0.571	U	2.05	1.19
Manganese-54	2000	0.149	U	1.75	0.997	-0.502	U	1.91	1.09	0.0675	U	1.74	0.987
Sodium-22	400	0.583	U	2.01	1.04	-0.0275	U	2.22	1.24	0.128	U	1.91	1.01
Strontium-90	8	0.023	U	0.385	0.219	-0.392	U	0.786	0.399	0.551	U	0.796	0.478
Tritium	20000	-20.4	U	361	202	6.66	U	362	204	-23.4	U	369	206
Zinc-65	360	1.11	U	3.68	2.12	-1.92	U	3.68	2.61	1.98	U	2.52	3.1

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	106-02 1/23/2019 pCi/L				106-20 6/5/2018 pCi/L				106-20 1/14/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2	-5.01	U	15.5	10								
Beryllium-7	40000	1.2	U	14.8	8.5								
Cesium-134	80	0.396	U	1.87	1.03								
Cesium-137	120	0.278	U	1.77	0.952								
Co-60	200	-0.353	U	1.78	1.04								
Cobalt-57	4000	1.32	U	1.48	1.4								
Europium-152	841	2.63	U	5.29	3.03								
Europium-154	573	-1.87	U	5.31	3.19								
Europium-155	4000	0.951	U	6.63	3.94								
Gross Alpha	15	0.149	U	1.96	0.994								
Gross Beta	1000	1.05	U	1.33	0.826								
Manganese-54	2000	0.585	U	1.69	0.875								
Sodium-22	400	-0.676	U	1.86	1.12								
Strontium-90	8	-0.342	U	0.775	0.42	0.336	U	0.761	0.447	-0.00493	U	0.737	0.428
Tritium	20000	-213	U	367	192								
Zinc-65	360	2.56	U	4.23	2.18								

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	106-21 6/5/2018 pCi/L				106-21 1/14/2019 pCi/L				106-30 1/23/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2									-0.361	U	11	6.31
Beryllium-7	40000									5.82	U	14.6	7.94
Cesium-134	80									-0.026	U	1.85	1
Cesium-137	120									-0.0754	U	1.75	1.02
Co-60	200									-0.0665	U	1.75	0.969
Cobalt-57	4000									-0.182	U	1.49	0.888
Europium-152	841									0.55	U	5.27	2.93
Europium-154	573									-0.868	U	5.05	2.87
Europium-155	4000									-0.821	U	6.42	3.81
Gross Alpha	15									0.792	U	1.94	1.12
Gross Beta	1000									1.46	J	1.17	0.799
Manganese-54	2000									0.442	U	1.54	2.05
Sodium-22	400									-0.0678	U	1.77	0.982
Strontium-90	8	-0.365	U	0.766	0.407	0.237	U	0.434	0.259	-0.486	U	0.74	0.404
Tritium	20000									-69.7	U	354	195
Zinc-65	360									1.03	U	4.13	2.49

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	106-43 1/23/2019 pCi/L				106-44 1/16/2019 pCi/L				106-45 1/23/2019 pCi/L			
		Result	Qual	MDA	Error	Result	Qual	MDA	Error	Result	Qual	MDA	Error
Americium-241	1.2												
Beryllium-7	40000												
Cesium-134	80												
Cesium-137	120												
Co-60	200												
Cobalt-57	4000												
Europium-152	841												
Europium-154	573												
Europium-155	4000												
Gross Alpha	15												
Gross Beta	1000												
Manganese-54	2000												
Sodium-22	400												
Strontium-90	8	0.327	U	0.402	0.245	2.62		0.788	0.671	0.409	U	0.789	0.469
Tritium	20000												
Zinc-65	360												

Table 10. Former Landfill - Summary of 2018 Radionuclide Data

<i>Analyte</i>	Groundwater Standards pCi/L	106-64 1/16/2019 pCi/L			
		Result	Qual	MDA	Error
Americium-241	1.2				
Beryllium-7	40000				
Cesium-134	80				
Cesium-137	120				
Co-60	200				
Cobalt-57	4000				
Europium-152	841				
Europium-154	573				
Europium-155	4000				
Gross Alpha	15				
Gross Beta	1000				
Manganese-54	2000				
Sodium-22	400				
Strontium-90	8	0.963		0.762	0.503
Tritium	20000				
Zinc-65	360				

U = Not detected.

J = Estimated value.

Table 11. Current and Former Landfill 2018 PFAS Monitoring Well Results (ng/L) (samples collected 1/11/19)

Chemical	Perfluorooctanesulfonate (PFOS)	Perfluoroundecanoic acid (PFUdA)	N-methylperfluoro-1-octanesulfonamidoacetic acid	Perfluoropentanoic acid (PFPeA)	Perfluoropentanesulfonate (PFPeS)	N-ethylperfluoro-1-octanesulfonamidoacetic acid	Perfluorohexanoic acid (PFHxA)	Perfluorododecanoic acid (PFDoA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorodecanesulfonate (PFDS)	Perfluorohexanesulfonate (PFHxS)	Perfluorobutyric acid (PFBA)	Perfluorobutanesulfonate (PFBS)	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonate (PFHpS)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoronanesulfonate (PFNS)	Perfluorotridecanoic acid (PFTTrDA)	Perfluorooctanesulfonamide (PFOSA)	PFOA/PFOS (Combined)
Current Landfill																						
087-11	<	<	<	12.1	0.7J	<	10.3	<	16	<	<	9.9	23.9	1.1J	3.4	<	<	<	<	<	<	16
088-109	4.7	<	<	0.9J	1J	<	1.3J	<	7.8	<	<	24.5	6.6	1.3J	1.4J	<	<	<	<	<	<	12.5
088-110	0.6J	<	<	1J	<	<	1.4J	<	2.7	<	<	1.7	4.2	<	<	<	<	<	<	<	<	3.3
Former Landfill																						
097-64	<	<	<	1J	<	<	0.8J	<	1J	<	<	<	2.2	<	<	<	<	<	<	<	<	1
106-30	<	<	<	<	<	<	1J	<	3.3	<	<	1.5J	3.3	<	1J	<	<	<	<	<	<	3.3

<: Not detected. Typical detection limit is 0.6 ng/L

J: Estimated concentration

Table 12
Current Landfill 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
Current Landfill 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
Former Landfill 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-2 PROBE 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 2018 Current Landfill Soil Gas Monitoring Summary

Soil/Gas Monitoring Well	Methane (% By Volume) 3/16/2018	Methane (% By Volume) 6/28/2018	Methane (% By Volume) 9/19/2018	Methane (% By Volume) 12/22/2018	LEL (% By Volume) 3/16/2018	LEL (% By Volume) 6/28/2018	LEL (% By Volume) 9/19/2018	LEL (% By Volume) 12/22/2018	Hydrogen Sulfide (ppm By Volume) 3/16/2018	Hydrogen Sulfide (ppm By Volume) 6/28/2018	Hydrogen Sulfide (ppm By Volume) 9/19/2018	Hydrogen Sulfide (ppm By Volume) 12/22/2018
SGMW-01A	12.6	7.8	9.3	20	>100	>100	>100	>100	7	2	0	13
SGMW-01B	12.6	9.3	8.7	15.7	>100	>100	>100	>100	2	3	0	0
SGMW-01C	11.5	7.6	7.1	10.9	>100	>100	>100	>100	0	1	0	0
SGMW-02A	40.6	35.8	46.9	58.7	>100	>100	>100	>100	0	6	27	0
SGMW-02B	31.8	49.7	54.7	58.8	>100	>100	>100	>100	19	21	32	12
SGMW-02C	50.4	50.1	35.2	19.2	>100	>100	>100	>100	3	4	0	0
SGMW-03A	14.8	52.3	46.1	36.1	>100	>100	>100	>100	1	0	50	3
SGMW-03B	54	52.4	30.3	28.8	>100	>100	>100	>100	38	24	0	0
SGMW-03C	51.9	54.8	0	0.1	>100	>100	0	2	20	22	0	0
SGMW-04A	47.6	43.5	48.2	53.9	>100	>100	>100	>100	2	4	3	0
SGMW-04B	46.3	40.8	29.9	36.5	>100	>100	>100	>100	3	6	0	0
SGMW-04C	43.2	31.7	25.7	0	>100	>100	>100	0	4	6	0	0
SGMW-05A	22.1	29.6	0	0	>100	>100	0	0	0	0	0	0
SGMW-05B	35.9	29.5	24.4	31.8	>100	>100	>100	>100	8	3	0	0
SGMW-05C	30.4	22.7	7.1	16.3	>100	>100	>100	>100	1	1	0	0
SGMW-06A	0	0.2	0	0	0	4	0	0	0	0	0	0
SGMW-06B	33.7	33.7	0	10.8	>100	>100	0	>100	3	4	0	0
SGMW-06C	32.2	29.1	0	26.8	>100	>100	0	>100	3	2	0	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-07C	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	0	0	0
SGMW-08C	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-09A	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-09B	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-09C	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-10A	9.5	8.9	21.9	20.2	>100	>100	>100	>100	2	1	18	0
SGMW-10B	13.3	13.8	20	17.2	>100	>100	>100	>100	2	6	1	0
SGMW-10C	11.8	12.5	16	6.8	>100	>100	>100	>100	10	1	0	0
SGMW-11A	10.2	14.9	24.5	21.7	>100	>100	>100	>100	5	16	20	2
SGMW-11B	12.1	13.9	24.4	12.8	>100	>100	>100	>100	0	1	3	0
SGMW-12A	43.9	39.6	45.8	52.9	>100	>100	>100	>100	11	20	32	7
SGMW-12B	30.8	36.1	35.8	16.3	>100	>100	>100	>100	0	0	0	0
SGMW-13A	0.2	18.3	41.1	0	4	>100	>100	0	0	8	0	0
SGMW-13B	35	38.2	42.1	0	>100	>100	>100	0	0	0	0	0
SGMW-14A	16.1	1.2	0	3.8	>100	24	0	76	1	0	0	0
SGMW-14B	16.2	14.6	0	0	>100	>100	0	0	1	4	0	0
SGMW-15A	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-15B	33.6	0	11.4	0	>100	0	>100	0	0	0	0	0
SGMW-16A	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-16B	0	0	0	0	0	0	0	0	0	0	0	0

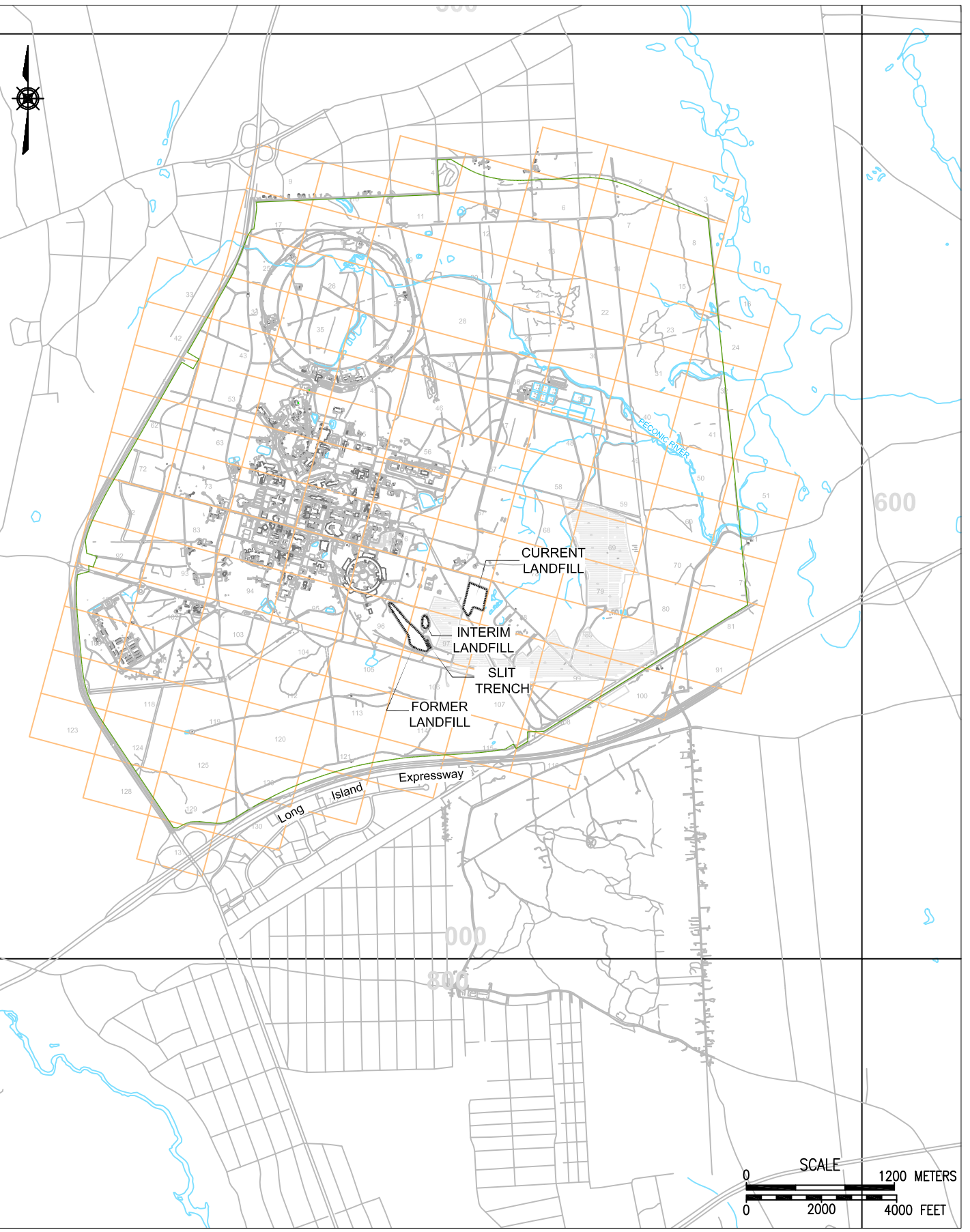
Table 13 2018 Current Landfill Soil Gas Monitoring Summary

Soil/Gas Monitoring Well	Methane (% By Volume) 3/16/2018	Methane (% By Volume) 6/28/2018	Methane (% By Volume) 9/19/2018	Methane (% By Volume) 12/22/2018	LEL (% By Volume) 3/16/2018	LEL (% By Volume) 6/28/2018	LEL (% By Volume) 9/19/2018	LEL (% By Volume) 12/22/2018	Hydrogen Sulfide (ppm By Volume) 3/16/2018	Hydrogen Sulfide (ppm By Volume) 6/28/2018	Hydrogen Sulfide (ppm By Volume) 9/19/2018	Hydrogen Sulfide (ppm By Volume) 12/22/2018
SGMW-17A	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-17B	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-18A	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-18B	0	0	0	0	0	0	0	0	0	0	0	0
SGMW-19A	13.6	8.9	13.1	15.4	>100	>100	>100	>100	12	8	27	0
SGMW-19B	0	17.7	0	0	0	>100	0	0	0	0	0	0
GSGM-1A	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-1B	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-1C	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-2A	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-2B	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-2C	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-3A	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-3B	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-4A	0	0	0	0	0	0	0	0	0	0	0	0
GSGM-4B	0	0	0	0	0	0	0	0	0	0	0	0

Table 14
2018 Former Landfill Soil-Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) 8/16/2018	LEL (% By Volume) 8/16/2018	Hydrogen Sulfide (ppm by volume) 8/16/2018
SGM-01A	0	0	0
SGM-01B	0	0	0
SGM-02A	0	0	0
SGM-02B	0	0	0
SGM-03A	0	0	0
SGM-03B	0	0	0
SGM-04A	0	0	0
SGM-04B	0	0	0
SGM-05A	0	0	0
SGM-05B	0	0	0
SGM-06A	0	0	0
SGM-06B	0	0	0
SGM-07A	0	0	0
SGM-07B	0	0	0
SGM-08A	0	0	0
SGM-08B	0	0	0
SGM-09A	0	0	0
SGM-09B	0	0	0
SGM-10A	0	0	0
SGM-10B	0	0	0
SGM-11A	0	0	0
SGM-11B	0	0	0
SGM-12A	0	0	0
SGM-12B	0	0	0

