Site Characterization Report Addendum Former Baron Blakeslee Site Bay Shore, New York

Prepared for General Electric, Albany, New York April 2013

Site Characterization Report Addendum Former Baron Blakeslee Site Bay Shore, New York

Prepared for General Electric 319 Great Oaks Blvd. Albany, New York 12203

April 2013

Project Number: 141247.200.500



Brown and Caldwell Associates

2 Park Way, Suite 2A Upper Saddle River, New Jersey 07458 234 Hudson Avenue Albany, New York 12210

Table of Contents

Арј	pendic	es		ii					
Lis	t of Ta	bles		iii					
Lis	t of Fig	gures		iii					
1.	Introd	duction		1-1					
	1.1	Backgro	ound	1-1					
	1.2	Objectiv	/es	1-1					
	1.3	Organiz	ation of the Site Characterization Report Addendum	1-2					
2.	Supp	lemental	Site Characterization Activities	2-1					
	2.1	Samplir	ng Layout/Survey	2-1					
	2.2	Underg	round Utility Markouts	2-1					
	2.3	Site Acc	ess	2-1					
	2.4	Monitor	ing Well Installation	2-1					
	2.5	Low-Flo	w Groundwater Sampling	2-2					
	2.6	Shallow	Soil Sampling	2-3					
	2.7	Soil Vap	oor and Indoor Air Investigation	2-4					
		2.7.1	Exterior Soil Vapor	2-4					
		2.7.2	Sub-Slab Soil Vapor and Indoor Air	2-4					
	2.8	Investig	ation-Derived Waste Management	2-5					
3.	Inves	tigation I	Results	3-1					
	3.1	Site-Spe	ecific Hydrogeology	3-1					
	3.2	Analytic	al Results	3-1					
		3.2.1	Data Usability	3-1					
		3.2.2	Groundwater Quality	3-1					
		3.2.3	Shallow Soil Samples						
		3.2.4	Sub-Slab Soil Vapor						
		3.2.5	Indoor and Outdoor Air Sampling	3-3					
		3.2.6	Exterior Soil Vapor	3-3					
4.	Sumr	mary							
5.	Conc	lusions a	nd Recommendations	5-1					
	5.1	Ground	water	5-1					
	5.2	Soil 5-	1						
	5.3	Soil Vap	oor	5-1					
	5.4	Indoor A	Air	5-2					
6.	Refer	References							

Brown AND Caldwell

i

Appendices

- Appendix A Boring and Monitoring Well Logs
- Appendix B Field Sample Data Sheets
- Appendix C Laboratory Deliverables
- Appendix D Data Usability Summary Reports



List of Tables

- Table 1. Groundwater Analytical Results
- Table 2. Soil Analytical Results
- Table 3. Soil Vapor Analytical Results
- Table 4. Groundwater Elevation Data

List of Figures

- Figure 1-1. Site Location Map
- Figure 2-1. Supplemental Site Characterization Investigation Locations
- Figure 3-1. Metal Concentrations in Groundwater
- Figure 3-2. Volatile Organic Compound Concentrations in Soil
- Figure 3-3. VOCs in Soil Vapor, Sub-Slab and Indoor Air
- Figure 3-4. Groundwater Potentiometric Surface



Section 1 Introduction

1.1 Background

Brown and Caldwell Associates, a subsidiary of Brown and Caldwell (hereinafter BC), has prepared this Site Characterization Report Addendum to present the results of the supplemental site characterization activities conducted in 2012 at the Former Baron Blakeslee Site, located at 86 Cleveland Avenue in the Town of Islip, Suffolk County, New York (Figure 1-1). The initial Site Characterization investigation was conducted in 2011 pursuant to an approved work plan prepared by Environmental Resources Management (2011). The results of the initial investigation were reported to the New York State Department of Environmental Conservation (DEC) in a Site Characterization Report (Brown and Caldwell Associates, 2012). The DEC provided comments on the Site Characterization Report on April 9, 2012 (DEC, April 2012). BC responded to DEC's comments on July 18, 2012 and proposed additional SC activities (BC, July 2012). On August 3, 2012 the DEC approved the proposed additional SC activities (DEC, August 2012). A Site Characterization Work Plan Addendum (BC, July 2012) was prepared to specify in detail the additional SC activities. The Site Characterization Work Plan Addendum (SCWPA) was approved by the DEC by email on October 16, 2012.

1.2 Objectives

The objectives of the supplemental SC investigation were as follows:

- Further evaluate metals concentrations previously detected in groundwater. The initial Site Characterization detected elevated metals concentrations in groundwater samples collected at several onsite locations. Because these samples were collected with direct push groundwater profiling tools, the turbidity of the samples was unusually high and it was suspected that the analytical results were not representative of actual dissolved concentrations in groundwater. It was determined that conventional monitoring wells and low-flow sampling methods would be needed to accurately assess dissolved metals concentrations.
- Further evaluate sub-slab soil vapor and potential VOC sources in vadose zone soils beneath the former Baron Blakeslee building. Although the initial indoor air sample results indicated little or no infiltration of sub-slab soil vapor was occurring to the indoor air, available guidance documents recommend consideration of possible mitigation measures such as sub-slab depressurization. Additional delineation of VOC concentrations in sub-slab soil and soil vapor was undertaken to facilitate this evaluation. In addition, to further assess the potential for soil vapor intrusion, it was necessary to obtain indoor air samples during the heating season, when the potential for vapor intrusion is greatest.
- Evaluate the potential for soil vapors to migrate from potential source areas beneath the former Baron Blakeslee building to off-site locations beyond Cleveland Avenue. During the initial Site Characterization, elevated concentrations of tetrachloroethene (PCE) vapors were detected in subslab soil vapor samples from under the onsite structure and in exterior soil vapor samples east of the structure. The data confirmed that vapor concentrations attenuate rapidly with distance from the source area, as reflected by the one- to three orders of magnitude reduction in vapor concentrations measured between samples located approximately 100 feet apart. It was



determined that additional soil gas sampling was needed to evaluate whether there is a continuum of chlorinated solvent vapors extending from beneath the former Baron Blakeslee building to the opposite side of Cleveland Avenue.

1.3 Organization of the Site Characterization Report Addendum

The organization of this report is similar to the original SC Report, but generally does not include background historical data or information that was previously provided and which has not changed. This report focuses on the supplemental SC activities.

- Section 2 Supplemental SC Activities, provides a summary of the investigation activities and all departures (if any) from the methods and materials specified in the SC Work Plan and SC Work Plan Addendum.
- Section 3 Supplemental SC Results, describes the investigation findings.
- Section 4 Summary- summarizes supplemental SC results.
- Section 5 Conclusions and Recommendations, presents conclusions supported by the SC results and recommendations for further investigation and/or remedial measures.

The following appendices are included in this report:

- Appendix A Boring and Monitoring Well Logs
- Appendix B Field Sample Data Sheets
- Appendix C Full Laboratory Deliverables
- Appendix D Data Usability Summary Reports (DUSRs)



Section 2

Supplemental Site Characterization Activities

The following subsections describe investigation activities and any departures from the methods and materials specified in the SC Work Plan and SC Work Plan Addendum.

2.1 Sampling Layout/Survey

Sampling points proposed in the SC Work Plan Addendum (monitoring well locations, soil vapor points and soil borings) were located in the field by MJ Engineering and marked with flags and surveyor's paint. Coordinates were referenced to the State Plane coordinate system for New York using the North American Datum of 1983 (NAD 1983) in units of feet. Elevations were referenced to the National Geodetic Vertical Datum (NGVD) of 1929 in units of feet. None of the sampling point locations needed to be altered based on Site conditions (e.g., subsurface refusal, underground utilities, etc.). Investigation locations are shown on Figure 2-1 and as-built data for the monitoring wells are provided on the boring logs in Appendix A.

2.2 Underground Utility Markouts

In selecting final drilling locations, BC considered the locations of underground utilities as they were marked by the utility locating subcontractor and UFPO. In addition, BC contacted the Suffolk County DPW for markouts of sewer and water lines. Existing sewer plans and the locations of catch basins and manholes were considered in identifying the alignments of sewers.

2.3 Site Access

Access to on-site indoor and outdoor drilling locations was provided by GE. Figure 2-1 shows the six offsite drilling locations within the public right-of-way maintained on Cleveland Avenue by the Town of Islip. As requested by the Town, the DEC case manager, Robert Corcoran, submitted a letter to the Town Department of Planning and Development confirming the upcoming soil vapor investigation. Additionally, BC submitted a completed Right of Way Work Permit Form to the Town. Approval to work in the right-of-way was received via email from the Town on November 19, 2012.

2.4 Monitoring Well Installation

Three conventional 2" PVC monitoring wells (MW-GWP-01, MW-GWP-03, and MW-GWP-06) were installed between October 22, 2012 and October 26, 2012 utilizing hollow stem auger methods. During drilling, clean potable water was added to the auger stem to maintain a positive hydraulic head inside the auger and reduce the potential for heaving sands. In each boring, a sample of soil was collected for classification from 60 to 62 feet bgs (within the targeted screen interval of 60 to 65 feet bgs) using a 2 ft. split barrel sampler. The soil samples were screened in the field for noticeable signs of contamination (e.g., staining) and observed for physical properties such as color, grain size, sorting, etc.



by an experienced hydrogeologist. Soil characteristics were logged in accordance with a system after Burmister (1959). The final boring logs include the Burmister description and the corresponding Unified Soil Classification System (USCS) classification (Appendix A).

Upon reaching the target depth of 65 feet bgs, a five (5) foot PVC pre-packed well screen (0.010 inch slot size) and two-inch diameter PVC riser casing were installed. Additional sand pack material was placed in the annulus surrounding the pre-packed screen as the casing was withdrawn to further reduce the potential for turbidity in the well. The well screens were installed in the interval from 60 to 65 feet bgs.

The remainder of overburden monitoring well construction included the following:

- Measurements of material depths were made by frequently sounding the annulus with a weighted tape measure during installation.
- A layer of bentonite pellets, at least two feet thick was placed above the sand pack to form an annular seal.
- Cement/bentonite grout was placed from the top of the bentonite seal to a point approximately two feet below existing ground surface. The grout consisted of one bag (94 pounds) of Portland cement and five pounds of bentonite mixed with six gallons of potable water.
- Wells were completed with flush mount protective well vaults. The vault was equipped with a cast iron cover secured by bolts to discourage unauthorized access to the monitoring well. A locked compression cap was placed in the PVC riser to prevent storm water from entering the well.
- The well vaults were set in place with concrete.

The monitoring wells were developed using the surge and evacuate method (after at least 12 hours following well construction) to remove silt and clay particles from the primary and secondary sand packs and the adjacent formation. Well development is normally considered complete when there is no visible decrease in the turbidity of the evacuated water. Wells were developed to below 50 Nephelometric Turbidity Units (NTUs) where possible. Turbidity readings were recorded at the completion of development using a portable turbidity meter.

It became apparent during the attempted development of MW-GWP-06 that grout had entered the PVC riser and hardened, creating an obstruction that rendered the well unusable for groundwater sampling. Replacement well MW-GWP-06R was installed by ADT on December 14, 2012. Development was completed on December 17, 2012. Due to the potential for injected grout to alter the pH of groundwater in the vicinity of an abandoned well, abandonment of well MW-GWP-6 will be deferred until its nearby replacement is no longer needed for monitoring groundwater quality.

2.5 Low-Flow Groundwater Sampling

The objective of the low flow sampling procedure is to collect samples from monitoring wells while exerting minimum stress on the water-bearing formation and minimizing the disturbance of sediment in the well. On November 15, 2012 one round of groundwater sampling was conducted on the two viable monitoring wells (MW-GWP-1, MW-GWP-3). On November 29, 2012, BC was informed by TestAmerica that the hexavalent chromium samples were analyzed outside of holding times due to laboratory instrument failure. A second, complete round of groundwater sampling was conducted on January 14, 2013. The second round included all three functional wells (MW-GWP-01, MW-GWP-03, and MW-GWP-06R).



The depth to groundwater (static water level) was measured to within the nearest 0.01 foot in each well (Table 4). Low-flow purging and sampling was conducted in accordance with procedures and methods described in the SC Work Plan Addendum. Flow rates during purging and sampling were limited to a range from 125 to 200 mL/min. During both sampling events (November 15, 2012 and January 14, 2013) the turbidity readings at the time of sample collection were well below 50 NTUs, ranging from 2.59 to 12.52 NTUs.

During purging of the monitoring wells, the following field indicator parameters were monitored: turbidity. temperature, specific conductance, pH, oxidation-reduction potential (ORP) and dissolved oxygen (DO). Purging was conducted at each well until the field parameters stabilized. In accordance with the SC Work Plan Addendum, a well was considered stabilized and ready for sample collection when three consecutive readings were within a range of minimum to maximum values as follows: ± 0.1 for pH, $\pm 3\%$ for specific conductance, ±10% for D.O., ±10 mV for ORP, and ±10% for turbidity. Measurement of the indicator parameters continued every three minutes until these measurements indicated stability in the water quality and the sample was collected. The field parameter measurements are provided on the Field Data Sheets included in Appendix B. In accordance with the work plan, filtered and unfiltered samples were collected from all wells to facilitate the evaluation of the effect of turbidity on metal concentrations. Unfiltered samples are designated in the sample ID with the letters "U" (unfiltered) or "T" (total). Filtered samples are designated in the sample ID with the letters "F" (filtered) or "D" (dissolved). Groundwater samples were transferred into appropriate laboratory supplied containers. Samples were packed on ice in coolers and picked up on onsite by Test America and couriered to TestAmerica Edison for analysis of Target Analyte List (TAL) metals using USEPA SW-846 Method 6010, total mercury by USEPA SW-846 Method 7471, and hexavalent chromium by USEPA SW-846 Method 7199 with associated calculations for trivalent chromium. The hexavalent chromium analyses of the January 2013 samples were completed by Accutest Laboratories of Dayton, Ohio due to continued instrument problems at TestAmerica Edison. Accutest of Dayton is a NYSDOH ELAP certified laboratory.

2.6 Shallow Soil Sampling

Given that buried utilities were suspected in the sampling area in the south west corner of the main building, a private utility locating firm was utilized to clear the investigation area prior to drilling.

Soil borings were advanced at eight (8) locations in the building as shown on Figure 2-1. The concrete floor slab at each boring location was penetrated using a core drill. The borings were advanced with GeoProbe® direct push equipment to the apparent depth of the water table, as indicated by saturated conditions observed in the soil samples (depths ranging from 7.7 to 10.7 ft bgs). Continuous soil samples were collected from each boring using a 4 ft macro core sampler with a dedicated, clean acetate liner. The barrel was advanced the full 4 feet for each push.

Soil in each liner was screened in the field using a photo-ionization detector (PID) and soil samples were collected from the six-inch interval with the greatest PID reading. Soils were visually characterized as described in Section 3.4. Boring logs are provided in Appendix A.

One soil sample was collected from each boring and analyzed for full target compound list (TCL) VOCs plus 10 tentatively identified compounds (TICs) via USEPA SW-846 Method 8260.

After sampling, the boreholes were backfilled with soil cuttings and clean sand. Floor penetrations in the concrete slab at each location were repaired with concrete patching material.



2.7 Soil Vapor and Indoor Air Investigation

2.7.1 Exterior Soil Vapor

Soil vapor was sampled at locations on the west and east sides of Cleveland Avenue to assess whether there might be a continuum of vapors extending from the former Baron-Blakeslee building to areas beyond Cleveland Avenue (Figure 2-1).

Soil vapor sampling was conducted in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, NYSDOH, October 2006 and the SCWPA. Six (6) temporary soil vapor sampling points were installed by Zebra using direct-push methods. Three of the proposed sampling points were installed in the municipally-owned grass area adjacent to the west side of Cleveland Avenue and three additional borings were installed in the municipally-owned grass area adjacent to the east side of Cleveland Avenue. Sampling points were installed with a direct-push rig to four (4) feet below grade in accordance with procedures specified in the original SC Work Plan. A 1.875" polyethylene vapor implant was attached to the end of the 0.25" tubing at 4' below grade. This implant acted as a filter of 40-60 microns. All vapor sample collection was completed simultaneously using SUMMA canisters on the day of the installation of the temporary sampling points. Prior to sampling the points were purged. All samples were submitted to TestAmerica of Burlington and analyzed for VOCs using USEPA Method TO-15.

2.7.2 Sub-Slab Soil Vapor and Indoor Air

A building chemical/product inventory was performed in accordance with New York State Department of Health (NYSDOH) guidance. Indoor items were examined to determine if they contain PCE, trichloroethene (TCE), or other VOCs. The inventory was performed the day before the sub-slab and indoor air sampling. The sampling was conducted during the week of November 26, 2012, after the beginning of the heating season.

Soil vapor sampling was conducted in accordance with Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006) and the SC Work Plan Addendum. Four (4) temporary sub-sub slab points were installed at the interior building locations shown in Figure 2-1. Due to the suspected presence of buried utilities in the southern portion of the main warehouse building, a private utility locator was used to clear locations prior to drilling. The temporary sub-slab sampling points were installed using the methods and materials specified in the original work plan. Prior to sampling the points were purged. All vapor sample collection (sub-slab soil vapor and indoor/outdoor air) was completed immediately following installation of the temporary sampling points.

The sub-slab soil vapor samples were collected over an 8 hour sampling period as specified in Section 2.1.6 (page 7) of the work plan. All samples were submitted to TestAmerica of Burlington and analyzed for VOCs using USEPA Method TO-15.Additionally, two indoor air samples and one ambient (outdoor) air sample were collected using Summa canisters. The indoor air samples were collected over an 8 hour sampling period as specified in Section 2.1.6 (page 7) of the work plan. All air samples were submitted to TestAmerica of Burlington and analyzed for VOCs using USEPA Method TO-15.

After sample collection, the boreholes were backfilled and finished with a concrete patch at the surface.



2.8 Investigation-Derived Waste Management

Investigation-derived waste (IDW) generated from field activities was containerized in labeled 55 gallon DOT-approved steel drums and staged in a single location on the property pending characterization and disposal. Information contained on the label included the drum contents, name, address and telephone number of generator, date(s) the material was placed in the drum, and a BC contact name/telephone number. Wastes were separated based on type and inventoried. A total of 38 drums of IDW were generated.

