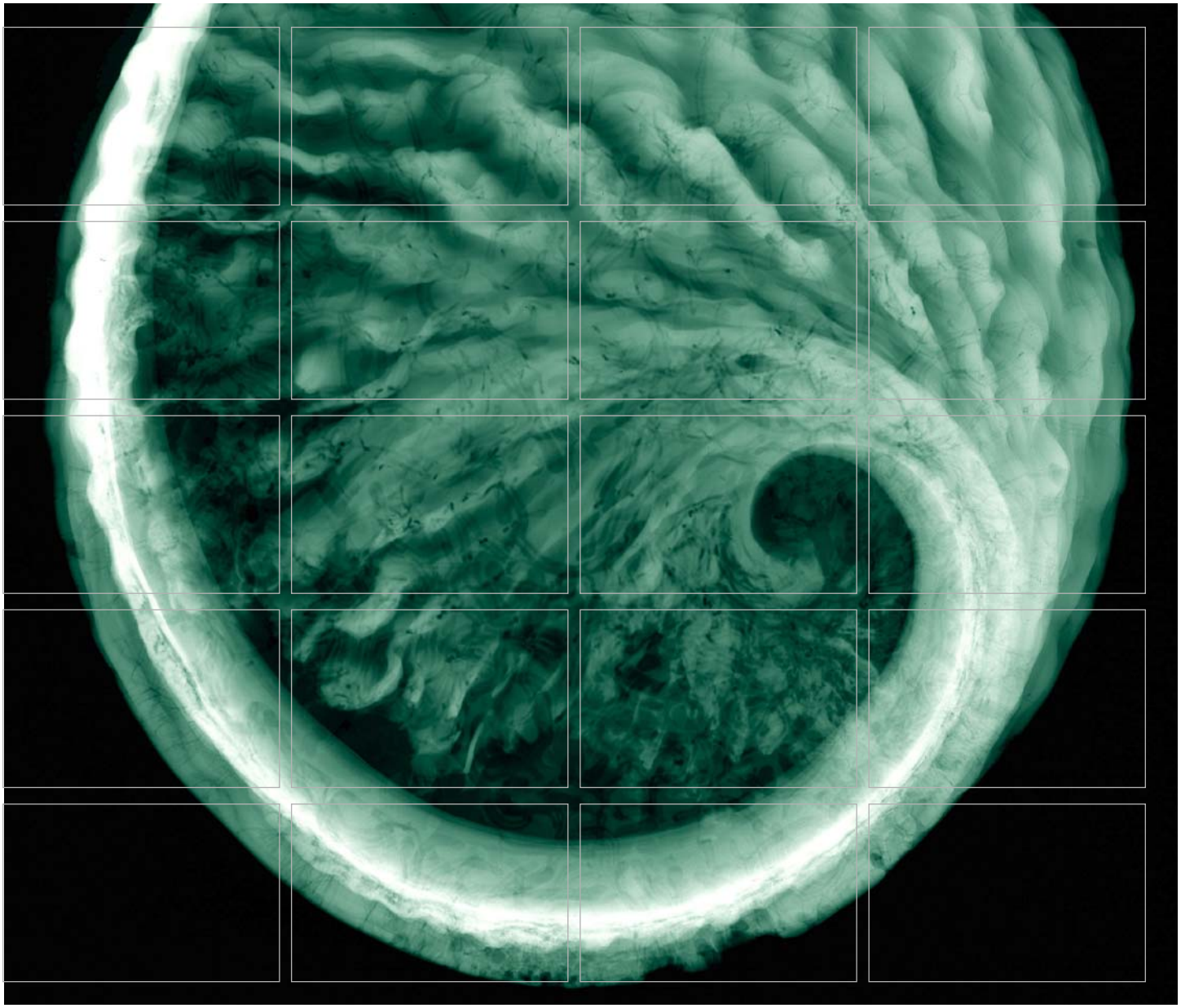

Hawthorne Village, LLC

REMEDIAL INVESTIGATION REPORT

220 Water Street
Brooklyn, New York

December 2006

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Hawthorne Village, LLC

Remedial Investigation Report

220 Water Street

Brooklyn, New York

15 December 2006

ERM Reference 0022103

Environmental Resources Management
399 Boylston Street, 6th Floor
Boston, Massachusetts 02116
T: (617) 646-7800
F: (617) 267-6447

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1.0 INTRODUCTION

Environmental Resources Management (ERM) has prepared this Remedial Investigation (RI) Report on behalf of Hawthorne Village, LLC to fulfill the requirement to investigate the 220 Water Street site located in Brooklyn, New York (the Site) in accordance with the Brownfield Site Cleanup Agreement (BCA) between the New York State Department of Environmental Conservation (NYSDEC) and Hawthorne Village, LLC (W2-1042-05-01). The Site, approximately one acre in size, is comprised of Block 41, Lot 17 as shown on the New York City tax maps. A location map showing the Site and the surrounding area is presented as Figure 1-1.

This RI Report presents a summary of previous environmental investigative activities conducted at the Site along with the results of additional investigative work conducted. The additional work was based on the September 2005 Remedial Investigation Work Plan (RIWP) (ERM, 2005) and the NYSDEC comment letter dated 3 July 2006 (NYSDEC, 2006).

Based on the previous investigations conducted at the Site, two potential lead-impacted soil areas of concern were identified at the Site. These two areas were beneath the sidewalk along Water Street (in the vicinity of SB-6) and beneath the boiler room (in the vicinity of sample location SB 3-5). Thus, additional soil sampling was conducted to confirm and complete the horizontal and vertical delineation of lead-impacted soil at the Site. Additionally, groundwater and soil gas sampling was conducted at the request of NYSDEC to assess potential environmental concerns associated with these media.

1.1 BACKGROUND AND HISTORY

Based on a review of available historical Sanborn Fire Insurance Maps, the Site has been used for industrial purposes since at least 1887. In that year,

the eastern portion of the Site was occupied by a two-story industrial building housing the Union White Lead Works, which reportedly burned down in the late 1800s. The current eastern wood building was then constructed in 1905. The eastern building then housed the Hanan & Sons Shoe Factory, whose operations ceased between 1915 and 1938. In 1952, the concrete building was constructed on the western side of the wood building in 1952. The buildings were then used by a number of manufacturers and commercial distributors, such as Gotham Furniture and Frame Company, Starlite Lampshade Company, Saw Television Company, Star Fastner Company, Modern Box Company, Dance Togs Company, Crown Set Curtains Company, Snocap Outerwear Company, Melcon Design, Embassy Archives, A.J. Cutting, Manhattan Fruitier, and DLX Industries, Inc. (KTR Newmark, 2004A)

The Site is currently owned by Hawthorne Village LLC, which purchased the building 9 February 2005. The ground floor and basements[1] are currently unoccupied. The fourth and fifth floors house residential loft apartments, including two home-based businesses, Klass Photographs Inc., and South Pole. The ground, second, and third floors, as well as portions of the fourth floor, are vacant.

1.2 PREVIOUS INVESTIGATIONS

The following section summarizes the Phase I and II Environmental Site Assessments (ESAs) conducted at the Site.

[1] Previous reports have referred to the ground floor as a basement. For the purposes of this report, the **ground floor** is the level at which the building is entered from Water Street. The term **basement** will only be used for the smaller, completely subterranean levels beneath the wood building and concrete building, i.e., "wood building basement" and "concrete building basement", respectively.

1.2.1 PHASE I ENVIRONMENTAL SITE ASSESSMENTS

Three Phase I ESA reports were conducted for this Site. A Phase I ESA report was prepared by Eldon Environmental Management Corporation on November 17, 1995. The report identified asbestos containing building materials (ACBM) with no other significant findings (Eldon, 1995). Middleton Environmental, Inc. conducted a Phase I ESA report dated July 13, 2001. This report, which was prepared for the Independence Community Bank, also identified ACBM associated with the boiler insulation, certain pipe insulation, and floor tiles, as well as issues with peeling and flaking paint potentially containing lead, with no other significant findings (Middleton, 2001).

KTR Newmark Consultants LLC (KTR) completed a Phase I ESA report dated 3 June 2004. This ESA included a visual reconnaissance, interviews with personnel, observations of the surrounding properties, records review, and a review of historical Site use information. Among other findings regarding the presence of ACBM and lead based paint (LBP), the ESA indicated that the Site had been occupied by the Union White Lead Works from at least 1887 to before 1904, who had produced a form of lead carbonate commonly known as "white lead". Lead carbonate is generally found in a powder form. As noted above, the building that previously housed this operation burned down in the late 1880s; however, the 2004 Phase I ESA stated that the potential for soil contamination still existed. (KTR Newmark, 2004A).

Based upon the past Site operations, KTR recommended that a Phase II subsurface investigation be conducted. This investigation was to include soil and groundwater sampling. The results of the soil sampling are summarized in Section 1.2.2. Groundwater was not encountered in soil borings installed as part of the KTR Phase II investigations; thus, groundwater samples were not collected.

1.2.2 PHASE II ENVIRONMENTAL SITE ASSESSMENTS

KTR conducted a Phase II ESA of the Site on 28 May 2004, and a Supplemental Phase II investigation on 24 and 25 June 2004 through their subcontractor, Jade Environmental, Inc. The subsurface investigation was performed to determine the potential impact to the underlying Site soils from the historical Site operations. A total of nine borings were completed during the initial Phase II, with analysis of nine discrete soil samples and two composite soil samples. The nine soil samples were analyzed for Resource Conservation and Recovery Act (RCRA) metals, one of which was also analyzed for volatile organic compounds (VOCs). The two composite samples were analyzed for VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and RCRA metals. Based on the findings of the initial investigation, a decision was made to conduct additional soil sampling in June 2004. During the supplemental Phase II investigation, KTR attempted to install 18 additional borings. A total of 15 borings were successfully installed. The supplemental Phase II work included the collection of exterior, interior sub-slab, and sub-basement soil samples.

During the supplemental Phase II, six additional exterior soil borings (SB2-1 to SB2-6) were installed beneath the sidewalk and were advanced at 4 foot intervals. One of the six borings was advanced to a maximum depth of 20 feet. A total of 15 samples were collected from the additional exterior soil borings SB2-1 to SB2-6 and analyzed for RCRA metals. Additionally, one interior and three exterior composite samples were formulated and submitted for RCRA Toxicity Characteristic Leaching Procedure (TCLP) metals analysis.

Twelve additional interior soil borings were attempted throughout the basements of the "wood building" and "concrete building" and

designated SB3-1 through SB3-12. Soil samples were collected from nine of these 12 locations (all but SB3-1, SB3-7, and SB3-8). One interior composite sample was also submitted for RCRA TCLP analysis.
Soil samples were collected from these boring locations and submitted for laboratory analysis. The results of this sampling were summarized in the September 2005 RIWP. A detailed discussion regarding these results is not repeated here for brevity. This previous sampling was used to determine additional soil sampling needed.

To fully describe the lead delineation in soil, all the lead results from all investigation phases are presented in the figures provided in Section 3.2.1. Figure 1-2 shows the previous soil sample locations. Following is a brief discussion of these previous results.

1.2.2.1 Exterior Soil Results

The RIWP (2005) summarized soil results from the Phase II and Supplemental Phase II Investigations. With the exception of lead, the soil metals concentrations that were detected above Technical Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs) are consistent with fill in urban areas. Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with metals concentrations that are above TAGM 4046 RSCOs. Lead concentrations ranged from below the default NYSDEC and NYSDOH screening value of 400 mg/kg, as stated in NYSDEC's 3 July 2006 comment letter, to a maximum detected concentration of 8,940 mg/kg, which was detected in SB-6 sample in the 0 to 4 foot depth interval.

Concentrations of polycyclic aromatic hydrocarbons (PAHs) detected in the soil beneath the sidewalks were generally consistent with those observed in urban fill as documented by the Agency for Toxic Substances

and Disease Registry (ATSDR, 1993). Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with PAH concentrations that are above TAGM 4046 RSCOs. Elevated levels of metals were also detected in the exterior composite soil sample (5/28/2004), and as expected, were consistent with the individual soil sample results. The TCLP metals results revealed that one of the four exterior composite samples, "Shallow Exterior Composite", exhibited a TCLP lead result above the TCLP limit of 5 mg/L at 6.34 mg/L.

1.2.2.2 Interior Soil Results

Lead was detected above the default NYSDEC and NYSDOH screening value of 400 mg/kg in one sample beneath the boiler room slab, SB3-5 (1-3' bgs), at a concentration of 3,770 mg/kg. Metals detected in interior soil were detected at concentrations consistent with fill in urban areas. Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with metals concentrations that are above TAGM 4046 RSCOs and the default NYSDEC and NYSDOH lead screening value. One interior composite soil sample was analyzed for VOCs, PCBs, and SVOCs. Neither VOCs nor PCBs were detected; however, SVOCs, in the form of PAHs were present at concentrations above the NYSDEC TAGM 4046 RSCO.