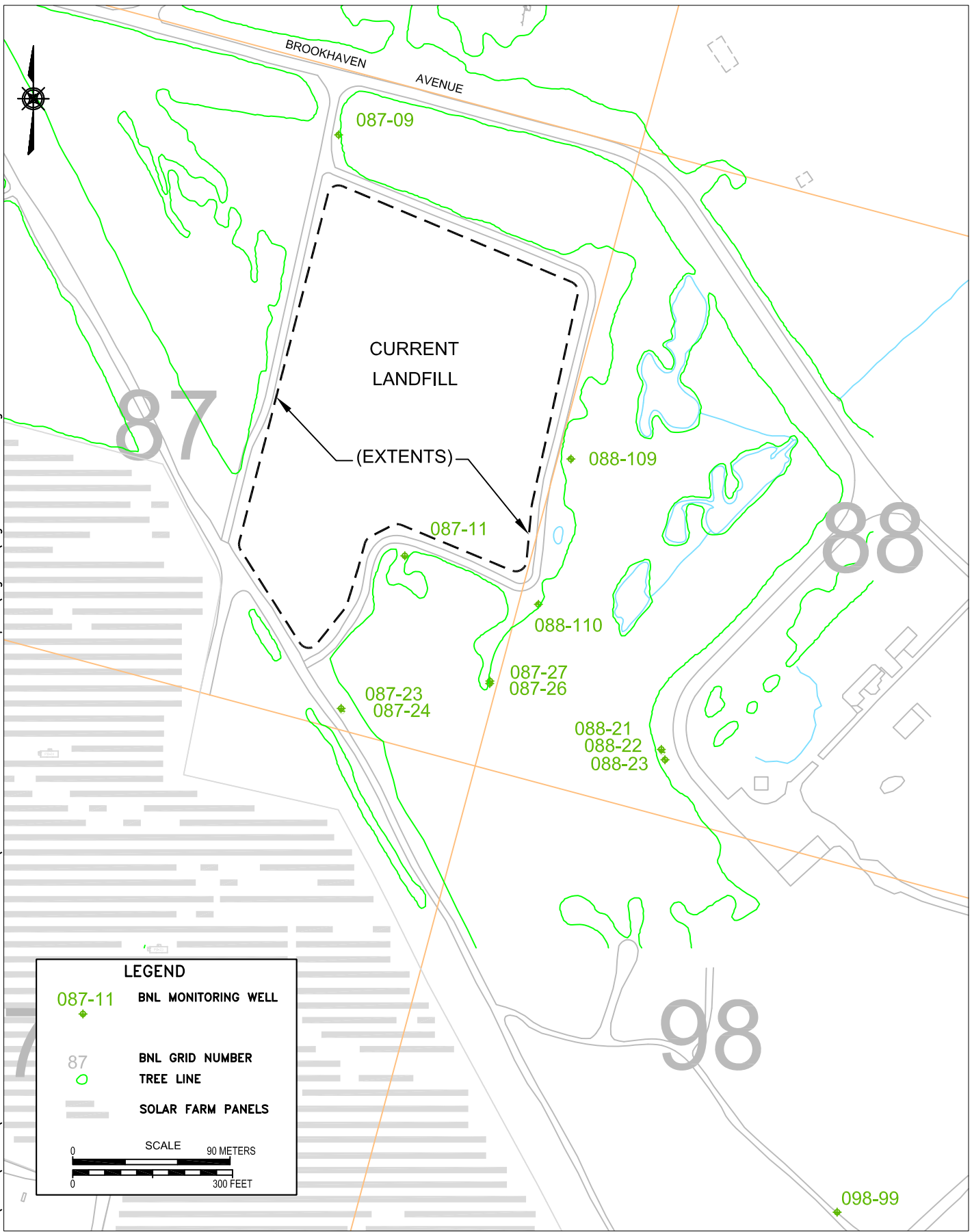
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TITLE:
SITE LOCATION MAP
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: AJZ	VT: HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:			1

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LEGEND

- ◆ 087-11 BNL MONITORING WELL
- 87 BNL GRID NUMBER
- TREE LINE
- ▬ SOLAR FARM PANELS

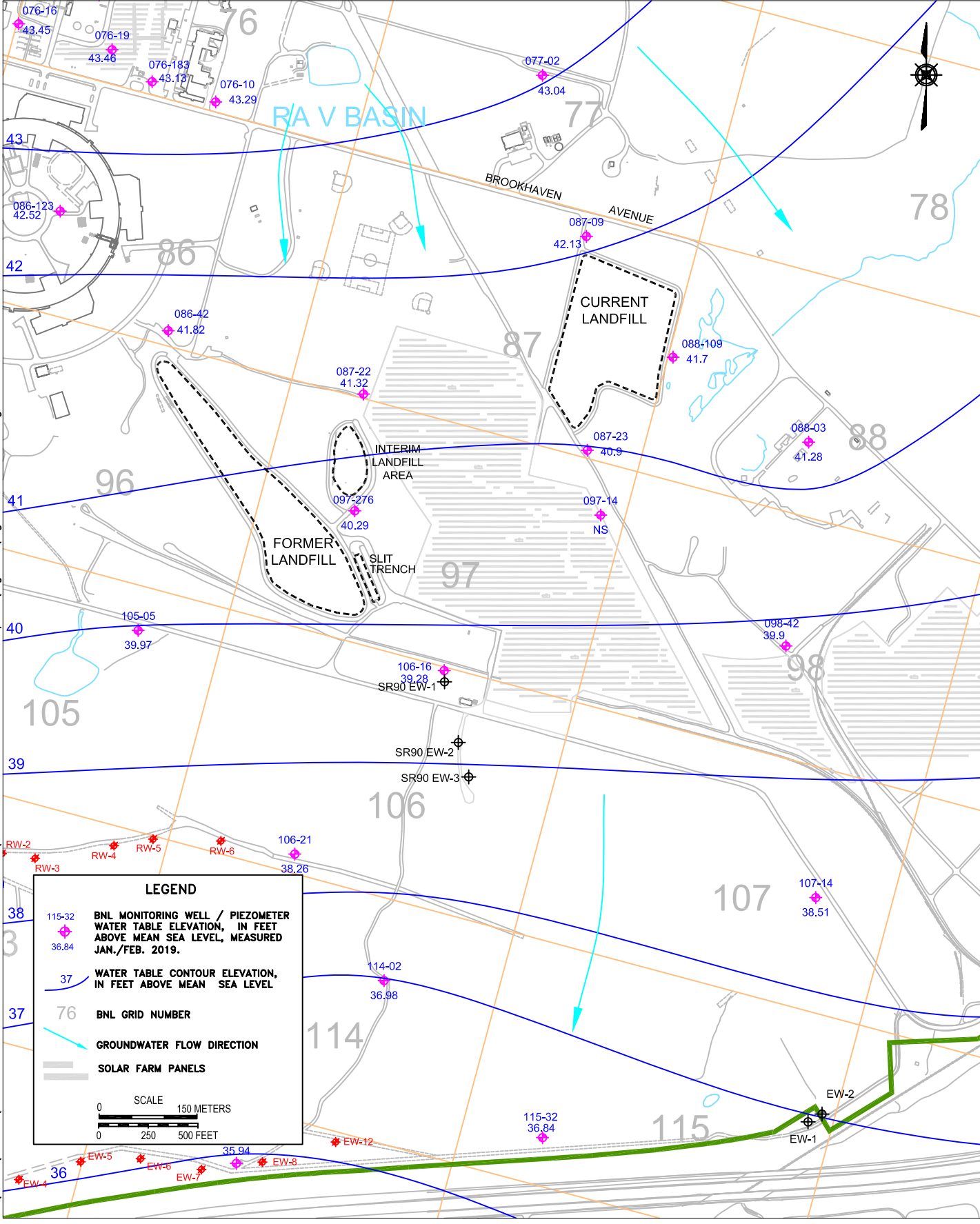
SCALE
 0 90 METERS
 0 300 FEET



TITLE:
**CURRENT LANDFILL
 MONITORING WELL LOCATIONS
 2018 ENVIRONMENTAL MONITORING REPORT
 CURRENT AND FORMER LANDFILL AREAS**

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:		2	

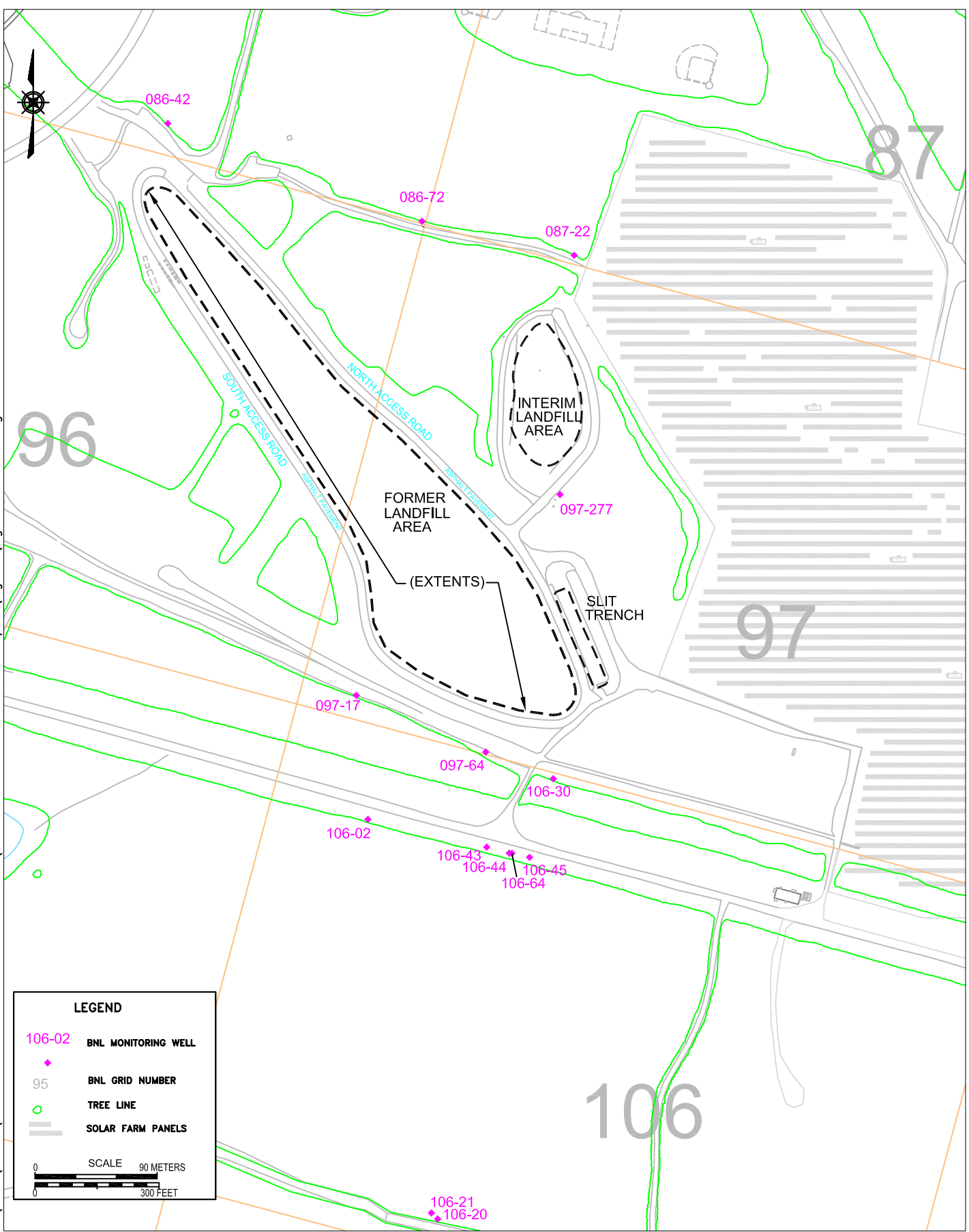
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TITLE:
WATER TABLE CONTOUR MAP
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:		3	

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LEGEND

- 106-02 BNL MONITORING WELL
- ◆ BNL GRID NUMBER
- TREE LINE
- ▬ SOLAR FARM PANELS

SCALE 90 METERS
0 300 FEET

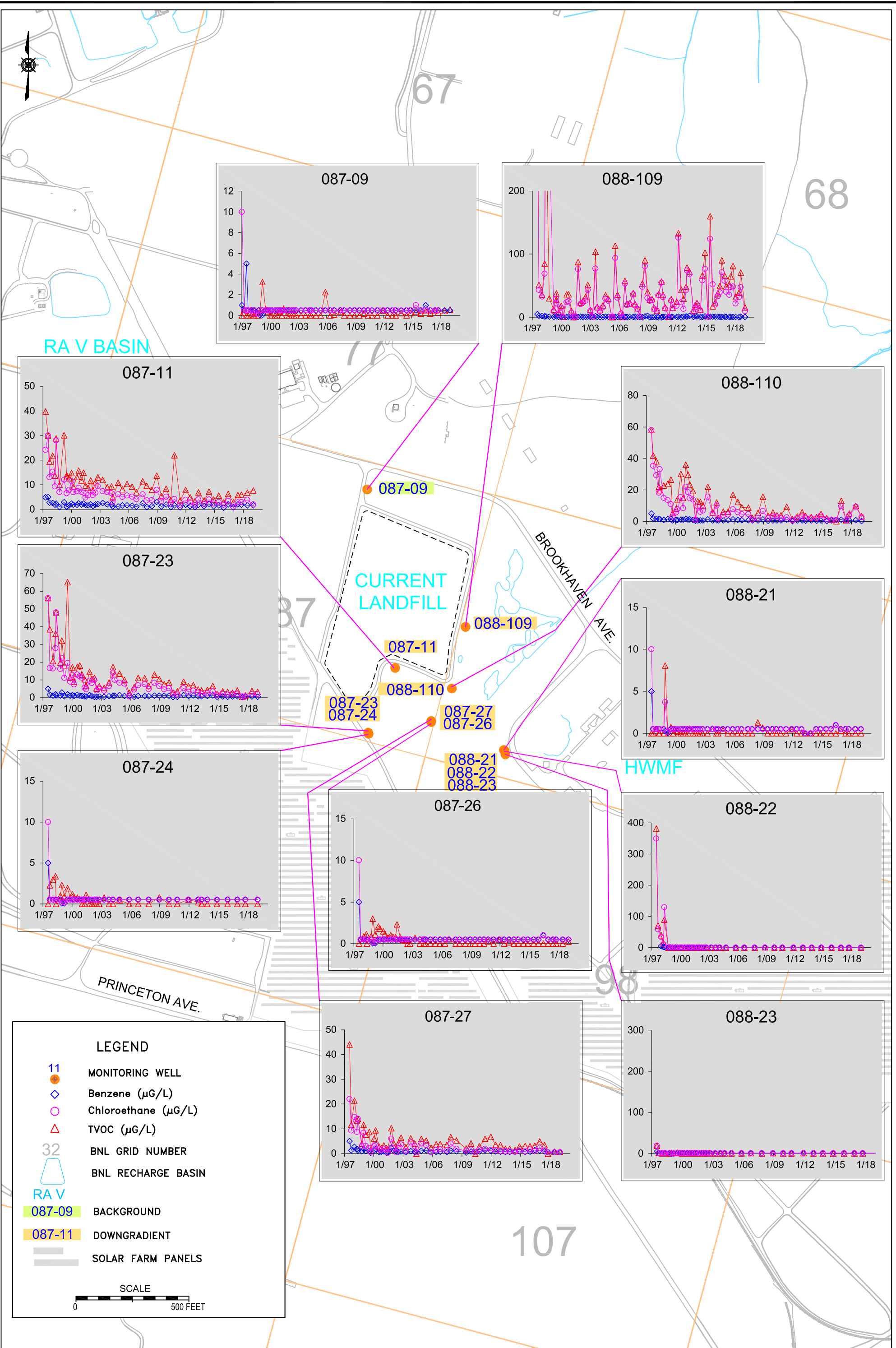


TITLE:

**FORMER LANDFILL
MONITORING WELL LOCATIONS
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS**

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:			4

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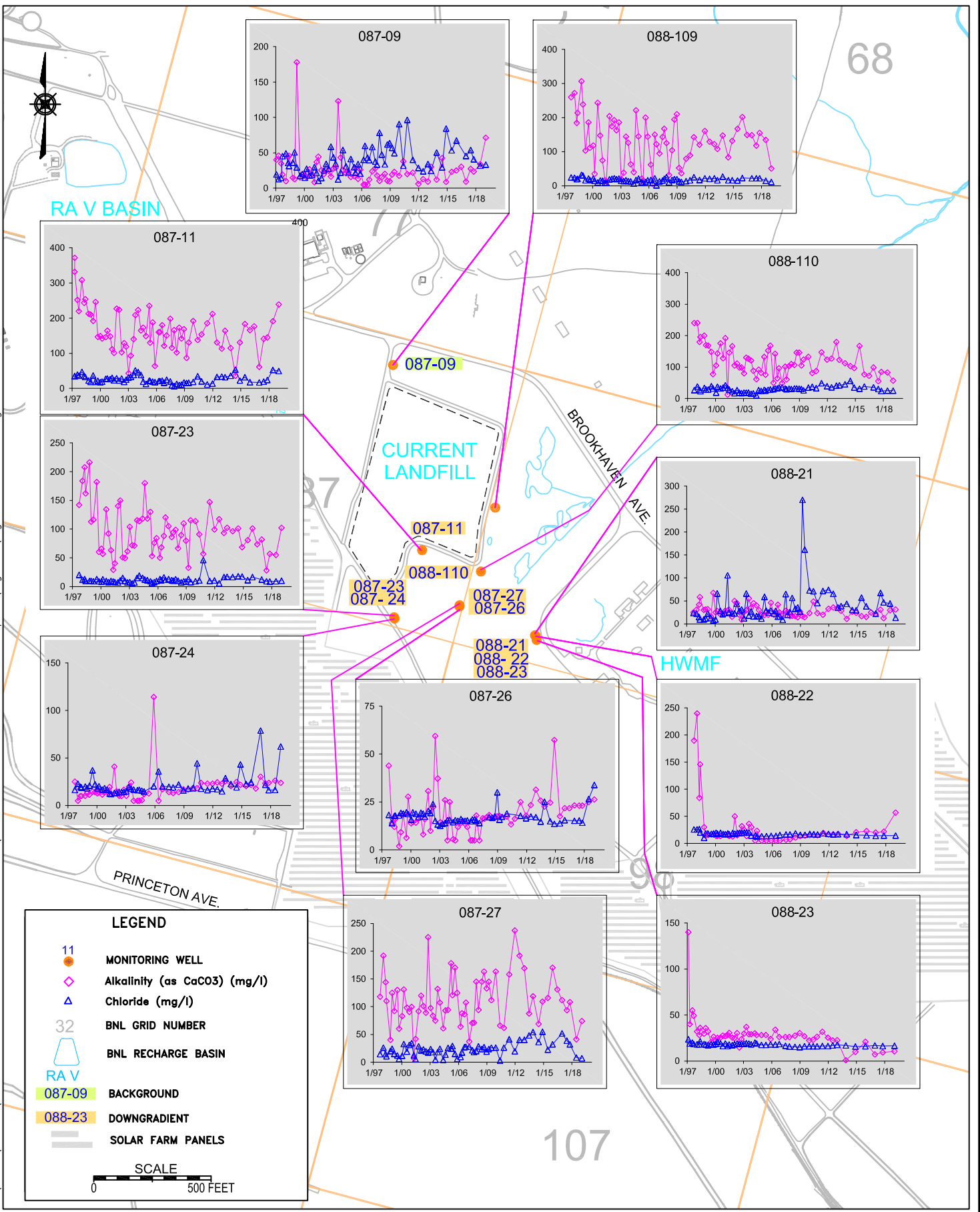
LEGEND

- 11 MONITORING WELL
- ◇ Benzene (μG/L)
- Chloroethane (μG/L)
- △ TVOC (μG/L)
- 32 BNL GRID NUMBER
- RA V BNL RECHARGE BASIN
- 087-09 BACKGROUND
- 087-11 DOWNGRADIENT
- SOLAR FARM PANELS

SCALE
0 500 FEET

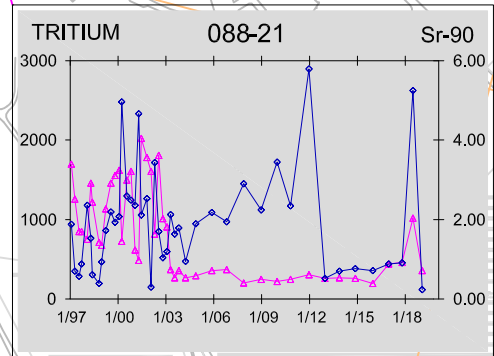
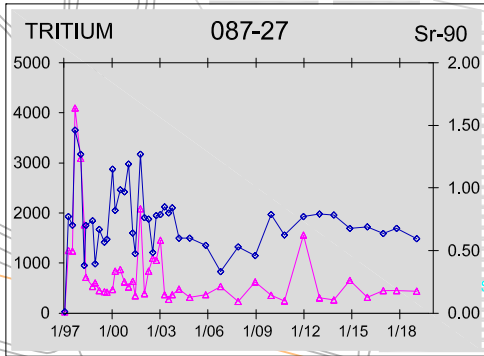
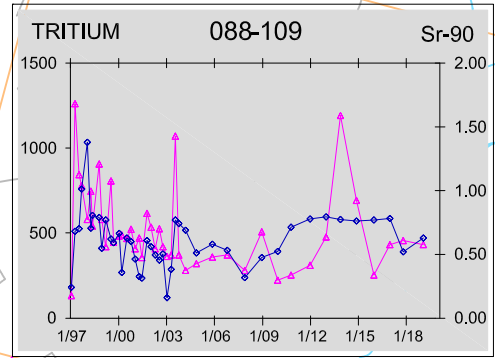
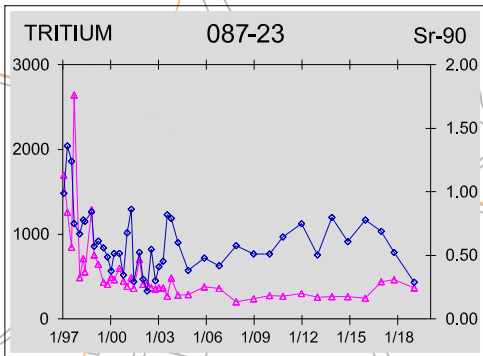
TITLE:
**CURRENT LANDFILL
VOC TREND PLOTS**
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:		5	



68

RA V BASIN



LEGEND

- 11 MONITORING WELL
- ◇ Strontium-90 (pCi/L) right scale
- △ Tritium (pCi/L) left scale
- 32 BNL GRID NUMBER
- RA V BNL RECHARGE BASIN
- 088-23 DOWNGRADIENT
- SOLAR FARM PANELS

SCALE
0 500 FEET

CURRENT LANDFILL

BROOKHAVEN AVE.

HWMF

PRINCETON AVE.

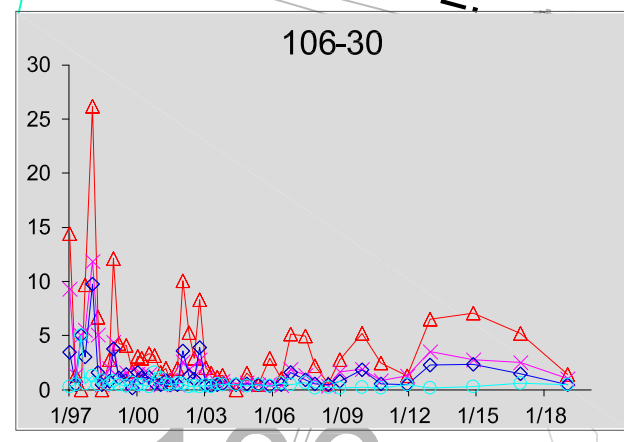
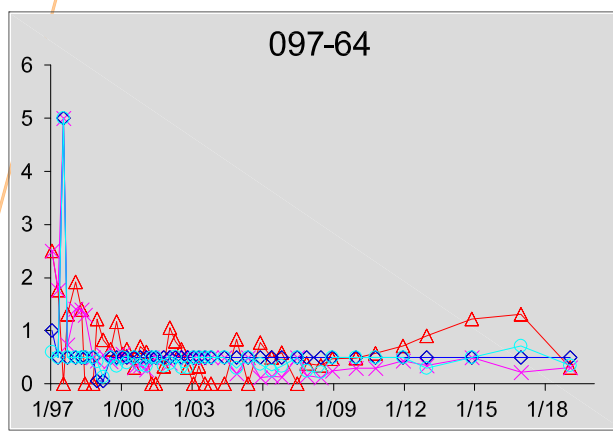
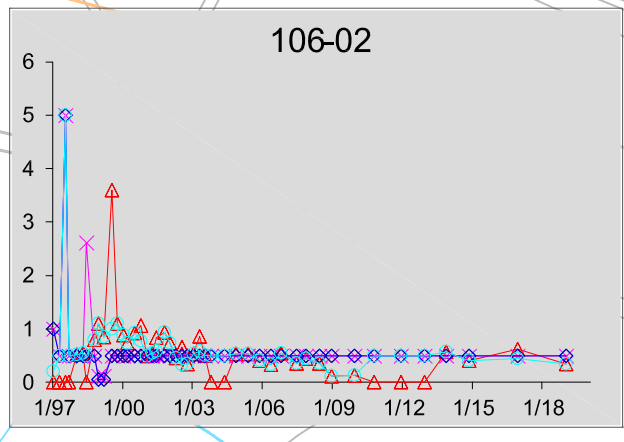
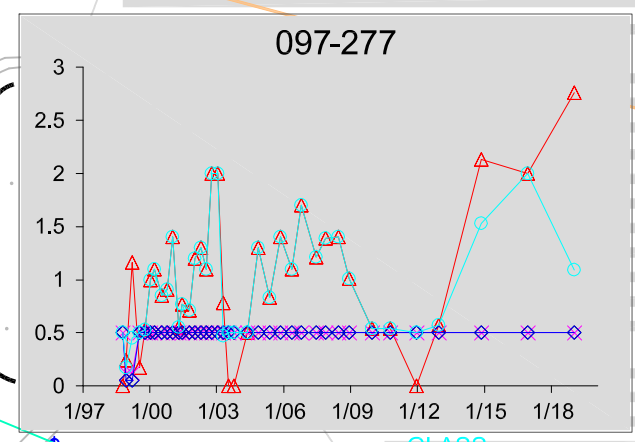
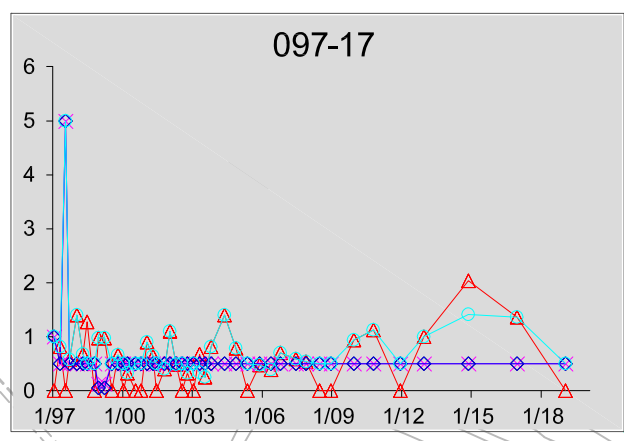
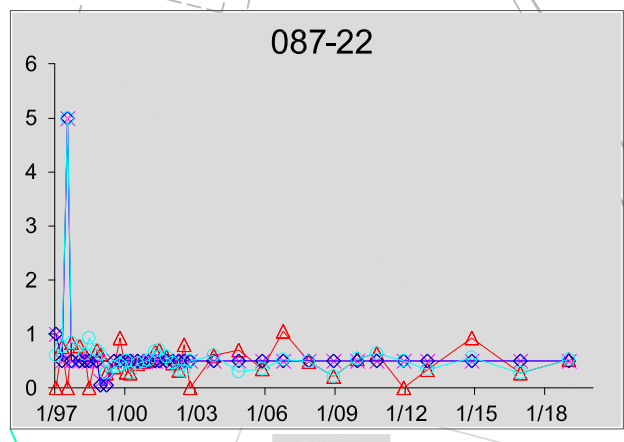
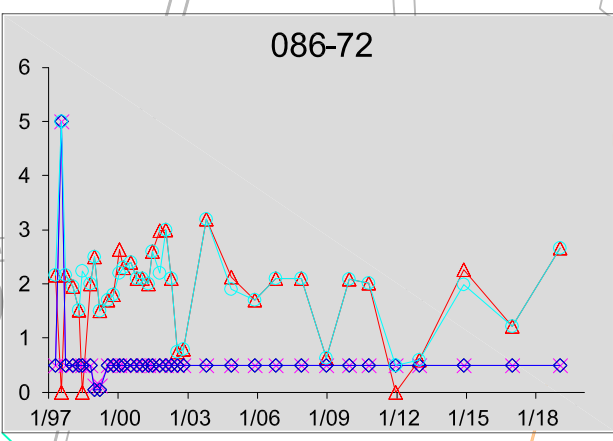
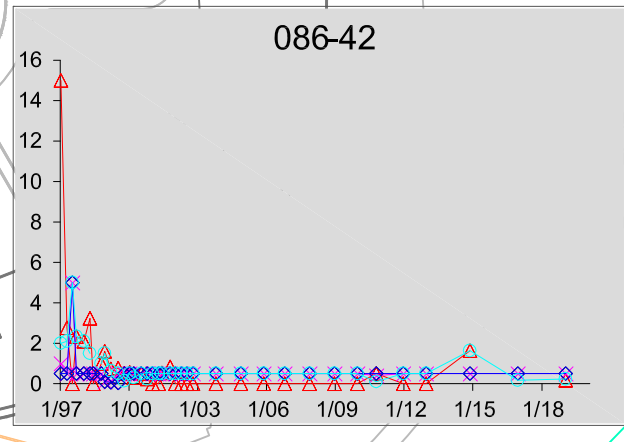
107