Available analytical data from environmental media were correlated with the particular contents of each drum and forwarded to the disposal subcontractor for preparation of waste profiles.



Section 3 Investigation Results

3.1 Site-Specific Hydrogeology

The properties of the soil samples obtained during the supplemental SC investigation were consistent with the hydrogeologic conditions previously described in the SC Report. Eight (8) shallow soil borings were advanced to a depth of approximately 7-10 feet below the concrete slab and continuously sampled. Reworked soils (fill) consisting predominantly of sand with varying amounts of gravel and silt were encountered from below the concrete slab to approximately 5 feet below ground surface. Below the fill, the borings encountered typical Upper Glacial Aquifer deposits consisting of coarse to fine sands with varying amounts of silt and gravel. These materials were also found in the samples from 60-62 feet bgs obtained from each of the three monitoring well borings.

Water elevations measured during the January 2013 groundwater sampling event are provided in Table 4 and plotted on Figure 3-4. Although based on limited data points, the potentiometric surface reflected by the wells is consistent with historic mapping, which indicates groundwater flow is generally to the south-southeast (Brown and Caldwell Associates, January 2012, Figure 2-2).

3.2 Analytical Results

3.2.1 Data Usability

Each of the soil, soil vapor, air, and groundwater samples was analyzed by TestAmerica, with the exception of the January 2013 hexavalent chromium samples analyzed by Accutest. Complete data packages are provided on CD-ROM in Attachment C. Data Usability Summary Reports (DUSRs) were prepared for each data package (Attachment D). Based on the data usability review, no data were rejected. Minor data quality issues were identified; only some required qualification of the data.

The primary QC issue regarding the groundwater data resulted from the missed holding times for the hexavalent chromium samples from the November 2012 sampling event. Accordingly, the hexavalent chromium results (all non-detect) were qualified as "UJ" (estimated). Minor data quality issues regarding field duplicate imprecision for the November 2012 event resulted in the qualification of select data. No data were qualified from the January 2013 groundwater sampling event. For the shallow soil data set, the primary QC issue was low laboratory spike recovery for sample SB-12 and the associated results were qualified as estimated. The primary QC issue for the air data was field duplicate imprecision and method blank contamination of n-heptane and 2,2,4-trimethylpentane. As a result, select data were qualified as necessary.

3.2.2 Groundwater Quality

Groundwater samples were submitted for analysis of TAL metals (including mercury) and hexavalent chromium with associated calculations for trivalent chromium. Table 1 summarizes analytical results for each metal that was detected in one or more of the samples. Both the November 2012 sampling round (MW-GWP-1, MW-GWP-3) and the January 2013 sampling round (MW-GWP-1, MW-GWP-3, and MW-GWP-6R) are included on the table. The results are compared to the New York State Class GA



Groundwater Quality Standards [6 NYCRR Part 703]. Exceedances are briefly described below. For discussion purposes, "total" refers to a result from an unfiltered groundwater sample and "dissolved" refers to a result from a field-filtered sample. Detected metals are depicted on Figure 3-1.

No chromium, cadmium or lead was detected in any of the samples. Thallium was detected in one unfiltered sample at an estimated concentration of 5.2 J μ g/L (the MDL was 5.2 μ g/L). This result is not considered significant because it is at the limit of detection and because thallium was not detected in the corresponding filtered sample.

Two metals, iron and sodium, were found in unfiltered samples at concentrations exceeding the Part 703 groundwater standards. Iron was not detected above standards in any of the filtered samples, indicating it is likely present predominantly in solid form, as an insoluble oxide or component of the naturally occurring minerals comprising the Upper Glacial Aquifer deposits. Sodium was detected in filtered and unfiltered groundwater samples at concentrations exceeding the Part 703 standard in wells MW-GWP-1 and MW-GWP-6R. The concentrations of sodium in filtered and unfiltered samples were generally similar, indicating it is present primarily in the dissolved phase. Neither iron nor sodium is considered a contaminant of concern (COC) at the site.

3.2.3 Shallow Soil Samples

Table 2 provides a summary of the analytical results for the samples collected from the eight sub-slab soil borings. Analytical results are compared to the New York State Soil Cleanup Objectives (SCOs) for Protection of Public Health (Industrial Use) and Protection of Groundwater [6 NYCRR Subpart 375-6]. Figure 3-2 depicts VOCs that exceed these soil standards and/or correspond to VOCs detected soil gas or air at concentrations above applicable guidelines (see Section 3.2.4 below).

The predominate VOC detected in soil was tetrachloroethene (PCE), found in shallow soils in an area extending north to south and encompassing borings SB-6, SB-8, SB-9 and SB-11. Lower concentrations of 1,1,1-tetrachloroethane (1,1,1-TCA), trichloroethene (TCE) and cis-1,2-dichloroethene (cis-DCE) are associated with these sample locations. TCE and cis-DCE are formed as daughter products during biodegradation of PCE.

All VOC concentrations detected in the shallow soil samples were below the SCOs for Protection of Public Health (Industrial Use). Four VOCs (PCE; cis-DCE; 1,1,1-TCA; and acetone) were detected at concentrations slightly above the SCOs for Protection of Groundwater; however, none of these impacts presently threaten groundwater quality due to their shallow depth and the cover afforded by the building. This has been confirmed by the recent (2011) groundwater profile sampling involving the analysis of 60 samples from 10 locations. VOCs were detected (at trace levels) in groundwater samples from only four locations.

3.2.4 Sub-Slab Soil Vapor

Table 3 and Figure 3-3 depict the analytical results for sub-slab soil vapor samples collected beneath the main building (SS-05 and SS-06) and GE Repair shop (SS-07 and SS-08). New York State currently does not have any standards, criteria or guidance values for concentrations of compounds in soil vapor¹.

The sub-slab vapor concentrations of PCE range from 2,300 μ g/m³ at SS-06 to 240,000 μ g/m³ at SS-08. Sub-slab TCE concentrations range from 74 μ g/m³ in sample SS-06 to 120,000 μ g/m³ in SS-08. PCE and TCE were also detected in nearby shallow soil samples. New York Sate Department of Health

¹ Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York; NYSDOH; October 2006 (Section 3.3.1).



(NYSDOH) guidance² provides decision matrices for TCE and PCE concentrations in sub-slab soil vapor. Based on the sub-slab concentrations detected beneath the former Baron Blakeslee building, the matrices recommend mitigation to minimize potential exposures associated with soil vapor intrusion.

3.2.5 Indoor and Outdoor Air Sampling

Table 3 provides a summary of the analytical results for the two indoor and one outdoor (ambient) air samples. Analytical results are compared to the NYSDOH Air Guideline Values (NYSDOH, 2006, Table 3.1). There were no exceedances of the guideline values in indoor air. PCE concentrations ranged from 3.5 μ g/m³ in sample IA-06 to an estimated 4.3 μ g/m³ in sample IA-05 while TCE concentrations ranged from an estimated 0.28 μ g/m³ in sample IA-05 to 3.3 μ g/m³ in sample IA-06. It should be noted that carbon tetrachloride, benzene and 1,3-butadiene were detected in the outdoor air sample (on the up-wind portion of the site) at concentrations at or above indoor air concentrations. These detections are not likely related to conditions on the property.

3.2.6 Exterior Soil Vapor

Table 3 provides a summary of the analytical results for six exterior soil vapor samples collected east of the building, in the public right-of-way (ROW) along Cleveland Avenue. As noted previously, New York State does not have any standards, criteria or guidance values for concentrations of compounds detected in soil vapor other than in the context of sub-slab detection. The aforementioned decision matrices for PCE and TCE address sub-slab vapor concentrations and their potential to impact indoor air quality in overlying structures, and thus have limited relevance to these exterior soil vapor data.

PCE concentrations ranged from 45 μ g/m³ to 4,200 μ g/m³ at locations in the ROW along the western side of Cleveland Avenue and from 63 μ g/m³ to 370 μ g/m³ at locations in the ROW along the eastern side of Cleveland Avenue. TCE concentrations ranged from 1.4 μ g/m³ to 94 μ g/m³ along the western side of Cleveland Avenue and from 0.87 μ g/m³ to 1.9J μ g/m³ along the eastern side of Cleveland Avenue. Concentrations of 1,3-butadiene, bromodichloromethane, chloroform and dibromochloromethane in soil vapor samples from the east side of Cleveland Avenue were generally higher than concentrations in the samples collected along the west side of Cleveland Avenue. As shown in Figure 3-3, soil vapor concentrations on the west side of Cleveland Avenue are generally 1 to 2 orders of magnitude lower than those under the former Baron Blakeslee building. Concentrations generally diminish an additional order magnitude at the sample locations along the east side of Cleveland Avenue.

² Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York; NYSDOH; October 2006; Soil Vapor/Indoor Air Matrix 1 and Matrix 2.



Section 4 Summary

Additional Site Characterization activities were performed on behalf of General Electric Company by Brown and Caldwell Associates. The findings are briefly summarized as follows.

Groundwater Monitoring for Dissolved Metals

- Three conventional 2" PVC monitoring wells (MW-GWP-01, MW-GWP-03, and MW-GWP-06) were installed to further evaluate dissolved metals in groundwater.
- No chromium, cadmium or lead was detected in any of the samples. Thallium was detected in one unfiltered sample at an estimated concentration of 5.2 J µg/L (the MDL was 5.2 µg/L). This result is not considered significant because it is at the limit of detection and because thallium was not detected in the corresponding filtered sample.
- Dissolved sodium concentrations exceeded the Part 703 standards in up gradient wells MW-GWP-1 and MW-GWP-3, and in well MW-GWP-6R.
- The highest concentration of sodium was found in up-gradient well MW-GWP-1, just downgradient from South 3rd Street.

Shallow Soil Samples

 VOC concentrations detected in all eight shallow soil borings were below the SCOs for Protection of Public Health (Industrial Use). Four VOCs (PCE; cis-DCE; 1,1,1-TCA and acetone) were detected at concentrations slightly above the SCOs for Protection of Groundwater at six locations; however, extensive groundwater profile sampling conducted in 2011 demonstrates that the VOCs are not adversely affecting groundwater quality.

Sub-Slab Soil Vapor Samples

- Four sub-slab vapor samples were collected beneath the building.
- PCE and TCE were detected in sub-slab soil vapor at concentrations at which New York Sate guidance recommends mitigation to minimize potential exposures associated with soil vapor intrusion.
- PCE, TCE and 1,1,1-TCA were also detected in nearby shallow soil samples.

Indoor Air

- Two indoor air samples were collected contemporaneously with the four sub-slab soil vapor samples.
- There were no exceedances of the NYSDOH Air Guideline Values in indoor air.

Outdoor Air

- One outdoor air sample was collected at an upwind location on the site, contemporaneously with the indoor air samples.
- PCE, TCE, carbon tetrachloride, benzene and several other VOCs were detected in the outdoor air sample.



Exterior Soil Vapor Samples

- Six soil vapor samples were collected outside the building, at locations within the public ROW on both sides of Cleveland Avenue.
- Concentrations of 1,3-butadiene, bromodichloromethane, chloroform, and dibromochloromethane were generally higher on the east side of Cleveland Avenue than on the west side.
- PCE and TCE concentrations in soil vapor samples from the ROW on the east side of Cleveland Avenue were 1-2 orders of magnitude lower than concentrations in samples from the ROW on the west side of Cleveland Avenue.



Section 5

Conclusions and Recommendations

5.1 Groundwater

The metals concentrations identified during the initial SC investigation in direct-push groundwater profile samples were not found in the samples recently obtained from conventional monitoring wells using standard low-flow sampling protocols, indicating that the results in the direct-push samples were artifacts of the high sample turbidity. No chromium was detected. The supplemental SC investigation did identify sodium at dissolved concentrations exceeding the Part 703 standards. Concentrations of sodium appear to vary across the site; however, the highest concentrations are found in up gradient well MW-GWP-1 located near the northern site boundary, approximately 15 feet downgradient from South 3rd Street.

Recommendation: No additional investigation of on-site of groundwater is warranted for the reasons stated above.

5.2 Soil

All VOC concentrations observed in the shallow soil samples were below the SCOs for Protection of Public Health (Industrial Use). Four VOCs (PCE; cis-DCE; 1,1,1-TCA; acetone) were detected at concentrations slightly above the SCOs for Protection of Groundwater; however, none of these impacts presently threaten groundwater quality due to their shallow depth and the cover afforded by the building, as confirmed by recent (2011) groundwater profile sampling.

Recommendation: See recommendation for indoor air.

5.3 Soil Vapor

PCE and TCE were detected in sub-slab soil vapor at concentrations at which NYSDOH guidance recommends mitigation to minimize potential exposures associated with soil vapor intrusion. PCE and TCE were also detected in nearby shallow soil samples.

Exterior soil vapor sampling data indicate that PCE and, to a lesser extent, TCE may be migrating eastward in soil vapor from the building toward Cleveland Avenue. As shown in Figure 3-3, soil vapor concentrations on the west side of Cleveland Avenue are generally 1 to 2 orders of magnitude lower than those under the former Baron Blakeslee building. Concentrations generally diminish an additional order of magnitude at the sample locations in the public ROW along the east side of Cleveland Avenue. PCE concentrations ranged from 45 μ g/m³ to 4,200 μ g/m³ at locations along the western side of Cleveland Avenue. TCE concentrations ranged from 1.4 μ g/m³ to 94 μ g/m³ along the western side of Cleveland Avenue. TCE concentrations ranged from 1.4 μ g/m³ to 94 μ g/m³ along the western side of Cleveland Avenue of New and from 0.87 μ g/m³ to 1.9 μ g/m³ along the eastern side of Cleveland Avenue of magnitude decrease from west to east.

Recommendation: See recommendation for indoor air.



5.4 Indoor Air

There were no exceedances of the NYSDOH Air Guideline values in indoor air. It should be noted that the indoor air concentrations are several orders of magnitude lower than sub-slab concentrations, indicating that the floor slab is significantly limiting or preventing intrusion of VOCs. Furthermore, carbon tetrachloride, benzene and 1,3-butadiene were also detected in the outdoor air sample (on the up-wind portion of the site) at concentrations at or above indoor air concentrations. These detections are likely not related to conditions on the property.

Recommendation: The Site Characterization data indicate that vapor intrusion of residual VOCs in onsite shallow soil is the only potential exposure pathway to historic site related conditions. General Electric is evaluating the implementation of an SVE system to address both residual low levels of VOCs in shallow soils and mitigate soil vapor. It is anticipated that SVE points can be installed through the building floor slab in the vicinity of identified soil impacts, which appear to be concentrated in the elongated north-south area noted previously. Depending on subsurface conditions, additional vacuum points could be installed elsewhere in the building to depressurize the entire sub-slab space, thereby eliminating any potential for vapor intrusion into the indoor environment. The implementation of such a system would be subject to discussions with the DEC.

General Electric Company should consider entry into the Brownfield Cleanup Program as a Volunteer and arrange for a pre-application meeting with the DEC project manager.



Section 6 References

- Brown and Caldwell Associates, January 2012. Site Characterization Report, Former Baron Blakeslee Site, Bay Shore, New York, January 2012.
- Brown and Caldwell Associates, July 2012. Letter RE: Site Characterization Report, Former Baron-Blakeslee Site Response to DEC Comments
- Brown and Caldwell Associates, October 2012. Site Characterization Work Plan Addendum, Former Baron Blakeslee Site, Bay Shore, New York. October 2012.
- Environmental Resources Management, 2011. Site Characterization Work Plan, Former Baron Blakeslee Potential Site (P Site), 86 Cleveland Avenue, Bay Shore, New York, April 2011
- New York State Department of Conservation, 2002. Draft DER-10 Technical Guidance for Site Investigation and Remediation. Division of Environmental Remediation. December 25, 2002.
- New York State Department of Conservation, April 2012. Letter RE: Site Characterization Report -January 2012, April 9, 2012
- New York State Department of Conservation, August 2012. Letter RE: Response to BC comment letter July 18, 2012; August 3, 2012
- New York State Department of Health, 2006. Guidance for Evaluating Soil Vapor Intrusion in New York State. October 2006. United States Environmental Protection Agency, 2002.
- OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). EPA530-D-02-004. November 2002.