1.2.2.3 Evaluation of Previous Soil Sampling Results

Where soil samples were collected at more than one depth interval at a single location, metals concentrations were observed to decrease with depth. These multiple sample points were at exterior locations. Lead concentrations in the deeper samples at all locations, except SB2-2, SB-6, and SB-9 were below the default NYSDEC and NYSDOH screening level of 400 mg/kg. Thus, the additional soil investigation focused on vertical delineation of lead in soil. Additionally, full Target Compound List (TCL)

and Target Analyte List (TAL) analysis was conducted on select soil samples during the additional investigation.

1.3 REPORT ORGANIZATION

Sections 1.0, 1.1, and 1.2 of this RI Report provided an introduction and described the history and previous investigations conducted at the Site in summary format. Section 2.0 provides a description of the Site and its environmental setting. Section 3.0 presents RI scope of work and the remedial objectives and field activities for soil, groundwater, and soil vapor sampling. Analytical results for samples in these media are presented as well. Conclusions and recommendations are presented in Section 4.0. References are presented in Section 5.0.

2.0 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

The Site is located in located in Brooklyn, New York on Block 41, Lot 17. The Site, which is bounded by Front Street, Bridge Street and Water Street to the south, east and north, respectively, has two current addresses: 220 Water Street and 201 Front Street. A Site location map was presented as Figure 1-1. The entire Site, with the exception of the sidewalk area, is covered by buildings. There is no exposed soil at the Site with the exception of a two foot by two foot area of missing concrete in the basement of the wood building. The East River is located approximately 1,000 feet north of the Site.

The Site is located in a mixed commercial/industrial area zoned as M1-2. According to the City of New York Department of City Planning (City Planning), an M1-2 zone is designated as a Light Manufacturing District (High Performance). According to the City Planning, the properties immediately adjacent to the Site to the north, east and west are all located in an M1-2 zone. The property south of the Site was recently changed to a M1-2/R-8A (General Residence District) zone through a city-initiated rezoning action; the Site property currently remains zoned as M1-2.

The Site is occupied by a five-story building, which was built in two phases according to the New York City Building Department records: the eastern portion was constructed in 1905 and the western side was constructed in 1952. The eastern portion of the building is identified as the "wood building" because of its predominant wood frame and flooring, and the western side is referred to as the "concrete building", named for its predominant concrete framing and flooring. (KTR Newmark, 2004A)

Adjacent property use includes: the former Kirkman and Sons industrial building to the north which has been converted to a residential loft

apartment building; an undeveloped parking lot and an undeveloped construction site to the south; a former industrial building converted into a residential loft apartment building to the east; and a fenced, vacant lot followed by a 1-story commercial/industrial building at 173-177 Water Street to the west.

It is anticipated that the Site and existing building will be converted into residential apartments. The proposed plan includes an adaptive reuse of the existing five-story building with a possible two-story addition to the top of the building. All floors will contain residential apartments. In addition to the residential apartments on the ground floor, a recreation facility, a retail use and parking may also be included. Along the perimeter of the building, there may be repair and/or improvements made to the property and sidewalks. While the foregoing proposed residential reuse of the property is highly likely, a commercial/office use is not precluded. The area surrounding the Site consists of many other converted industrial buildings that now are used for similar purposes. Previous Site investigations identified asbestos containing building material (ACBM) and lead-based paint (LBP) at the Site. Although these media will not be part of the scope of this remedial investigation, they will be addressed appropriately during the redevelopment in a manner consistent with all federal, state, and local requirements.

3.0 REMEDIAL INVESTIGATION SCOPE OF WORK AND OBJECTIVES

The RI scope of the work consisted of sampling of groundwater, sub-building soil vapor, indoor air, background outdoor air, and subsurface soil sampling beneath sidewalks and the building. The investigation data will be used to evaluate potential remedial needs for the Site. It is anticipated that the Site would be converted into residential apartments with commercial use on the ground floor, consistent with reuse of industrial buildings in this area of Brooklyn. Previous Site investigations identified ACBM and LBP at the Site. Although these media are not part of the scope of this RI, they will be addressed appropriately during the redevelopment in a manner consistent with all federal, state, and local requirements.

3.1 REMEDIAL INVESTIGATION FIELD SAMPLING ACTIVITIES

3.1.1 Soil Sampling

Table 3-1 presents a summary of soil samples collected during the additional investigative activities. Implementation of the soil boring activities commenced in November 2005 and was completed in December 2005. Soil borings were advanced at the following locations where lead was previously detected in soil at concentrations above the default NYSDEC and NYSDOH screening level of 400 mg/kg: SB-2, SB-5, SB-6, SB2-2, SB2-6, SB 3-5, and SB-9. Additionally, the following four new soil borings were advanced at specific locations in the interior of the building to investigate potential sub-surface impacts: SB-10 through SB-13. As shown in Figure 3-1, a total of five borings were advanced for soil sample collection outside of the building: SB2-2, SB-6, SB-5, SB2-6, and SB-2. Two of these soil borings, SB-5 and SB2-6, were converted into permanent monitoring wells, MW-2 and MW-1, respectively (see Section 3.1.2 for installation details). Five soil borings were attempted in the interior of the

building, as per the RIWP: SB-9, SB-10, SB-11, SB-12, and SB3-5. A sixth soil boring (SB-13) was also advanced and sampled just outside the boiler room. All borings were advanced at two-foot intervals. Intervals at locations scheduled to be sampled for full TCL/TAL analysis (i.e., SB-9, SB-10, SB-11) were screened with a photoionization detector (PID) in two-foot intervals down to refusal or six feet below grade to determine which interval to submit for laboratory analysis.

Exterior soil borings were installed using a 4.25-inch hollow-stem auger (HSA) drill rig and split spoons, respectively. Split spoons advanced at 2-foot intervals by a cathead and standard 140-pound hammer simulating a free-fall of 30 inches, and collected using a properly decontaminated 2-foot by 2-inch carbon steel split-spoon sampler driven by a 140-lb. hammer dropped 30 inches. An ERM field representative examined and identified the soil sample immediately upon collection, and developed a soil boring log as per Appendix A (Standard Operating Procedures [SOP]) of the RIWP. Samples were collected at 2-foot intervals. Borings were abandoned with removed material and concrete in accordance with the SOP of the RIWP.

A total of 20 soil samples were collected and analyzed. Table 3-1 presents a summary of the soil samples collected during the RI. Appendix A presents the soil boring logs with soil descriptions for samples collected at the Site. Appendix B contains the field notes for the investigation work conducted at the Site.

All samples identified in the RIWP were collected with the exception of the following:

- Refusal at three feet below grade was encountered at SB-6 during each of four attempts. Thus, only one sample (2-3') was collected and submitted for laboratory analysis rather than the three samples identified in the RIWP.

- The concrete floor thickness at SB-12 was found to be greater than three feet. Due to the thickness of this flooring and the reduced likelihood of direct contact exposures or impacts at this location, soil samples were not collected at SB-12. Furthermore, the thickness of the concrete in the area of this sampling location would likely have been a barrier to any potential contaminant release from the interior.

- Refusal was encountered at SB3-5 at 2.5 feet below grade during each of three attempts; thus a soil sample was collected just outside the boiler room at a new location SB-13.

- Refusal was encountered at SB-13 at two feet below grade, possibly due to an underlying concrete slab. Thus, only one sample, from the one to two-foot depth interval, was collected from this location.

As per the RIWP, soil samples were collected from beneath a drain cover in the concrete basement building (SB-10). During sampling activities, the drain cover was removed. No piping was observed connecting the drain to the sewer and the drain did not have a bottom. Thus, the boring was advanced through the drain soil bottom for soil sample collection.

All soil samples collected were analyzed for total lead by USEPA SW846 Method 6061B. Following receipt and evaluation of total lead concentration results, three composite soil samples were formulated by the laboratory at the direction of ERM for TCLP lead analysis via USEPA SW846 Method 6061B. Soil samples from locations exhibiting total lead concentrations greater than 400 mg/kg and less that 1,000 mg/kg were composited into two samples, each given an 'A' designation, for TCLP lead analyses (one for interior, and one for exterior). Two interior soil samples SB-10 (0-2') and SB-13 (1-2') were composited to form "Interior A" and three exterior soil samples SB-5 (2-4'), SB2-6 (0-2'), and SB2-6 (4-6') were composited to form "Exterior A". Only one sample exhibited a total

lead concentration greater than 1,000 mg/kg, SB-6 (2-3'), which was designated Exterior B for TCLP lead analysis. Interior lead soil concentrations from the additional investigation were not above 1,000 mg/kg, thus a second TCLP sample was not necessary for interior soil. The TCLP lead results were obtained to evaluate whether soil would be considered a hazardous waste upon excavation, if materials were removed from the Site.

Soil samples from SB-9 (0'-2'), SB-10 (2'-4'), and SB-11 (0'-2') were submitted for full TCL+TICs and TAL analysis. Intervals were chosen based on the highest PID reading detected from each of the three borings. The soil sample with the highest PID reading from SB-12 was also scheduled to be sampled for full TCL/TAL analyses; however, as previously noted, no samples were collected at this location.

3.1.2 Monitoring Well Installation

A total of four (4) monitoring wells were installed to evaluate groundwater flow and Site groundwater quality. Initially three wells were installed in 2005: one was installed on the southern side of the property, near the anticipated upgradient boundary of the Site, and the other two were installed north of the property, near the anticipated downgradient boundary of the Site. Based on the first round of groundwater sample results from these wells in January 2005, NYSDEC requested one additional well be installed on the upgradient boundary of the Site in their comment letter dated 3 July 2006. To locate this additional well, four temporary geoprobe groundwater samples were initially installed upgradient of the Site along a transect that was approximately perpendicular to the direction of groundwater flow. The geoprobe work was completed in September 2006. It resulted in installation of a new permanent well, MW-4, in October 2006. The sample location plan,

showing the temporary geoprobe groundwater sample locations and subsequent permanent monitoring well (MW-4) is shown in Figure 3-1.

In accordance with the RIWP, wells were scheduled to be installed and sampled using 4.25-inch HSA drill rig and split spoons, respectively. However, the debris in soil posed a fouling threat. Further, an initial attempt to install wells with HSA was unsuccessful due to repeated refusal prior to reaching groundwater. Thus, the wells had to be installed using a combination of direct push and coring with bio slurry, which was approved by NYSDEC. This alternate drilling method is not expected to have a significant impact, if any, on groundwater sample results, as only a minimal amount of bio slurry was used.

Groundwater monitoring wells were installed to intercept the water table using a 10-foot screen. Split spoons were collected at two-foot intervals to observe the soil lithology in soil borings where soil samples were collected and identify the depth at which groundwater was present. MW-1 and MW-2 were coincident with soil boring locations SB2-6 and SB-5, respectively, where lead concentrations greater than 400 mg/kg were observed at depth during previous investigations. To determine the depth of lead impacts, soil samples were collected during the installation of MW-1 and MW-2 and analyzed for lead. Because KTR sampling detected lead at concentrations less than 400 mg/kg at SB-2-1 (which was coincident with MW-3) at depth, soil samples were not collected from monitoring well MW-3 for laboratory analysis. Monitoring well logs are included in Appendix A.

3.1.3 Groundwater Sampling

Following the initial well installation in 2005, the original three monitoring wells were developed. Groundwater sampling was conducted on 11 January 2006, approximately two weeks following well

development activities. Likewise, following the installation of MW-4, this well was developed and, following a two-week waiting period, sampled along with the original three wells. The second sampling occurred on 31 October 2006. The groundwater samples from the first round of sampling were analyzed for VOCs, SVOCs, PCBs, pesticides, and TAL metals using USEPA SW-846 Methods 8260B, 8270, 8082, 8081, and 6010B, respectively. Mercury was analyzed using USEPA SW-846 Method 7470. Groundwater samples from the second round of sampling in October 2006 were analyzed for VOCs only.

To avoid the generation of a significant volume of purge water and collect more representative groundwater concentrations of dissolved constituents, USEPA low-flow well sampling techniques were utilized. Well purging continued until the turbidity of the recovered groundwater was less than 50 Nephelometric Turbidity Units (NTUs) and the pH, conductivity, oxidation-reaction potential (ORP), and temperature measurements of the purge water stabilized to within 10% for a minimum of three consecutive measurements. Appendix C includes the low-flow sample sheets for the groundwater samples collected at the Site. The applicable SOP for this work was presented in Appendix A of the RIWP. The HASP and sampling QAPP for this work were presented in Appendices B and C of the RIWP, respectively.