TITLE:
CURRENT LANDFILL TRITIUM AND STRONTIUM-90 TREND PLOTS
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:			8

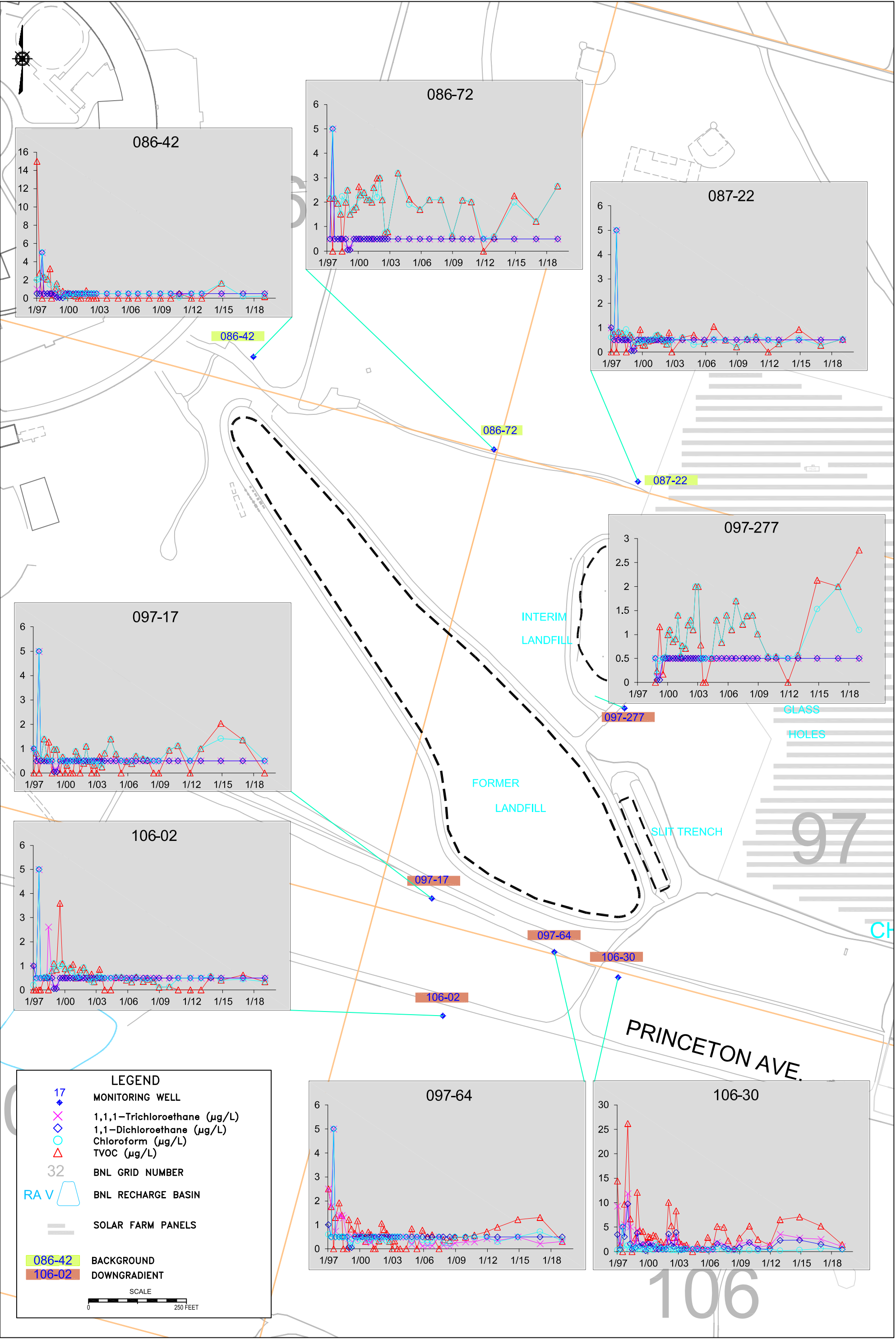
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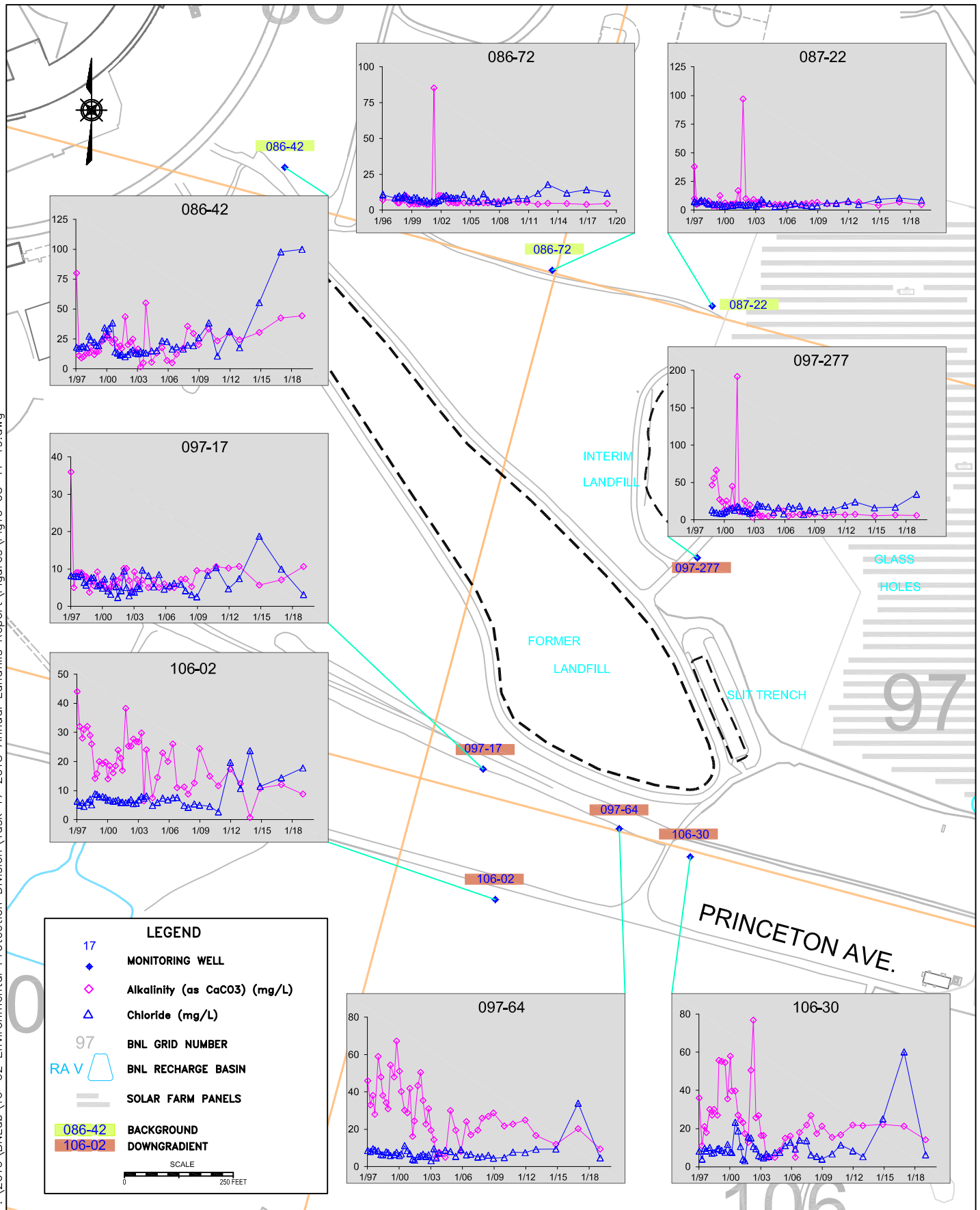
LEGEND

- 17 MONITORING WELL
- 1,1,1-Trichloroethane ($\mu\text{g/L}$)
- 1,1-Dichloroethane ($\mu\text{g/L}$)
- Chloroform ($\mu\text{g/L}$)
- TVOC ($\mu\text{g/L}$)
- 32 BNL GRID NUMBER
- RA V BNL RECHARGE BASIN
- SOLAR FARM PANELS
- 086-42 BACKGROUND
- 106-02 DOWNGRAIDENT

SCALE
0 250 FEET



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LEGEND

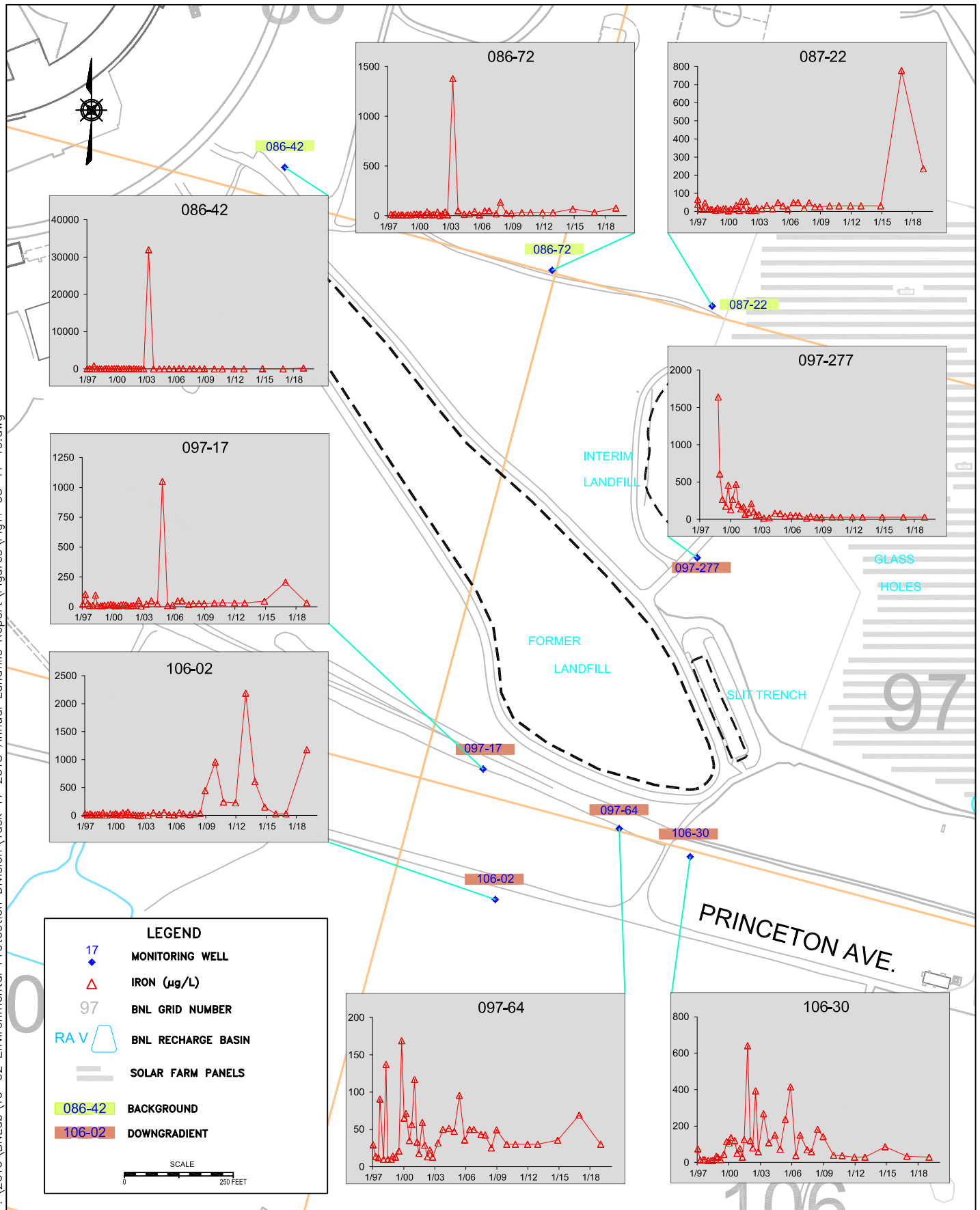
- 17 MONITORING WELL
- ◆ Alkalinity (as CaCO3) (mg/L)
- △ Chloride (mg/L)
- 97 BNL GRID NUMBER
- RA V BNL RECHARGE BASIN
- ☐ SOLAR FARM PANELS
- 086-42 BACKGROUND
- 106-02 DOWNGRADIENT

SCALE
0 250 FEET

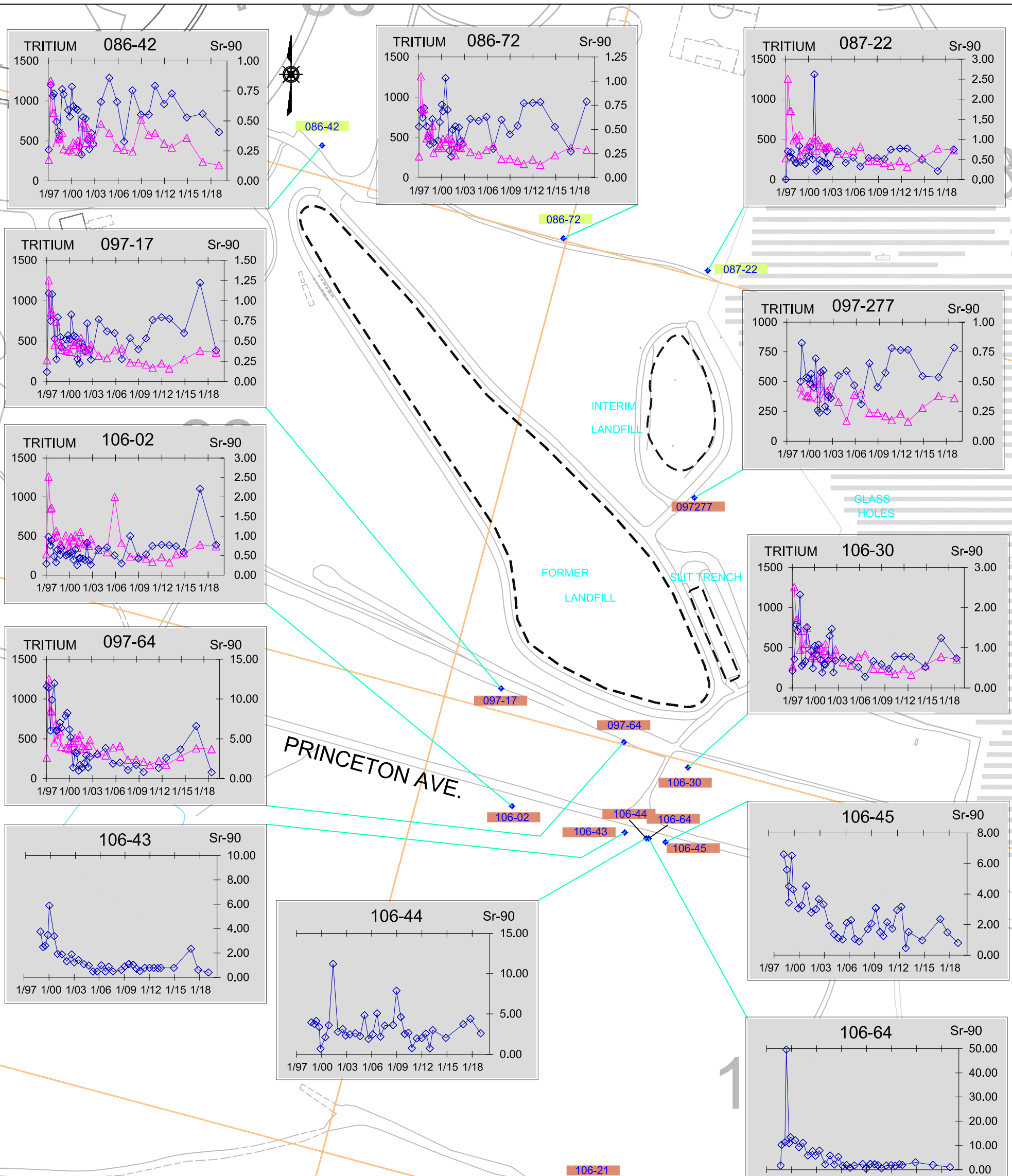


TITLE:
**FORMER LANDFILL
ALKALINITY AND CHLORIDE TREND PLOTS
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS**

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:		10	



P:\2016\BNLab\16-02 Environmental Protection Division\Task 17 2018 Annual Landfills Report\Figures\Fig12_03-11-19.dwg

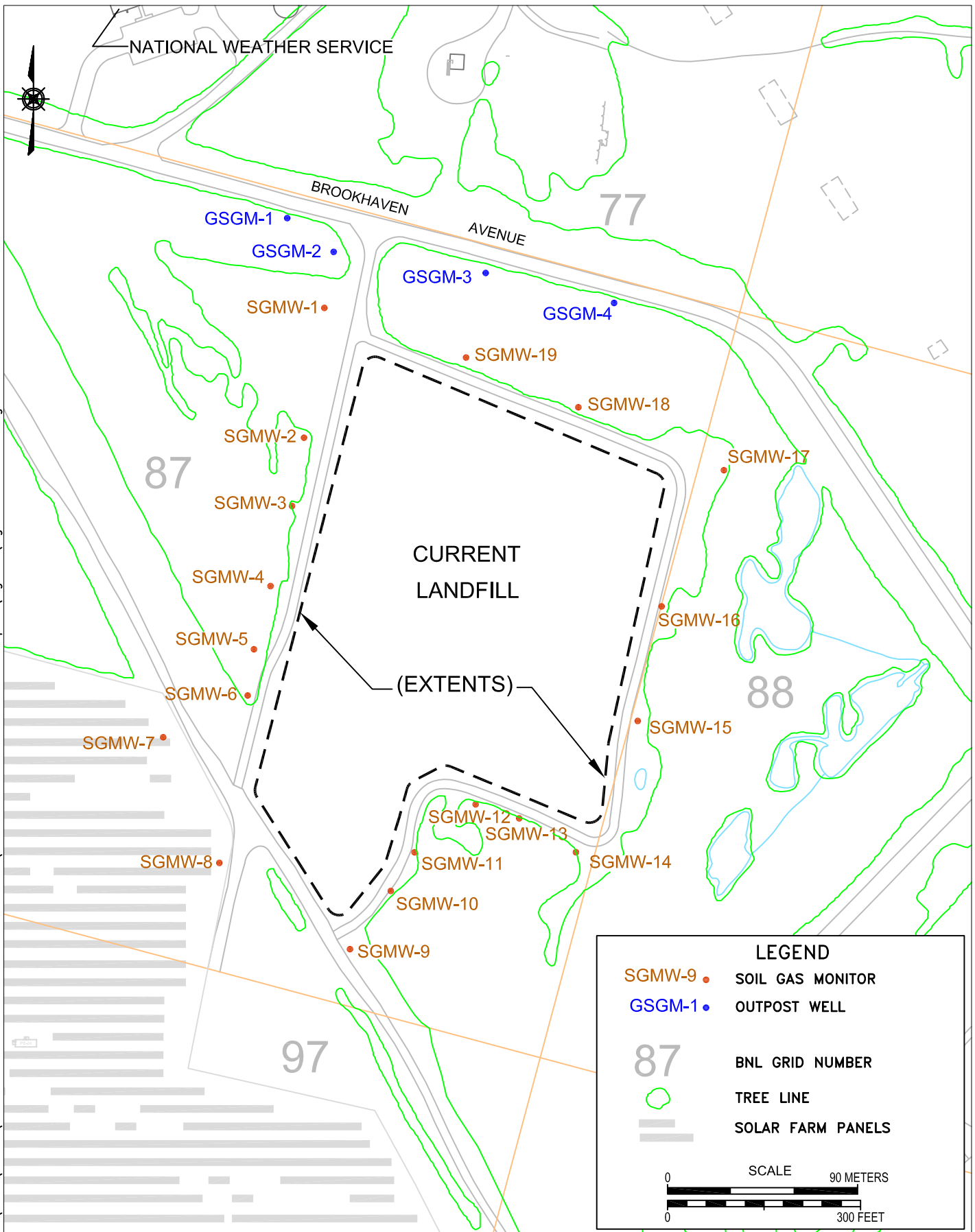


LEGEND

- 17 MONITORING WELL
- ◇ Strontium-90 (pCi/L) right scale
- △ Tritium (pCi/L) left scale
- 32 BNL GRID NUMBER
- RAV BNL RECHARGE BASIN
- ☐ SOLAR FARM PANELS
- 086-42 BACKGROUND
- 106-02 DOWNGRAIDENT