Tables



TABLE 1Groundwater Analytical ResultsSupplemental Site Characterization InvestigationFormer Baron Blakeslee SiteBay Shore, New York

GW Quality

Analyte Group:	Class GA Groundwater		Location:	MW-GWP-1	MW-GWP-1	MW-GWP-1	MW-GWP-1	MW-GWP-1	MW-GWP-1
Metals	Criteria		Sample Name	MW CWP 1E	MW CWP 11	DUP111512 F			MW CWP 01 T
Analyte Name	NYS Part 703(1) Standard	U nits	Sample Name.	<u>11/15/2012</u>	<u>11/15/2012</u>	<u>11/15/2012</u>	<u>11/15/2012</u>	<u>1/14/2013</u>	1/14/2013
			Sumple Dute:	70.0	100	70.4.11	00.4	70.4.1	105 1
	NE	UG/L		72.9 J	188 J	72.10	86.4 J	72.10	185 J
Antimony	3	UG/L		7.4 0	7.4 0	7.4 U	7.4 0	7.4 0	7.4 0
	25	UG/L		3.7 0	3.7 0	3.7 0	3.7 U	3.7 0	3.7 U
Barium	1000	UG/L		333	338	330	332	286	281
Beryllium	NE	UG/L		0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
	5	UG/L		0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Calcium	NE	UG/L		24300	24300	23600	23400	21600	21200
Chromium	50	UG/L		4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Chromium III	NE	UG/L		NA	0.11 U	NA	0.11 U	4.5 U	4.5 U
Chromium, hexavalent	NE	UG/L		0.56 UJ	0.56 UJ	0.56 UJ	0.56 UJ	5.5 U	5.5 U
Cobalt	5	UG/L		4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Copper	200	UG/L		7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
ron	300	UG/L		73.6 U	217 J	73.6 U	81.1 J	84.9 J	277
ead	25	UG/L		4 U	4 U	4 U	4 U	4 U	4 U
<i>I</i> agnesium	NE	UG/L		3920 J	3880 J	3800 J	3790 J	3940 J	3840 J
<i>l</i> anganese	300	UG/L		104 J	102 J	56.5 J	64.4 J	58.6	84.2
Aercury	0.7	UG/L		0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
lickel	100	UG/L		5 U	5 U	5 U	5 U	5 U	5 U
Potassium	NE	UG/L		18600	18700	18200	18400	17100	17000
Selenium	10	UG/L		5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Silver	50	UG/L		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	20000	UG/L		*97700	*98100	*98200	*98200	*94900	*93500
Thallium	NE	UG/L		5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U
/anadium	14	UG/L		4 U	4 U	4 U	4 U	4 U	4 U
Zinc	NE	UG/L		6.4 J	6.6 J	5.8 U	5.8 U	5.8 U	5.8 U

TABLE 1 Groundwater Analytical Results Supplemental Site Characterization Investigation Former Baron Blakeslee Site **Bay Shore, New York**

GW Quality

Analyte Group:	Groundwater		Location:	MW-GWP-3	MW-GWP-3	MW-GWP-3	MW-GWP-3	MW-GWP-6R	MW-GWP-6R	MW-GWP-6R
Metals	Criteria		Sample Name:	MW-GWP-3F	MW-GWP-3U	MW-GWP-03-D	MW-GWP-03-T	MW-GWP-06R-D	MW-GWP-06R-T	DUP 011413-D
Analyte Name	Standard	Units	Sample Date:	11/15/2012	11/15/2012	1/14/2013	1/14/2013	1/14/2013	1/14/2013	1/14/2013
Aluminum	NE	UG/L		72.1 U	280	72.1 U	675	72.1 U	231	72.1 U
Antimony	3	UG/L		7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U
Arsenic	25	UG/L		3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Barium	1000	UG/L		63.6 J	64.8 J	41.9 J	46 J	60 J	62.1 J	60.3 J
Beryllium	NE	UG/L		0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
Cadmium	5	UG/L		0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Calcium	NE	UG/L		25600	26500	8170	8720	15400	16000	15600
Chromium	50	UG/L		4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Chromium III	NE	UG/L		NA	0.11 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
Chromium, hexavalent	NE	UG/L		0.56 UJ	0.56 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
Cobalt	5	UG/L		4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Copper	200	UG/L		7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Iron	300	UG/L		73.6 U	*332	73.6 U	*959	73.6 U	*617	73.6 U
Lead	25	UG/L		4 U	4 U	4 U	4 U	4 U	4 U	4 U
Magnesium	NE	UG/L		1230 J	1310 J	1250 J	1340 J	2010 J	2180 J	2040 J
Manganese	300	UG/L		70.6	99	22.1	97.4	37	47.1	38
Mercury	0.7	UG/L		0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Nickel	100	UG/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium	NE	UG/L		8340	8320	6280	6190	3480 J	3490 J	3480 J
Selenium	10	UG/L		5.8 U	5.8 U	5.8 U	5.8 U	7 J	5.8 U	9.1 J
Silver	50	UG/L		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	20000	UG/L		6270	5930	4890 J	4890 J	*53500	*53900	*54200
Thallium	NE	UG/L		5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 J	5.2 U
Vanadium	14	UG/L		4 U	4 U	4 U	4 U	4 U	4 U	4 U
Zinc	NE	UG/L		5.8 U	6.4 J	5.8 U	7.4 J	5.8 U	10.2 J	5.8 U

Notes: U – The analyte was analyzed for, but was not detected. Value shown is the method detection limit (MDL) for the analyzed constituent. J – Estimated concentration. The result is below the quantitation limit but above the method detection limit. NE – Standard and/or guidance value not established. NA – Not analyzed. ND – Not detected. * (Red) concentrations are above New York State Class GA Groundwater Standards or Guidance values.

* (Red) concentrations are above New York State Class GA Groundwater Standards or Guidance values

Water Data Summary Page 1 - 2

TABLE 2 Soil Analytical Results Supplemental Site Characterization Investigation Former Baron Blakeslee Site **Bay Shore, New York**

Soil Results:

Analyte Group:	Soil Cleanup [6 NYCRR Su	Objectives bpart 375-6]											
VOCs	Protection of	Protection of		Location:	SB-5	SB-6	SB-7	SB-8	SB-9	SB-9	SB-10	SB-11	SB-12
Analyte Name	Industrial Use	Groundwater	Units	SampleName:	SB-5-6-6.5	SB-6-5-5.5	SB-7-5-5.5	SB-8-1.5-2	SB-9-1-1.5	DUP-112912	SB-10-3-3.5	SB-11-1-1.5	SB-12-1-1.5
1,1,1-Trichloroethane	1000	0.68	MG/KG		0.00022 J	*2.4	0.007 U	0.0066 U	0.1 J	0.077 J	0.00086 J	0.019 J	0.024 J
1,1-Dichloroethane	480	0.27	MG/KG		0.00029 J	0.035 J	0.015 U	0.014 U	0.014 U	0.016 U	0.00011 U	0.015 U	0.00011 U
1,2-Dimethylbenzene (o-xylene)	NE	NE	MG/KG		0.012	0.019 J	0.057 J	0.014 U	0.014 U	0.016 U	0.00018 U	0.015 U	0.00019 UJ
2-Butanone (MEK)	1000	0.12	MG/KG		0.011	0.28 U	0.26 U	0.24 U	0.25 U	0.29 U	0.0046 J	0.27 U	0.00064 U
2-Hexanone	NE	NE	MG/KG		0.00014 U	0.061 U	0.056 U	0.053 U	0.055 U	0.063 U	0.00083 J	0.058 U	0.00013 U
4-Methyl-2-pentanone (MIBK)	NE	NE	MG/KG		0.00022 U	0.12 U	0.11 U	0.1 U	0.11 U	0.12 U	0.00084 J	0.11 U	0.0002 U
Acetone	1000	0.05	MG/KG		*0.071	0.33 U	0.3 U	0.28 U	0.29 U	0.34 U	0.02	0.31 U	0.006 UJ
Carbon disulfide	NE	NE	MG/KG		0.00018 J	0.015 U	0.014 U	0.013 U	0.014 U	0.016 U	0.00031 J	0.014 U	0.00015 U
Chloroform	700	0.37	MG/KG		0.00026 U	0.0095 U	0.0088 U	0.0083 U	0.0086 U	0.0099 U	0.00023 U	0.0091 U	0.00072 J
cis-1,2-Dichloroethene	1000	0.25	MG/KG		0.00012 U	*2.3	0.02 U	0.019 U	0.019 U	0.022 U	0.00011 U	0.02 U	0.00011 U
Ethylbenzene	780	1	MG/KG		0.0031	0.014 J	0.11	0.01 U	0.01 U	0.012 U	0.00017 U	0.011 U	0.00017 UJ
Isopropylbenzene (Cumene)	NE	NE	MG/KG		0.00027 J	0.0093 U	0.09 J	0.0081 U	0.0084 U	0.0097 U	0.00011 U	0.0089 U	0.00011 UJ
m,p-Xylene (sum of isomers)	1000	1.6	MG/KG		0.0064	0.05 J	0.055 J	0.026 U	0.027 U	0.031 U	0.00057 U	0.028 U	0.0006 UJ
Methylcyclohexane	NE	NE	MG/KG		0.0072	0.021 J	4.5	0.014 U	0.015 U	0.017 U	0.000097 U	0.016 U	0.0001 UJ
Tetrachloroethene (PCE)	300	1.3	MG/KG		0.015	*8.3	0.062 J	*6.3 J	*11	*10	0.054	*11	0.35
Toluene	1000	0.7	MG/KG		0.0053	0.021 J	0.018 J	0.016 U	0.016 U	0.019 U	0.0002 J	0.017 U	0.00017 J
Trichloroethene (TCE)	400	0.47	MG/KG		0.0036	0.22	0.01 U	0.0097 U	0.17	0.14	0.00099	0.073 J	0.063 J

Notes:

U – The analyte was analyzed for, but was not detected. Value shown is the practical quantitation limit (PQL) for the analyzed constituent.
 J – Estimated concentration. The result is below the quantitation limit but above the method detection limit.

UJ - The analyte was not detected above the reported method detection limit. However, based on data validation, the

reported method detection limit is approximate and may or may not represent the actual limit of the detection necessary to accurately and precisely measure the analyte in the sample.

NE – Standard and/or guidance value not established.

* (Red) concentrations are above Soil Cleanup Objectives (NYCRR Subpart 375-6) Protection of Public Health (Industrial Use) and/or protection of groundwater

TABLE 3a Indoor/Ambient Air Analytical Results Supplemental Site Characterization Investigation Former Baron Blakeslee Site Bay Shore, New York

Air Results:

Analyte Group:

VOCs	NYSDOH Air Guidelines		Location:	IA-05	IA-05	IA-06	AA-07
Analyte Name	Culdenites	Units	SampleName:	IA-05	DUP-112712-2	IA-06	AA-07
1,1,1-Trichloroethane	NE	UG/M3		0.31	0.22 U	0.43	0.22 U
1,1,2,2-Tetrachloroethane	NE	UG/M3		0.28	0.27 U	0.27 U	0.27 U
1,2-Dimethylbenzene (o-xylene)	NE	UG/M3		0.57	0.4	1.9	0.48
1,3,5-Trimethylbenzene (mesitylene)	NE	UG/M3		0.39 U	0.39 U	0.39 U	0.39 U
1,3-Butadiene	NE	UG/M3		0.3	0.18 U	0.34	0.41
2,2,4-Trimethylpentane	NE	UG/M3		1.2 J	0.58 J	0.61	0.66
4-Ethyltoluene	NE	UG/M3		0.3	0.2 U	0.22	0.2 U
Benzene	NE	UG/M3		0.99 J	0.52 J	0.9	0.95
Bromodichloromethane	NE	UG/M3		0.27 U	0.27 U	0.27 U	0.27 U
Carbon tetrachloride	NE	UG/M3		0.5 J	0.3 J	0.43	0.55
Chloroform	NE	UG/M3		0.2	0.2 U	0.2 U	0.2 U
Cyclohexane	NE	UG/M3		1 J	0.53 J	6.2	0.43
Dibromochloromethane	NE	UG/M3		0.34 U	0.34 U	0.34 U	0.34 U
Dichlorodifluoromethane (Freon 12)	NE	UG/M3		6 J	3.9 J	7.8	3.8
Ethylbenzene	NE	UG/M3		0.54	0.35	1.8	0.37
m,p-Xylene (sum of isomers)	NE	UG/M3		1.8	1.1	7	1.2
Methylene chloride	60	UG/M3		1.8 J	9 J	4.2	1.5
n-Heptane (C7)	NE	UG/M3		0.97 J	0.44 J	4.4	0.81
n-Hexane (C6)	NE	UG/M3		1.3 J	0.73 J	2.6	0.88
tert-Butyl methyl ether (MTBE)	NE	UG/M3		0.14 U	0.14 U	0.14 U	0.14 U
Tetrachloroethene (PCE)	100	UG/M3		4.3 J	2.3 J	3.5	1.2
Toluene	NE	UG/M3		6.9 J	4.2 J	12	7.1
Trichloroethene (TCE)	5	UG/M3		0.59 J	0.28 J	3.3	0.33
Trichlorofluoromethane (Freon 11)	NE	UG/M3		2.4 J	1.6 J	3	2
Xylenes, total	NE	UG/M3		2.4	1.5	9	1.7

Vapor Intrusion Data Summary Page 1 - 1

TABLE 3b Soil Vapor Analytical Results Supplemental Site Characterization Investigation Former Baron Blakeslee Site **Bay Shore, New York**

Soil Vapor Results:

Analyte Group:

VOCs		Location:	SS-05	<i>SS-05</i>	SS-06	<i>SS-07</i>	SS-08	SV-06	SV-07	SV-08	SV-09	SV-10	SV-11
Analyte Name	Units	SampleName:	<i>SS-05</i>	DUP-112712-1	SS-06	SS-07	<i>SS-08</i>	SV-06	SV-07	SV-08	SV-09	SV-10	SV-11
1,1,1-Trichloroethane	UG/M3		570	650	870	6300	120000	9.4	11 J	4.1	0.27 U	1.9 J	1.9
1,1,2,2-Tetrachloroethane	UG/M3		1.9 U	2.1 U	0.76 U	110 U	110 U	0.12 U	1.7 U	0.076 U	0.19 U	0.14 U	0.076 U
1,2-Dimethylbenzene (o-xylene)	UG/M3		1.7 U	1.9 U	4.4 J	97 U	97 U	12	4.9 J	8.5	15	14	14
1,3,5-Trimethylbenzene (mesitylene)	UG/M3		2.3 U	2.6 U	13	130 U	130 U	6	2.1 U	6.1	6.3	8.5	8.7
1,3-Butadiene	UG/M3		1.4 U	1.5 U	2.7 J	77 U	77 U	0.088 U	1.2 U	1.2	1.5	1.4	0.91
2,2,4-Trimethylpentane	UG/M3		1.7 U	1.9 U	0.7 U	98 U	98 U	1.1 J	1.6 U	0.5 J	2.1 J	0.55 J	1.7
4-Ethyltoluene	UG/M3		1.8 U	2 U	8.7 J	100 U	100 U	5.1	1.6 U	5.3	5.9	8.5	7.1
Benzene	UG/M3		1.4 U	1.6 U	7.3	81 U	81 U	1.6	1.3 U	1.9	2.9	2	2.1
Bromodichloromethane	UG/M3		2 U	2.2 U	0.8 U	110 U	110 U	0.13 U	1.8 U	0.08 U	0.2 U	0.14 U	13
Carbon tetrachloride	UG/M3		2 U	2.2 U	0.82 U	110 U	110 U	0.13 U	1.8 U	0.082 U	0.2 U	0.15 U	0.35 J
Chloroform	UG/M3		2.9 U	3.2 U	1.2 U	160 U	2100	0.58 J	2.6 U	0.25 J	0.29 U	0.9 J	110
Cyclohexane	UG/M3		1.6 U	1.8 U	0.65 U	92 U	92 U	1.7	1.5 U	0.48 J	2.4	0.44 J	2.3
Dibromochloromethane	UG/M3		2.3 U	2.6 U	0.94 U	130 U	130 U	0.15 U	2.1 U	0.094 U	0.23 U	0.17 U	1.9
Dichlorodifluoromethane (Freon 12)	UG/M3		41 J	45 J	20 J	140 U	140 U	2.7 J	2.2 U	2.7	2.4 J	2.7 J	3.3
Ethylbenzene	UG/M3		1.6 U	1.8 U	2.2 J	91 U	91 U	9.1	3.8 J	5.9	11	8.9	9.5
m,p-Xylene (sum of isomers)	UG/M3		2.4 U	2.6 U	6.3 J	130 U	130 U	37	16 J	25	41	41	40
Methylene chloride	UG/M3		2 U	2.2 U	0.8 U	110 U	110 U	1.2 J	1.8 U	0.61 J	0.81 J	0.73 J	1.6 J
n-Heptane (C7)	UG/M3		1.7 U	1.9 U	3.8 UJ	98 U	98 U	4.1	1.6 U	3.3	8	4	6.7
n-Hexane (C6)	UG/M3		1.7 U	1.9 U	0.7 U	99 U	99 U	2.2	1.6 U	2	4.2	1.9	6
tert-Butyl methyl ether (MTBE)	UG/M3		1.3 U	1.5 U	0.54 U	76 U	76 U	0.087 U	1.2 U	0.054 U	0.14 U	0.097 U	0.08 J
Tetrachloroethene (PCE)	UG/M3		6400	6400	2300	220000	240000	400	4200	45	63	370	92
Toluene	UG/M3		1.8 J	1.4 U	8.2	74 U	74 U	22	8.9 J	14	26	17	19
Trichloroethene (TCE)	UG/M3		76	83	74	1600	120000	20	94	1.4	0.87 J	1.9 J	0.89 J
Trichlorofluoromethane (Freon 11)	UG/M3		2.9 U	3.2 U	1.2 U	170 U	170 U	2	2.6 U	1.9	2.4 J	5.5	2.7
Xylenes, total	UG/M3		1.7 U	1.9 U	11	97 U	97 U	48	21	34	56	55	54

Notes: U - The analyte was analyzed for, but was not detected. Value shown is the method detection limit (MDL) for the analyzed

U – The analyte was analyzed for, but was not detected. Value shown is the method detection limit (MDL) to constituent.
 J – Estimated concentration. The result is below the quantitation limit but above the method detection limit.
 NE – Standard and/or guidance value not established.
 AA – Indicates Ambient Air Sample
 IA – Indicates Indoor Air Sample
 SS – Indicates Sub-Slab Vapor Sample
 SV – Indicates an exterior Soil Vapor Sample

Vapor Intrusion Data Summary Page 2 - 1

TABLE 4 GROUNDWATER ELEVATION DATA FORMER BARON BLAKESLEE SITE BAY SHORE, NEW YORK

			Screene	d Interval	Screene	d Interval	<u>1/14</u>	/2013
	Top of Casing	Ground					Depth to	Water
	Elevation	Elevation	Тор	Bottom	Тор	Bottom	Water	Elevation
Location ID	(ft., NGVD)	(ft., NGVD)	(ft., BGS)	(ft., BGS)	(ft., NGVD)	(ft., NGVD)	(ft. BTOC)	(ft. NGVD)
MW-GWP-01	57.53	57.64	58.4	63.4	-0.71	-5.71	6.82	50.71
MW-GWP-03	58.68	58.86	59.4	64.4	-0.50	-5.50	7.95	50.73
MW-GWP-06R	57.83	58.06	60.0	65.0	-1.94	-6.94	7.64	50.19

Notes:

NGVD - National Geodetic Vertical Datum BGS - Below Ground Surface BTOC - Below Top of Casing NI - Not Installed NM- Not measured

Brown AND Caldwell

Figures





P:\GIS\GE\Bayshore\Bayshore_Site_Location.mxd



- ----- Approximate Site Boundary
- Soil Boring
- Soil Vapor Sample
- Subslab Vapor Sample
 Indoor Air Sample ("AA" indicates Ambient Air Sample)
 - Monitoring Well

Note:

* - Indicates that monitoring well installed incorrectly and proposed for abandonment.