3.1.4 Soil Vapor Sampling

Two rounds of soil vapor sampling were conducted. Two sub-slab soil vapor samples, SG-1 and SG-2, were collected for laboratory analysis during each of the two sampling rounds. During each round, one vapor sample was collected from below the wood basement and concrete basement, each. The first round of sampling was conducted in December 2005. Based on the results of the first round of sub-slab vapor sampling, at the request of NYSDOH, the second round of sampling on 6 April 2006

incorporated simultaneous indoor and outdoor (background) air samples. Additional discussion regarding the indoor air sample collection during Round 2 sampling is provided in Section 3.1.5.

Two soil vapor samples were collected during each round. The first sub-slab vapor sample (SG-1) was collected from below the concrete basement to account for any footings or structures that may separate the concrete portion of the building from the wooden portion of the building. The concrete basement vapor sample was collected from just beneath the concrete floor, within any sub-slab aggregate material that was present. The second sub-slab vapor sample (SG-2) was collected in the wood building in the vicinity of the former SB-9 boring location. Prior to sampling, the uncovered floor area in the wood basement was sealed to prevent any short-circuiting of air flow from the surface from impacting sample results.

All sub-slab vapor samples were collected using a Summa canister equipped with a flow regulator. Helium tracer gas was used to verify that the sample had not been diluted by surface air. The helium gas tracer was used at the concrete basement location (SG-1), but not in the wood basement location (SG-2). Since the wood basement is a confined space, as confirmed by NYSDEC, the tracer gas could not be used at this location due to health and safety concerns for engulfment and/or potential oxygen deficiency.

Using a flow regulator, the vapor samples were collected at a collection flowrate of approximately 0.2 liters per minute for a 2-hour period. The initial and final vacuum in the Summa canister was recorded to assess any leakage that may occur during transport.

The sub-slab soil vapor samples were analyzed for VOCs using EPA Method TO-15 by STL of Burlington, Vermont. The SOP for this work was

presented in Appendix A.10 of the RIWP. The validated sub-slab soil vapor sample results from the first round of vapor sampling were submitted to NYSDEC in Monthly Progress Report #03 for February 2006. Based on the first round of sub-slab soil vapor sampling results, NYSDOH determined that collection of indoor air samples was needed.

3.1.5 Simultaneous Sub-slab and Indoor Air Sampling

A second round of sub-slab vapor samples were collected on 6 April 2006 at SG-1 and SG-2. Along with the sub-slab vapor samples, indoor and outdoor air samples were collected at the request of NYSDEC. Four indoor air samples were collected, two within the wood building (basement and second floor) and two within the concrete building (basement and elevator shaft on the second floor). One outdoor air sample was collected on Water Street, in the vicinity of MW-3, to evaluate background ambient air concentrations. The four indoor air samples were collected in the concrete basement (IA-01), the wood basement (IA-02, and considered a confined space), the elevator shaft on the second level of the concrete building (IA-04), and the second floor of the wood building (IA-03). Using flow regulators, samples were collected at a collection flowrate of approximately 0.2 liters per minute for a 2-hour period. The initial and final vacuum in the Summa canister was recorded to assess any leakage that may occur during transport. The samples were analyzed for VOCs using EPA Method TO-15 by STL of Burlington, Vermont.

3.1.6 Surveying

After the completion of soil boring and monitoring well installation activities, the monitoring wells and exterior soil boring locations were surveyed by a NYS-licensed land surveyor, Keller and Kirkpatrick, Inc., for horizontal and vertical control. The longitude and latitude of exterior

soil borings and the monitoring wells were also recorded. The horizontal datum was based upon the 1983 North American Datum (NAD, NY Long Island), and the vertical datum was based on North American Vertical Datum (NAVD) '88. Figure 3-1 shows the soil samples and wells completed during the RI. The elevations of all monitoring well casings were established to within +/- 0.01 feet based on the NAVD '88 datum. A notch was placed in all interior casings to provide the point to collect future groundwater elevation measurements. Interior soil boring locations were determined via field measurements.

3.1.7 Waste Management

Drums were noted to be present in the wood building basement during a 2004 Phase I ESA and during a subsequent Site visit by ERM and NSYDEC on 16 February 2005. However, during installation of the soil borings and monitoring wells, these drums were no longer present at the Site. It is presumed that these drums had been empty and were removed prior to the main Site tenant vacating the building in May 2005. Currently drums containing purge water from well development and sampling remain on-Site in the wood building and are scheduled to be removed from the property and disposed off-Site in accordance with applicable regulations.

3.2 ANALYTICAL RESULTS

Analytical results for the soil, groundwater, sub-slab vapor, indoor air and outdoor air (background) samples collected are presented in the subsections 3.2.1 through 3.2.4. Appendix D includes a CD containing the Data Usability Summary Reports (DUSRs) and the laboratory analytical reports for all sample analysis conducted during the additional

investigation. Section 3.2.5 presents a Qualitative Exposure Assessment for the Site.

3.2.1 Soil

A total of 20 soil samples were analyzed for lead during the additional investigation. Table 3-1 presents a summary of soil samples, reason for sample collection, and analyses performed. Three of 20 soil samples (SB-9 [0-2'], SB-10 [2-4'], and SB-11 [0-2']) were analyzed for full TCL/TAL[1] analyses. Three composite soil samples, Interior A, Exterior A, and Exterior B, were analyzed for TCLP lead. Soil results were compared to the NYSDEC TAGM 4046. Table 3-2 presents a comparison of all soil samples to their TAGM 4046 RSCOs and the default NYSDEC and NYSDOH screening value of 400 mg/kg for lead.

Concentrations of VOCs, PCBs, and pesticides in all soil samples were below their TAGM 4046 RSCOs. Lead was detected at concentrations above the default NYSDEC and NYSDOH screening value 400 mg/kg in SB-10 (0-2'), SB-13 (1-2'), SB2-6(0-2', 2-4'), SB-5 (2-4'), and SB-6 (2-3'). Lead concentrations above the default NYSDEC and NYSDOH screening value during the additional investigation ranged from 519 mg/kg in SB2-6 to 6,710 mg/kg in SB-6. These results, along with the historical data, are provided in Figures 3-2 through 3-4 to depict cross-section views of all lead soil results for all investigations conducted at the Site to date.

Arsenic, cadmium, cobalt, copper, iron, mercury, nickel, and zinc were also detected above their RSCOs in soil. Arsenic was detected at a concentration of 9.3 J mg/kg at SB-9 (0-2'), above its RSCO of 7.5 mg/kg. Copper was detected at concentrations of 466 J mg/kg at SB-9 (0-2') and 27.1 mg/kg at SB-10 (2-4'), above its RSCO of 25 mg/kg. Mercury was

[1] SB-9 (0-2') was requested for PCB laboratory analysis, but was not analyzed by the lab.

detected at concentrations 0.12 J mg/kg at SB-9 (0-2') and 0.93 mg/kg at SB-10 (2-4') above its RSCO of 0.1 mg/kg. Nickel was detected at concentrations of 29.1 J mg/kg at SB-9 (0-2'), 25.3 mg/kg at SB-10 (2-4'), and 16.6 mg/kg at SB-11 (0-2'), above its RSCO of 13 mg/kg. Zinc was detected at concentrations of 800 J mg/kg at SB-9 (0-2'), 99.5 mg/kg at SB-10 (2-4'), and 47.8 mg/kg at SB-11 (0-2'). Cobalt was detected in SB-11 (0-2') at a concentration of 40.5 mg/kg, above its RSCO of 30 mg/kg. Cadmium was detected at a concentration of 13 mg/kg at SB-10 (2-4'), above its RSCO of 10 mg/kg. Iron was detected at concentrations of 46,000 mg/kg at SB-9 (0-2'), 14,000 mg/kg at SB-10 (2-4'), and 10,800 mg/kg at SB-11 (0-2'), above its RSCO of 2,000 mg/kg.

SVOCs detected in soil above RSCOs were PAHs. Benzo(a)anthracene, benzo(a)pyrene, chrysene, and dibenzo(a,h) anthracene were detected above their RSCOs in SB-9 (0-2') and SB-11 (0-2'). SVOCs detected in SB-9 (0-2') above their RSCOs were benzo(a)anthracene (890J mg/kg), benzo(a)pyrene (900J mg/kg), chrysene (810J mg/kg), and dibenzo(a,h)anthracene (120J mg/kg). The RSCOs for these compounds are 224 mg/kg, 61 mg/kg, 400 mg/kg, and 14 mg/kg, respectively. Benzo(b)fluoranthene was also detected slightly above its RSCO of 1,100 mg/kg in SB-9 (0-2') at 1,200J mg/kg. Chrysene and benzo(a)anthracene were each detected at 1,000 mg/kg in SB-11 (0-2') above their RSCOs of 400 mg/kg and 224 mg/kg, respectively. Finally, benzo(a)pyrene was detected at 840 mg/kg in SB-11 (0-2'), above its RSCO of 61 mg/kg. The concentrations of these PAHs in soil were generally consistent with urban fill (ASTDR, 1995). Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with PAHs concentrations that are above TAGM 4046 RSCOs.

3.2.2 TCLP Results

As discussed in Section 3.1.1, three composite soil samples were

formulated for TCLP lead analysis. Interior A and Exterior A consisted of soil samples exhibiting total lead concentrations between 400 and 1,000 mg/kg. Exterior B consisted of the one exterior soil sample, SB-6 (2-3'), that exhibited a lead concentration greater than 1,000 mg/kg. The TCLP results were compared to the USEPA RCRA TCLP limit of 5 mg/L for characteristic hazardous waste. Table 3-2 presents the soil TCLP results for composite soil samples. Both the Interior A and Exterior A samples exhibited lead leachate concentrations below the limit, at 2.27J mg/L and 2.96J mg/L, respectively. Exterior B exhibited a TCLP lead concentration of 198J mg/L. Thus, soil in the vicinity of SB-6 (2-3') would be considered hazardous waste upon excavation.

3.2.3 Groundwater

Depth to water measurements were collected for groundwater flow information. Figures 3-5 and 3-6 present groundwater flow maps based on the groundwater elevations from January 2006 and October 2006, respectively. As shown on these figures groundwater is generally flowing to the north.

Table 3-3 summarizes the VOC, SVOC, PCB, pesticide, and TAL metals groundwater analytical results for MW-1, MW-2, and MW-3 for January 2006 and for MW-1 through MW-4 for October 2006. Table 3-3A summarizes the VOC geoprobe groundwater analytical results that were used to locate MW-4. SVOCs, pesticides, and PCBs were not detected in Site groundwater.

The NYSDEC request to install another upgradient monitoring well was prompted by the finding of a Trichloroethene (TCE) concentration in MW-3 of 15 µg/L , which was more than three times the TCE concentration observed in the upgradient well MW-1 (1.3 µg/L) during the initial

sampling in January 2006. After installation of MW-4, the new upgradient well, a second round of sampling in October 2006 found TCE in this upgradient location at a level of 6.3 µg/L. The corresponding TCE concentration in the downgradient well, MW-3, during the October 2006 13 µg/L, was approximately twice the upgradient concentration.

As indicated on Table 3-3, the remaining VOC results from the second round of groundwater sampling were fairly consistent with prior findings. Overall, the only two VOCs that exhibit concentrations in excess of NYS ground water standards during the first or second sampling round were TCE and Tetrachloroethene (PCE).

Both the initial and second samplings identified TCE in upgradient and downgradient groundwater. Depending on the sampling event, the reported TCE concentrations were above the NYS groundwater standard at both upgradient and downgradient locations. The presence of TCE and PCE at detectable concentrations in both upgradient and downgradient wells indicates an upgradient source of contamination. Moreover, given the moderate TCE concentration range observed at both upgradient and downgradient locations (i.e., 6.3 µg/L to 13 µg/L), the differential between the upgradient and downgradient values in the second sampling round further indicates that TCE is present in the regional groundwater moving beneath the Site.

Magnesium, manganese, and sodium were the only inorganic constituents detected above their NYS groundwater quality standards in all three wells. Magnesium was detected above its NYS groundwater quality standard of 35,000 µg/L in MW-1 at 50,300 µg/L, in MW-2 at 50,200 µg/L, and in MW-3 at 46,500 µg/L. Manganese was detected above its NYS groundwater quality standard of 300 mg/kg in MW-1 at 1,000 µg/L, at 1,000 µg/L in MW-2, and at 383 µg/L in MW-3. Sodium was detected above its NYS groundwater quality standard of 20,000 µg/L in MW-1 at

113,000 µg/L, in MW-2 at 103,000 µg /L, and in MW-3 at 109,000 µg /L. These exceedances are consistent with groundwater quality near saline waters.