SCALE
0 250 FEET

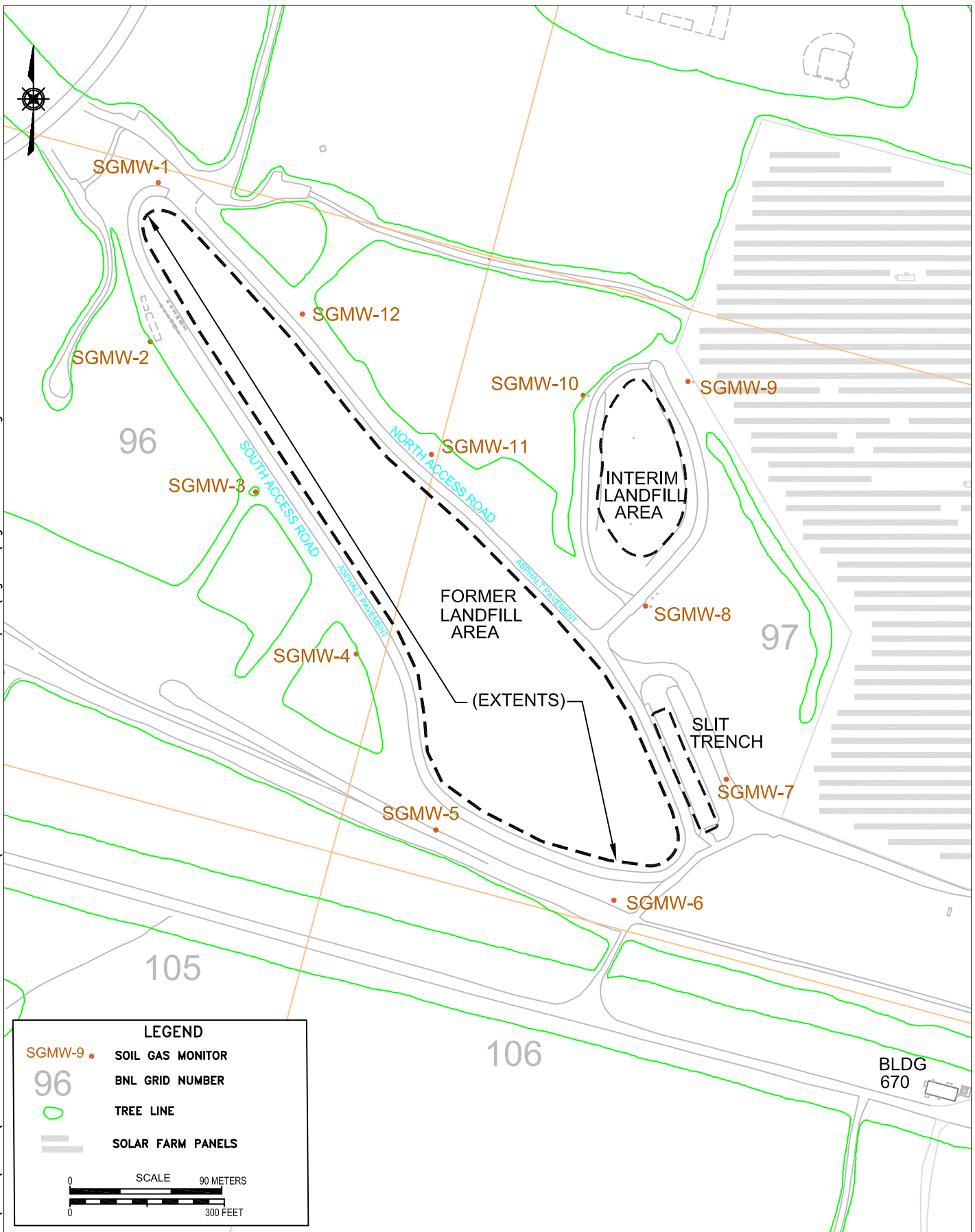
P:\2016\BNLab\16-02 Environmental Protection Division\Task 17 2018 Annual Landfills Report\Figures\Fig13 03-11-19 .dwg



TITLE:
**CURRENT LANDFILL
SOIL-GAS MONITOR LOCATION MAP
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS**

DWN: AJZ	VT: HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:		13	

P:\2016\BNLab\16-02 Environmental Protection Division\Task 17 2018 Annual Landfills Report\Figures\Fig14_03-11-19.dwg



LEGEND

- SGMW-9 • SOIL GAS MONITOR
- 96 BNL GRID NUMBER
- TREE LINE
- ▨ SOLAR FARM PANELS

SCALE 90 METERS
300 FEET



TITLE:
**FORMER LANDFILL AREA
SOIL-GAS MONITOR LOCATION MAP
2018 ENVIRONMENTAL MONITORING REPORT
CURRENT AND FORMER LANDFILL AREAS**

DWN: AJZ	VT:HZ.: -	DATE: 03/11/19	PROJECT NO.: -
CHKD: WRD	APPD: RFH	REV.: -	NOTES: -
FIGURE NO.:			14

Appendix A

Soil-gas Sampling Field Notes

(132)

3/15/18

Cutter Lumber

33°

29.48 ^{Hg} / _{Clw/wh}

Location	Well ID	CH4%	LEL%	H ₂ S	Comp/Time
Sign-1A	087-62	12.6	700 ²⁵²	7	0920
1B	087-78	12.6	7100 ²⁵²	2	0926
1C	087-79	11.5	7100 ²³⁰	0	0926
2A	087-63	40.6	710 ⁸¹²	0	0944
2B	087-80	31.8	710 ⁶³⁶	19	0950
2C	087-81	50.4	7100 ¹⁰⁰⁸	3	1000
3A	087-64	14.8	700 ²⁹⁶	1	1004
3B	087-82	54.0	700 ¹⁰⁸⁰	38	1010
3C	087-83	51.9	700 ¹⁰³⁸	20	1019
4A	087-65	47.6	710 ⁹⁵²	2	1023
4B	087-84	46.3	7100 ⁹²⁶	3	1025
4C	087-85	43.2	7110 ⁸⁶⁴	4	1035
5A	087-62	22.1	7110 ⁴⁴²	0	1042
5B	087-86	35.9	710 ⁷¹⁸	8	1048
5C	087-87	30.4	7100 ⁶⁰⁸	1	1110
6A	087-67	0	0	0	1014
6B	087-88	33.7	7100 ⁶⁷⁴	3	1020
6C	087-89	32.2	7100 ⁶⁴⁴	3	1135
7A	087-68	0	0	0	1305
7B	087-90	0	0	0	1310
7C	087-91	0	0	0	1320
8A	087-69	0	0	0	1330
8B	087-92	0	0	0	1337
8C	087-93	0	0	0	1347

⊕

3/15/18

-3/16

Cutter Lumber

Cutter

⊕

(133)

Location	Well ID	CH4%	LEL%	H ₂ S	Comp/Time
56m	9A 087-70	0	0	0	1353
	9B 087-94	0	0	0	1400
	9C 087-95	0	0	0	1410
	10A 087-77	9.5	7000 ¹⁹⁰	2	1415
	10B 087-98	13.3	700 ²⁶⁶	2	1423
	10C 087-97	11.8	7100 ²³⁶	10	1435
	11A 087-72	10.2	700 ²⁰⁴	5	1443
	11B 087-98	12.1	710 ²⁴²	0	1450
	12A 087-73	43.9	710 ⁸⁷⁸	11	1458
	12B 087-99	30.8	700 ⁶¹⁶	0	1505
	13A 087-74	0.2	704 %	0	1510
	13B 087-700	35.0	700 ⁷⁰⁰	0	1517
	14A 087-75	16.1	700 ³²⁴	1	1525
	14B 087-107	16.2	700 ³²⁴	1	1535
	15A 088-111	0.0	0	0	water in pipe 1540
	15B 088-114	33.6	700 ⁶⁷²	39	1548
	16A 088-112	0	0	0	0920
	16B 088-115	0	0	0	water 0928
	17A 088-113	0	0	0	water 0935
	17B 088-116	0	0	0	water 0945
	18A 087-76	0	0	0	water 0952
	18B 087-102	0	0	0	water 0958
	19A 087-97	13.6	70 ²⁷²	12	1009
	19B 087-103	0	0	0	1020

3/16/18

⊕

Locn	3/16/18	Current Level		35°	Pore pres
		CH ₄ %	LBE %		
656m 1A	NO 20	0	0	0	1030
1B	↓	0	0	0	1036
1C		0	0	0	1046
2A		0	0	0	1052
2B		0	0	0	1059
2C		0	0	0	1108
3A		0	0	0	1115
3B		0	0	0	1125
4A		0	0	0	1135
4B		0	0	0	1148

(Handwritten signature or initials)

(134)		3/10/18	Current Level		35°	Peak temp	on 6/27/18		Current Level		35°	Peak temp	(135)
Locn	WEIGHT	CH4%	nLBL%	hrs	Conc/ft	Locn	WEIGHT	CH4%	nLBL%	hrs	30.07	hrs	
656m 1A	NO 2A	0	0	0	1030	86m 1A	087-62	7.8	200 156	2		0750	
1B		0	0	0	1036	1B	087-79	4.3	600 186	3		0938	
1C		0	0	0	1046	1C	087-79	7.6	2100 152	1		0948	
2A		0	0	0	1052	2A	087-63	35.8	7100 716	6		0955	
2B		0	0	0	1059	2B	087-80	49.7	7100 994	21		1010	
2C		0	0	0	1108	2C	087-81	50.1	2100 1002	4		1020	
3A		0	0	0	1115	3A	087-64	52.3	2100 1096	0		1025	
3B		0	0	0	1125	3B	087-82	52.4	7100 1048	24		1035	
4A		0	0	0	1135	3C	087-83	54.8	7100 1098	22		1045	
4B		0	0	0	1148	4A	087-65	42.5	2100 870	4		1050	
						4B	087-84	40.8	7100 816	6		1055	
						4C	087-85	31.7	7100 634	6		1105	
						5A	087-66	29.6	7100 592	0		1109	
						5B	087-86	29.5	2100 590	3		1115	
						5C	087-87	22.7	7100 454	1		1135	
						6A	087-67	0.2	3	0		1205	
						6B	087-88	33.7	2100 674	4		1315	
						6C	087-89	29.1	2100 582	2		1330	
						7A	087-68	0	0	0		0935	
						7B	087-90	0	0	0		0943	
						7C	087-91	0	0	0		0953	
						8A	087-69	0	0	0		1000	
						8B	087-92	0	0	0		1016	
						8C	087-93	0	0	0		1016	

(Handwritten signature)

6/29

6/27/18 6/27

Current Lapse

(136)

Loc	Time	CH4%	Vol	H ₂ S	Temp
86A	087-70	0	0	0	1400
9B	087-94	0	0	0	1405
9C	087-95	0	0	0	1419
10A	087-71	8.7	7100 ¹⁷⁸	1	1425
10B	087-96	13.8	7100 ²⁷⁵	6	1430
10C	087-97	12.5	7100 ²⁵⁰	1	1440
11A	087-72	14.9	7100 ²⁴⁸	16	1450
11B	087-98	13.9	7100	1	1458
12A	087-73	39.6	7100 ⁷¹²	20	1508
12B	087-99	36.1	7100 ⁷²²	0	1518
13A	087-74	18.3	7100 ³⁶¹	8	1525
13B	087-100	38.2	7100 ⁷⁶⁴	0	1540
14A	087-75	1.2	25	0	1348
14B	087-101	14.6	7100 ²⁹²	4	1356
15A	088-111	0	0	0	1033
15B	088-114	0	0	0	1041
16A	088-112	0	0	0	1048
16B	088-115	0	0	0	1055
17A	088-113	0	0	0	1106
17B	088-116	0	0	0	1113
18A	087-108	0	0	0	1118
18B	087-102	0	0	0	1128
19A	087-117	8.9	7100 ¹⁷⁸	8	1135
19B	087-113	12.7	7100 ³⁵⁴	0	1145

6/28/18 2975' Hy Pan in AM

Loc	Wind	CH4%	Temp	H ₂ S	Time
656A	1A	0	0	0	1150
	1B	0	0	0	1156
	1C	0	0	0	1216
	2A	0	0	0	1305
	2B	0	0	0	1310
	2C	0	0	0	1315
	3A	0	0	0	1322
	3B	0	0	0	1330
	4A	0	0	0	1338
	4B	0	0	0	1348

6/28/18

9/14/18

Well ID	Cotton Candy		75° check	Comments/Time
	CH4 %	LFL %		
56A - 1A	087-62	9.3	2100 186	11 0822
1B	087-78	8.7	2100 174	0 0825
1C	087-79	7.1	2100 142	0 0835
2A	087-63	46.9	2100 937	27 0846
2B	087-80	54.7	2100 1097	32 0855
2C	087-81	35.2	2100 704	0 09-3
3A	087-64	46.1	2100 922	50 0908
3B	087-82	30.3	2100 606	0 0918
3C	087-83	0	0	0 0930
4A	087-85	48.2	2100 964	3 0934
4B	087-84	29.9	2100 598	0 0943
4C	087-85	25.7	2100 514	0 0945
5A	087-86	0	0	0 0955
5B	087-86	24.4	2100 498	0 1010
5C	087-87	7.1	2100 142	0 1020
6A	087-67	0	0	0 1023
6B	087-88	0	0	0 1032
6C	087-89	0	0	0 1043
7A	087-69	0	0	0 0905
7B	087-90	0	0	0 0911
7C	087-91	0	0	0 0921
8A	087-69	0	0	0 0930
8B	087-92	0	0	0 0938
8C	087-93	0	0	0 0941

9/19/18

Well ID	Cotton Candy		H2S	Comments/Time
	CH4 %	LFL %		
56A 9A	087-70	0	0	0 1053
9B	087-94	0	0	0 1059
9C	087-95	0	0	0 1109
10A	087-71	21.9	2100 438	18 1112
10B	087-96	20.0	2100 400	1 1118
10C	087-97	16.0	2100 320	0 1127
11A	087-72	24.5	2100 410	20 1305
11B	087-98	24.4	2100 488	3 1318
12A	087-73	45.8	2100 916	32 1326
12B	087-99	35.8	2100 711	0 1335
13A	087-74	41.1	2100 822	0 1345
13B	087-100	42.1	2100 842	0 1356
14A	087-75	0	0	0 1400
14B	087-101	0	0	0 1406
15A	088-111	0	0	0 1418
15B	088-114	11.4	2070 228	0 1428
16A	088-112	0	0	0 1435
16B	088-115	0	0	0 1442 water
17A	088-113	0	0	0 1448
17B	088-116	0	0	0 1449
18A	087-76	0	0	0 1455
18B	087-102	0	0	0 1500 water
19A	087-77	13.1	2100	27 15-5
19B	087-103	0	0	0 1512