	0 25	50 Feet	-
and a	FIGUR	E 2-1	
5	2012 SUPPLEMENTAL SI INVESTIGATION SA	TE CHARACT	TERIZATION TIONS
AL SOL	FORMER BARON BLAKESLEE SITE	DATE 01/11/13	PROJECT NUMBER 141247.200
361	86 CLEVELAND AVE BAY SHORE, NEW YORK	BROWN AND ASSOC	CALDWELL NATES

	MW_GWD_1	11/1	5/12	1/14/13		
		Total	Dissolved	Total	Dissolved	
	Aluminum	188J	72.9J	185J	72.1U	
Constant of the	Barium	338	333	281	286	
WHELE I	Calcium	24300	24300	21200	21600	
	Iron	217J	73.6U	277	84.9J	
	Magnesium	3880J	3920J	3840J	3940J	
	Manganese	102J	104J	84.2	58.6	
	Potassium	18700	18600	17000	17100	
	Selenium	5.8U	5.8U	5.8U	5.8U	
and the	Sodium	*98200	*97700	*93500	*94900	
	Thallium	5.2U	5.2U	5.2U	5.2U	
	Zinc	6.6J	6.4J	5.8U	5.8U	
	A DECK PROPERTY			100	The lot	
				1.		
				- 1		

-

1

MW-GWP-6

	11	/15/12	1/	/14/13
	Total Dissolved		Total	Dissolved
Aluminum	280	72.1U	675	72.1U
Barium	64.8J	63.6J	46 J	41.9J
Calcium	26500	25600	8720	8170
Iron	*332	73.6U	*959	73.6U
Magnesium	1310J	1230J	1340J	1250J
Manganese	99	70.6	97.4	22.1
Potassium	8320	8340	6190	6280
Selenium	5.8U	5.8U	5.8U	5.8U
Sodium	5930	6270	4890J	4890J
Thallium	5.2U	5.2U	5.2U	5.2U
Zinc	6.4J	5.8U	7.4J	5.8U

_				
		Total	Dissolved	
	Aluminum	231	72.1U	
	Barium	62.1J	60.3J	2
	Calcium	16000	15600	2
	Iron	*617	73.6U	1º
2	Magnesium	2180J	2040J	
	Manganese	47.1	38	
Ń	Potassium	3490J	3480J	
	Selenium	5.8U	9.1J	
ł,	Sodium	*53900	*54200	
٦	Thallium	5.2J	5.2U	
-	Zinc	10.2J	5.8U	

Sec. Married	254000 C							
Lege	Legend							
	Approximate Site Boundary							
•	Monitoring Well							
	Former Recharge Wells from GW Treatm							
	Former Recovery Well from GW Treatment							
	Well MW-GWP-6 Not Sampled							

N

	1	Notes:
		U-The analyte was analyzed the method detection limit (I
imate Site Boundary	De	J - Estimated Concentration
ing Well	1.0	limit but above the method of
Recharge Wells from GW Treatment System	Pak	Results reported in microgra
Recovery Well from GW Treatment System		Where applicable, table lists

ed for, but not detected. Value shown is (MDL) for the analyzed constituent.

n. The result is below the quantitation detection limit.

rams per liter (ug/l)

Where applicable, table lists the higher concentration from original and duplicate sample.

*Red concentrations are above the New York State Class GA Groundwater Quality Standards [6 NYCRR Part 703]



20

0

40

Feet

METAL CONCENTRATIONS IN GROUNDWATER

DATE

FORMER BARON BLAKESLEE SITE 86 CLEVELAND AVE BAY SHORE, NEW YORK



200 er.

-	
Sec. 1	S B-5
	1,1,1-Trichloroeahne
100 C 100 C - 100	1,1,2,2Tetrachloroe
	Acetone
	Benzene
	Carbon tetrachlorid
	Chloroform
	Cis-1,2,Dichloroethe
	Dibromochlorometh
	Tetrachloroethene
	Trichloroethene
	CONTRACTOR OF THE OWNER.

	1,1,1-Trichloroeaahne	0 .0 00 2 2 J
	1,1,2,2Tetrachloroethane	0.000098
	Acetone	*0.071
	Benzene	0.00016l
1	Carbon tetrachloride	0.000161
	Chloroform	0.000261
	C is-1,2,D ichloroethene	0.000121
	Dibromochloromethane	0.000111
	Tetrachloroethene	0.015
	Trichloroethene	0.0086
	CALL CONTRACTOR OF CALL OF CAL	/

6.0-6.5

1.0

۲

SB-7	5.0-5.5
1,1,1- Trichloroethane	0.007U
1,1,2,2-Tetrachloroethane	0.018U
Acetone	0.3U
Benzene	0.0092U
Carbon tetrachloride	0.0064U
Chloroform	0.0088U
Cis-1,2,-Dichloroethene	0.02U
Dibromochloromethane	0.022U
Tetrachloroethene	0.062J
Trichloroethene	0.01U

SB-9

1,1,1- Trichloroethane 1,1,2,2-Tetrachloroethane

Carbon tetrachloride

Cis-1,2,-Dichloroethene

Dibromochloromethane

Tetrachloroethene

Trichloroethene

Acetone Benzene

Chloroform

	1,1,1- Trichloroethane	^2.4
	1,1,2,2-Tetrachloroethane	0.019U
G	Acetone	0.33U
	Benzene	0.010U
	Carbon tetrachloride	0.0069U
	Chloroform	0.0095U
	Cis-1,2,-Dichloroethene	*2.3
	Dibromochloromethane	0.024U
a	Tetrachloroethene	*8.3
	Trichloroethene	0.22
1		

SB-6

SB-8	1.5-2.0
1,1,1- Trichloroethane	0.0066U
1,1,2,2-Tetrachloroethane	0.017U
Acetone	0.28U
Benzene	0.0087U
Carbon tetrachloride	0.006U
Chloroform	0.0083U
Cis-1,2,-Dichloroethene	0.019U
Dibromochloromethane	0.021U
Tetrachloroethene	*6.3J
Trichloroethene	0.0097U

5.0-5.5

1

SB-10	3.0-3.5
1,1,1- Trichloroethane	0.00086J
1,1,2,2-Tetrachloroethane	0.000088U
Acetone	0.02
Benzene	0.00015U
Carbon tetrachloride	0.00015U
Chloroform	0.00023U
Cis-1,2,-Dichloroethene	0.00011U
Dibromochloromethane	0.000097U
Tetrachloroethene	0.054
Trichloroethene	0.00099
	SB-10 1,1,1- Trichloroethane 1,1,2,2-Tetrachloroethane Acetone Benzene Carbon tetrachloride Chloroform Cis-1,2,-Dichloroethene Dibromochloromethane Tetrachloroethene Trichloroethene

And a	
SB-11	1.0-1.5
1,1,1- Trichloroethane	0.019J
1,1,2,2-Tetrachloroethane	0.018U
Acetone	0.31U
Benzene	0.0095U
Carbon tetrachloride	0.0066U
Chloroform	0.0091U
Cis-1,2,-Dichloroethene	0.02U
Dibromochloromethane	0.023U
Tetrachloroethene	*11
Trichloroethene	0.073J

1.0-1.5

0.1J 0.020U 0.34U

0.010U

0.0072U

0.0099U

0.022U

0.025U

*11

0.17

R B B M	5332	
SB-12	1.0-1.5	
1,1,1-Trichloroethane	0.024J	5
1,1,2,2-Tetrachloroethane	0.000091UJ	
Acetone	0.006UJ	and the second diversion of th
Benzene	0.00015U	
Carbon tetrachloride	0.00015U	
Chloroform	0.00072J	1
Cis-1,2,-Dichloroethene	0.00011U	
Dibromochloromethane	0.0001U	
Tetrachloroethene	0.35	
Trichloroethene	0.063J	

50 Fee FIGURE 3-2 SELECTED VOLATILE ORGANIC COMPOUNDS CONCENTRATIONS IN SOIL PROJECT NUMBER DATE 01/14/2012 141247.200 FORMER BARON BLAKESLEE SITE 86 CLEVELAND AVE BAY SHORE, NEW YORK

	and the second se	
	Notes: (1) U-The analyte was analyzed for, but not detected. Value shown is the method detection limit (MDL) for the analyzed constituent. (2) J- Estimated concentration. The result is below the quantitation limit but above the method detection limit.	
a i	(3) UJ – The analyte was not detected above the reported method	
	method detection limit is approximate and may or may not represent the actual limit of the detection necessary to accurately and precisely	
	(4) Results reported in milligrams per kilogram (mg/kg).	
	(5) Where applicable, table lists the higher concentration from original and duplicate sample.	
1	(6) *Red concentrations are above one or more of the following New York State Subpart 375 Soil Cleanup Objectives: Protection	
7	of Public Health (Industrial Use) or Protection of Groundwater. (7) Specific constituents shown based on indoor air and soil vapor result and avecadances of applicable standards	

ASSOCIATES

CAL

DWEI

AND

BROWN

		and the second	and the second of the second s	the state of the s		
		-	AA-07	Ambient Air		
	ALL S	C Destantion	1,1,1 - Trichloroethane	0.22 U		
	2000	r	1,1,2,2 - Tetrachloroethane	0.27 U	As A The second s	States of States and States
IN	A LOUND		1,3 - Butadiene	0.41		Cont .
D	A State	-	Bromodichloromethane	0.95	and the second second	N. S.
and the second second		Line all	Carbon tetrachloride	0.5 5		
10.05/88.05	Indoor Air	Sub Slab	Chloroform	0.2 U	00 V/S	Soil Vapor
1 1 1 - Trichloroethane	0.31	570	Dibromochloromethane	0.34 U	1 1 1 - Trichloroethane	
1122 - Tetrachloroethane	0.28	2 1U	Tetrachloroethene	1.2	1122 - Tetrachloroethane	0.12U
1,3 - Butadiene	0.3	1.5U	Irichloroethene	0.33	1,3 - Butadiene	0.088U
Benzene	0.99J	1.6U			Benzene	1.6
Bromodichloromethane	0.27U	2.2U	and the second s		Bromodichloromethane	0.13U
Carbon tetrachloride	0.5J	2.20			Carbon tetrachloride	0.13U
Dibromochloromethane	0.2	2.6U			Dibromochloromethane	0.585
Tetrachloroethene	4.3J	6400	and the second division of the local divisio		Tetrachloroethene	400
Trichloroethene	0.59J	83	COLUMN TRAVELLAND	A ADDRESS OF TAXABLE PARTY.	Trichloroethene	20
HALL BE THE REAL PROPERTY OF		THE STATE	and the state		A A A	
and the second second second						other design and the second seco
AND DESCRIPTION OF A DESCRIPTION OF				And a state of the		
A DEPARTMENT						
89-06	Sub - Slab			and a series	SV-09	Soil Vapor
1.1.1 – Trichloroethane	870	-		And a second	1,1,1 – Trichloroetha	ne 0.27 U
1,1,2,2 - Tetrachloroethane	0.76U		No ft	A de	1,1,2,2 - Tetrachloro	1 5 U.19U
1,3 - Butadiene	2.7J		1 A A A A A A A A A A A A A A A A A A A		Benzene	2.9
Benzene	7.3				Bromodichlorometha	ne 0.2U
Bromodichloromethane	0.8U		and the second s	And I wanted	Carbon tetrachloride	0.2U
Carbon tetracnioride	0.820				Chloroform	0.29U
Dibromochloromethane	0.941		A REAL PROPERTY OF		Dibromochlorometha	ne 0.23U
Tetrachloroethene	2,300		A DECK OF THE OWNER		Trichloroethene	
Trichloroethene	74		- 59		Thenioroethene	0.07 3
ALC: YIY Y Y		and and				Statement of the second
				States and the second s		
ALL DESCRIPTION OF						the man the
Company of the local division of the local d		3			SV 1	0 Soil Vapor
				1000000	1 1 1 - Trichloroet	
					1,1,2,2 - Tetrachl	proethane 0.14U
				10005000	1,3 - Butadiene	1.4
00.07	Out Olah				Benzene	2
55-0 7	Sub - Slab				Bromodichloromet	thane 0.14U
1,1,1 – I richloroethane	6,300				Carbon tetrachlori	de 0.15 U
1.3 - Butadiene	77U			0000000	Dibromochloromet	0.95
Benzene	81U			00425005	Tetrachloroethene	370
Bromodichloromethane	110U				Trichloroethene	1.9 J
Carbon tetrachloride	110U			 International 		
Chloroform	160U			10 MILLION		
Dibromocnioromethane	220,000					
Trichloroethene	1.600		the local design of the local division in the			
ADD A HEAD AND A HEAD AND A		1	the state of the s	No. of Lot of Lo		
the state of the s	S REALTING					
A0-41	Indoor Air		Contraction of the			15 Banks
1.1.1 – Trichloroethane	0.43	1				A diversity of the second
1,1,2,2 - Tetrachloroethane	0.27U	1				
1,3 - Butadiene	0.34	a Bar Mar		AND IN CASE OF THE		
Benzene	0.9		Anna	State of the second second		AND THE REPORT OF
Bromodicnioromethane	0.270	140				and the second second second
Chloroform	0.43	4				
Dibromochloromethane	0.34U		e and a state of the			A REAL PROPERTY AND A REAL
Tetrachloroethene	3.5		A REAL PROPERTY AND			01.1
Trichloroethene	3.3		And the second se			
the second s				108	A COMPANY AND	a a
the set of the set		4				1
A ADD A ADD A ADD ADD ADD ADD ADD ADD A			Martin and I			ALL MADE IN CASE OF
THE R. P. LEWIS CO.	Carrow and		- No another the second			A CONTRACT OF A
00.00	Quit Olat				CV 4	
	Sub - Slab	*	the second second	/	JULIA Trichloroath	
1,1,1 – I richloroethane	120,000		/		1,1,1 - Trichloroeth	roethane 0.076 LL
1.3 - Butadiene	7711				1,3 - Butadiene	0.91
Benzene	810	Contraction of	No Plan / his		Benzene	2.1
Bromodichloromethane	110U				Bromodichlorometh	nane 13
Carbon tetrachloride	110U				Carbon tetrachlorid	le 0.35J
Chlorotorm	2,100	at the			Dibromochloromoth	110 10
	240.000	C. Martin			Tetrachloroethene	92
Trichloroethene	120,000	States of the local division in which the local division in the lo		The spin state	Trichloroethene	0.89J

201	A Carlo
20	201 -24
and and	
T	NAC
Lege	nd
	Approximate Site Boundary
•	Soil Vapor Sample
•	Subslab Vapor Sample
•	Indoor Air Sample

Trichloroethene

CONTRACTOR OF A	
SV-07	Soil Vapor
1,1,1 – Trichloroethane	11 J
1,1,2,2 - Tetrachloroethane	1.7U
1,3 - Butadiene	1.2U
Benzene	1.3U
Bromodichloromethane	1.8U
Carbon tetrachloride	1.8U
Chloroform	2.6U
Dibromochloromethane	2.1U
Tetrachloroethene	4,200
Trichloroethene	94
And a second sec	

120,000

SV-08	Soil Vapor				
1,1,1 – Trichloroethane	4.1				
1,1,2,2 - Tetrachloroethane	0.076 U				
1,3 - Butadiene	1.2				
Benzene	1.9				
Bromodichloromethane	0.08 U				
Carbon tetrachloride	0.082 U				
Chloroform	0.25J				
Dibromochloromethane	0.094 U				
Tetrachloroethene	45				
Trichloroethene	1.4				

Notes: (1) U-The analyte was analyzed for, but not detected. Value shown is the method detection limit (MDL) for the analyzed constituent. (2) J- Estimated concentration. The result is below the quantitation limit but above the method detection limit. (2) Desuring control is missing and the method is missing (up(m2)) (3) Results reported in micrograms per cubic meters (ug/m3)
(4) Where applicable, table lists the higher concentration from original and duplicate sample.
(5) *Red concentrations are above NYSDOH Air Guideline Values. 1 2 0 3



25

50 Feet



Appendix A: Boring and Monitoring Well Logs



BORING LOG

Brown AND Caldwell					Project Name: Fromer Baron Blakeslee Site Project Number: 141247.100 Project Location: Bay Shore, NY									Permit Number: NA			Boring No. SB-1 Page 1 of 1	
Geologist/Office Checked By: Borehole Diamer					eter: Screen Diameter and Type:						Slot Size:			Total Boring Depth (ft)				
B. Taylor/Albany, NY CAS/FJW 2"					NA						NA"			3.8 ft.				
Start/Finish Date Drilling Contractor: Sampling					ig: Co	e	Devel	opment	t Method:									
7/19/11 - 7/19/11 Zebra Hammer					r Type	2:			NA									
Driller: Dr. Evan M. Di				Dril Dir	ling Method: ect Push	Drilli Geop	ng Equip robe	oment:	ent: Horiz Datum/Proj: NA Vert Datum: NGVD29 Ground Surface Elev: 5				NAD83 029 7: 58.7 f	t.		Easting: 1181265.7 ft. Northing: 218423.7 ft. TOC Elev:		
Depth (feet)	Elevation (feet)	USC Soil Type	Description					B Co	low ounts	Sample No.	Sample Int Recovery	Gran	ohic Log Bacl	; kfill	ppm Readings (ppm)		Remarks	
	55	SW	Co FII Bra [M Lig Dr	ncrete LL/R own f isc: As ght Bro y.	EWORKED SOIL SAND, some Silt an shpalt). Dry own fc SAND and fo	d fc Gra	EL.			1					136	Hole cuttin Samp PID I 6-10" 14-18 22-26 30-34 38-42	backfiled with soil gs and grouted. le Name: SB-1-1-1.5. Readings (ppm): =0, 10-14"=136, "=40.9, 18-22"=45.5, "=6.4, 26-30"=18.6, "=10.9, 34-38"19.9, "=22.3, 42-46"=6.6	
E	Brov Calc	wn lwe			Project Name: F Project Number: Project Location:	rome: 1412 Bay S	r Baron 47.100 Shore, N	Blake JY	slee Sit	e				Permi	t Nun NA	nber:	Boring No. SB-2 Page 1 of	1
--------------	--------------------------	----------------	--	---	--	-------------------------------	-------------------------------	----------------	---------------------	------------------------	----------------------	---------------------------	---------------------------	-----------------------	-------------	---	---	--------------------------
	Geolog	;ist/C	Office		Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	<u>г</u>	l'otal Boring Dep	oth (ft)
В.	Taylor	r/Alb	any, N	IΥ	CAS/FJW		2"		NA	L				N	\ "		4.4 ft.	
s	tart/I	Finisł	n Date	;	Drilling Contrac	tor:	Samplin	i g: Co	ontinuous	s Cor	e	Deve	lopment	t Metho	d:			
7/19	0/11 -	7/19	0/11		Zebra		Hamme	r Type	:			NA						
I I	Driller Evan N	: 1.]	Dril Dire	ling Method: ect Push	Drilli Geop	ng Equip robe	ment:	Hor Vert Grou	iz Da Datu und S	ıtum um: Surfa	/Proj: NGVI ce Elev	NAD83 029 7: 60.5 f	3 īt.		Ea No T(asting: 1181216 orthing: 218541 OC Elev:	.6 ft. .3 ft.
Depth (feet)	Elevation (feet)	USC Soil Type			Description		B Co	low unts	Sample No.	Sample Int	Lithology Lithology	ohic Log Bac	g kfill	ppm Readings (ppm)		Remarks		
	60	SW SW SW	Conc FILI Light little(Brow Silt. J Brow Silt. J	crete L/R t Brc (-) Si Dry. Dry.	EWORKED SOIL own fc SAND, some lt. Dry. : SAND and fc GRA : SAND and fc GRA : SAND and fc GRA	fc Grav VEL, li VEL, li	rel, ttle (-) ttle (-)			1					34.7	Hole cuttim Samp SB-2- (ppm) @14" @22" @338" @48"	backfilled with so ges and grouted. le Number: 2.5-3.5 PID Re:). @6"=5.6, @10' =11.1, @18"=15 =22.6, @26"=21. '=2.8,@34"=34.7; =29.8, @42"=0, '=2.2	il l=6.5, 4, 9,