3.2.4 Soil Vapor and Indoor Air Sampling

Table 3-4 summarizes sub-slab soil vapor, indoor air, and outdoor air (background) sampling results. Sub-slab soil vapor samples were collected from two locations, SG-1 and SG-2, beneath the concrete basement and wood basement. At the request of NYSDOH, a second round of sub-slab vapor samples, coincident with four indoor air samples and one outdoor air sample, were collected at the Site. The NYSDOH Guidance for Evaluating Soil Vapor Intrusion dated October 2006 provides Soil Vapor/Indoor Air matrices to evaluate whether TCE or PCE concentrations require further action (i.e., monitoring or mitigation).

During the first round of sampling, a variety of VOCs were detected, with PCE and TCE being the most prominent. PCE was detected at 560 µg/m^3 in SG-1 and 480 µg/m^3 in SG-2. TCE was detected at 3,700 µg/m^3 in SG-1 and 5,100 µg/m^3 in SG-2.

During the second round of sampling, a variety of VOCs were detected, with PCE and TCE being the most prominent. PCE concentrations of 440 µg/m^3 (SG-1) and 350 µg/m^3 (SG-2) and TCE concentrations of 7,500 µg/m^3 (SG-1) and 3,600 µg/m^3 (SG-2) were detected in sub-slab soil vapor. On the second floor, indoor air concentrations of TCE were not detected at a detection limit of 0.86 µg/m^3 in IA-03 (wood building) and 1.1 µg/m^3 in IA-04 (elevator shaft of concrete building). In the basements, indoor air concentrations of TCE were 7.0 µg/m^3 in IA-01 (concrete basement) and 28 µg/m^3 in IA-02 (wood basement), the highest concentration being within the wood basement, an unoccupied, confined space area. PCE was also detected in one indoor air sample (IA-02) at 5.6

µg/m^3, also in the wood basement. PCE was not detected at a detection limit of 1.1 µg/m^3 in the remaining three indoor air samples.

Generally, TCE and PCE were either not detected or detected at low levels in indoor air, with the exception TCE in the basements. Most VOCs detected in indoor air were not detected in sub-slab soil vapor, indicating that there are other sources of these compounds. Based on the corollary matrices prepared by NYSDOH, mitigation and/or monitoring would be required.

There is no apparent correlation between the TCE in groundwater, approximately 24 to 35 feet beneath the Site from the exterior ground surface, which had a maximum concentration of 15 µg/L and the elevated soil vapor concentrations. The maximum soil vapor TCE concentrations are on the order of thousands of micrograms per meter cubed, which would be expected to require a significant transfer of VOC mass from groundwater into soil vapor. There are cases where soil vapor has been observed to travel more than a hundred feet laterally, dependent upon chemical properties, subsurface geometry and composition, preferential pathways, and building characteristics (USEPA, 2002). Thus, elevated soil or groundwater concentrations may exist a significant distance from where resultant elevated soil vapor concentrations migrate. In fact, there are numerous utility lines and sewer lines at the Site (see field notes sketch for utilities noted along Front Street during a private utility survey conducted for subsurface clearance purposes for drilling) that may provide preferential pathways for soil vapor to migrate to beneath the building, which is situated on a localized topographic high for the area.

3.2.5 Qualitative Exposure Assessment

In accordance with Draft DER-10 Technical Guidance for Site Investigation and Remediation, (NYSDEC, 2002), a qualitative exposure

assessment has been prepared for the Site. The Site is located in a mixed commercial/industrial area with recent rezoning to accommodate residential development as well. The Site itself currently houses residential occupancy, and until recently, commercial occupancy. The Site currently consists of a five story building: the eastern portion of the building is identified as the "wood building" because of its predominant wood frame and flooring, and the western side is referred to as the "concrete building", named for its predominant concrete framing and flooring. The ground surface is covered with impervious cover with the exception of a two by two foot square uncovered area in the wood basement and drain in the concrete basement, and the East River is located approximately 1,000 feet away from the Site.

3.2.5.1 Chemicals of Concern

Based on sampling conducted in the RI as well as historical sampling results, contaminants of potential concern (COPCs) include PAHs, metals and VOCs. PAHs (benzo(a)anthracene, benzo(a)pyrene, chrysene, and dibenzo(a,h) anthracene and benzo(b)fluoranthene) and metals (arsenic, cadmium, lead, cobalt, copper, iron, mercury, nickel, and zinc) are present at concentrations above the TAGM 4046 RSCOs; however, their concentrations, with the exception of lead, are generally consistent with those found in urban fill. Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with PAHs and metals concentrations that are above TAGM 4046 RSCOs or the default NYSDEC and NYSDOH screening value for lead.

VOCs (specifically TCE and PCE) are present in groundwater above the NYS groundwater quality standard both upgradient and downgradient of the Site, and also in soil vapor beneath the Site and indoor air in the unoccupied wood basement. The source of these VOCs is suspected to be an off-Site release. In addition to VOCs, metals (magnesium, manganese,

and sodium) are present in Site groundwater. These chemicals are consistent with saline influenced groundwater bodies. Due to the close proximity of the East River, which is an estuary, Site groundwater is likely saline influenced.

3.2.5.2 Potential Exposure Pathways

Soil

Soil containing chemicals at concentrations in excess of the TAGM 4046 RSCOs are present beneath the sidewalk and beneath the Site building (one sample was collected from an uncovered below building location in the wood basement). Potential exposure pathways for Site soil include: inhalation, dermal contact and ingestion. Because the COPCs detected in Site soil are not the same COPCs detected in Site groundwater, leaching to groundwater is not a complete exposure pathway at this Site.

Following is a summary of the potential current and future exposure pathways.

Exposure Pathway	**Current**	**Future**
Dermal contact/ingestion with soil beneath sidewalk	Not applicable	Construction Workers, Residents, Commercial Workers, Adjacent Property Occupants, Passersby (if soil remains and is left uncovered)
Dermal contact/ingestion with exposed soil within the building	Commercial workers	Construction Workers and Commercial Workers
Inhalation of Dust from Construction Activities	Not applicable	Residents, Commercial Workers, Construction Workers, Adjacent Property Occupants

Currently, soil containing COPCs at concentrations above the TAGM 4046 RSCOs is present beneath the sidewalk. Under future use, residents, commercial workers, construction workers, adjacent property occupants, and commercial workers could be exposed to surficial soil contamination if this soil area is uncovered. However, as noted above, with the exception of lead, the chemical concentrations in soil, although above the TAGM 4046 RSCOs, are consistent with urban fill concentrations. Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with chemical concentrations that are above TAGM 4046 RSCOs or the default NYSDEC and NYSDOH screening value for lead. The wood building currently contains a limited area of exposed impacted soil. The only current potential receptors for this soil are commercial workers working in this area.

Under future use, all of the above exposure scenarios exist if Site conditions and Site use remain the same. In addition, if construction is conducted at the Site, inhalation of particulates containing metals and VOCs by residents and commercial workers (if they remain in the building during this time), adjacent property occupants and construction workers would be a potential exposure pathway. All future construction activities would include activities to mitigate this potential exposure pathway (e.g., dust control measures, etc.).

Groundwater

Groundwater containing VOCs and metals is present upgradient and downgradient of the Site. There are no water supply wells at the Site and thus no ingestion of groundwater. The Site is connected to city water and thus groundwater ingestion would not occur under any future use of the Site. Site groundwater ultimately discharges to the Lower East River where it is diluted by surface water. The Lower East River is designated Class I waters. In accordance with 6 NYCRR 701.13, the best uses of Class

I saline surface waters are secondary contact recreation and fishing. Due to the depth of groundwater, dermal contact with groundwater during current or future use (e.g., construction) activities are not anticipated. Given the above Site conditions, potential exposure pathways for Site groundwater are restricted to: volatilization to indoor air and secondary contact recreation and fishing after dilution in the Hudson River. However, due to the low concentrations of VOCs in Site groundwater and the likelihood that they will either volatilize upon entry into the East River or become diluted and the fact that the groundwater concentrations of metals are consistent with estuary impacts, discharge to surface water is not a problematic exposure pathway.

Under current use, commercial workers, who have access to the basement, have the only potential exposure to VOCs migrating from groundwater to indoor air. Under future use, additional parties could become receptors for this pathway depending upon renovations to the existing structure or construction of new Site building (if executed). Based on the indoor air results, the slab structure in place is believed to be a barrier to significant migration of impacted vapors to occupied spaces of the building. The future redevelopment will address this exposure pathway. Specifically, measures would be implemented to prevent vapor migration from beneath the building to indoor air.

4.0 CONCLUSIONS AND RECOMMENDATIONS

As part of the additional remedial investigation, 11 soil borings and three monitoring wells were installed. Two rounds of sub-slab soil gas sampling were conducted. During the second round, four concurrent indoor air samples and one concurrent outdoor air sample were also collected. Twenty soil samples were collected for total lead analysis; three of these samples were analyzed for full TCL+TICs/TAL and three composite soil samples were formulated for TCLP lead analysis. Three groundwater samples were collected and analyzed for VOCs, SVOCs, pesticides, PCBs, and metals.

In soil, metals and SVOCs were detected at concentrations above their TAGM 4046 RSCOs or the default NYSDEC and NYSDOH screening value for lead. The most prevalent parameter was lead, which was detected above its default NYSDEC and NYSDOH screening value of 400 mg/kg in five areas, with the highest detection at the SB-6 location, under the sidewalk. Other metals detected above their TAGM 40406 RSCOs included arsenic, cadmium, cobalt, copper, iron, mercury, nickel, and zinc. SVOC detections in soils above the TAGM 4046 RSCOs included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene and dibenzo(a,h)anthracene. Concentrations of metals, with the exception of lead, and SVOCs were generally consistent with urban fill. Nonetheless, the remedy proposed for the Site would be designed to prevent direct contact with metals concentrations that are above TAGM 4046 RSCOs and the default NYSDEC and NYSDOH lead screening value. In general, the RI activities indicate localized soil areas containing elevated lead concentrations. Remedial needs for these areas will be addressed in the Remedial Action Work Plan (RAWP).

In groundwater, VOCs and metals were detected above their NYS groundwater quality standards. TCE and PCE were both detected in the

upgradient and downgradient Site wells at a concentration differential less than three times, indicating an upgradient source of contamination. Metals detected above their NYS groundwater quality standards were magnesium, manganese, and sodium, chemicals associated with saline waters (i.e., East River influence).

Two rounds of soil vapor sampling were conducted at the Site. In each case, samples were collected from beneath both the wood basement (SG-1) and the concrete basement (SG-2). Though these sample results show elevated TCE and PCE in soil vapor, it has been shown at other sites that vapors can migrate a significant distance from their source. Based on sampling results in these media, additional monitoring for groundwater and mitigative measures for soil vapor are warranted to address elevated VOC concentrations. These measures will be evaluated in a RAWP.