(14) loc	Well ID	9/14/18		ht	9/20/18
		CH ₄ %	LEL%		concentr./m
556m 1A	no ID	0	0	0	1115
1B	↓	0	0	0	1108
1C		0	0	0	1057
2A		0	0	0	1047
2B		0	0	0	1037
2C		0	0	0	1028
3A		0	0	0	1015
3B		0	0	0	1005
4A		0	0	0	1525
4B		0	0	0	1520



9/20/18

9/20/18

Well ID	CH4%	LEL%	H2S	9/20/18 Comments/In
1A	0	0	0	1115
1B	0	0	0	1108
1C	0	0	0	1057
2A	0	0	0	1047
2B	0	0	0	1037
2C	0	0	0	1028
3A	0	0	0	1015
3B	0	0	0	1005
4A	0	0	0	1525
4B	0	0	0	1520



9/20/18

Location	Well ID	CH4%	LEL%	H2S	60° 80° 954 AB 12/22/18 Comments/In
1A	087-62	20.0	2100 466	13	0905
1B	087-78	15.7	2100 314	0	0912
1C	087-79	10.9	2100 218	0	0928
2A	087-63	58.7	2100 1174	0	0936
2B	087-80	58.8	2100 1176	12	0942
2C	087-81	19.2	2100 384	0	0950
3A	087-64	36.1	2100 722	3	0953
3B	087-82	28.8	2100 576	0	0959
3C	087-83	0.1	2100 2	0	1015
4A	087-65	53.9	2100 1670	0	1019
4B	087-84	36.5	2100 730	0	1024
4C	087-85	0	0	0	1034
5A	087-66	0	0	0	1040
5B	087-86	31.8	2100 636	0	1046
5C	087-87	16.3	2100 326	0	1056
6A	087-67	0	0	0	1100
6B	087-88	10.8	2100 216	0	1106
6C	087-89	26.8	2100 526	0	1118
7A	087-68	0	0	0	1105
7B	087-90	0	0	0	1112
7C	087-91	0	0	0	1123
8A	087-69	0	0	0	1128
8B	087-92	0	0	0	1134
8C	087-93	0	0	0	1144

(146)	n/w/1	CH4%	LBE%	hr	Comment
Run	Well ID				
9A	087-70	0	0	0	1115
9B	087-94	0	0	0	1118
9C	087-95	0	0	0	1128
10A	087-71	20.2	>100 ⁴⁴	0	1138
10B	087-96	17.2	>100 ⁴⁴	0	1145
10C	087-97	6.8	>100 ¹³⁶	0	1156
11A	087-72	21.7	>100 ⁴³⁴	2	1202
11B	087-98	12.8	>100 ²⁵⁶	0	1208
12A	087-73	52.9	>100 ¹⁰⁵⁰	7	1218
12B	087-99	16.3	>100 ³²⁶	0	1224
13A	087-74	0	0	0	1230
13B	087-111	0	0	0	1240
14A	087-75	3.3	69%	0	1244
14B	087-111	0	0	0	1250
15A	088-111	0	0	0	1256
15B	088-114	0	0	0	1306
16A	088-112	0	0	0	1316 w/h
16B	088-115	0	0	0	1324 w/h
17A	088-113	0	0	0	1330 w/h
17B	088-116	0	0	0	1338 w/h
18A	087-76	0	0	0	1350 w/h
18B	087-102	0	0	0	1400 w/h
19A	087-72	15.4	>100	0	1406
19B	087-103	0	0	0	145

38° Sarg circ 1036 Ab 50%		Current water		n/w/11	(147)
Location	Well ID	CH4%	LBE%	H2S	Count/Min
G-567	1A	0	0	0	0905
	1B	0	0	0	0912
	1C	0	0	0	0922
	2A	0	0	0	0926
	2B	0	0	0	0930
	2C	0	0	0	0940
	3A	0	0	0	0946
	3B	0	0	0	0956
	4A	0	0	0	1005
	4B	0	0	0	1015


 n/w/11

Appendix B

Monthly Landfill Site Inspection Forms

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 1-29-18

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: All OK

Observed Conditions: _____

Recommendations: _____

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

2-26-18

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:

Observed Conditions:

Everything OK

Recommendations:

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

4-26-18

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	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Cap	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Gas Vents	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
2.0 Drainage Structures:					
Toe Drain	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Drainage Channels	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
French Drains/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Subsurface Drainage Pipes/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Manholes	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Recharge Areas	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Monitoring System:					
Soil Gas Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Groundwater Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
1.0 Site Access:					
Asphalt Access Road	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Crushed-Concrete Access Road	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
1. Description of Further Action Requirements:					

Location:

Observed Conditions:

All OK. Some Vegetation Starting to Grow.

Recommendations:

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

5-21-18

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

B. Description of Further Action Requirements:

Location:

Landfill, Drainage Channels, Road

Observed Conditions:

Some Excess Vegetation

Recommendations:

CONTACT Ground

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kraker
 Date of Inspection: 6-27-18
 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	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
2.0 Drainage Structures: Toe Drain Drainage Channels French Drains/Outfalls Subsurface Drainage Pipes/Outfalls Manholes Recharge Areas	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Monitoring System: Soil Gas Wells Groundwater Wells	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
1.0 Site Access: Asphalt Access Road Crushed-Concrete Access Road	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

B. Description of Further Action Requirements:

Location: Landfill, Drainage Channels, Edges, Roads
 Observed Conditions: Excess Vegetation Growth

Recommendations: SENT E-Mail to Grounds to address issues

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

7-25-18

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

B. Description of Further Action Requirements:

Location: Landfill, Drainage Channels, Edges, Roads.
 Observed Conditions: Excess Vegetation Growth
 Recommendations: CONTACT Grounds to address issues.

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer
 Date of Inspection: 8-29-18
 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				<input checked="" type="checkbox"/>	
Cap			<input checked="" type="checkbox"/>		
Gas Vents	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
2.0 Drainage Structures:					
Toe Drain		<input checked="" type="checkbox"/>			
Drainage Channels	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
French Drains/Outfalls	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Subsurface Drainage Pipes/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Manholes	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Recharge Areas	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Monitoring System:					
Soil Gas Wells	<input checked="" type="checkbox"/>				
Groundwater Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
4.0 Site Access:					
Asphalt Access Road					<input checked="" type="checkbox"/>
Crushed-Concrete Access Road	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
				<input checked="" type="checkbox"/>	
					<input checked="" type="checkbox"/>

B. Description of Further Action Requirements:

Location: Landfill, Drainage Channels, Edges, Roads
 Observed Conditions: A lot of Excess Vegetation Growth.

Recommendations:

Sent E-mail to Grounds Asking to Correct All Issues as soon as possible. Replied they would take care of it

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

9-26-10

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	<input checked="" type="checkbox"/>				
Cap	<input checked="" type="checkbox"/>				
Gas Vents	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
2.0 Drainage Structures:					
Toe Drain	<input checked="" type="checkbox"/>				
Drainage Channels	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
French Drains/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Subsurface Drainage Pipes/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Manholes	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Recharge Areas	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Monitoring System:					
Soil Gas Wells	<input checked="" type="checkbox"/>				
Groundwater Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
1.0 Site Access:					
Asphalt Access Road	<input checked="" type="checkbox"/>				
Crushed-Concrete Access Road	<input checked="" type="checkbox"/>				
1. Description of Further Action Requirements:					

Location:

All OK

Observed Conditions:

Recommendations:

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s):

Eric Kramer

Date of Inspection:

10-30-18

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	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Cap	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Gas Vents	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
2.0 Drainage Structures:					
Toe Drain	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Drainage Channels	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
French Drains/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Subsurface Drainage Pipes/Outfalls	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Manholes	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Recharge Areas	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Monitoring System:					
Soil Gas Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Groundwater Wells	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
1.0 Site Access:					
Asphalt Access Road	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Crushed-Concrete Access Road	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
1. Description of Further Action Requirements:					

Location: All OK
Observed Conditions:

commendations:

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer
 Date of Inspection: 11-28-13
 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	X				
French Drains/Outfalls		X			
Subsurface Drainage Pipes/Outfalls	X				
Manholes	X				
Recharge Areas	X				
Monitoring System:					
Soil Gas Wells	X				
Groundwater Wells	X				
1.0 Site Access:					
Asphalt Access Road					
Crushed-Concrete Access Road	X				

B. Description of Further Action Requirements:

Location: _____
 Observed Conditions: Drainage channels
Some Vegetation
 Recommendations: MONITOR

**BROOKHAVEN NATIONAL LABORATORY
CURRENT LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer
 Date of Inspection: 12-21-18
 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				
Cap	X				
Gas Vents	X				X
2.0 Drainage Structures:					
Toe Drain	X				
Drainage Channels		X			X
French Drains/Outfalls	X				X
Subsurface Drainage Pipes/Outfalls	X				X
Manholes	X				X
Recharge Areas	X				X
Monitoring System:					
Soil Gas Wells	X				
Groundwater Wells	X				X
4.0 Site Access:					
Asphalt Access Road	X				
Crushed-Concrete Access Road	X				
3. Description of Further Action Requirements:					
Location:					
Observed Conditions:					
Recommendations:					

Drainage channels

Some Vegetation

Monitor

BROOKHAVEN NATIONAL LABORATORY LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland _____
 Date of Inspection: 6/6/18 _____
 Name of Inspector(s): R. Howe, J. Burke, A. Steinhauhoff, W. Dorsch, V. Racaniello
 Purpose of Inspection: Routine (Scheduled Frequency of 2x/yr) Heavy Rainfall Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X				Grass needs mowing	
Soil (Cap/Cover/Fill)	X				No burrows evident	X
Other: _____						
2. Drainage Structures:						
Standing Water	X				None	X
Toe Drain	X					X
Drainage Channels		X			Veg. 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				Basin dry	X
Other: _____						
3. Monitoring System:						
Soil Gas Wells		X			Needs clearing	
Groundwater Wells	X				Locked	X
Gas Vents	X					X
Other: __						
4. Site Access:						
Asphalt Access Road	X				Grass in cracks	X
Crushed-concrete Access Road				X		X
Fence	X					X
Gates/locks	X				Gates locked	X
LUIC Signs	X				Replace worn sign	
Other: Stairs access to cap	X					X
5. Evidence of unauthorized work activities and/or unauthorized access has occurred?						
If yes, describe evidence: _____						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

B. Description of Other Observations

Observed Conditions/Recommendations: The grass on the cap was not cut yet this year, and it prohibited walking due to safety concerns with ticks. However, no burrows are evident from the road. Facilities and Operations partially sprayed the vegetation along the asphalt road edges for weeds, but more work is needed there and in the channels. F&O needs to cut weeds for access to the soil gas and groundwater monitoring wells. All three point of contact signs are in place and gates locked. The sign on SE gate is faded and broken, and was replaced the same day. The Wooded Wetland has significant standing water. LUIC Factsheet Changes: No changes for Current Landfill. For the Wooded Wetlands, Admin. Controls, reference 2016 Natural Resource Management Plan, and fix link to reference.

BROOKHAVEN NATIONAL LABORATORY LTRA SITE INSPECTION FORM

Location (AOC): Current Landfill and Wooded Wetland _____
 Date of Inspection: 12/3/18 _____
 Name of Inspector(s): R. Howe, M. Samms
 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 cut in October	X
Soil (Cap/Cover/Fill)	X				No burrows	X
Other: _____						
2. Drainage Structures:						
Standing Water	X				Some along roads	X
Toe Drain	X					X
Drainage Channels		X			Some veg. in channels	X
French Drains/Outfalls				X	Some water	X
Subsurface Drainage Pipes/Outfalls		X			Some water	X
Manholes				X		X
Berms				X		X
Roof Drains				X		X
Recharge Areas	X					X
Other: _____						
3. Monitoring System:						
Soil Gas Wells	X					X
Groundwater Wells	X				Locked	X
Gas Vents	X					X
Other: __						
4. Site Access:						
Asphalt Access Road	X				Grass in cracks	X
Crushed-concrete Access Road				X		X
Fence	X					X
Gates/locks	X				Gates locked	X
LUIC Signs	X				3 signs in place	X
Other: Stairs access to cap	X				Good condition	X
5. Evidence of unauthorized work activities and/or unauthorized access has occurred?						
If yes, describe evidence: _____					<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

B. Description of Other Observations

Observed Conditions/Recommendations: The grass on the cap was cut in October, and there are a few piles of cut grass mounded. No animal burrows are present. Facilities and Operations need to fill in one sunken area on NE slope from an old burrow and reseed. All three point of contact signs are in place and gates locked. The Wooded Wetland has significant water present and it backs up to the toe drain on the NE side of landfill. LUIC Factsheet Changes: No changes for Current Landfill or Wooded Wetlands.

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 1-29-18

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: All OK

Observed Conditions: _____

Recommendations: _____

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 4-26-18

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: _____
 Observed Conditions: All OK. Some vegetation starting to grow

Recommendations: _____

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 6-27-18

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			

B. Description of Further Action Requirements:

1. Location: Landfill, Drainage Channels, Edges, Roads

Observed Conditions: Some Excess Vegetation Growth. Small Pines on Landfill & Culverts
Woodchuck Burrows

Recommendations: SENT E-Mail To Grounds today to address issues.

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 7-25-18

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, Roads, Drainage Channels

Observed Conditions: Excess Vegetation Growth

Recommendations: Contact Grounds

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 8-29-18

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					
Crushed-Concrete Access Road		X	X	X	

B. Description of Further Action Requirements:

1. Location: Landfill, Edges, Roads, Drainage Channels

Observed Conditions: A LOT of Excess Vegetation Growthy Pine Saplings

Recommendations: _____

SENT E-Mail to Grounds Asking to correct all issues, as soon as possible. Replied they would take care of it

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 11-29-18

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: Some Vegetation

Recommendations: MONITOR

**BROOKHAVEN NATIONAL LABORATORY
FORMER LANDFILL AREA
SITE INSPECTION FORM**

Name of Inspector(s): Eric Kramer

Date of Inspection: 12-21-18

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: Drainage Channels

Observed Conditions: Some Vegetation

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: 5/21/18
 Name of Inspector(s): R. Howe, W. Dorsch, V. Racaniello, E. Kramer, A. Steinhauff, M. Samms, N. Contos
 Purpose of Inspection: Routine (Scheduled Frequency of 2x/yr) Heavy Rainfall Reported Incident

A. Inspection Checklist

Component	Observed Condition				Further Action Req'd	
	Excell.	Fair	Poor	Not Applic.	Yes (describe)	No
1. Landfill Cap/Soil Covers/Wetlands:						
Vegetation (e.g. grass)	X				Needs cut, but too wet	
Soil (Cap/Cover/Fill)		X			Burrow on West Slope	X
Other: _____						
2. Drainage Structures:						
Standing Water	X				Cap is spongy/wet	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 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: LUIIC Signs		X			Signs in place/repair one	
5. Evidence of unauthorized work activities and/or unauthorized access has occurred?						
If yes, describe evidence: _____					<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

B. Description of Other Observations

Observed Conditions/Recommendations: Former Landfill, Interim Landfill, and Slit Trench caps are in good condition. Former Landfill cap was spongy and wet in the middle. Facilities and Operations (F&O) was informed 5/21/18 that the grass should not be cut until it dries out. There was one woodchuck burrow observed on the Former Landfill west slope, and was filled in at the time of inspection. There is significant vegetation in the drainage channels and a few pine seedlings growing on the south and west slope which need to be addressed by F&O. All contact signs were in place. However, the sign by the former landfill entrance is faded and needs to be replaced. LUIIC Factsheet Changes: None.

BROOKHAVEN NATIONAL LABORATORY SITE INSPECTION FORM

Location (AOC): Former Landfill Area (includes the former and interim landfills and slit trench)
 Date of Inspection: 11/29/18
 Name of Inspector(s): R. Howe, E. Kramer, A. Steinhauff, M. Samms, T. Green
 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 cut in October	X
Soil (Cap/Cover/Fill)		X			Some shallow tire ruts	X
Other: _____						
2. Drainage Structures:						
Standing Water	X				Cap surface is spongy	X
Toe Drain	X					X
Drainage Channels		X			Some veget 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				X
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: LUIIC Signs		X			Signs in place	X
5. Evidence of unauthorized work activities and/or unauthorized access has occurred?						
If yes, describe evidence: _____						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

B. Description of Other Observations

Observed Conditions/Recommendations: Former Landfill, Interim Landfill, and Slit Trench caps are in good condition. The grass was cut in October. The Former Landfill cap was spongy due to recent rains. There were no woodchuck burrows observed. There is no water in the recharge basin. Vegetation in the drainage channels need to be cut or sprayed by Facilities and Operations. A few pine seedlings growing on the slopes of the landfills were removed at the time of inspection. Point of contact signs were in place. LUIIC Factsheet Changes: None.