E	Brov Calc	wn lwe	AND Ell		Project Name: I Project Number: Project Location:	Frome 1412 Bay S	r Baron 47.100 Shore, N	Blake JY	eslee Sit	e				Permi	t Nur NA	nber:	Boring No S Page 1	o. B-3 of ¹
	Geolog	gist/C	Office	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian	neter	:		Slot	Size:	1	Гotal Boring	Depth (ft)
В.	Tayloı	r/Alb	any, İ	NY	CAS/FJW		2"		NA					N	A "		4.1 f	t.
S	start/H	Finisł	n Dat	te	Drilling Contrac	ctor:	Samplin	i g: Co	ontinuous	s Cor	e	Deve	lopmen	t Metho	od:			
7/19	9/11 -	7/19	0/11		Zebra		Hamme	г Туре	2:			NA						
	Driller: Evan N	4.		Dril Dir	l ing Method: ect Push	Drilli Geop	ng Equip orobe	ment:	Hor Vert Grou	iz Da Dati und S	utum um: Surfa	r /Proj: NGVI ace Ele	NAD83 D29 v: 60.5 f	3 ft.		Ea No T(asting: 118 orthing: 21 OC Elev:	1216.1 ft. 8494.2 ft.
Depth (feet)	Elevation (feet)	USC Soil Type			Description	L		B Co	blow bunts	Sample No.	Sample Int	Lithology	phic Loạ Bac	g :kfill	ppm Readings (ppm)		Remark	S
	60	SW SW SW	Co FII Bro Dr Da littl	ncrete LL/R wwn n y. rk Brc (+) rk Brc le (-) S	EXEWORKED SOIL of SAND, little (-) C own mfc SAND, son Silt. Dry. own mfc SAND, son Silt. [Misc. Ashpalt]. I	Gravel ar ne fc Gr ne mf G Dry.	avel,			1					85.8	Hole cutim Samp PID I @6"= @14" @30" @38" @48"	backfilled wi gs and groutd le Number: S Readings (pp) =4.2, @10"= "=0.3, @26"= "=0.3, @34"= =0.5, @42"= "=0.0	th soil ed. BB-3-3-4. m): 1.2, =0.3, =0.0, :0.9, =85.8,

	Brov Calc	wn lwe	AND Ell		Project Name: I Project Number: Project Location:	Fromer 1412 Bay S	r Baron 47.100 Shore, N	Blako JY	eslee Si	te				Permi	it Nun NA	nber:	Boring No. SB- Page 1 of	4 1
	Geolog	gist/C	Office	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian	neter			Slot	Size:	1	fotal Boring De	epth (ft)
В.	Taylor	r/Alb	any, I	NY	CAS/FJW		2"		NA	1				N	A''		4.1 ft.	
5	Start/I	Finisł	n Dat	te	Drilling Contrac	ctor:	Samplin	ig: C	ontinuou	s Cor	e	Devel	lopment	Metho	od:			
7/1	9/11 -	7/19	0/11		Zebra		Hamme	г Тур	e:			NA						
	Driller Evan N	: 1.		Dril Dir	l ing Method: ect Push	Drilli Geop	ng Equip robe	oment	: Hor Ver Gro	iz Da t Dat und S	atum um: Surfa	/Proj: NGVI ce Elev	NAD83 D29 7: 60.5 f	t.		Ea No T(asting: 118126 orthing: 21849 OC Elev:	56.8 ft. 94.5 ft.
Depth (feet)	Elevation (feet)	USC Soil Type			Description	L		H Cd	3low ounts	Sample No.	Sample Int Recovery	Gran	bhic Log Bac	; kfill	ppm Readings (ppm)		Remarks	
	60	SW SW SW	Cor FII Bro Silt Lig (-) : Da: Gra	ncrett LL/R Jwn n . Dry. ht Br Silt. E rk Br avel, 1	REWORKED SOIL of SAND, little f Gra own mfc SAND, son Dry. own mfc SAND, son ittle (+) Silt. Dry.	vel, little ne Grav ne (+) m	e (-) = el, little = nf			1					16.7	Hole cuttinn Samp PID I @6"= @14" @38" @46"	backfilled with s gs and grouted. le Number: SB Readings (ppm): =2.9, @10"=0.0, '=8.5, @18"=8.9 =10.2, @26"=1 '=16.7, @34"=1 '=0.9, @42"=1.9 '=1.1 @48"=0.2	soil 4-2-3 0, 6.1, 3.9, 5,

	Brov Calo	wn dwe	AND Ell		Project Name: F Project Number: Project Location:	romer 1412 Bay S	: Baron I 47.100 Shore, N	Blakes IY	lee Sit	e				Permi	t Nun NA	nber:	Boring No. SB-5 Page 1 of 1
(Geolog	gist/O	Offic	e	Checked By:	Boreho	le Diame	ter: S	Screen I and Typ	Diam pe:	eter			Slot	Size:	r	Total Boring Depth (ft)
В.	Taylo	r/Alb	any,	NY	FJW		2"	Ν	JA					N	4"		12.0 ft.
5	Start/I	Finisł	n Dat	te	Drilling Contrac	tor:	Samplin	g: Con	tinuous	s Cor	9	Devel	opmen	Metho	od:		
11/2	29/12	- 11/	29/1	12	Zebra		Hammer	r Type:				NA					
1 Ç	Driller Quincy	: B.		Dril Dire	ling Method: ect Push	Drilli Geop	ng Equip robe	ment:	Hor Vert Grou	iz Da Datı ınd S	tum ım: burfa	/Proj: NGVE ce Elev	NAD83 029 7: 60.5 f	3 Ìt.		Ea No T(asting: 1181190.7 ft. orthing: 218528.5 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type			Description			Blo Cou	ow ints	Sample No.	Sample Int Recovery	Crathology Lithology	ohic Log Bac	g kfill	ppm Readings (ppm)		Remarks
	60	-	Со	ncrete	e Slab							0 4 4 9 9 4 4 9 9 4 4			0.0	Borin	g backfilled with soil
5	<u>55</u> <u>50</u>	SW GP SW GP SP GP SP GP SW GP	Co FII Bro Sar Dr Lig GF Lig Sat	ncrete LL/R own cr ne as : ack sta y. tht brock AVE AVE tht brock AVE tht gree urated	E Slab EWORKED SOIL mf SAND and mf Gl above. ined cmf SAND and pwn/whilte mf SANI L. Dry. pwn/whilte mf SANI L. Moist to Very Moi ty cmf SAND and mf l.	AVEL f GRA D and m D and m st.	- Dry								0.0 90.9 1.4	Borin, cuttin, PID r 0-4'=0 FID r 4.0'=0 5.0'=1 6.0'=9 Collect PID F 8.0'=1	g backfilled with soil gs and grouted. eadings (ppm); 0.0 readings (ppm); 0.9, 4.5'=10.2, 17.1, 5.5'=46.9, 00.9, 6.5'=87.6, 51.2 le SB-5-6.0-6.5 ted. Readings (ppm); 1.4, 8.5-10.0'=0.0

	Bro Calo	wn dwe	AND Ell		Project Name: Project Number: Project Location:	Fromer 1412 Bay S	r Baron 47.100 Shore, N	Blake JY	eslee Sit	æ				Permi	it Nun NA	nber:	Boring No. SB-6 Page 1 of 1
(Geolog	gist/(Offic	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	Г	Гotal Boring Depth (ft)
В.	Taylo	r/Alb	any,	NY	FJW		2"		NA					N	А"		12.0 ft.
9	Start/1	Finisł	n Da	te	Drilling Contra	ctor:	Samplin	i g: Co	ontinuous	s Cor	e	Devel	opment	t Metho	od:		
11/	29/12	- 11/	/29/1	12	Zebra		Hamme	г Тур	e:			NA					
	Driller Quincy	: В.		Dril Dir	l ling Method: ect Push	Drilli Geop	ng Equip robe	ment	: Hor Vert Grou	iz Da Datu und S	itum im: Surfa	/Proj: NGVE ce Elev	NAD83 029 : 60.6 f	3 īt.		Ea Na T(asting: 1181238.1 ft. orthing: 218517.6 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type			Descriptior	1		E Co	Blow ounts	Sample No.	Sample Int Recovery	Grap Lithology	hic Log Bac	g kfill	ppm Readings (ppm)		Remarks
Depth (1	60 55 50	nsc soil SW GW SW GW SP SW GP SW GP SW GP SW GP	Co FI Bro Da Dr Ligg GH GH GH	ncrete LL/R own c me as rk bro AVE th bro AVE nite/li AVE	Description	GRAVE	L. Dry		Blow bunts	Sample	Sample I				5.0 67.8 0.0	Borin; PID r 0.5'=0 2.0'=1 3.5'=3 PID r 4.5'=1 5.5'=0 6.5'=2 7.5'=3 Sampl collec PID r 8-10.5	Remarks

l	Brov Calo	wn dwe			Project Name: 1 Project Number: Project Location:	Fromer 1412 Bay S	r Baron 1 47.100 Shore, N	Blako JY	eslee Si	te				Permi	it Nur NA	nber:	Boring No. SB-7 Page 1 of 1
	Geolog	gist/C	Office		Checked By:	Boreho	le Diame	ter:	Screen	Dian	neter	:		Slot	Size:	1	l'otal Boring Depth (ft)
В.	Taylo	r/Alb	any, N	Y	FJW		2"		NA	pe.				N	А"		12.0 ft.
S	start/I	Finisł	n Date		Drilling Contra	ctor:	Samplin	ig: C	ontinuou	is Cor	e	Deve	lopmen	t Metho	od:	•	
11/2	29/12	- 11/	29/12		Zebra		Hamme	r Typ	e:			NA					
1 Ç	Driller Quincy	: В.	I]	Drill Dire	ling Method: ect Push	Drilli Geop	ng Equip robe	ment	: Hor Ver Gro	riz Da t Dat ound S	atum um: Surfa	/ Proj: NGVI ace Elev	NAD8 029 v: 60.5	3 ft.		Ea Na T(asting: 1181189.6 ft. orthing: 218503.5 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type			Description	L		H Cd	3low ounts	Sample No.	Sample Int	Gran Gran Gran Gran Gran Gran Gran Gran	bhic Log Bac	g :kfill	ppm Readings (ppm)		Remarks
Deb	Efenal Elenar	SP GP SP SP SP SP SW	Conc FILL Brow Same Black Dry. Brow White Grave Light Grave	rete /R as a state as tate as tate as tate as tate as tate as tate as tate as tate browned as tate as tate	Slab EWORKED SOIL if SAND and mf GF above. ined mf SAND, little af SAND and mf GF ght brown mf SANE doist. ght brown mf SANE doist. wm/white cmf SAN iaturated.	AVEL. e (-) mf (AVEL.), little (), little (D, little	Dry			Sarr					0.3 34.6 3.2	Borin Cuttin PID r 4.5'=2 5.5'=2 6.5'=8 8.0'=0 Samp collec PID r 8.5'=3 10.0'=	g backfilled with soil gs and grouted. readings (ppm); 1.5, 5.0'=34.6, 24.5, 6.0'=17.2, 8.1, 7.0'=8.2, 7.5'=6.7, 6.4 le SB-7-5.0-5.5 rted. readings (ppm); 3.2, 9.0'=0.4, 9.5'=0.1, =0.0

B	Brov Calc	wn dwe		Project Name: Project Number: Project Location	Frome 1412 Bay S	r Baron 47.100 Shore, N	Blakes IY	slee Sit	te				Permi	t Nun NA	nber:	Boring No. SB-8 Page 1 of 1
(Geolog	gist/C	Office	Checked By:	Boreho	ole Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	ſ	Total Boring Depth (ft)
В.	Taylo	r/Alb	any, NY	r FJW		2"	1	NA					N	\ "		8.0 ft.
s	tart/I	Finisł	n Date	Drilling Contra	ctor:	Samplin	ig: Cor	ntinuous	s Cor	e	Devel	lopment	Metho	d:		
11/2	29/12	- 11/	29/12	Zebra		Hamme	r Type:				NA					
I Q	Driller Quincy	: В.	D	Filling Method: Direct Push	Drilli Geop	ng Equip probe	ment:	Hor Vert Grou	iz Da Datu und S	itum um: Surfa	/Proj: NGVI ce Elev	NAD83 029 7: 58.7 f	t.		Ea No T(asting: 1181262.6 ft. orthing: 218470.2 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type		Description	1		Bla Cou	ow ints	Sample No.	Sample Int Recovery	Gran	ohic Log Bac	g kfill	ppm Readings (ppm)		Remarks
5	55	SW GW SW SP SW	Concr FILL Brown stained Brown Dry. Light Grave Same Light (-) mf Brown mf Gr	ete Slab /REWORKED SOIL a cmf SAND, some mf d in spots) Dry. a cmf GRAVEL, some brown/white cmf SAN l. Dry. as above. brown/orange bown n Gravel. Moist to Very a/orange brown cmf S. avel. Saturated.	Gravel (-) mf S ID, little of SANE Moist. AND, lit	(black								0.0	Borin, cutim PID r 0.5'=7 2.0'=8 3.5'=3 Samp collec PID r 4-7.7'	g backfilled with soil gs and grouted. eadings (ppm); 7.2, 1.0'=3.6, 1.5'=10.4, 3.9, 2.5'=2.0, 3.0'=9.8, 3.0, 4.0'=0.4 le SB-8-1.5-2.0 ted readings (ppm); =0.0

E	Brov Calc	wn dwe			Project Name: H Project Number: Project Location:	Fromer 1412 Bay S	: Baron 47.100 Shore, N	Blak IY	eslee Sit	æ				Permi	t Nun NA	nber:	Boring No. SB-9 Page 1 of	1
(Geolog	gist/C	Office		Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	ſ	fotal Boring Dep	th (ft)
В.	Taylo	r/Alb	any, N	ſΥ	FJW		2"		NA					N	4"		12.0 ft.	
s	tart/I	Finisł	n Date	:	Drilling Contrac	ctor:	Samplin	g: C	ontinuou	s Cor	e	Devel	opment	Metho	d:			
11/2	29/12	- 11/	29/12	2	Zebra		Hamme	г Тур	e:			NA						
1 Ç	Driller Quincy	: В.]	Dril Dire	ling Method: ect Push	Drilli Geop	ng Equip robe	ment	: Hor Vert Grou	iz Da Datu und S	itum um: Surfa	/ Proj: NGVI ce Elev	NAD83 029 7: 58.8 f	t.		Ea No T(asting: 1181246. orthing: 218437 DC Elev:	4 ft. .9 ft.
Depth (feet)	Elevation (feet)	USC Soil Type			Description			H C	3low ounts	Sample No.	Sample Int Recovery	Gran	bhic Log Bac	g kfill	ppm Readings (ppm)		Remarks	
	55	SP GP SW SP SW SW	Cond FILI Brow Grav Whte Dry- Light Mois Oran Grav Light Grav	crete L/R vn/d vel. I e cm t broc st. nge/l vel. V t bro vel. s	Slab EWORKED SOIL lark brown mf SANI Dry. f GRAVEL, little m. wen cmf SAND, little st. own mf SAND, little brown cmf SAND, little trown cmf SAND, little aturated.	D, some f Sand. I e mf Gra mf Gra ittle (-) n e (+) mf	mf								21.2	Borin, and gg Samp collec PID r 0.5'=5 1.5'=5 0.0 PID r 8.5'=1 PID r 8.5'=2	g backfilled with s routed. le SB-9-1.0-1.5 ted. readings (ppm); 5.9, 1.0'= 21.2, 9.5, 2.0'=1.4, 2.5-4 readings (ppm); 1.7, 5.0-8.0'=0.0 readings (ppm); 2.0, 9.0'=0.0	oil .0'=