5.0 REFERENCES

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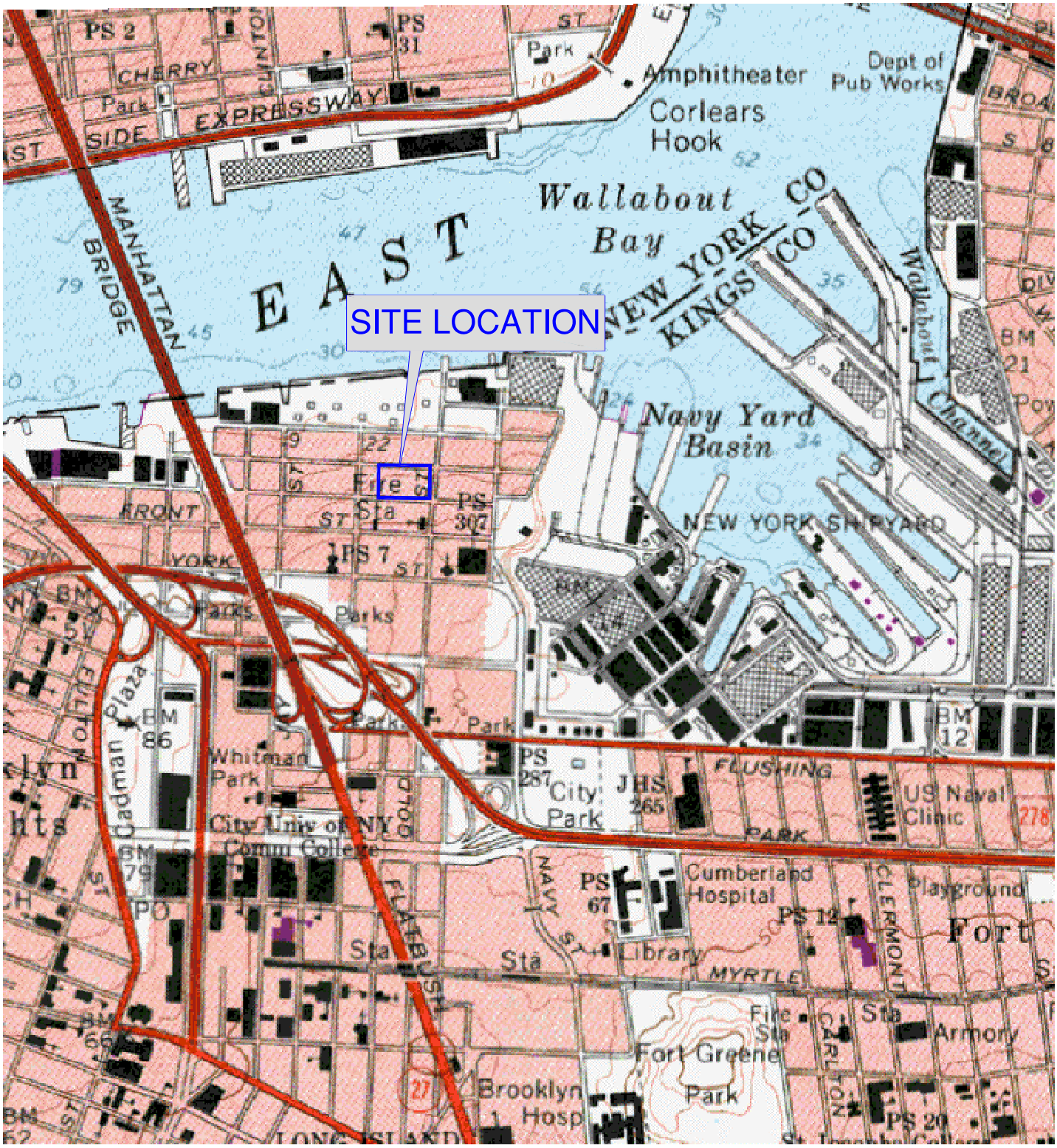
FIGURES



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GRAPHIC SCALE

N

REFERENCE:
A PORTION OF USGS 7.5 MINUTE TOPOGRAPHIC MAP; BROOKLYN QUADRANGLE, NEW YORK; 1969; PHOTREVISED 1979.

TITLE

SITE LOCATION MAP
220 WATER STREET
BROOKLYN, NEW YORK

PREPARED FOR

NYSDEC

Environmental Resources Management

SCALE	FIGURE
GRAPHIC	1-1

DRAWN	JOB NO.	FILE NAME	DATE
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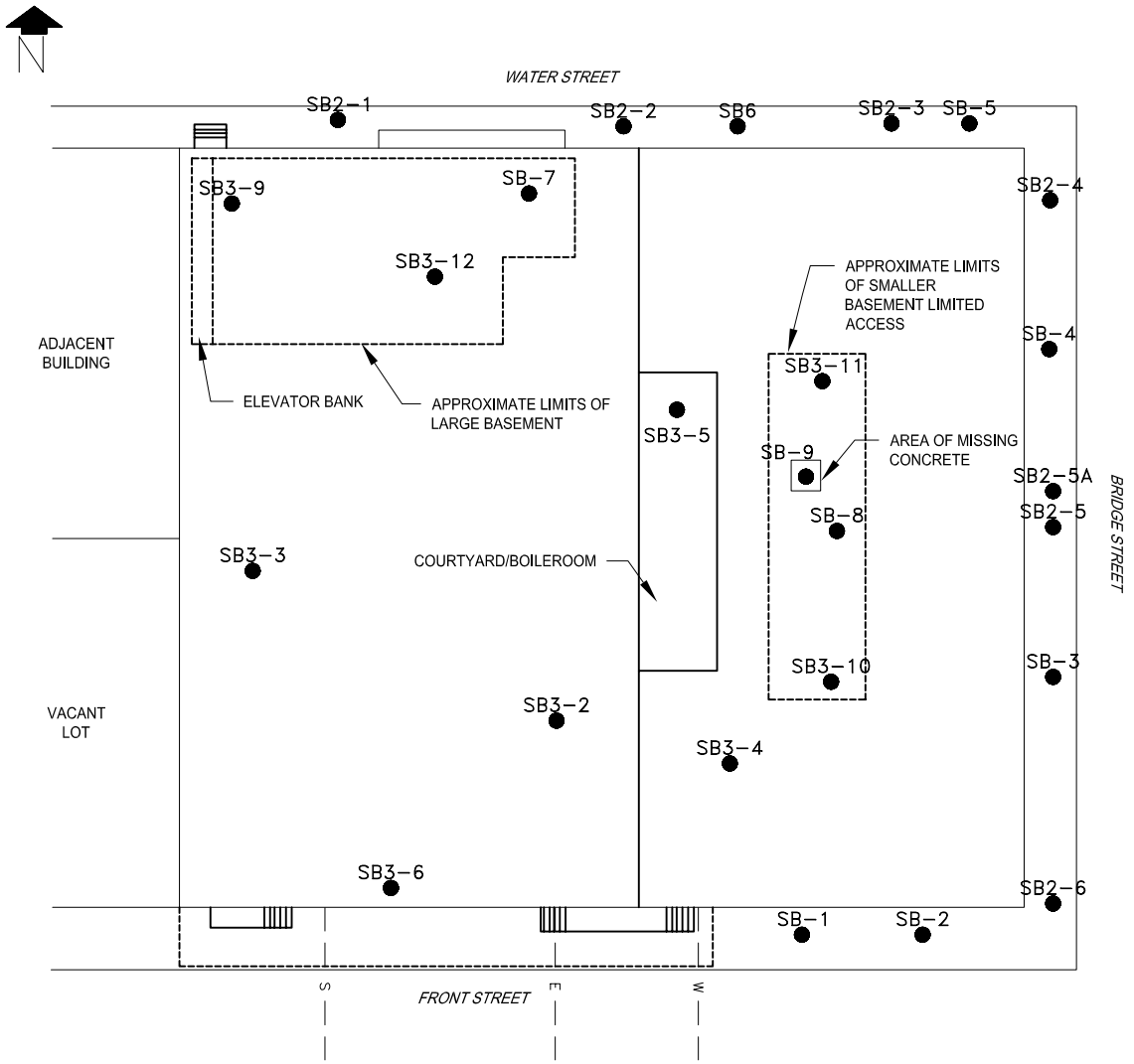

LEGEND

● SOIL BORING

NOTES:
1. EXTERIOR LOCATIONS TO SCALE
2. INTERIOR LOCATIONS ARE APPROXIMATE
SOURCE: BASED ON JADE ENVIRONMENTAL, INC. DRAWING DATED 07/09/04

50 25 0 50

SCALE IN FEET

TITLE

PREVIOUS SOIL BORING LOCATIONS
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management

ERM

SCALE	FIGURE
GRAPHIC	1-2

DRAWN:	JOB NO.:	FILE NAME:	DATE
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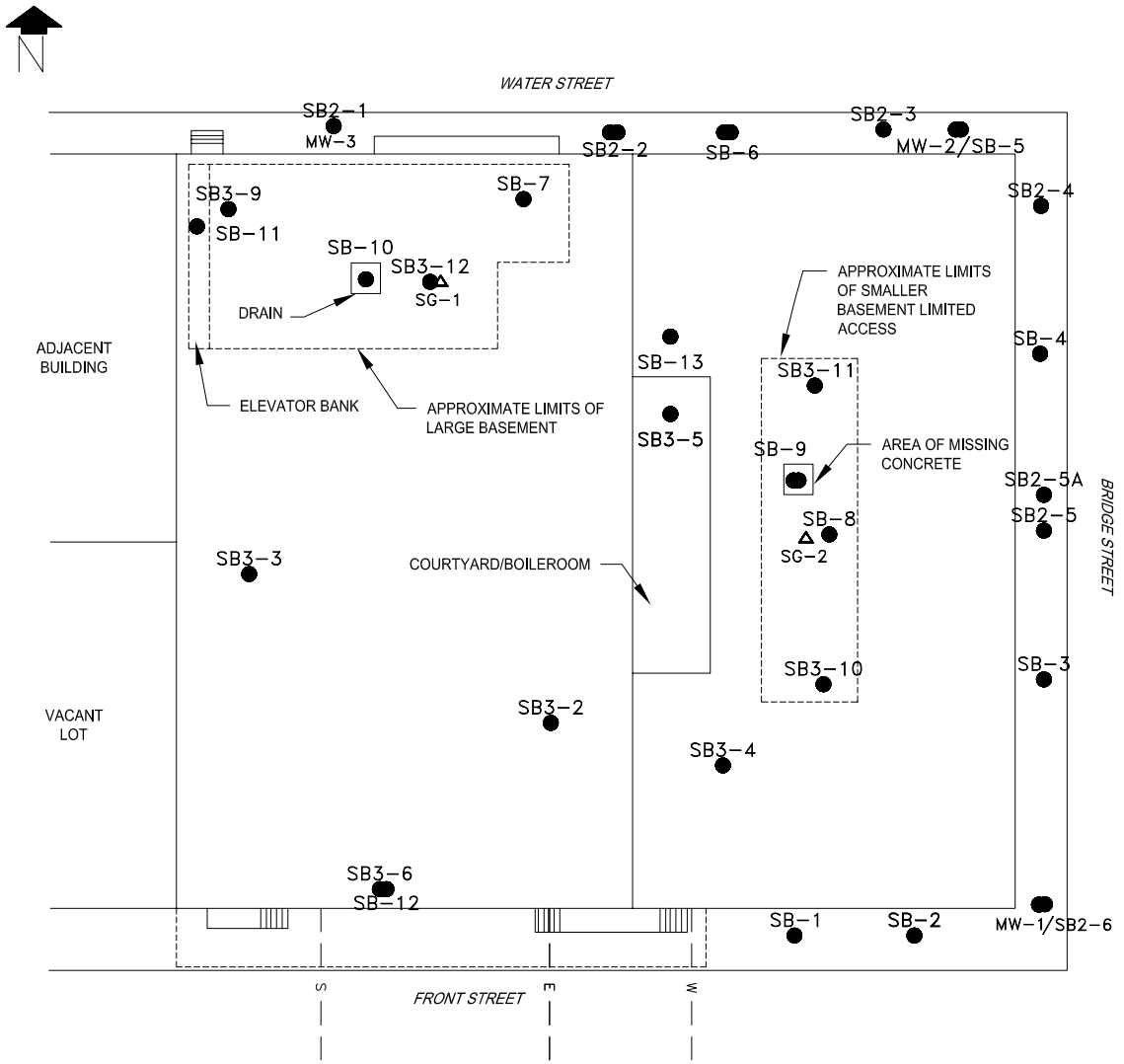

LEGEND

- ⊕ MONITORING WELL
- △ SOILGAS SAMPLE LOCATION
- ● SOIL BORING LOCATIONS
- ◉ DRAIN

NOTES:
1. EXTERIOR LOCATIONS TO SCALE
2. INTERIOR LOCATIONS ARE APPROXIMATE
SOURCE: BASED ON JADE ENVIRONMENTAL, INC. DRAWING DATED 07/09/04
3. EXTERIOR SOIL BORINGS AND WELLS INSTALLED BY ERM WERE SURVEYED BY KELLER AND KIRKPATICK OF PARSIPPANY, NJ.