Appendix C

Historical Soil-gas Monitoring Data

1996 CURRENT LANDFILL SOIL GAS MONITORING SUMMARY TABLE

1998 Environmental Monitoring Report
Current and Former Landfills - Brookhaven National Laboratory

Soil Gas Monitoring Well	Methane (% By Volume)			
	April-96	June-96	July-96	December-96
SGMW-01A	21.6	0	16.5	29.8
SGMW-01B	23.2	0	11	28.9
SGMW-01C	24.1	0	11.4	26.8
SGMW-02A	55.1	53	49.5	64.8
SGMW-02B	55.5	52.7	51.4	59
SGMW-02C	55.6	56.4	43.8	58
SGMW-03A	66	61.2	54	62.8
SGMW-03B	62	59.5	45	61.6
SGMW-03C	57.8	58.1	54	57.9
SGMW-04A	49.7	0	48.9	52.4
SGMW-04B	53	0	49.4	54.3
SGMW-04C	52.8	0	48.6	53.9
SGMW-05A	50.1	49.4	46.5	52
SGMW-05B	50.9	47.5	42	53.7
SGMW-05C	48.7	46.9	38.4	51.6
SGMW-06A	40.1	44.2	0.8	0
SGMW-06B	44	46	41.9	0
SGMW-06C	45.2	46.7	42	0
SGMW-07A	8.6	10.4	14.5	6.2
SGMW-07B	76	11.6	0.2	0.8
SGMW-07C	8.4	11.7	3.2	8.7
SGMW-08A	0	0	0.7	0
SGMW-08B	0	0	0	0
SGMW-08C	0	0	0	0
SGMW-09A	0.3	0	0	0
SGMW-09B	1.2	0	0	2.8
SGMW-09C	2.5	0	0	6.7
SGMW-10A	16.7	0.3	0	5.8
SGMW-10B	16.6	22.8	23	22.7
SGMW-10C	14	14.3	15.8	32.5
SGMW-11A	16.4	18.2	11.4	29.2
SGMW-11B	15.7	26.8	23.5	39.3
SGMW-12A	57.5	25.6	25	29.6
SGMW-12B	51.3	0	36.9	57.2
SGMW-13A	46.3	0	32.3	55.7
SGMW-13B	47.5	0	18.7	0
SGMW-14A	34.9	0	26	0
SGMW-14B	41.4	0	18.2	38.6
SGMW-15A	0	44.2	16	0
SGMW-15B	12.7	0.6	3.6	3.4
SGMW-16A	0	0	0	0
SGMW-16B	0	0	0	0
SGMW-17A	0	0	0.7	0
SGMW-17B	0	0	0	0
SGMW-18A	8.6	0	0	0
SGMW-18B	0.6	0	0	7.1
SGMW-19A	40.8	29	0	0
SGMW-19B	36.7	30.1	16	52.5
GSGM-1A	NA	<	6.9	46.5
GSGM-1B	NA	<	0	<
GSGM-1C	NA	<	0	<
GSGM-2A	NA	<	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-1B	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 F
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	38.9	0	0	27
SGMW-14A	39.1	20.1	5.2	6	10	24
SGMW-14B	0	0	13.5	0	0	13
SGMW-15A	1.8	0.2	2.5	0	0	14
SGMW-15B	0	0	2.6	0	0	14
SGMW-16A	0	31.7	1.1	0	0	9
SGMW-16B	0	0	0	0	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	0	4	0	0
GSGM-1B	0	0	0	5	0	1
GSGM-1C	0	0	0	6	0	0
GSGM-2A	0	0	0	6	0	0
GSGM-2B	0	0	0	6	0	4
GSGM-2C	0	0	0	6	0	0
GSGM-3A	0	0	0	5	0	0
GSGM-3B	0	0	0	4	0	0
GSGM-4A	0	0	0	5	0	8
GSGM-4B	0	0	0	5	0	0

* Values are calculated, not measured.

◊ No measurement was recorded.

Bronkhuysen National Laboratory

1998 Landfill Environmental Monitoring Report

1998 Current Landfill Soil Gas Monitoring Summary Table.

Soil Gas Monitoring Well	Methane (% By Volume) February-98	Methane (% By Volume) May-98	Methane (% By Volume) August-98	Methane (% By Volume) December-98	Hydrogen sulfide (ppm By Volume) February-98	Hydrogen sulfide (ppm By Volume) May-98	Hydrogen sulfide (ppm By Volume) August-98	Hydrogen sulfide (ppm By Volume) December-98	Soil Gas Monitoring Well
SGMW-01A	26.3	26.1	24.2	20.4	5	0	0	0	SGMW-01A
SGMW-01B	26.1	26.1	24.2	20.4	4	0	0	0	SGMW-01B
SGMW-01C	24	26	26	10.7	1	2	0	4	SGMW-01C
SGMW-02A	27.8	25.3	26.4	17.7	62	3	1	2	SGMW-02A
SGMW-02B	24.1	26	26.4	11.1	63	6	5	0	SGMW-02B
SGMW-02C	21.6	24.7	25	53.1	11	0	0	0	SGMW-02C
SGMW-03A	20.4	20	20.4	23.3	10	0	2	1	SGMW-03A
SGMW-03B	20.4	20	20.4	21.1	33	0	0	0	SGMW-03B
SGMW-03C	25.3	25.3	25.3	41.5	4	3	4	1	SGMW-03C
SGMW-04A	11.3	11.3	11.3	65.3	9	7	4	0	SGMW-04A
SGMW-04B	26.0	26.0	26.0	28.1	17	4	3	0	SGMW-04B
SGMW-04C	20.0	20.0	20.0	0	3	2	2	0	SGMW-04C
SGMW-05A	48.1	48.1	48.1	30	3	6	5	2	SGMW-05A
SGMW-05B	48	48	48	47.7	3	4	3	3	SGMW-05B
SGMW-05C	27.3	27.3	27.3	41.5	0	0	2	0	SGMW-05C
SGMW-06A	44.8	44.8	44.8	17.6	2	7	8	0	SGMW-06A
SGMW-06B	16.3	16.3	16.3	0	19	0	0	1	SGMW-06B
SGMW-07A	2.2	2.2	2.2	47.2	0	0	0	0	SGMW-07A
SGMW-07B	0	0	0	0	0	0	0	0	SGMW-07B
SGMW-07C	4.0	4.0	4.0	0.1	0	4	4	0	SGMW-07C
SGMW-08A	0	0	0	0	1	0	0	0	SGMW-08A
SGMW-08B	6	6	6	0	3	0	0	0	SGMW-08B
SGMW-08C	0	0	0	0	3	3	0	0	SGMW-08C
SGMW-08A	0	0	0	0	1	1	1	0	SGMW-08A
SGMW-08B	0	0	0	0	0	0	0	0	SGMW-08B
SGMW-08C	0	0	0	0	0	0	0	0	SGMW-08C
SGMW-08A	0.7	0.7	0.7	1.2	2	0	0	0	SGMW-08A
SGMW-08B	3	3	3	0.7	6	2	1	0	SGMW-08B
SGMW-10A	17.0	17.0	17.0	28.3	0	0	0	0	SGMW-10A
SGMW-10B	23.5	23.5	23.5	26	2	0	0	0	SGMW-10B
SGMW-10C	20.7	20.7	20.7	23.7	0	0	0	0	SGMW-10C
SGMW-11A	10.0	10.0	10.0	35.4	18	0	0	0	SGMW-11A
SGMW-11B	23.7	23.7	23.7	33.0	27	2	1	3	SGMW-11B
SGMW-12A	60.3	60.3	60.3	38.3	11	3	4	0	SGMW-12A
SGMW-12B	7	7	7	0	0	0	0	0	SGMW-12B
SGMW-12C	0.1	0.1	0.1	0	0	0	0	0	SGMW-12C
SGMW-14A	17.1	17.1	17.1	1.2	0	0	0	0	SGMW-14A
SGMW-14B	0	0	0	0	0	0	0	0	SGMW-14B
SGMW-15A	4	4	4	0	6	2	2	0	SGMW-15A
SGMW-15B	0	0	0	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	0	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-17A	0.2	0.2	0.2	0	0	2	2	0	SGMW-17A
SGMW-18A	37.4	37.4	37.4	47.2	0	0	0	0	SGMW-18A
SGMW-18B	20.7	20.7	20.7	1.2	0	0	0	0	SGMW-18B

Soil Gas Monitoring Well	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
GGGM-1A	0	0	0	0	GGGM-1A
GGGM-1B	0	0	0	0	GGGM-1B
GGGM-1C	0	0	0	0	GGGM-1C
GGGM-2A	0	0	0	0	GGGM-2A
GGGM-2B	0	0	0	0	GGGM-2B
GGGM-2C	0	0	0	0	GGGM-2C
GGGM-3A	2	0	0	0	GGGM-3A
GGGM-3B	0	0	0	0	GGGM-3B
GGGM-4A	0	0	0	0	GGGM-4A
GGGM-4B	2	0	0	0	GGGM-4B

Soil Gas Monitoring Well	Methane (% By Volume) February-00	Methane (% By Volume) May-00	Methane (% By Volume) August-00	Methane (% By Volume) December-00
GGGM-1A	0	0	0	0
GGGM-1B	0	0	0	0
GGGM-1C	0	0	0	0
GGGM-2A	0	0	0	0
GGGM-2B	0	0	20.1	0
GGGM-2C	0	0	0	0
GGGM-3A	0	0	0	0
GGGM-3B	0	0	0	0
GGGM-4A	0	0	0	0
GGGM-4B	0	0	0	0

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

Brookhaven National Laboratory
 1988 Landfill Environmental Monitoring Report
 1988 Current Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) June-88	Methane (% By Volume) October-88	Methane (% By Volume) December-88	LEL (% By Volume) June-88	LEL (% By Volume) October-88	LEL (% By Volume) December-88	Hydrogen sulfide (ppm By Volume) June-88	Hydrogen sulfide (ppm By Volume) October-88	Hydrogen sulfide (ppm By Volume) December-88	Soil Gas Monitoring Well
SGMW-01A	10.5	17.0	10.0	350	350	374	0	0	0	SGMW-01A
SGMW-01B	10.6	10.1	10.0	370	302	372	0	0	0	SGMW-01B
SGMW-01C	17.2	14.2	10.7	344	200	334	0	0	0	SGMW-01C
SGMW-02A	52.4	62.0	55.0	1010	1062	1110	13	13	26	SGMW-02A
SGMW-02B	54.4	65	58.7	1000	1100	1134	3	3	11	SGMW-02B
SGMW-02C	55.3	55.2	57.5	1100	1104	1150	3	3	3	SGMW-02C
SGMW-03A	58.0	41.5	2.0	1102	0	50	0	0	0	SGMW-03A
SGMW-03B	61.4	60.3	0.3	1220	1100	1226	0	0	1	SGMW-03B
SGMW-03C	55.0	53.3	53.5	1199	1080	1180	0	0	3	SGMW-03C
SGMW-04A	53.0	0	39.1	1070	0	702	0	0	2	SGMW-04A
SGMW-04B	53.5	63.0	62.0	1070	1070	1050	0	0	7	SGMW-04B
SGMW-04C	62.4	55.2	40.7	1010	1104	97.4	2	2	9	SGMW-04C
SGMW-05A	47.8	51.1	47.4	910	1032	944	0	0	8	SGMW-05A
SGMW-05B	4.0	61.5	10	800	1030	884	0	0	4	SGMW-05B
SGMW-05C	39.7	39	30.2	754	762	788	0	0	4	SGMW-05C
SGMW-06A	41.1	43.2	48.0	820	862	834	0	0	3	SGMW-06A
SGMW-06B	43.2	43.2	40.6	882	882	820	0	0	6	SGMW-06B
SGMW-06C	43.1	0	0	88	0	0	0	0	2	SGMW-06C
SGMW-07A	0.0	0	0	10	0	0	0	0	2	SGMW-07A
SGMW-07B	0.0	0	0	10	0	0	0	0	2	SGMW-07B
SGMW-07C	4.4	0.17	1.3	10	34	20	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	2	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	0	0	0	0	0	3	SGMW-09C
SGMW-10A	21.4	16.7	20	420	314	400	1	1	2	SGMW-10A
SGMW-10B	18.0	20.7	21.1	350	532	420	0	0	3	SGMW-10B
SGMW-10C	17.0	22.0	15.1	350	454	420	0	0	3	SGMW-10C
SGMW-11A	10.3	31.2	18.0	300	524	300	0	0	3	SGMW-11A
SGMW-11B	19.2	26.0	14.0	304	512	284	10	10	3	SGMW-11B
SGMW-12A	48.8	45.1	47.1	892	884	842	30	30	0	SGMW-12A
SGMW-12B	44.2	48.5	47.0	884	900	854	0	0	0	SGMW-12B
SGMW-13A	50.4	0.1	0	1082	0	954	0	0	0	SGMW-13A
SGMW-13B	0.2	0.2	24.6	4	0	402	0	0	0	SGMW-13B
SGMW-14A	7.0	5.9	7.1	102	110	142	0	0	5	SGMW-14A
SGMW-14B	0	22.0	3.1	0	452	60	0	0	5	SGMW-14B
SGMW-15A	0	1.0	2.9	32	32	50	0	0	3	SGMW-15A
SGMW-15B	0	0	0	0	0	0	0	0	3	SGMW-15B
SGMW-15C	0	0	0	0	0	0	0	0	3	SGMW-15C
SGMW-16A	0	0	0	0	0	0	0	0	2	SGMW-16A
SGMW-16B	0	0	0	0	0	0	0	0	2	SGMW-16B
SGMW-17A	0	0	0	0	0	0	0	0	2	SGMW-17A
SGMW-17B	0	0	0	0	0	0	0	0	2	SGMW-17B
SGMW-18A	0	0	0	0	0	0	0	0	2	SGMW-18A
SGMW-18B	0	0	0	0	0	0	0	0	2	SGMW-18B
SGMW-19A	25.1	23	20.0	802	400	400	0	0	1	SGMW-19A
SGMW-19B	30.1	27.3	20.5	802	544	410	10	10	12	SGMW-19B

Screen in water table

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

Soil Gas Monitoring Well	Methane (% By Volume) June-99	Methane (% By Volume) December-99	Methane (% By Volume) June-00	LEL (% By Volume) December-99	LEL (% By Volume) October-99	LEL (% By Volume) December-99	Hydrogen sulfide (ppm By Volume) June-00	Hydrogen sulfide (ppm By Volume) December-99	Hydrogen sulfide (ppm By Volume) December-99	Hydrogen sulfide (ppm By Volume) December-99	Soil Gas Monitoring Well
GSGM-1A	0	0	0	0	0	0	0	0	0	0	GSGM-1A
GSGM-1B	0	0	0	0	0	0	0	0	0	0	GSGM-1B
GSGM-1C	0	broken valve	0	0	0	0	0	0	0	0	GSGM-1C
GSGM-2A	0	broken valve	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

** No measurement was recorded.

Brookhaven National Laboratory
 2001 Landfill Environmental Monitoring Report
 2001 District Landfill Gas Monitoring Summary Table