B	Brov Calc	wn lwe	AND ell		Project Name: F Project Number: Project Location:	romer 1412 Bay S	: Baron 47.100 Shore, N	Blake JY	eslee Sit	e				Permi	t Nun NA	nber:	Boring No. SB-10 Page 1 of 1
(Geolog	;ist/C	Office	:	Checked By:	Boreho	le Diame	ter:	Screen 1 and Typ	Dian pe:	neter			Slot	Size:	ſ	Total Boring Depth (ft)
В.	Taylo	r/Alb	any, N	NΥ	FJW		2"		NA					N/	\ "		8.0 ft.
s	tart/I	Finisł	n Date	e	Drilling Contrac	tor:	Samplin	i g: Co	ontinuous	s Cor	e	Devel	opment	Metho	d:		
11/2	29/12	- 11/	29/12	2	Zebra		Hamme	r Type	2:			NA					
I Q	Driller Quincy	В.		Dril Dire	ling Method: ect Push	Drilli Geop	ng Equip robe	ment:	Hor Vert Grou	iz Da Datu und S	itum im: Surfa	/Proj: NGVI ce Elev	NAD83 029 7: 58.7 f	t.		Ea No T(asting: 1181278.7 ft. orthing: 218437.9 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type			Description			B Co	low ounts	Sample No.	Sample Int Recovery	Grand	ohic Log Bac	s kfill	ppm Readings (ppm)		Remarks
5	55	SP SP SW SW SW	Con FIL Bro Gre GR. Whi Moi Bro Gra Bro mf C	ncrete L/R wn m wn m y/br AVE ite/gr ist. wn/c Vel. M wn/c Grave	E Slab. EWORKED SOIL of SAND, little mf Gr of SAND, and mf GR own cmf SAND and L. Dry. rey mf SAND, trace (orange cmf brown SA Moist to Very Moist. orange brown cmf SA el. Saturated.	ravel. D (AVEL. cmf -) f Gra ND, lit ND, lit	ry Dry vel tle mf tle (+)								0.0	Borin, cutim PID r 0.5'=0 2.0'=2 3.5'=1 Samp collec PID r 4.5-7.4	g backfilled with soil gs and grouted. eadings (ppm); 5.8, 1.0'=9.7, 1.5'=4.6, 4.6, 2.5'=4.7, 3.0'=9.4, 15.2, 4.0'=1.8 le SB-10-3.0-3.5 ted. eadings (ppm) 8'= 0.0

E	Brov Calc	wn dwe	AND Ell	Project Name: Project Number: Project Location:	Frome 1412 Bay S	r Baron I 47.100 Shore, N	Blakes IY	lee Sit	te				Permi	it Nun NA	nber:	Boring No. SB-11 Page 1 of 1
0	eolog	gist/C	Office	Checked By:	Boreho	ole Diame	ter: S	Screen and Ty	Dian pe:	neter			Slot	Size:	1	Total Boring Depth (ft)
В.	Taylo	r/Alb	any, NY	FJW		2"	Ν	JA					N	A''		12.0 ft.
s	tart/I	Finisł	n Date	Drilling Contra	ctor:	Samplin	g: Con	tinuous	s Cor	e	Devel	opment	t Metho	od:		
11/2	29/12	- 11/	29/12	Zebra		Hammer	r Type:				NA					
I Q	Driller uincy	: В.	D D	illing Method: irect Push	Drilli Geop	ng Equip	ment:	Hor Vert Grou	iz Da Dati und S	utum, um: Surfa	/ Proj: NGVE ce Elev	NAD83 029 7: 58.8 f	3 Īt.		Ea No T(asting: 1181245.9 ft. orthing: 218404.0 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type		Description	ı		Blc Cou	ow ints	Sample No.	Sample Int Recoverv	Grap Lithology	bhic Log Bac	g kfill	ppm Readings (ppm)		Remarks
	55 50	SW GW SP SP SP SP SP	Concre FILL/ Brown White/ SAND Brown mf Grz White/ Dry. Brown mf Grz Light b Gravel	tte Slab. REWORKED SOII cmf SAND and cmf (brown cmf GRAVEL . Dry. /orange brown mf SA wel. Dry. brown mf SAND, litt /orange brown mf SA wel. Moist to Very Mc rown cmf SAND, sor . saturated.	GRAVE , some c ND, sor le mf G1 ND, littl ist. ne (+) m	L. Dry remf ne (+) ravel le (+) nf								37.6	Borin cuttim Samp collec PID r 0.5'=7 1.5'=3 3.0'=0 PID r 8.5'=9 PID r 8.5'-9	g backfilled with soil gs and grouted. le SB-11-1.0-1.5 tted. readings (ppm); 7.0, 1.0'=37.6, 33.7, 2.0'=4.8, 2.5'=1.5, 0.0 readings (ppm); 1.2, 5.0'=0.8, 0'=0.0 readings (ppm); .5'=0.0

E	Brov Calo	wn dwe		Project Name: 1 Project Number: Project Location:	Frome 1412 Bay S	r Baron 1 47.100 Shore, N	Blakes IY	lee Sit	te				Permi	it Nun NA	nber:	Boring No. SB-12 Page 1 of 1
0	Geolog	gist/C	Office	Checked By:	Boreho	le Diame	ter: S	Screen and Ty	Dian pe:	neter			Slot	Size:	1	Total Boring Depth (ft)
В.	Taylo	r/Alb	any, NY	FJW		2"	Ν	NA					N	A''		12.0 ft.
s	tart/l	Finisł	n Date	Drilling Contra	ctor:	Samplin	g: Con	ntinuous	s Cor	e	Devel	opment	t Metho	od:		
11/2	29/12	- 11/	29/12	Zebra		Hamme	r Type:				NA					
I Q	Driller Quincy	: В.	Dr Di	illing Method: rect Push	Drilli Geop	ng Equip probe	ment:	Hor Vert Grou	iz Da Datu und S	itum, im: Surfa	/ Proj: NGVE ce Elev	NAD83 029 : 58.7 f	3 īt.		Ea No T(asting: 1181280.3 ft. orthing: 218401.4 ft. OC Elev:
Depth (feet)	Elevation (feet)	USC Soil Type		Description	L		Blo Cou	OW ints	Sample No.	Sample Int Recoverv	Grap	hic Log Bac	g kfill	ppm Readings (ppm)		Remarks
	55	SP SW GW SW SP SP SW	Concre FILL/ Brown Brown/ cmf GF Light b Gravel. Same as Orange Gravel. Light b Gravel.	te Slab. REWORKED SOIL mf SAND, little mf G (white/dark brown en CAVEL. Dry. rown/white emf SAN Dry. a above. /brown mf SAND, litt Moist to Very Moist. /brown mf SAND, litt Very Moist. rown emf SAND, son Saturated.	ravel. D of SANI D, some tle (-) m tle (-) m ne (-) m	Pry D and e (-) mf ff ff ff ff								3.4 0.2 0.0	Borin cuttin Samp collec PID r 4.5'=(6.0'=(PID r 8-10.4	g backfilled with soil gs and grouted. le SB-12-1.0-1.5 tted. readings (ppm); 1.3, 1.0'=3.0, 1.5'=3.4, 1.1, 2.5'=0.7, 3.0'=0.1, 0.2 readings (ppm); 0.2, 5.0'=0.2, 5.5'=0.1, 0.0 readings (ppm); 4'=0.0

E	Brov Calc	wn dwe			Project Name: Project Number:	Former 14214	Baron- 47 Shore N	Blake:	slee Si	te				Permi	t Nun	nber:	Well No. MW-GW	P-1
					Project Location:	Day 3		· 1									Page 1 of 2	2
	Geolog	gist/C	Offic	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	נ	Total Boring Dept	h (ft)
]	BFT/.	Alban	y, N	Y	FJW		6.25"		2" Pre-I	Packed	I PVC	2		0.01	.0"		63.4 ft.	
s	tart/l	Finisł	n Da	te	Drilling Contrac	ctor:	Samplin	g: Spl	it Spoor	1		Deve	lopment	Metho	d:			
10/2	22/12	- 10/	/24/	12	ADT		Hamme	r Type	: 140	b Au	to	Surge	and Pur	ge w/ W	hale l	Pump:	90 Gallons remove	ed
I	Driller	:		Dri	lling Method:	Drilli	ng Equip	ment:	Hor	iz Da	.tum/	/Proj:				Ea	asting: 1181331.4	4 ft.
C.	Migcl	ore		Но	llow Stem Auger	CME	-75		Gro	und S	un: burfac	e Elev	v: 57.6 f	t.		T	DC Elev: 57.5 ft.	9 II.
	et)	be										Grap	ohic Log	ç	(mq			
(feet	on (fe	il Ty			Description			Bl	ow	le No	: Int ery) BY	w	ell	d) sö		Domarka	
Jepth	evatio	SC Sc			Description	L		Co	unts	amp	ecov	ithol	Traffic	Rated	pm eadir		Remarks	
I	E	ñ								0	Sa R	F	Vault	DOX	R Iq			
-							-									1 5 2 !	DC C.	
-	55															Cemen	t/Bentonite Grout	
-																		
							_											
-																		
-	50																	
-																		
10-							_											
-																		
-	45																	
-																		
15-							-											
-																		
-	40																	
-																		
20-																		
-	35	-																
-							_											
25-							-											
-																		
-	30																	
-																		
30-							-											
							_											

E	Brov Calc	wn dwe	Project Name: Former Baron Project Number: 142147 Project Location: Bay Shore,	Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY Gra						Permi	t Nur	mber: Well No. MW-GWP-1 Page 2 of 2
th (feet)	ion (feet)	Soil Type	Description	Blow	ple No.	le Int	very	Graf Graf	ohic Log	g 'ell	ings (ppm)	Remarks
Dept	Elevat	USC S		Counts	Sam	Sampl	Reco	Litho			ppm Readi	
-	25		-	-								
35-			-	- - - -								
-	20		-	- - - -								
40-			-	-								
-	15		-									
- - 45-			-	-								
-	10		-	-								
50-			-	-								
-	5		-	- - - -								
			-	- - - -								53-55' BGS: Bentonite Seal
-	0		-	-								Pack
			-									
-	-5	SW	Brown/Tan cmf SAND, trace mf Gravel, trace (-) Silt. Saturated.	13-15-16-12	1	X					0.0	58.35-63.35' BGS: Pre-Packed 0.010'' Slot PVC Screen
-			-									

B	Brown AND Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY								Permi	t Nur	nber:	Well No. MW-GWP-3					
	Juit		~~		Project Location	: Bay S	shore, N	. Y									Page 1 of 2
	Geolog	gist/C	Offic	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	ר	fotal Boring Depth (ft)
	BFT/.	Alban	y, N	Y	FJW		6.25"		2" Pre-I	Packee	l PVC	2		0.01	10"		64.4 ft.
s	tart/l	Finisł	n Da	ite	Drilling Contra	ctor:	Samplin	ı g: Spl	lit Spoor	1		Deve	lopment	t Metho	d:		
10/2	24/12	- 10/	24/	12	ADT		Hamme	r Type	: 1401	lb Au	to	Surge	e and Pur	ge w/ W	7hale 1	Pump:	85 Gallons removed
I	Driller	:		Dri	lling Method:	Drilli	ng Equip	ment:	Hor	riz Da	itum,	/Proj:				Ea	sting: 1181208.2 ft.
C.	Migcl	ore		Но	llow Stem Auger	CME	-75		Gro	und S	un: Surfac	ce Ele	v: 58.9 f	t.		T	DC Elev: 58.7 ft.
	et)	pe										Gra	phic Log	g	(mq		
(feet	on (fe	il Ty			Decoriotics			В	low	le No	Int	gy (W	ell	d) sgi		Domostro
)epth	evatic	SC So			Description	1		Со	ounts	amp	ecove	itholo	Traffic	Rated	pm eadir		Kemarks
I	Ē	ñ								00	Sa		Vault	BOX	PI		
-							-									0.54	DC C.
-																Cemen	t/Bentonite Grout
-	55																
5-							-										
-																	
-																	
-	50																
10-							-										
-																	
-																	
-	45						-										
15-							-										
-																	
-							-										
-	40	-															
20-																	
-																	
-																	
-	35	-															
25-																	
-							-										
-	20						-										
-	30						-										
30-																	

E	Brov Calc	wn dwe	Project Name: Former Baron- Project Number: 142147 Project Location: Bay Shore, N	Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY Graph						Permit	t Nur	nber: Well No. MW-GWP-3 Page 2 of 2
Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Sample Int	Recovery	Craft Graft	w	g ell	ppm Readings (ppm)	Remarks
35-	25											
40	20	-										
- - - 45 - - - - -	15	-	- - - - - - - - - - - - - - - - - - -									
	10	-	- - - - - - - - - - - - - - - - - - -									
- - 55 - - - - -	5		- - - - - - - - - - - - - - - - - - -									54-56' BGS: Bentonite Seal 56-64.36' BGS: Sand Filter Pack
	-5	SW	Brown/Tan cmf SAND, little (+) cmf Gravel, trace (-) Silt. Saturated.	7-15-30-31	1	X					0.0	59.36-64.36' BGS: Pre-Packed 0.010'' Slot PVC Screen
										1.1.1.1.1		

E	Brown AND Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY								Permi	t Nur	nber:	Well No. MW-GWP-6					
			~~		Project Location:	: Day 3	snore, N									-	Page 1 of 2
	Geolog	gist/C	Offic	e	Checked By:	Boreho	le Diame	ter:	Screen and Ty	Dian pe:	neter			Slot	Size:	ר	Total Boring Depth (ft)
	BFT/	Alban	ıy, N	Y	FJW		6.25"		2" Pre-I	Packee	ł PVC	2		0.01	10"		65.0 ft.
s	tart/1	Finisł	n Da	ite	Drilling Contra-	ctor:	Samplin	n g: Spl	lit Spoor	n		Deve	lopmen	t Metho	d:		
10/2	25/12	- 10/	/25/	12	ADT		Hamme	r Type	:: 140]	lb Au	to	Surge	e and Pur	ge w/ W	7hale 1	Pump:	20 gallons removed
1	Driller	:		Dri	lling Method:	Drilli	ng Equip	ment:	Hor	tiz Da	tum/	/Proj:				Ea	usting: 1181278.6 ft.
C.	Migcl	lore		Но	ollow Stem Auger	CME	-75		Gro	und S	burfac	ce Ele	ev: 57.8 f	t.		T	DC Elev: 57.6 ft.
t)	et)	pe										Gra	phic Log	g	(mqc		
ı (fee	on (fe	oil Ty			Description	,		B	low	le N	erv	ogy	w	ell	i) säi		Remarks
Dept	evati	SC S			Description	•		Со	ounts	Samp	ample	ithol	Traffic	c Rated	pm teadir		
I	E	D									S. B		vauit	DOX	P R P		
-							-									1-54'	BGS
-	55															Cemen	t/Bentonite Grout
-																	
5-							-										
-																	
-	50																
-							-										
10-							-										
-																	
-	45	-															
-							-										
15-																	
-							-										
-	40																
-																	
20-																	
-	25																
-	35																
25																	
- 23							-										
-	30																
-	50																
30-							-										
- 1							-								1		

E	Brov Calc	wn dwe	Project Name: Former Baron Project Number: 142147 Project Location: Bay Shore, N	Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY							t Nur	nber:	Well No. MW-GWP-6 Page 2 of 2
Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Sample Int	Kecovery	Lithology Later La	w	g ell	ppm Readings (ppm)		Remarks
35 	25 20 15												
45	<u> </u>											On 10, develo of well 50.25' develo second measur been g installa abando 54-57' 57-65'	/16/2012 pment attempted. TD measured to be BGS. On 11/9/2012 pment attempted a time. TD of well red to be 50.25' BGS. nined that well had routed in during tion, and will be ned. BGS: Bentonite Seal BGS: Sand Filter Pack
60	-5	SW	Tan/Brown cmf SAND, some mf Gravel, trace (-) Silt. Saturated.	22-23-21-20	1						0.0	60-65' 0.010''	BGS: Pre-Packed Slot PVC Screen

E	Brown AND Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY								Permit	t Nun	nber:	Well No. MW-GWP-6R Page 1 of 2					
	Geolog	gist/O	Offic	e l	Checked By:	Boreho	le Diame	ter:	Screen	Dian	neter			Slot	Size:	ר	Total Boring Depth (ft)
	CRM/	Albar	ıy, N	JΥ	FJW		6.25"		and Ty 2" Pre-I	pe: Packeo	ł PV(0.01	0"		65.0 ft.
s	tart/l	Finisł	n Da	ıte	Drilling Contra	ctor:	Samplin	g: Spl	it Spoor	1		Deve	lopment	t Metho	d:	1	
12/1	14/12	- 12/	/14/	12	ADT		Hamme	r Type	: 140	b Au	to	Surge	and Pur	ge w/ W	/hale I	Pump:	50 gallons removed
I	Driller	:		Dri	lling Method:	Drilli	ng Equip	ment:	Hor	iz Da	tum,	/Proj:				Ea	asting: 1181256.0 ft.
	Shaun Hollow Stem Auger CME-75 Ground Surface Elev					v: 58.1 f	Ìt.		T	DC Elev: 57.8 ft.							
et)	èet)	ype								.0		Graj	phic Log	g	(mqq		
th (fe	tion (f	Soil T			Description	ı		B1 Cor	ow	ıple N	ole Int overv	ology	W	ell	lings (Remarks
Dep	Eleva	USC Samp Sam Record					Traffic Vault I	: Rated Box	ppm Read								
-							-									1-56.5 Cemen	5' BGS: t/ bentonite grout.
	55	-															
5-																	
	50																
-							_										
10-																	
							-										
-	45																
15-																	
-							-										
-	40																
-							-										
20-																	
							-										
	35	-															
25-																	
-																	
-	30																
-																	
30-																	

E	Brov Calc	wn dwe	Project Name: Former Baron Project Number: 142147 Project Location: Bay Shore,	Project Name: Former Baron-Blakeslee Site Project Number: 142147 Project Location: Bay Shore, NY Graph							t Nur	mber: Well No. MW-GWP-6R Page 2 of 2
Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Sample Int	Recovery	Lithology Lat	w	g ell	ppm Readings (ppm)	Remarks
	25	-	· · · · · · · · · · · · · · · · · · ·									
35	20	-	· · ·									
40												
- - - 45-	15	-	· ·	-								
	10	-	· · ·									
50	5		· · ·	-								
- - - 55- - -												
	0	- CD						ie Neurolie			0.0	56.5-59' BGS: Bentonite seal. 59-65' BGS: Sand filter pack.
	-5	51	(rubrounded). Saturated.			X					0.0	60-65' BGS: Pre-Packed 0.010'' Slot PVC Screen
 65				-								

Appendix B: Field Sample Data Sheets



LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	JF-	Beydin
Personnel:	NAG	BOD
Purge/Sample	Dépth:	20