50 25 0 50

SCALE IN FEET

TITLE

ALL SOIL BORING LOCATIONS
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management

ERM

SCALE	FIGURE
GRAPHIC	1-3

DRAWN:	JOB NO.:	FILE NAME:	DATE
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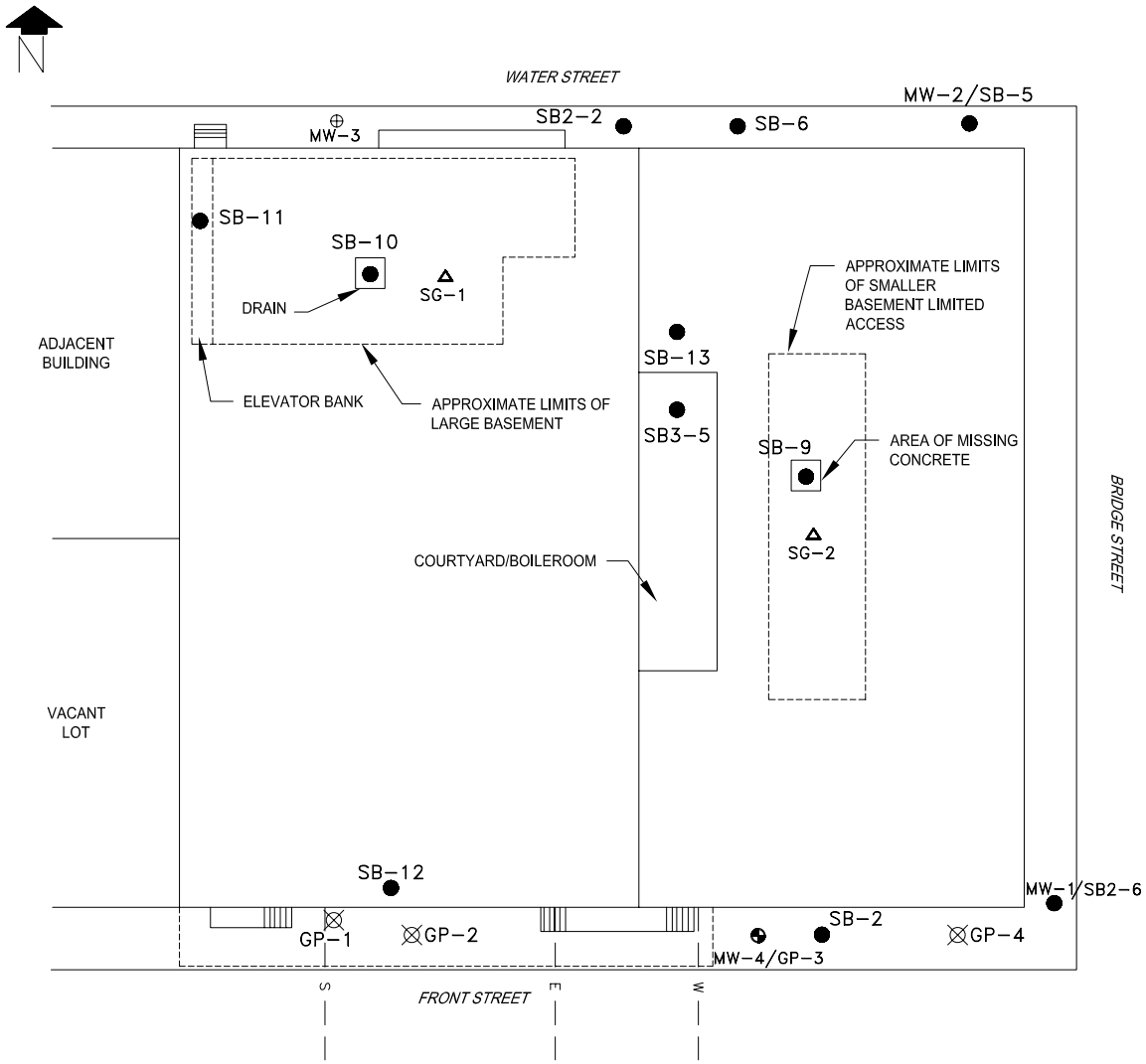

LEGEND

- GEOPROBE
- MONITORING WELL
- SOILGAS SAMPLE LOCATION
- DEEPER SOIL SAMPLE LOCATION
- DRAIN

NOTES:
1. EXTERIOR LOCATIONS TO SCALE
2. INTERIOR LOCATIONS ARE APPROXIMATE
SOURCE: BASED ON JADE ENVIRONMENTAL, INC. DRAWING DATED 07/09/04
3. EXTERIOR SOIL BORINGS AND WELLS INSTALLED BY ERM WERE SURVEYED BY KELLER AND KIRKPATICK OF PARSIPPANY, NJ.

50 25 0 50

SCALE IN FEET

TITLE

RI SAMPLE LOCATION PLAN
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management

SCALE	FIGURE
GRAPHIC	3-1

DRAWN:	JOB NO.:	FILE NAME:	DATE
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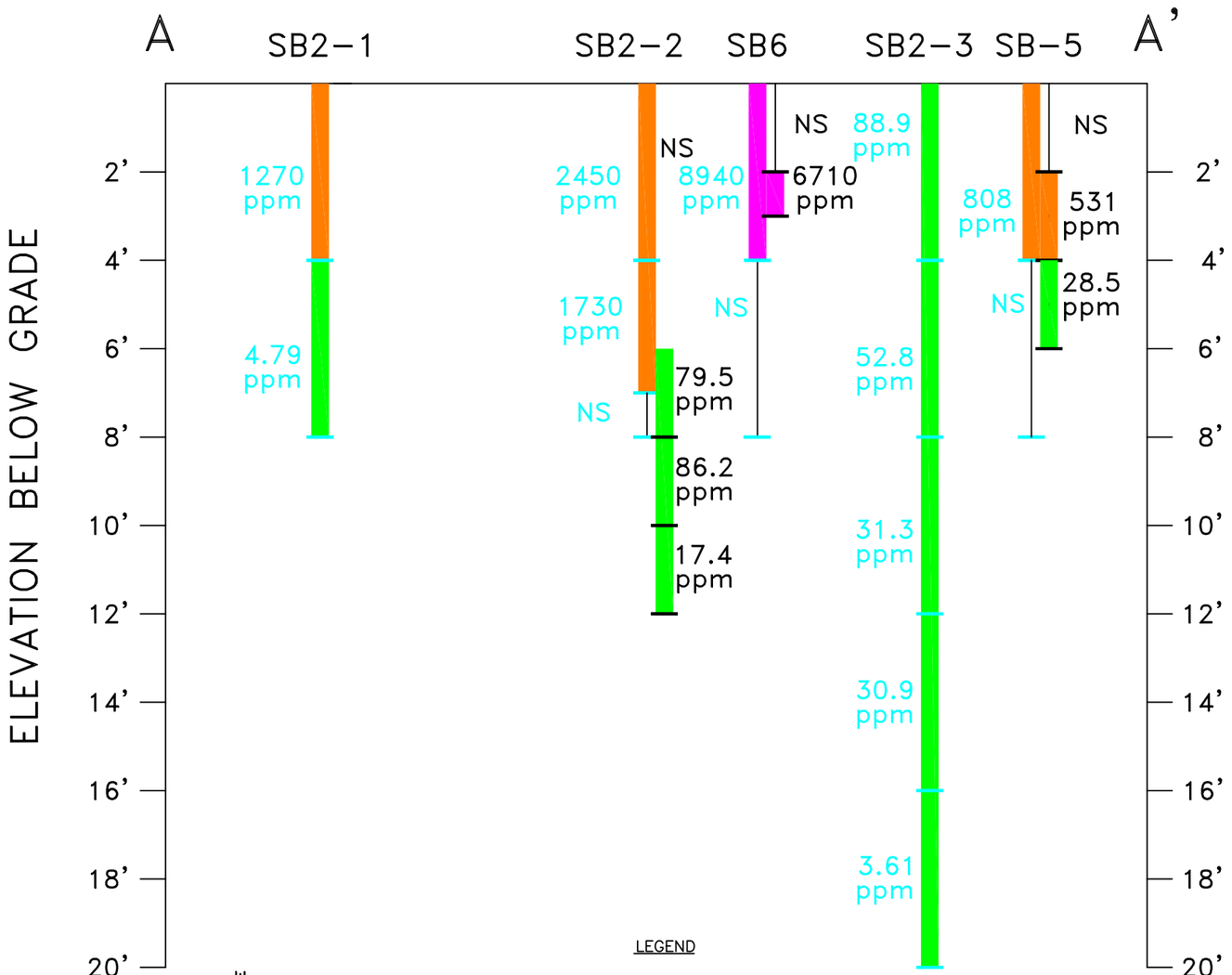
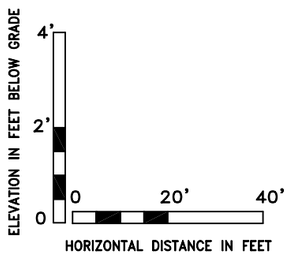
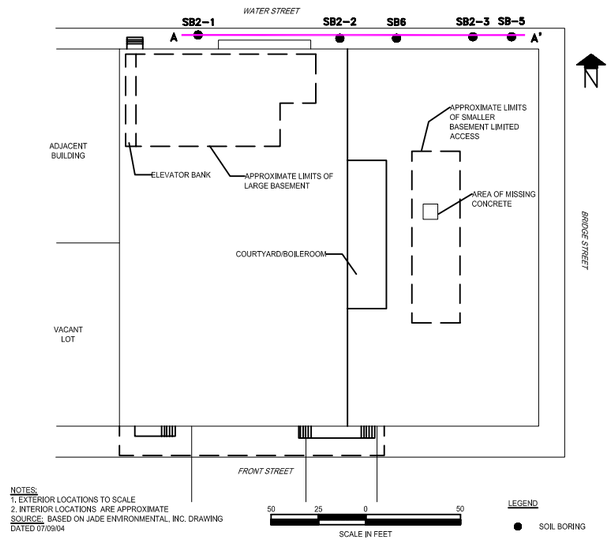




LEGEND

	LEAD CONCENTRATIONS <400 ppm
	400 ppm < LEAD CONCENTRATIONS <5,000 ppm
	LEAD CONCENTRATIONS ≤ 5,000 ppm
NS	NOT SAMPLED – FIRST SAMPLING ROUND
NS	NOT SAMPLED – SECOND SAMPLING ROUND
ppm	PARTS PER MILLION – FIRST SAMPLING ROUND
ppm	PARTS PER MILLION – SECOND SAMPLING ROUND



TITLE

EXTERIOR SOIL BORING CROSS–SECTION A–A'
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management
ERM

DRAWN:	JOB NO.:	FILE NAME:	SCALE	FIGURE
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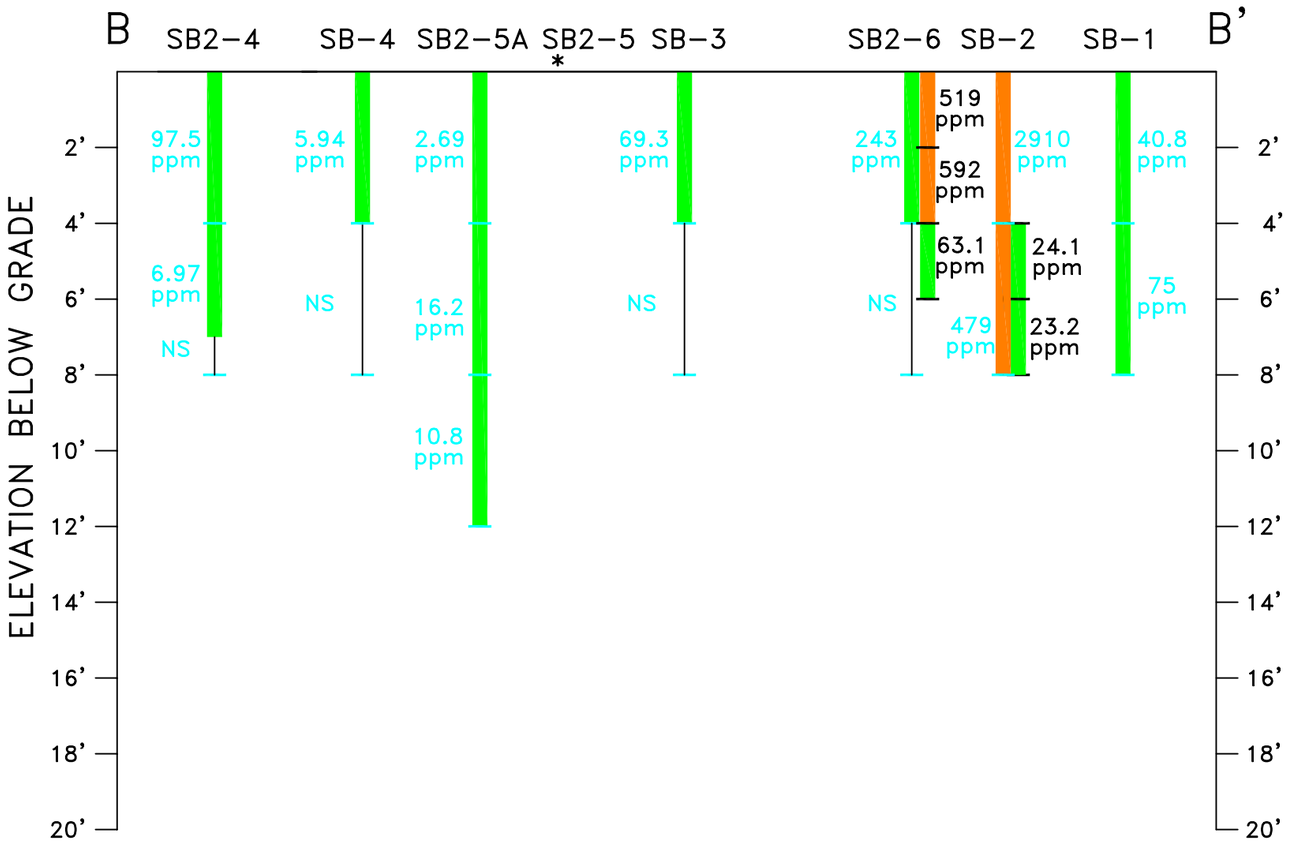
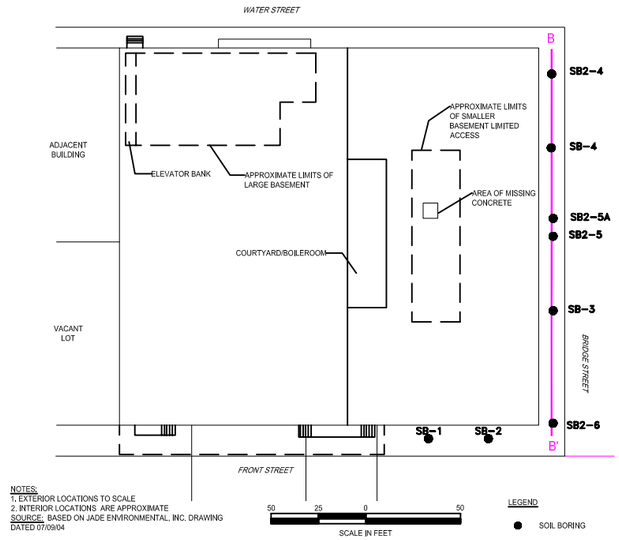
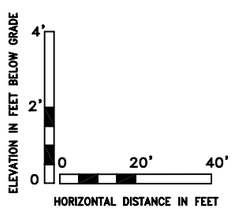
			DATE 12/7/06	