Soil Cell Monitoring Well	Methane (% By Volume)		Hydrogen Sulfide (ppm by volume)		Hydrogen Sulfide (ppm by volume)		Hydrogen Sulfide (ppm by volume)	
	March-01	June-01	March-01	June-01	March-01	June-01	March-01	June-01
56ANV-07A	52.2	33.1	44.0	262	0.0	0.0	0	0
56ANV-07B	2.9	0.0	43.4	0	0.0	0.0	0	0
56ANV-07C	16.3	20.4	259	1856	0.0	0.0	0	0
56ANV-07D	59.8	57.0	1300	0	145	67	49	49
56ANV-07E	50.0	0.0	1100	0	0	0	0	0
56ANV-07F	0.0	0.0	0	0	0	0	0	0
56ANV-07G	30.0	61.0	750	1160	0	0	0	0
56ANV-07H	97.2	90.8	1544	1030	0	0	0	0
56ANV-07I	0.0	0.0	0.0	0	0	0	0	0
56ANV-07J	42.0	0.0	0.0	0	0	0	0	0
56ANV-07K	50.0	0.0	0.0	0	0	0	0	0
56ANV-07L	0.0	0.0	0.0	0	0	0	0	0
56ANV-07M	46.0	40.2	0.0	0	0	0	0	0
56ANV-07N	43.0	0.0	0.0	0	0	0	0	0
56ANV-07O	0.0	0.0	0.0	0	0	0	0	0
56ANV-07P	0.0	0.0	0.0	0	0	0	0	0
56ANV-07Q	0.0	0.0	0.0	0	0	0	0	0
56ANV-07R	0.0	0.0	0.0	0	0	0	0	0
56ANV-07S	0.0	0.0	0.0	0	0	0	0	0
56ANV-07T	0.0	0.0	0.0	0	0	0	0	0
56ANV-07U	0.0	0.0	0.0	0	0	0	0	0
56ANV-07V	0.0	0.0	0.0	0	0	0	0	0
56ANV-07W	0.0	0.0	0.0	0	0	0	0	0
56ANV-07X	0.0	0.0	0.0	0	0	0	0	0
56ANV-07Y	0.0	0.0	0.0	0	0	0	0	0
56ANV-07Z	0.0	0.0	0.0	0	0	0	0	0
56ANV-08A	10.0	16.0	210	320	0.0	0.0	0	0
56ANV-08B	11.2	10.0	224	370	0.12	0.12	2	2
56ANV-08C	0.0	13.2	180	284	0.0	0.0	0	0
56ANV-08D	0.0	21.8	170	430	0.0	0.0	0	0
56ANV-08E	0.1	18.3	0.0	0.0	0.0	0.0	0	0
56ANV-08F	43.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08G	44.4	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08H	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08I	17.4	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08J	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08K	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08L	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08M	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08N	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08O	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08P	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08Q	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08R	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08S	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08T	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08U	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08V	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08W	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08X	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08Y	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-08Z	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09A	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09B	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09C	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09D	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09E	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09F	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09G	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09H	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09I	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09J	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09K	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09L	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09M	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09N	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09O	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09P	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09Q	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09R	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09S	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09T	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09U	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09V	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09W	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09X	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09Y	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-09Z	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10A	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10B	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10C	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10D	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10E	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10F	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10G	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10H	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10I	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10J	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10K	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10L	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10M	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10N	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10O	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10P	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10Q	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10R	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10S	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10T	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10U	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10V	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10W	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10X	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10Y	0.0	0.0	0.0	0.0	0.0	0.0	0	0
56ANV-10Z	0.0	0.0	0.0	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.

2003 Current Landfill Cell Gas Monitoring Summary

Soil Gas Monitoring Well	Methane		Ethylene		Methane		Methane		Hydrogen Sulfide		Hydrogen Sulfide		Hydrogen Sulfide		Soil Gas Monitoring Well
	(% By Volume) March-02	(% By Volume) June-02	(% By Volume) Sept-02	(% By Volume) Dec-02	(% By Volume) March-02	(% By Volume) June-02	(% By Volume) Sept-02	(% By Volume) Dec-02	(ppm by volume) March-02	(ppm by volume) June-02	(ppm by volume) Sept-02	(ppm by volume) Dec-02	(ppm by volume) December-03		
SGMW-01A	13.8	13.1	13.1	18.0	37.0	20.3	10.2	35.4	0	7	10	2	3	SGMW-01A	
SGMW-01B	13.7	11.5	11.5	19.9	37.4	23.0	16.1	33.4	0	1	2	1	4	SGMW-01B	
SGMW-01C	10.0	9.6	9.6	11.0	31.0	17.2	11.0	23.4	0	1	1	1	0	SGMW-01C	
SGMW-02A	48.0	48.0	48.0	50.5	0.0	0.0	0.0	0.0	0	0	0	0	0	SGMW-02A	
SGMW-02B	17.1	17.1	17.1	43.7	34.2	67.6	68.4	113.0	0	2	11	14.1	40	SGMW-02B	
SGMW-02C	31.4	31.4	31.4	51.7	51.7	51.7	103.4	103.4	0	24	68	68	77	SGMW-02C	
SGMW-02D	36.5	36.5	36.5	41.4	73.0	107.2	107.2	107.2	0	148	34	34	18	SGMW-02D	
SGMW-02E	57.0	57.0	57.0	60.0	114.0	114.0	114.0	114.0	0	0	0	0	0	SGMW-02E	
SGMW-02F	40.0	40.0	40.0	48.1	103.2	117.2	117.2	117.2	0	1	20	20	3	SGMW-02F	
SGMW-02G	44.6	44.6	44.6	51.3	68.8	103.0	103.0	103.0	0	11	75	75	37	SGMW-02G	
SGMW-02H	36.5	36.5	36.5	44.1	72.0	107.0	107.0	107.0	0	30	32	32	30	SGMW-02H	
SGMW-02I	37.4	37.4	37.4	42.5	70.2	106.0	106.0	106.0	0	44	3	3	34	SGMW-02I	
SGMW-02J	20.0	20.0	20.0	41.3	73.0	106.0	106.0	106.0	0	13	63	63	20	SGMW-02J	
SGMW-02K	30.7	30.7	30.7	41.3	67.0	102.0	102.0	102.0	0	10	37	37	12	SGMW-02K	
SGMW-02L	36.1	36.1	36.1	41.3	68.0	102.0	102.0	102.0	0	3	37	37	2	SGMW-02L	
SGMW-02M	35.3	35.3	35.3	42.0	73.0	107.0	107.0	107.0	0	22	62	62	32	SGMW-02M	
SGMW-02N	0.4	0.4	0.4	0.0	4.0	6.0	6.0	6.0	0	10	21	21	2	SGMW-02N	
SGMW-02O	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	7	7	1	SGMW-02O	
SGMW-02P	0.3	0.3	0.3	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02P	
SGMW-02Q	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02Q	
SGMW-02R	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02R	
SGMW-02S	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02S	
SGMW-02T	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02T	
SGMW-02U	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02U	
SGMW-02V	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02V	
SGMW-02W	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02W	
SGMW-02X	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02X	
SGMW-02Y	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02Y	
SGMW-02Z	0.2	0.2	0.2	0.0	4.0	6.0	6.0	6.0	0	1	0	0	2	SGMW-02Z	
SGMW-03A	10.0	10.0	10.0	14.8	21.2	30.0	30.0	30.0	0	13	5	5	2	SGMW-03A	
SGMW-03B	10.7	10.7	10.7	14.8	21.2	30.0	30.0	30.0	0	13	5	5	2	SGMW-03B	
SGMW-03C	8.0	8.0	8.0	11.1	16.0	24.4	24.4	24.4	0	3	2	2	0	SGMW-03C	
SGMW-03D	8.3	8.3	8.3	11.0	16.0	24.4	24.4	24.4	0	3	2	2	0	SGMW-03D	
SGMW-03E	0.1	0.1	0.1	14.5	24.7	30.0	30.0	30.0	0	3	2	2	0	SGMW-03E	
SGMW-03F	37.0	37.0	37.0	40.0	75.5	100.0	100.0	100.0	0	22	22	22	16	SGMW-03F	
SGMW-03G	35.6	35.6	35.6	40.0	76.0	100.0	100.0	100.0	0	13	22	22	3	SGMW-03G	
SGMW-03H	33.7	33.7	33.7	47.9	71.0	94.0	94.0	94.0	0	150	70	70	5	SGMW-03H	
SGMW-03I	1.0	1.0	1.0	10.6	17.2	20.0	20.0	20.0	0	4	0	0	7	SGMW-03I	
SGMW-03J	5.9	5.9	5.9	14.0	11.2	22.0	22.0	22.0	0	3	0	0	1	SGMW-03J	
SGMW-03K	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03K	
SGMW-03L	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03L	
SGMW-03M	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03M	
SGMW-03N	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03N	
SGMW-03O	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03O	
SGMW-03P	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03P	
SGMW-03Q	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03Q	
SGMW-03R	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03R	
SGMW-03S	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03S	
SGMW-03T	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03T	
SGMW-03U	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03U	
SGMW-03V	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03V	
SGMW-03W	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03W	
SGMW-03X	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03X	
SGMW-03Y	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03Y	
SGMW-03Z	0.1	0.1	0.1	0.0	2.0	0.0	0.0	0.0	0	3	0	0	1	SGMW-03Z	

Measurements in ft 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	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	1	-	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-13B
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 correctly in 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-13B
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-13B
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				LEL				Hydrogen Sulfide				Soil Gas Monitoring Well
	(% By Volume)	(% By Volume)	(% By Volume)	(% By Volume)	(% By Volume)	(% By Volume)	(% By Volume)	(% By Volume)	(ppm by volume)	(ppm by volume)	(ppm by volume)	(ppm by volume)	
	3/24/2008	7/29/2008	9/30/2008	12/9/2008	3/24/2008	7/29/2008	9/30/2008	12/9/2008	3/24/2008	7/29/2008	9/30/2008	12/9/2008	
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-13B
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.

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	>100	0.0	0.0	1.0	SGMW-01B
SGMW-01C	10.4	8.9	0	9.5	>100	>100	0	>100	>100	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	54.6	>100	>100	0	>100	2.0	0.0	0.0	22.0	SGMW-03B
SGMW-03C	42.1	49.6	0	51.7	>100	>100	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	41.2	>100	>100	0	>100	4.0	8.0	0.0	8.0	SGMW-04B
SGMW-04C	25.3	39.5	0	33.4	>100	>100	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	24.1	>100	>100	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	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	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	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	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	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	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	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	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	>100	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	0.0	SGMW-10C
SGMW-11A	3.1	16.1	16.5	12.5	62.0	>100	>100	>100	>100	10.0	0	8.0	SGMW-11A
SGMW-11B	1.4	15.8	28.0	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-13B
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	SGMW-14A
SGMW-14B	0.0	0.0	0.0	3.2	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	SGMW-15A
SGMW-15B	6.0	0.0	0.0	33.7	>100	>100	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	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	0.0	SGMW-18B
SGMW-19A	0.3	22.6	0.0	10.2	0.0	>100	0	>100	0.0	14.0	0.0	1.0	SGMW-19A
SGMW-19B	0.4	0.0	0.0	9.8	0.0	>100	0	>100	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	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	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	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	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	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	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	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	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	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	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	0
SGMW-12A	0	0	0.3	0	◇	9	-5	2
SGMW-12B	0	0	0.3	0	◇	5	-5	0

◇ No measurement taken.

Negative numbers reported are due to equipment problems.

Brookhaven National Laboratory

1998 Landfills Environmental Monitoring Report

1998 Former Landfill Area Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	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	1	0	1	0	SGMW-07A
SGMW-01B	1	0	0	0	SGMW-07B
SGMW-02A	6	0	0	0	SGMW-08A
SGMW-02B	6	1	0	0	SGMW-08B
SGMW-03A	0	0	1	1	SGMW-09A
SGMW-03B	3	0	2	0	SGMW-09B
SGMW-04A	0	0	0	0	SGMW-10A
SGMW-04B	1	2	0	0	SGMW-10B
SGMW-05A	0	0	3	0	SGMW-11A
SGMW-05B	0	0	1	0	SGMW-11B
SGMW-06A	0	0	0	1	SGMW-12A
SGMW-06B	2	0	0	0	SGMW-12B
SGMW-07A	0	0	0	0	
SGMW-07B	0	0	0	0	
SGMW-08A	0	0	0	0	
SGMW-08B	0	0	0	0	
SGMW-09A	0	0	0	0	
SGMW-09B	0	0	0	0	
SGMW-10A	0	0	0	0	
SGMW-10B	0	0	0	0	
SGMW-11A	0	0	0	0	
SGMW-11B	0	0	0	0	
SGMW-12A	0	0	0	0	
SGMW-12B	0	0	0	0	

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

SGM07 was not accessible

Brookhaven National Laboratory
 1998 Landfill Environmental Monitoring Report
 1998 Former Landfill Soil Gas Monitoring Summary Table

Soil Gas Monitoring Well	Methane (% By Volume) June-98	Methane (% By Volume) October-98	Methane (% By Volume) December-98	LEL (% By Volume) June-98	LEL (% By Volume) October-98	LEL (% By Volume) December-98	Hydrogen sulfide (ppm By Volume) June-98	Hydrogen sulfide (ppm By Volume) October-98	Hydrogen sulfide (ppm By Volume) December-98	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

** No measurement was taken.

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

Well	Methane (% By Volume) February-00	Methane (% By Volume) June-00	Methane (% By Volume) September-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
1	0	0	0	0	0	0	0	2	5	1	1	SGMW-01A
2	0	0	0	0	0	0	0	0	0	0	0	SGMW-01B
3	0	0	0	0	0	0	0	0	0	0	0	SGMW-02A
4	0	0	0	0	0	0	0	0	0	0	0	SGMW-02B
5	0	0	0	0	0	0	0	0	0	0	0	SGMW-03A
6	0	0	0	0	0	0	0	0	0	0	0	SGMW-03B
7	0	0	0	0	0	0	0	0	0	0	0	SGMW-04A
8	0	0	0	0	0	0	0	0	0	0	0	SGMW-04B
9	0	0	0	0	0	0	0	0	0	0	0	SGMW-05A
10	0	0	0	0	0	0	0	0	0	0	0	SGMW-05B
11	0	0	0	0	0	0	0	0	0	0	0	SGMW-06A
12	0	0	0	0	0	0	0	0	0	0	0	SGMW-06B
13	0	0	0	0	0	0	0	0	0	0	0	SGMW-07A
14	0	0	0	0	0	0	0	0	0	0	0	SGMW-07B
15	0	0	0	0	0	0	0	0	0	0	0	SGMW-08A
16	0	0	0	0	0	0	0	0	0	0	0	SGMW-08B
17	0	0	0	0	0	0	0	0	0	0	0	SGMW-09A
18	0	0	0	0	0	0	0	0	0	0	0	SGMW-09B
19	0	0	0	0	0	0	0	0	0	0	0	SGMW-10A
20	0	0	0	0	0	0	0	0	0	0	0	SGMW-10B
21	0	0	0	0	0	0	0	0	0	0	0	SGMW-11A
22	0	0	0	0	0	0	0	0	0	0	0	SGMW-11B
23	0	0	0	0	0	0	0	0	0	0	0	SGMW-12A
24	0	0	0	0	0	0	0	0	0	0	0	SGMW-12B

Gas was collected due to other work in the area.

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

Soil Gas Monitoring Well	Methane (% By Volume)			LEL (% By Volume)			Hydrogen Sulfide (ppm by volume)		
	March-01	June-01	September-01	March-01	June-01	September-01	March-01	June-01	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
V-05A	0	0	0	0	0	0	6	N/A	0
V-05B	0	0	0	0	0	0	5	N/A	0
V-06A	0	0	0	0	0	0	6	N/A	0
V-06B	0	0	0	0	0	0	5	N/A	0
V-07A	0	0	0	0	0	0	5	N/A	0
V-07B	0	0	0	0	0	0	5	N/A	0
V-08A	0	0	0	0	0	0	6	N/A	0
V-08B	0	0	0	0	0	0	7	N/A	0
V-09A	0	0	0	0	0	0	6	N/A	0
V-09B	0	0	0	0	0	0	9	N/A	0
V-10A	0	0	0	0	0	0	6	N/A	0
V-10B	0	0	0	0	0	0	8	N/A	0
V-11A	0	0	0	0	0	0	7	N/A	0
V-11B	0	0	0	0	0	0	4	N/A	0
V-12A	0	0	0	0	0	0	6	N/A	0
V-12B	0	0	0	0	0	0	7	N/A	0
V-12C	0	0	0	0	0	0	8	N/A	0

Measurement was collected due to other work in the area.

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.

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

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

Table 9**2017 Former Landfill Soil-Gas Monitoring Summary Table**

Soil Gas Monitoring Well	Methane (% By Volume) 8/17/2017	LEL (% By Volume) 8/17/2017	Hydrogen Sulfide (ppm by volume) 8/17/2017	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