Project Number: Well ID: _____P___ Sample ID: _____

Actual Time	рН	Temp (ºC)	ORP (mV)	Cond ()	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1473	5.17	2.64	349	349	6-21	16.6	610	2,000	
1436	5.87	3.97	309	0.597	2.58	11.5	are all		
1439	6.34	14.11	274	0.427	1.67	9.6	6,48		
14.42	BUS	14.13	262	0.356	1.10	73			
1445	6:54	14.15	248	0.229	0.80	7.2			
1448	653	14113	227	0.258	0.60	8.7			
1451	6.54	14,18	215	0.251	0-63	8.8		200	
1454	6152	M.00	200	0.2-4	0.59	9.0.		-	
1457	6.50	:4.08	193	0.242	0.55	8.0	4. O	100 JUN	
1500	6.50	14.08	189	0.240	0.57	7.9			
1503	6.49	14.09	186	0.239	0.55	7.2	- H - H	e li ins	
1503	Samel	2 CM2	t.	witto	cal		an inte		no constation
1506	Sarul	e Colle	ted -	Stored	1		and a grant of the		
	/	-					1	f	
		24				~			
	Ξ.	<u> </u>						<u>-</u>	
			21 12	1.22			-		
1.									to Tay on the Albertage
		el a come com	ц = _		- 52	, nendu ,	00240		
				a 1980 il			- 18 m		
							10 C	1	
-d	lib		10010	1000C			· Contraction		
					0.050			in a second	a Mercellings of
					1001.0		1.750 L	Real and a	
11 C				902	1.8	-	-10 gr - 1		
de la				and .			·		
						2			
				·					
						-			
					11.1			- Nuclea	
	-						<		'
	L								
							X		
			· · ·					×	
	-			7		1.1	30.0	2	
		1						<u> </u>	

7.29 NTU

	BROWNAND	LOW-FLOW GROUNDWATER SAMPLING FIELD DATA
	CALDWELL Allendale, NJ Office	Well Number: Sample I.D.: MW: DWP- Rif different from well no.)
P	Project: He Bos wee Personnel: June 29	Date: Time: Air Temp.: Air Temp.:
	VELL DATA: Casing Diameter: 2' Intake Diameter: 3 Stainless Steel DEPTH TO : Stait Water Level: DEPTH TO : Stait Water Level: DATUM: Top of Protective Casing CONDITION: Is Well clearly labeled?	V Teflon® Other: PVC Teflon® Open rock II: ft Other: II clean to bottom? Ves No
v	Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not-cracked or frost hea Is Padlock Functional? ☐ Yes ☐ No ☐ NA Is Inner Casing Properly Capped and Vented? /OLUME OF WATER: Standing in well:	Yes I No Ved) I Yes I No Is Inner Casing Intact? I Yes I No Yes I No To be purged:
F	PURGE DATA: METHOD: Image: Construction of the second sec	□ 2" Submersible Pump □ 4" Submersible Pump □ □ Inertial Lift Pump □ Other:
P V	ATERIALS: Pump/Bailer: Teflon® Stainless Steel PVC Comping Rate: Composition Pumping Rate: Composi	Tubing/Rope: T
F	PURGING EQUIPMENT: Dedicated Prepared Off-	Site Field Cleaned
N	METHOD: Bailer, Size: AETHOD: Size: AETHOD: Size: AETHOD: AETHOD: AETHOD: AETHOD: A	ubmersible Pump □ 4" Submersible Pump tial Lift Pump □ Other:
N S M F T C C U N F I S P	MATERIALS: Permp/Bailer: Teflon® SAMPLING EQUIPMENT: Dedicated Prepared O Material Samples field filtered? Yes No Metals samples field filtered? Yes No FIELD DETERMINATIONS: pH: 6.41 Meter Model: Deremperature: Meter Model: ORP: 18.42 DO: 9.55 OUP: No Yes Name: MS/MSD: No Yes Name: Field Lab Results: DN/A pH: DO: Certify that this sample was collected and handled in accordance with applicable model: State Metals Signature:	Tubing/Rope: Teflon® Polyethylene Polyethylene Dff-Site Field Cleaned Contains Immiscible Liquid Hapla 452 Meter S/N: Meter S/N: Meter S/N: Meter S/N: Temperature:

7.29 NTU (Hach)

LOW-FLOW GROUNDWATER FIELD DATA SHEET

	ho	n - 1
Project Name:	46	1 says were
Personnel:	MB	At I
Purge/Sample	Depth:	

Actual Time	рН	Temp (°C)	ORP (mV)	Cond ()	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1357	6.38	13.00	226	816.2	6.30	15.923	6.40	111 W. 11 2	
1400	6.36	13.07	227	847.2	6.32	1522		ard	
1403	5.27	13.93	317	1854	6.67	13-3			
1406	5.27	13.93	318	1855	6.63	14.8			
1409	5.18	13.96	331	1856	6-64	10.5		Constant and	
1412	5.13	13.99	340	.856	6.67	8.3			
1415	5.15	14.01	342	1857	0-57	6.4	6.39		
1118	5.08	14.06	352	1864	6.46	3.5			
1421	5.07	14.06	352	1864	6,41	5.5		200	
1422	3.07	19.09	335	.865	6.44	2.9			
ILIA F	3.00	14.08	<u>55 8</u>	1875	6.25	1.9			
1130			1						
1	<u> </u>							· ·	
					- m_ m_				
								2.4	/
						2/2	-ih	1 HPCPAL	/
		\overline{D}		1. 6	201			H M CO	
			1 11e	CT			-		
		/ /	2811				172	1 01	1117-2
					-		11110	· C/ (a)	1155
5. 1									
					2				
				/ M					
				$- \mathcal{U}$	K.[
					1				
					-				
				N					
						-			
									· · · · · · · · · · · · · · · · · · ·
			_			@	<u>`</u>		

8

BROWNAND	LOW-FLOW GROUNDWATER SAMPLING FIELD DATA
CALDWELL Allendale, NJ Office	Well Number: MN - DWP - 2 (if different from well no.)
Project: DE Bang Work Personnel: 11/17/2 BB	Date: <u>11/15/12</u> Time: <u>1357</u> Weather: <u>Cloudy</u> Air Temp.: <u>45</u>
WELL DATA: 21 Casing Diameter: 2 Intake Diameter: 3 Stainless Steel DEPTH TO : Stain Vater Level: DEPTH TO : Stain Vater Level: DATUM: Top of Protective Casing CONDITION: Is Well clearly labeled? Is Prot. Casing/Surface Mount in Good Cond.? (r Does Weep Hole adequately drain well head? Is Concrete Pad Intact? (not cracked or frost head is Padlock Functional? Is Inner Casing Properly Capped and Vented? VOLUME OF WATER:	VC
PURGE DATA: METHOD: Image: Description of the second seco	✓ 2" Submersible Pump □ 4" Submersible Pump □ Inertial Lift Pump □ Other:
Image: Constraint of the second state of the second sta	Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Polyethylene Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Polyethylene Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Volume Pumped: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Volume Pumped: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Volume Pumped: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Volume Pumped: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Cubicity/Rope: Image: Volume Pumped: Image: Cubicity/Rope: Image: Cubici
SAMPLING DATA: METHOD: Bailer, Size: Syringe Sampler Peristaltic Pump Inert	ubmersible Pump ם 4" Submersible Pump ial Lift Pump Other:
MATERIALS: Pump/Bailer: Teflon® Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared O Metals samples field filtered? Yes No Method APPEARANCE: Clear Turbid Color: FIELD DETERMINATIONS: pH: 5.06 Meter Model: Temperature: 14.09 Spec. Cond.: 0.873 Meter Model: ORP: 58 DO: 757 Meter Model: ORP: 58 DO: 757 Meter Model: DUP: No Yes Name: 100: 100 MS/MSD: No Yes Name: 100: 100 Field Lab Results: N/A pH: DO: 100 I certify that this sample was collected and handled in accordance with applicable re Signature: 100 PMOHICeVFIeld_LabVield_Data_sheetsWell_Inter Sheet.doc	Tubing/Rope: Teflon® Polyethylene Polyethylene Image: State St
3.77	NTU (thach)

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name: GE BAYSHORE	Project Number:
Personnel: JMU NPB	Well ID:
Purge/Sample Depth:	Sample ID: <u>MW-GWP-06R</u>

Actual Time	pН	Temp (°C)	ORP (mV)	Cond ()	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1150	6.73	12.00	137	7.24	12.13	431	7.64	115	
1133	6,13	17170	2.30	1297	11.87	436	101		
1136	5.95	13,17	225	.308	11.57	339	7,64		
1134	5.83	13.71	222	,311	11.26	364		175	
1142	3.76	13,70	321	.311	1.11	317			,
1145	5,72	13.63	220	.311	113.97	2.20	7.65		
1148	5.60	14,62	221	. 311	. 10.86	261			
1151	5.68	13.61	223	, 208	10.78	196		125	
1154	5.66	13.59	222	,307	10.55	107	7.64		
1157	5.65	13.61	221	· 30 ¥	16124	96			
1200	5.65	1160	221	1200	TCIVIT	16			068-1
1207	SAM	UL .	Colle						062.0
1700	TYM		LALLE	Cill					
						_			
	ļ								
				_					
				-					
									· · · · · · ·
r	<u> </u>				1 Acho			1	
					1 /10/1				
		G			VI	NIV			
						1 WILL	17		
						1.14			
A REAL PROPERTY.		I Provide August 1		N. A. of Sciences		1		and the second second second	
L	L	L	L						
		ļ			1	<u> </u>			
				 					
	<u> </u>								
	<u> </u>					 			
								<u>+</u>	

ġ.

	LOW-FLOW GROUNDWATER
BROWN AND_	SAMPLING FIELD DATA
CALDWELL Allendale, NJ Office	Well Number: Sample I.D.: MW - Gwp-06R (if different from well no.)
Project: GE BAYSHORE Personnel: JMC, NPB	Date: 1.14.13 Time: 1.150 Weather:
WELL DATA: Casing Diameter: □ Stainless Steel □ Steel ☑ P Intake Diameter: □ Stainless Steel □ Galv. Steel DEPTH TO: Static Water Level:64 ft Bottom of We DATUM: □ Top of Protective Casing ☑ Top of Well Casing CONDITION: Is Well clearly labeled? □ Yes ☑ No Is we Is Prot. Casing/Surface Mount in Good Cond.? (r Does Weep Hole adequately drain well head? ☑ Is Concrete Pad Intact? (not cracked or frost hea Is Padlock Functional? □ Yes □ No ☑ NA	VC Teflon® Other: PVC Teflon® Open rock II:ft Other: II clean to bottom? Yes No Not bent or corroded) Yes No Yes No Yes No No Is Inner Casing Intact? Yes No
Is Inner Casing Properly Capped and Vented? VOLUME OF WATER: Standing in well:	PrYes □ No To be purged:
PURGE DATA:	
METHOD:	□ 2" Submersible Pump □ 4" Submersible Pump □ Inertial Lift Pump □ Other:
MATERIALS: Pump/Bailer: Pumping Rate: Pumping Rate: Pump	Tubing/Rope: Teflon® Polyethylene Polypropylene Other: umber of Well Volumes Removed: Site Field Cleaned
SAMPLING DATA: METHOD: □ Bailer, Size: □ Syringe Sampler □ Peristaltic Pump □ Inertice	ubmersible Pump
MATERIALS: Pump/Bailer: Teflon® Stainless Steel Stainless Steel SAMPLING EQUIPMENT: Dedicated Prepared O Metals samples field filtered? Yes No Method APPEARANCE: Clear Turbid Color:	Tubing/Rope: Teflon® Off-Site Field Cleaned Contains Immiscible Liquid Horisan 0-22 Meter S/N: Meter S/N:
MS/MSD : No Yes Name: DO:	Temperature: egulatory and project protocols. Date:2
P.WOMICEWFIEld_LEDUFIERS NEW WEII_INIO_Sheet.06C	
Lamott 2020 : Turbidity: 12.	2 NTU
8	

 $\left| \mathbf{c} \right|$

LOW-FLOW GROUNDWATER FIELD DATA SHEET

HE Bayshare

Project Number: Well ID: <u>Mw-&wp-0/</u> Sample ID: _____

1.00								r	
Actual Time	рН	Temp (°C)	ORP (mV)	Cond ()	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
17115	5-77	. 7 UI	NEU	2.2.01	1157)	6.6	6.82		
12110	1.17 r (7	1226	217	BYSE	12.83	125			
1378	9.37	12.70	741	0521	10.52	185			
1251	521	1301	200	0578	10 47	705	0.87		
1559	5.76 C 24	12 75	272	244	10 77	217	5.00	150	
1357	5.51	17:00	122	CUD	10.01	24.5		1 3 0	
1900.	5.31	1707	215	577	10.Cr	193	6 94		
1405	5,24	1772	215	1052	10.01	110	0101		
1405	5,20	1221	219	. 176	10.04	0.7	<u> </u>	150	
1409	SIJT	12.2	011	·>>T	10.27	4.2	1.24	1.00	
1412	5.26	1221	278	037	10-16	4.+	h.01		
1415	3,26	15,61	dly Public /	1550	10.15	7**	<u> </u>		01-1
7418	SAMU		GLLC (tr 0					(1) = 10
142	SAMPL	- C	COLLEL						Der Der
	<u> </u>		L						
					<u> </u>	l			
		2		L	<u> </u>				
			L			L			
				 	ļ	l		· · · · · · · · · · · · · · · · · · ·	
	L			L					
						L			·
	1								
						· ·		· · · · ·	· · · · · · · · · · · · · · · · · · ·
					12				
					$X \angle$				
				/	$1 \sim$				
				0		$\sqrt{2}$			
						$1 \times -$			
					,		0		
, and the	and the second second	1							
					T				
			1						
	+	+							
				-	+				
L		1							

BROWN AND CALDWELL Allendale, NJ Off	ice LOW-FLOW GROUNDWATER SAMPLING FIELD DATA Well Number: Sample I.D.: MW-BWP-01 (If different from well no.)
Project: DE Bayshar Personnel:	Date:
WELL DATA: Casing Diameter: Intake Diameter: DEPTH TO: Static Water Level: CONDITION: Is Well clearly labeled? Is Prot. Casing/Surface Mount in Go Does Weep Hole adequately drain w Is Concrete Pad Intact? (not cracked Is Padlock Functional? Standing in well: VOLUME OF WATER: Standing in well:	Steel STPVC □ Teflon® □ Other: Galv. Steel □ PVC □ Teflon® □ Open rock bottom of Well:ft Vell Casing □ Other: No Is well clean to bottom? □ Yes □ No od Cond.? (not bent or corroded) □ Yes □ No vell head? □ Yes □ No d or frost heaved) □ Yes □ No No □ NA Is Inner Casing Intact? □ Yes □ No d Vented? □ Yes □ No To be purged:
PURGE DATA: Bailer, Size: Bailer, Size: Centrifugal Pump Pee	der Pump
MATERIALS: Perph/Bailer: Teflon® Stainless Stee PVC Other: Was well Evacuated? Yes No PURGING EQUIPMENT: Dedicated P	
SAMPLING DATA: METHOD: □ Bailer, Size: □ Syringe Sampler □ Peristaltic Pu	mp
MATERIALS: Ump/Bailer: Teflon® SAMPLING EQUIPMENT: Dedicated Metals samples field filtered? Metals samples field filtered? Yes N APPEARANCE: Clear Turbid FIELD DETERMINATIONS: pH: 5.2.6 M ORP: 27.4 DO: 10.1.5 DUP : No Yes Name: MS/MSD : No Yes Name: Field Lab Results: M/A pH: DC Icertify that this sample was collected and handled in accordance w Icertify Icertify	Toping/Rope: Tefion® Prepared Off-Site Field Cleaned o Method: Gradient Contains Immiscible Liquid Inter Model: Topic Contains Immiscible Liquid Ieter Model: Topic Contains Immiscible Liquid Ieter Model: Meter S/N: urbidity: 3.9 Gwp-01-0 Temperature: Temperature: Temperature:

Tub: 2.59 NTU Lanoth 20-20

LOW-FLOW GROUNDWATER FIELD DATA SHEET

Project Name:	GE BAYSHORE	Project Number:
Personnel:	JAC, NPB	Well ID: <u>MW-GWP-03</u>
Purge/Sample D	epth:	Sample ID:

Actual Time	pН	Temp (°C)	ORP (mV)	Cond ()	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Pumping Rate (mL/min)	Comments
1243 1246 1249 1252 1253 1253 1253 1253 1253	5.77 5.64 5.61 5.58 5.58 5.58 5.58 5.58	13,44 13,33 13,31 13,31 13,32 13,34 13,32 13,31 13,31	246 247 245 245 248 247 252 253 253 252	.085 .085 .085 .084 .084 .085 .084 .085	11,19 10,34 10,34 10,91 11,0 10,34 10,37 16,79 10,63 10,28	111 99 82 59.3 55.4 33.1 32.1 29.2 24.3	7.45 5.00 8.05	175	
1310 1313 1316 1319	5.54 5.55 5.58 5.4mpl 3Ampl	13.30 13.39 13.40 E Co CE CO	252 253 <u>253</u> <u>LLE(TE</u> •LLE(TE	.084 .034 D E D	10.90	21.7	9.0 %		03- 03-D
							Re la		
<u> </u>									