LEGEND

	LEAD CONCENTRATIONS ≤ 400 ppm
	400 ppm < LEAD CONCENTRATIONS ≤ 5,000 ppm
NS	NOT SAMPLED – FIRST SAMPLING ROUND
ppm	PARTS PER MILLION – FIRST SAMPLING ROUND
ppm	PARTS PER MILLION – SECOND SAMPLING ROUND
*	NO SAMPLES COLLECTED AT THIS LOCATION

TITLE

EXTERIOR SOIL BORING CROSS-SECTION B-B'
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management
ERM

DRAWN:	JOB NO.:	FILE NAME:	SCALE	FIGURE
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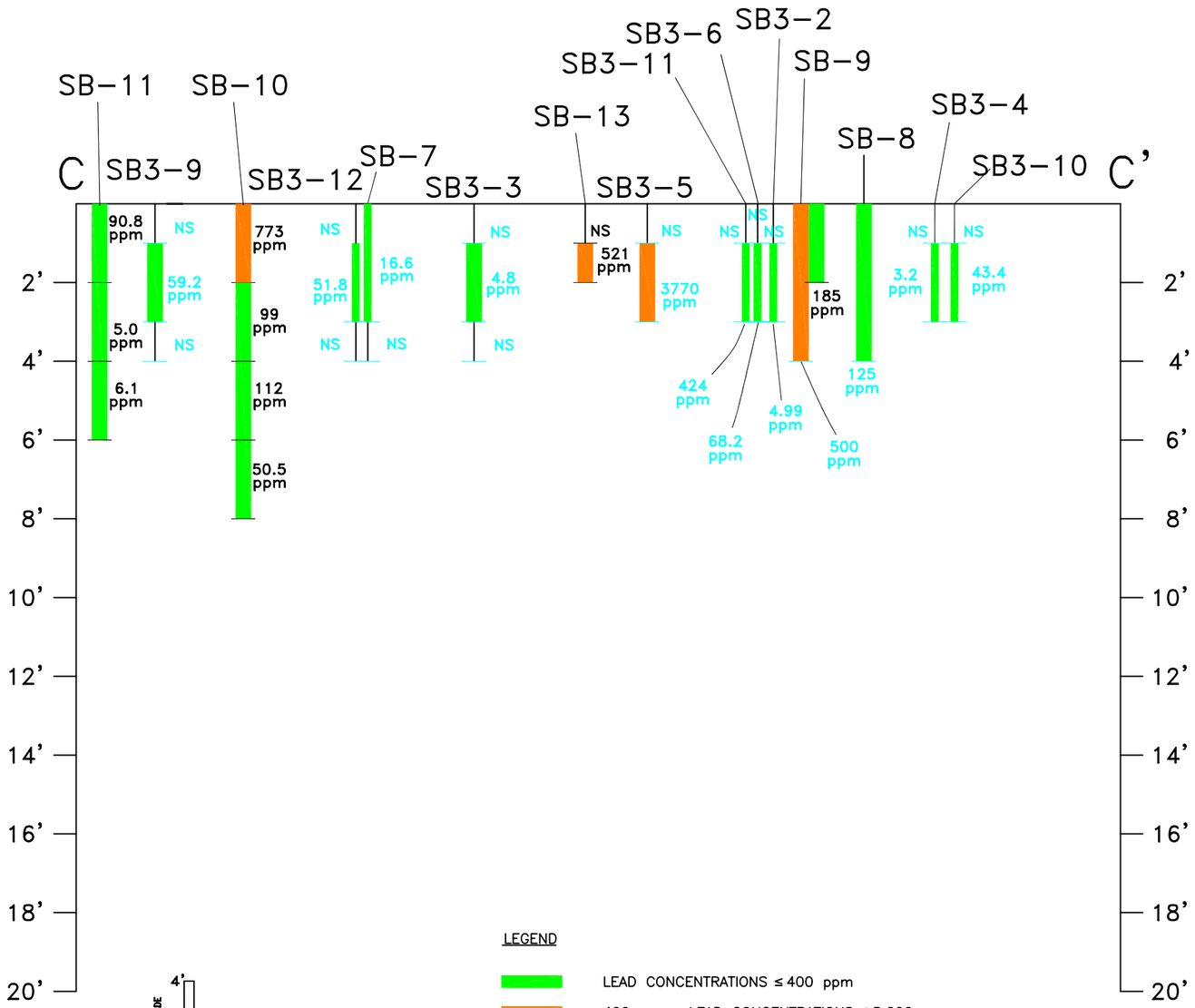
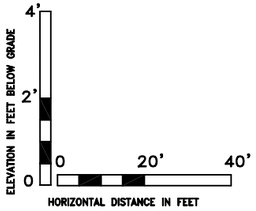
			DATE 12/7/06	





LEGEND

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NS	NOT SAMPLED – FIRST SAMPLING ROUND
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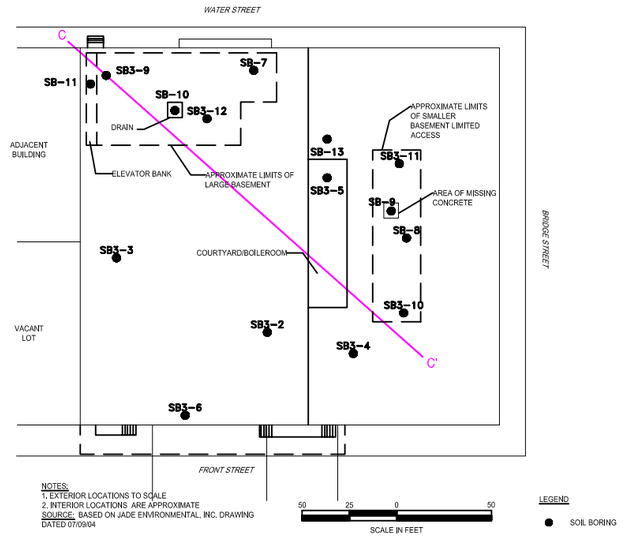

TITLE

INTERIOR SOIL BORING CROSS-SECTION C-C'
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management
ERM

DRAWN:	JOB NO.:	FILE NAME:	SCALE	FIGURE
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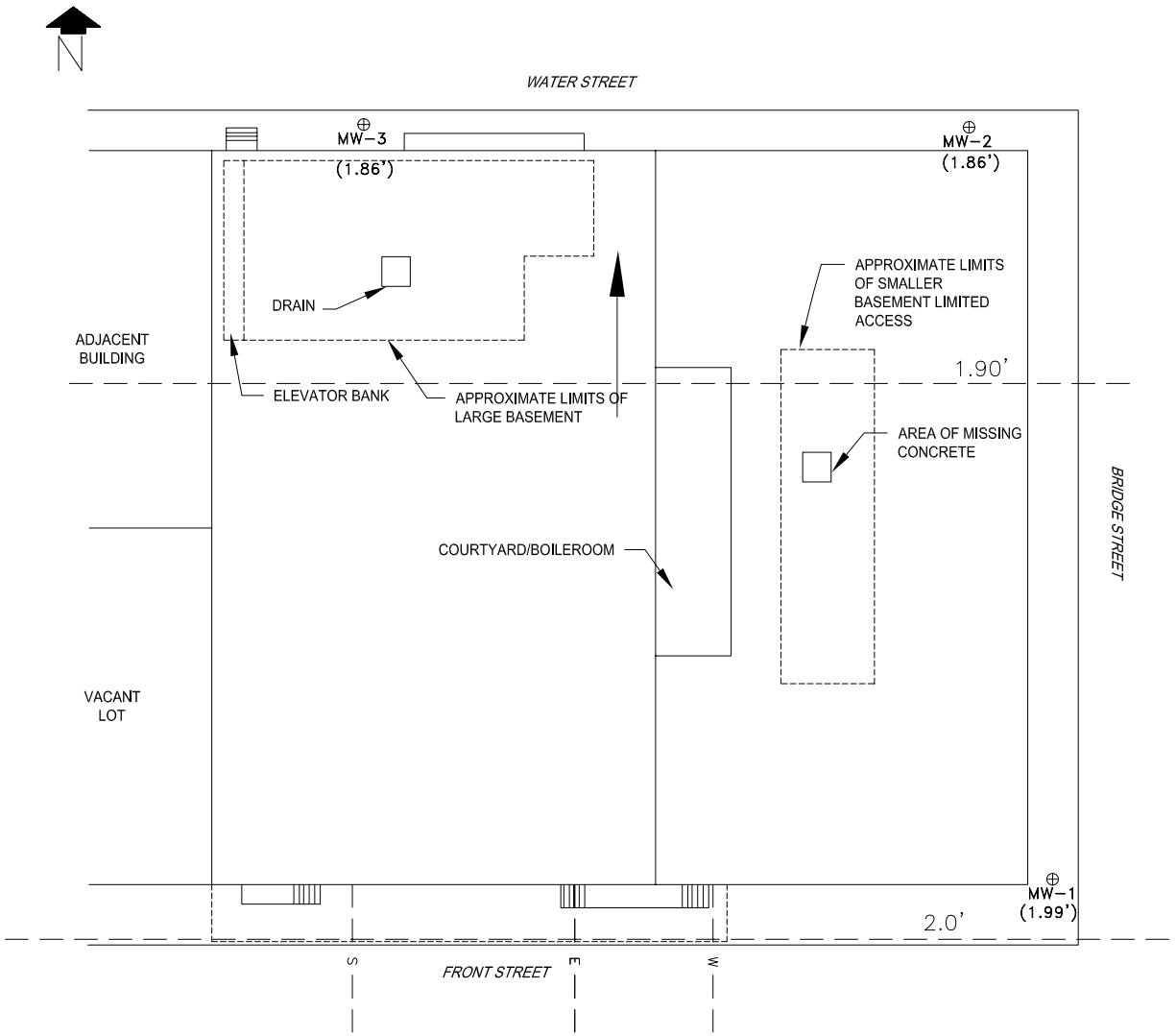
			DATE 12/7/06	



LEGEND

- ⊕ MONITORING WELL
- 1.90' GROUNDWATER ELEVATION CONTOUR
- DIRECTION OF GROUNDWATE FLOW
- DRAIN

NOTES:

Well Location per property survey by Keller and Kirkpatrik

50 25 0 50

SCALE IN FEET

Source: Survey Map by Keller and Kirkpatrik, Parsippany, NJ

TITLE

GROUNDWATER FLOW MAP
JANUARY 2006
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