BROWN AND	esta por sul com	LOW-FLOW GROU SAMPLING FIE	UNDWATER LD DATA
CALDWELL	Allendale, NJ Office	Well Number: Sample I.D.: Mw- Gu P-0 ²) (if different from well no.)
Project: SE BAY SHO Personnel: Jec NoPi3	RE	Date: 1.11,13 Time: 10 Weather: 0000(%)	<u>⊇4_3</u> Air Temp.: <u>54 °</u> P
WELL DATA: Casing Diameter: Intake Diameter: DEPTH TO : Static Water Level: DATUM: CONDITION: CONDITION: SWell clearly lal Is Prot. Casing/S Does Weep Hole Is Concrete Pad Is Padlock Funct	Stainless Steel Steel Steel Stainless Steel Galv. Steel Stainless Steel Galv. Steel Top of Well Casing beled? Yes No Is w Surface Mount in Good Cond.? adequately drain well head? Intact? (not cracked or frost he tional? Yes No No	PVC Teflon® Other: el PVC Teflon® Other: ell:ft Other: rell clean to bottom? Yes N (not bent or corroded) Yes Ves Yes No saved) Yes No Is Inner Casing Intact?	k Io No es 🛯 No
Is Inner Casing F VOLUME OF WATER: Sta	Properly Capped and Vented?	Yes I No To be purged:	
PURGE DATA: METHOD:	Size:	2" Submersible Pump 4" Sump Inertial Lift Pump Other:	Ibmersible Pump
MATERIALS: Pump/Bailer:		Tubing/Rope:	Teflon® Polyethylene Polypropylene Other:
SAMPLING DATA: METHOD:	🗆 Bladder Pump 🗆 2" : er 🗆 Peristaltic Pump 🗅 Ine	Submersible Pump □ 4" Submersit rtial Lift Pump □ Other:	ble Pump
MATERIALS: Pump Bailer: SAMPLING EQUIPMENT: Metals samples field filtered? APPEARANCE: Clear FIELD DETERMINATIONS: Temperature: <u>13.40</u> Spec. Cor ORP: <u>253</u> DUP: <u>No</u> Yes N MS/MSD: <u>No</u> Yes N	Teflon® Stainless Steel Dedicated □ Prepared □ Yes □ No Methor r □ Turbid □ Color: pH: <u>5.53</u> Meter Mode nd.: <u></u>	Off-Site Field Cleaned Contains Immiscible Lique Contains Immiscible Lique Herr S/N: 21.7	Teflon® Polyethylene uid
Field Lab Results: DN/A pH:	DO:	Temperature:	

Lamott 2020 : Furbidity: 6.29 NTU

Appendix C: Laboratory Deliverables

Provided Electronically



Appendix D: Data Usability Summary Reports





QUALITATIVE DATA USABILITY REPORT GE Bayshore Site November 2012 Air Samples

SDG No.:	200-13963
Laboratory:	TestAmerica Buffalo, Amherst, New York
Site:	GE Bayshore Site, Bay Shore, New York
Date:	January 4, 2013

<u>Samples</u>

Laboratory ID	Client ID	Matrix
200-13963-1	SS-05	Air
200-13963-2	DUP-112712-1 (SS-05)	Air
200-13963-3	SS-06	Air
200-13963-4	SS-07	Air
200-13963-5	SS-08	Air
200-13963-6	IA-06	Air
200-13963-7	IA-05	Air
200-13963-8	DUP-112712-2 (IA-05)	Air
200-13963-9	AA-07	Air
200-13963-10	SV-6	Air
200-13963-11	SV-7	Air
200-13963-12	SV-8	Air

Data from the following samples were reviewed:

200-13963-13	SV-9	Air
200-13963-14	SV-10	Air
200-13963-15	SV-11	Air

A Qualitative Data Usability Review was performed on all analytical data from SDG 200-13693. The samples were collected at the GE Bayshore Site, in Bayshore, New York. The following table outlines the analytical methods used to analyze the samples;

Analysis	Method
Volatile Organic Compounds (VOC)	EPA Method TO-15
Low Level Volatile Organic Compounds (LLVOC)	EPA Method TO-15

This review was performed in accordance with NYSDEC Guidance for the Development of Data Usability Summary Reports (revised September 1997).

Data Package Completeness

• The data packages were received complete as defined under the requirements for the NYSDEC ASP Category B and USEPA CLP deliverables.

Chains of Custody

The Chains-of Custody (COCs) were reviewed for completeness and accuracy. There were no discrepancies noted and all requested analyses were performed.

Organics

The following were reviewed for the organic analyses in this report:

- Case narrative
- Analysis data sheets (Form 1's)
- Holding time
- Surrogate recoveries

- Lab Control Sample/Lab Control Sample duplicate (LCS/LCSD) recoveries and RPDs
- Blank contamination
- Gas Chromatography/Mass Spectroscopy (GC/MS) tuning
- Initial and continuing calibration summaries
- Internal Standard area and retention time summary forms
- Field duplicate precision

The items listed above were technically and contractually in compliance with the method and Work Plan requirements, with the exceptions discussed in the following text.

Volatiles by Method TO-15

The compounds n-Heptane and 2,2,4-Trimethylpentane were detected in the method blank associated with samples SS-05, DUP-112712-1, and SS-06. The compound n-Heptane was detected in the method blank associated with samples SV-6, SV-7, SV-8, SV-9, SV-10 and SV-11. Associated sample results for these compounds less than 5 times the blank concentration have been qualified as not detected (U) at the reported sample concentration.

Location	Compound	Result (ug/M ³)	Qualifier
SS-06	n-Heptane	<3.8	U

Field duplicate imprecision between samples IA-05 and DUP-112712-2 accounted for the following results being qualified as estimated (J flagged).

Analyte	Normal Sample	Field Duplicate	RPD	Qualifier
	Result (ug/M ³)	Result (ug/M^3)		
Benzene	0.99	0.52	62	J
Toluene	6.9	4.2	49	J
n-Hexane (C6)	1.3	0.73	56	J
n-Heptane (C-7)	0.97	0.44	75	J

Carbon Tetrachloride	0.5	0.3	50	J
Cyclohexane	1.0	0.53	61	J
Trichlorofluoromethane	2.4	1.6	40	J
Dichlordifluoromethane	6.0	3.9	42	J
Methylene chloride	1.8	9.0	133	J
Tetrachloroethene	4.3	2.3	61	J
Trichloroethene	0.59	0.28	72	J
2,2,4-Trimethylpentane	1.2	0.58	70	J

Validation Qualifiers

The following validation qualifiers may have been applied to the data, as appropriate.

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was tested, but was not detected above the sample reporting limit.
- R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Summary Evaluation of Data and Potential Usability Issues

Overall, the data is acceptable for the intended purposes. No Data were rejected as a result of this review; most data meet the criteria for the parameters reviewed. Minor data quality issues were identified, only some required qualification of the data. The primary QC issue was field duplicate imprecision.

Signed: _____ Dated: _____
Gregory Cole Senior Chemist



QUALITATIVE DATA USABILITY REPORT GE Bayshore Site November 2012 Groundwater Samples

SDG No.:	460-47127
Laboratory:	TestAmerica Edison, Edison, New Jersey
Site:	GE Bayshore Site, Bay Shore, New York
Date:	January 4, 2013

<u>Samples</u>

Laboratory ID	Client ID	Matrix
460-47127-1	FB111512	Water
460-47127-2	MW-GWP-3U	Water
460-47127-3	MW-GWP-3F	Water
460-47127-4	MW-GWP-1U	Water
460-47127-5	MW-GWP-1F	Water
460-47127-6	DUP111512U	Water
460-47127-7	DUP111512F	Water

Data from the following samples were reviewed:

A Qualitative Data Usability Review was performed on all analytical data from SDG 460-47127. The samples were collected at the GE Bayshore Site, in Bayshore, New York. The following table outlines the analytical methods used to analyze the samples;

Analysis	Method
ICP Metals (total)	SW846 6010B
ICP Metals (dissolved)	SW846 6010B
Mercury (total)	SW846 7470A
Mercury (dissolved)	SW846 7470A
Hexavalent and Trivalent Chromium	SW846 7199

This review was performed in accordance with NYSDEC Guidance for the Development of Data Usability Summary Reports (revised September 1997).

Data Package Completeness

• The data packages were received complete as defined under the requirements for the NYSDEC ASP Category B and USEPA CLP deliverables.

Chains of Custody

The Chains-of Custody (COCs) were reviewed for completeness and accuracy. There were no discrepancies noted and all requested analyses were performed.

<u>Inorganics</u>

The following were reviewed for the inorganic analyses in this report:

- Case narrative
- Analysis data sheets (Form 1's)
- Holding time
- Lab Control Sample/Lab Control Sample duplicate (LCS/LCSD) recoveries and RPDs
- Blank contamination
- Initial and continuing calibration summaries
- Matrix spike/Matrix spike duplicate (MS/MSD) recoveries and RPDs
- ICSA/ICSAB summaries

- Lab replicate precision
- Field duplicate precision
- Serial dilutions

The items listed above were technically and contractually in compliance with the method and Work Plan requirements, with the exceptions discussed in the following text.

Total metals by Method SW6010B

Field duplicate imprecision between samples MW-GWP-1U and DUP-111512 U accounted for the following results being qualified as estimated (J flagged).

Analyte	Normal Sample	Field Duplicate	RPD	Qualifier
	Result (ug/L)	Result (ug/L)		
Iron	217	81.1J	91	J
Manganese	102	64.4	45	J

Field duplicate imprecision between samples MW-GWP-1F and DUP-111512 F accounted for the following results being qualified as estimated (J flagged).

Analyte	Normal	Sample	Field	Duplicate	RPD	Qualifier
	Result (ug	g/L)	Result	(ug/L)		
Manganese	104		56.5		60	J

Missed holding times accounted for the following results being qualified as estimated (J/UJ flagged).

Location	Compound	Result	Qualifier
		(ug/Kg)	
MW-GWP-3U	Hexavalent Chromium	< 0.56	UJ
MW-GWP-3F	Hexavalent Chromium	< 0.56	UJ
MW-GWP-1U	Hexavalent Chromium	< 0.56	UJ

P:\General_Electric\Former_Baron_Blakeslee_Site\141247_GE_Bayshore_Site_Char_WP_Implementation\2012_Supplemental_Site _Characterization\Report\Appendics\AppendiX_D_DUSRs\GE Bayshore_data_usability_report_GW_2012.docx Page 3 of 4

MW-GWP-1F	Hexavalent Chromium	< 0.56	UJ
DUP111512 U	Hexavalent Chromium	< 0.56	UJ
DUP111512 F	Hexavalent Chromium	< 0.56	UJ
FB111512	Hexavalent Chromium	< 0.56	UJ

Validation Qualifiers

The following validation qualifiers may have been applied to the data, as appropriate.

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was tested, but was not detected above the sample reporting limit.
- R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Summary Evaluation of Data and Potential Usability Issues

Overall, the data is acceptable for the intended purposes. No Data were rejected as a result of this review; most data meet the criteria for the parameters reviewed. Minor data quality issues were identified, only some required qualification of the data. The primary QC issue was missed holding times for hexavalent chromium.

Signed: _____

Dated:

Gregory Cole Senior Chemist



QUALITATIVE DATA USABILITY REPORT GE Bayshore Site November 2012 Soil Samples

SDG No.:	460-47673
Laboratory:	TestAmerica Edison, Edison, New Jersey
Site:	GE Bayshore Site, Bay Shore, New York
Date:	January 4, 2013

<u>Samples</u>

Laboratory ID	Client ID	Matrix
460-47673-1	SB-9-1.0-1.5	Soil
460-47673-2	SB-11-1.0-1.5	Soil
460-47673-3	SB-12-1.0-1.5	Soil
460-47673-4	SB-10-3.0-3.5	Soil
460-47673-5	SB-8-1.5-2.0	Soil
460-47673-6	SB-6-5-5.5	Soil
460-47673-7	SB-7-5-5.5	Soil
460-47673-8	SB-5-6-6.5	Soil
460-47673-9	FB-112912	Water
460-47673-10	DUP-112912 (SB-9-1.0-1.5)	Soil

Data from the following samples were reviewed:

A Qualitative Data Usability Review was performed on all analytical data from SDG 460-47673. The samples were collected at the GE Bayshore Site, in Bayshore, New York. The following table outlines the analytical methods used to analyze the samples;

Analysis	Method
Volatile Organic Compounds (VOC)	SW846 8260B
Percent Moisture	EPA Moisture

This review was performed in accordance with NYSDEC Guidance for the Development of Data Usability Summary Reports (revised September 1997).

Data Package Completeness

• The data packages were received complete as defined under the requirements for the NYSDEC ASP Category B and USEPA CLP deliverables.

Chains of Custody

The Chains-of Custody (COCs) were reviewed for completeness and accuracy. There were no discrepancies noted and all requested analyses were performed.

Organics

The following were reviewed for the organic analyses in this report:

- Case narrative
- Analysis data sheets (Form 1's)
- Holding time
- Surrogate recoveries
- Lab Control Sample/Lab Control Sample duplicate (LCS/LCSD) recoveries and RPDs
- Blank contamination
- Gas Chromatography/Mass Spectroscopy (GC/MS) tuning

- Initial and continuing calibration summaries
- Internal Standard area and retention time summary forms
- Field duplicate precision

The items listed above were technically and contractually in compliance with the method and Work Plan requirements, with the exceptions discussed in the following text.

Volatiles by Method SW8260B

The compounds acetone and methylene chloride were detected in the method blank associated with samples SB-12-1.0-1.5, SB-10-3.0-3.5, and SB-5-6-6.5. The compound n-Heptane was detected in the method blank associated with samples SV-6, SV-7, SV-8, SV-9, SV-10 and SV-11. Associated sample results for these compounds less than 5 times the blank concentration have been qualified as not detected (U) at the reported sample concentration.

Location	Compound	Result (ug/Kg)	Qualifier
SB-12-1.0-1.5	Acetone	<6	U
SB-12-1.0-1.5	Methylene chloride	<0.45	U
SB-10-3.0-3.5	Methylene chloride	<0.5	U
SB-5-6-6.5	Methylene chloride	<0.28	U

Low matrix spike recoveries accounted for the following results being qualified as estimated (J/UJ flagged).

Location	Compound	Result	Qualifier
		(ug/Kg)	
SB-12-1.0-1.5	Toluene	0.17	J
SB-12-1.0-1.5	Methylcyclohexane	<0.1	UJ
SB-12-1.0-1.5	Chlorobenzene	< 0.18	UJ
SB-12-1.0-1.5	Cyclohexane	< 0.13	UJ
SB-12-1.0-1.5	1,2-Dibromo-3-chloropropane	<0.44	UJ
SB-12-1.0-1.5	1,2-Dichlorobenzene	<0.1	UJ

SB-12-1.0-1.5	1,3-Dichlorobenzene	<0.16	UJ
SB-12-1.0-1.5	1,4-Dichlorobenzene	<0.11	UJ
SB-12-1.0-1.5	Ethylbenzene	<0.17	UJ
SB-12-1.0-1.5	Isopropylbenzene	<0.11	UJ
SB-12-1.0-1.5	1,1,2,2-Tetrachloroethane	< 0.091	UJ
SB-12-1.0-1.5	Styrene	<0.28	UJ
SB-12-1.0-1.5	1,1,1-Trichloroethane	24	J
SB-12-1.0-1.5	1,2,3-Trichlorobenzene	<0.16	UJ
SB-12-1.0-1.5	1,2,4-Trichlorobenzene	<0.19	UJ
SB-12-1.0-1.5	Trichloroethene	63	J
SB-12-1.0-1.5	m,p-Xylene	<0.6	UJ
SB-12-1.0-1.5	o-Xylene	<0.19	UJ
SB-8-1.5-2.0	Tetrachloroethene	6300	J

Validation Qualifiers

The following validation qualifiers may have been applied to the data, as appropriate.

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was tested, but was not detected above the sample reporting limit.
- R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Summary Evaluation of Data and Potential Usability Issues

Overall, the data is acceptable for the intended purposes. No Data were rejected as a result of this review; most data meet the criteria for the parameters reviewed. Minor data quality issues were identified, only some required qualification of the data. The primary QC issue was low matrix spike recoveries.

Signed: _____

Dated:

Gregory Cole Senior Chemist

BROWN AND CALDWELL

QUALITATIVE DATA USABILITY REPORT GE Bayshore Site January 2013 Groundwater Samples

SDG No.: 460-49437-1

Laboratories:TestAmerica Edison, Edison, New JerseyAccutest Laboratories, Dayton, New JerseySite:GE Bayshore Site, Bay Shore, New YorkDate:February 6, 2013

<u>Samples</u>

Laboratory ID	Client ID	Matrix	
460-49437-1	MW-GWP-06R-T	Water	
460-49437-2	MW-GWP-06R-D	Water	
460-49437-3	DUP 011413-D	Water	0.10
460-49437-4	FB011413	Water	
460-49437-5	MW-GWP-03-T	Water	
460-49437-6	MW-GWP-03-D	Water	
460-49437-7	MW-GWP-01-T	Water	
460-49437-8	MW-GWP-01-D	Water	

Data from the following samples were reviewed:

A Qualitative Data Usability Review was performed on all analytical data from SDG 460-47127. The samples were collected at the GE Bayshore Site, in Bayshore, New York. The following table outlines the analytical methods used to analyze the samples;

Analysis		Method
ICP Metals (total)		SW846 6010B
ICP Metals (dissolved)		SW846 6010B
Mercury (total)		SW846 7470A
Mercury (dissolved)		SW846 7470A
Hexavalent and Trivalent Chromium		SW846 7199

All analyses with the exception of hexavalent chromium were performed by TestAmerica Edison. The haxavalent chromium analysis was performed by Accutest Laboratories. This review was performed in accordance with NYSDEC Guidance for the Development of Data Usability Summary Reports (revised September 1997).

Data Package Completeness

• The data packages were received complete as defined under the requirements for the NYSDEC ASP Category B and USEPA CLP deliverables.

Chains of Custody

The Chains-of Custody (COCs) were reviewed for completeness and accuracy. There were no discrepancies noted and all requested analyses were performed.

Inorganics

The following were reviewed for the inorganic analyses in this report:

- Case narrative
- Analysis data sheets (Form 1's)
- Holding time
- Lab Control Sample/Lab Control Sample duplicate (LCS/LCSD) recoveries and RPDs
- Blank contamination
- Initial and continuing calibration summaries

- Matrix spike/Matrix spike duplicate (MS/MSD) recoveries and RPDs
- ICSA/ICSAB summaries
- Lab replicate precision
- Field duplicate precision
- Serial dilutions

The items listed above were technically and contractually in compliance with the method and Work Plan requirements and no data qualification was warranted.

Validation Qualifiers

The following validation qualifiers may have been applied to the data, as appropriate.

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was tested, but was not detected above the sample reporting limit.
- R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Summary Evaluation of Data and Potential Usability Issues

Overall, the data is acceptable for the intended purposes. No Data were qualified as a result of this review.

John Signed: Gregory Cole

Dated: 27 2013

Senior Chemist