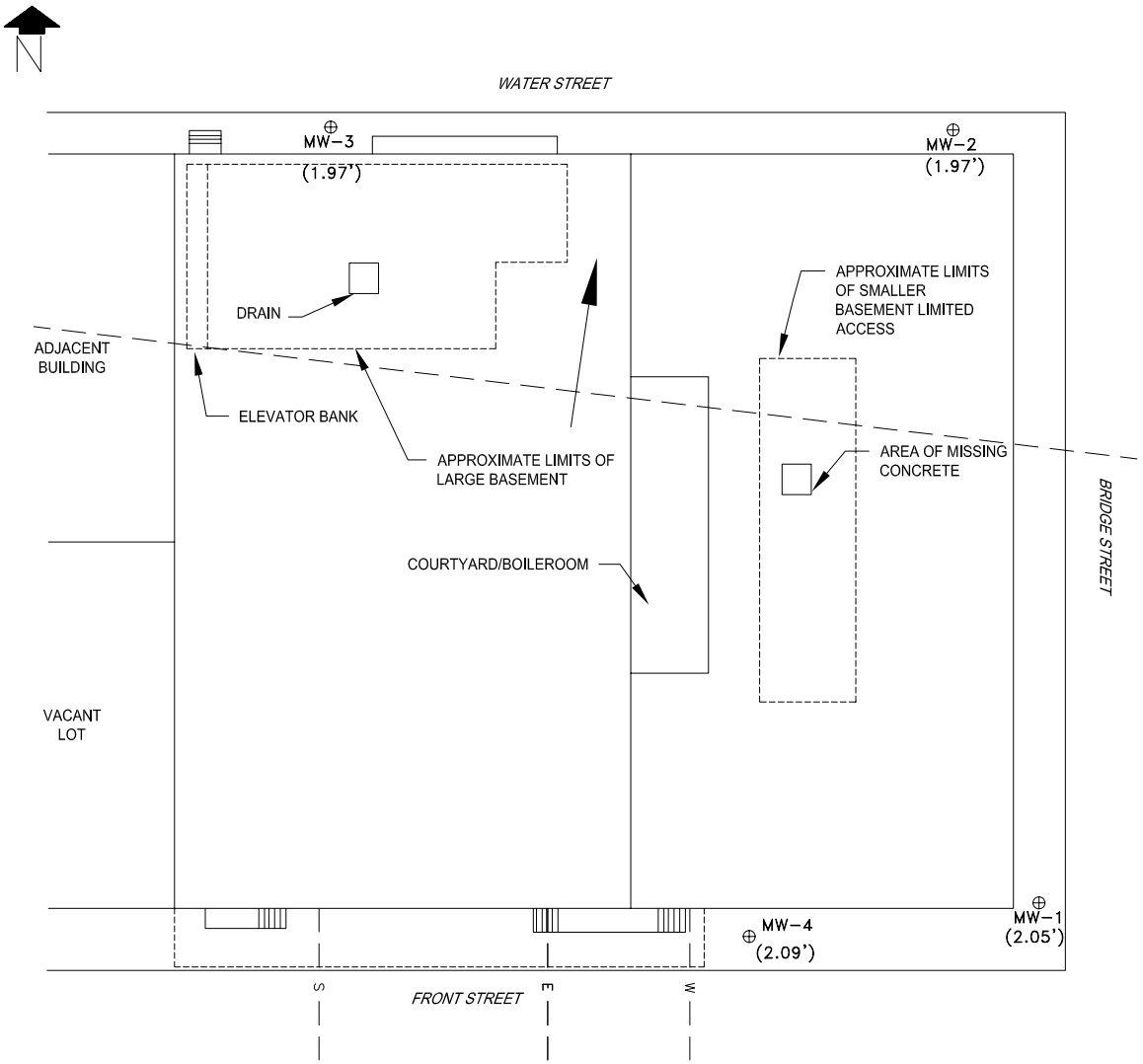
220 WATER STREET

Environmental Resources Management

ERM

SCALE	FIGURE
GRAPHIC	3-5

DRAWN:	JOB NO.:	FILE NAME:	DATE
JMC/EMF	0022103	0022103-00-015	12/14/06



Source: Survey Map by Keller and Kirkpatrik, Parsippany, NJ

LEGEND

⊕ MONITORING WELL

(1.97') GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

GROUNDWATER ELEVATION CONTOUR

DIRECTION OF GROUNDWATE FLOW

DRAIN

NOTES:

Well Location per property survey by Keller and Kirkpatrik

50 25 0 50

SCALE IN FEET

TITLE

GROUNDWATER FLOW MAP
OCTOBER 2006
220 WATER STREET
BROOKLYN, NY

PREPARED FOR

220 WATER STREET

Environmental Resources Management

ERM

SCALE	FIGURE
GRAPHIC	3-6

DRAWN:	JOB NO.:	FILE NAME:	DATE
JMC/EMF	0022103	0022103-00-025	12/14/06

TABLES

Table 3-1
Summary of Soil Samples
220 Water Street
Brooklyn, NY 11211

DISCRETE SOIL SAMPLES

Sample Designation		Location Description	Analysis
EXTERIOR LOCATIONS			
SB 2-2	(6-8')	Former location of soil boring with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead
	(8-10')		
	(10-12')		
SB-6	(2-3')	Former location of soil boring with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead
SB-5	(2-4')	Former location of soil boring with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead
	(4-6')		
SB 2-6	(0-2')	Former location of soil boring with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead
	(2-4')		
	(4-6')		
SB-2	(4-6')	Former location of soil boring with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead
	(6-8')		
	(8-10')		Not analyzed due to shallower zone providing delineation for lead
INTERIOR LOCATIONS			
SB3-5	(0-2.5')	Former location of soil boring with soil sample exhibiting lead concentrations above 400 mg/kg	Not analyzed since SB-13 was alternately attempted to collect a deeper soil sample. Though an obstruction was encountered at nearly the same depth as SB-13.
SB-9	(0-2')	Former location of soil boring in wood building basement with soil sample(s) exhibiting lead concentrations above 400 mg/kg	Total Lead, TCL+ TICs/TAL analysis [(1)]
SB-10	(0-2')	Location of drain within the concrete building basement. Since the drain does not discharge to the sewer, the soil boring was advanced through the center of the drain.	Total Lead
	(2-4')		Total Lead, TCL+ TICs/TAL analysis
	(4-6')		Total Lead
	(6-8')		
SB-11	(0-2')	Outside elevator machine room.	Total lead,TCL+ TICs/TAL analysis
	(2-4')		Total Lead
	(4-6')		
SB-12	(0-3.5')	Former main electrical room where straining of floor was noted. Two attempts were made to collect a soil sample at this location, though the concrete slab thickness was found to be greater than three feet. Thus, the potential for subsurface impacts at this location.	Not analyzed (since only concrete was encountered to 3.5' below grade).
SB-13	(1-2')	Outside Boiler Room	Total Lead

Table 3-1
Summary of Soil Samples
220 Water Street
Brooklyn, NY 11211

COMPOSITE SOIL SAMPLES

Sample Designation	Location Description	Analysis
Interior A [(2)]	Interior soil samples with lead concentrations between 400 mg/kg and 1,000 mg/kg: SB-10 (0-2') and SB-13 (1-2')	TCLP Lead
Exterior A	Exterior soil samples with lead concentrations between 400 and 1,000 mg/kg: SB-5 (2-4'), SB2-6 (0-2'), and SB2-6 (4-6').	TCLP Lead
Exterior B	Only one exterior soil sample exhibited a lead concentration greater than 1,000 mg/kg: SB-6 (2-3').	TCLP Lead

(1) This sample was not analyzed for PCBs by the laboratory.
(2) There were no interior soil samples with lead detected at a concentration greater than 1,000 mg/kg. Hence, a TCLP sample was not required.

Notes
TCL+TICs/TAL = target compound list (TCL) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs) with tentatively identified compounds (TICs) reported. TAL is target analyte list (TAL) for inorganics.
400 mg/kg = Default New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) screening value for lead
TCLP= Toxicity Characteristic Leaching Procedure.

Table 3-2
Summary of Soil Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-001 12/08/2005 Primary	SB-9 211601-002 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Starting Depth	(feet)		0.00	0.00	2.00	0.00
Ending Depth	(feet)		2.00	2.00	4.00	2.00
1,1,1-Trichloroethane	(ug/kg)	800	5.2 U	5.3 U	5.8 U	5.6 U
1,1,2,2-Tetrachloroethane	(ug/kg)	600	5.2 U	5.3 U	5.8 U	5.6 U
1,1,2-Trichloroethane	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
1,1-Dichloroethane	(ug/kg)	200	5.2 U	5.3 U	5.8 U	5.6 U
1,1-Dichloroethene	(ug/kg)	400	5.2 U	5.3 U	5.8 U	5.6 U
1,2-Dichloroethane	(ug/kg)	100	5.2 U	5.3 U	5.8 U	5.6 U
1,2-Dichloropropane	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
2-Butanone	(ug/kg)	300	59	31	12 U	19 U
2-Hexanone	(ug/kg)		10 U J	11 U J	12 U	11 U
4-Methyl-2-Pentanone	(ug/kg)	1000	10 U	11 U	12 U	11 U
Acetone	(ug/kg)	200	21 U	21 U	23 U	23 U
Benzene	(ug/kg)	60	5.2 U	5.3 U	5.8 U	5.6 U
Bromodichloromethane	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Bromoform	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Bromomethane	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Carbon Disulfide	(ug/kg)	2700	5.2 U	5.3 U	5.8 U	5.6 U
Carbon Tetrachloride	(ug/kg)	600	5.2 U J	5.3 U J	5.8 U	5.6 U
Chlorobenzene	(ug/kg)	1700	5.2 U	5.3 U	5.8 U	5.6 U
Chloroethane	(ug/kg)	1900	5.2 U	5.3 U	5.8 U	5.6 U

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-001 12/08/2005 Primary	SB-9 211601-002 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Chloroform	(ug/kg)	300	5.2 U	5.3 U	5.8 U	5.6 U
Chloromethane	(ug/kg)		5.2 U	5.3 U	5.8 U J	5.6 U
cis-1,2-Dichloroethene	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
cis-1,3-Dichloropropene	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Dibromochloromethane	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U J
Ethylbenzene	(ug/kg)	5500	5.2 U	5.3 U	5.8 U	5.6 U
Methylene Chloride	(ug/kg)	100	6.4 J	21 U	23 U	23 U
Styrene	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Tetrachloroethene	(ug/kg)	1400	5.2 U	5.3 U	5.8 U	5.6 U
Toluene	(ug/kg)	1500	5.2 U	5.3 U	5.8 U	5.6 U
trans-1,2-Dichloroethene	(ug/kg)	300	5.2 U	5.3 U	5.8 U	5.6 U
trans-1,3-Dichloropropene	(ug/kg)		5.2 U	5.3 U	5.8 U	5.6 U
Trichloroethene	(ug/kg)	700	5.2 U	5.3 U	2.6 J	5.6 U
Vinyl chloride	(ug/kg)	200	5.2 U	5.3 U	5.8 U	5.6 U
Xylene (total)	(ug/kg)	1200	5.2 U	5.3 U	5.8 U	5.6 U
Sum of Constituents	(ug/kg)		65.40	31.00	2.60	0.00

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

Notes:

- µg/kg = micrograms per kilogram (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Volatile Organic Compound (VOC) analysis by USEPA SW-846 Method 8260B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-2
Summary of Soil Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Starting Depth	(feet)		0.00	0.00	2.00	0.00
Ending Depth	(feet)		2.00	2.00	4.00	2.00
1,2,4-Trichlorobenzene	(ug/kg)	3400	340 U J	340 U J	370 U	360 U
1,2-Dichlorobenzene	(ug/kg)	7900	340 U J	340 U J	370 U	360 U
1,3-Dichlorobenzene	(ug/kg)	1600	340 U J	340 U J	370 U	360 U
1,4-Dichlorobenzene	(ug/kg)	8500	340 U J	340 U J	370 U	360 U
2,4,5-Trichlorophenol	(ug/kg)	100	1600 U J	1600 U J	1800 U	1700 U
2,4,6-Trichlorophenol	(ug/kg)		340 U J	340 U J	370 U	360 U
2,4-Dichlorophenol	(ug/kg)	400	340 U J	340 U J	370 U	360 U
2,4-Dimethylphenol	(ug/kg)		340 U J	340 U J	370 U	360 U
2,4-Dinitrophenol	(ug/kg)	200	1600 U J	1600 U J	1800 U	1700 U
2,4-Dinitrotoluene	(ug/kg)		340 U J	340 U J	370 U	360 U
2,6-Dinitrotoluene	(ug/kg)	1000	340 U J	340 U J	370 U	360 U
2-Chloronaphthalene	(ug/kg)		340 U J	340 U J	370 U	360 U
2-Chlorophenol	(ug/kg)	800	340 U J	340 U J	370 U	360 U
2-Methylnaphthalene	(ug/kg)	36400	340 U J	340 U J	370 U	290 J
3,3-Dichlorobenzidine	(ug/kg)		680 U J	680 U J	730 U	720 U J
4,6-Dinitro-o-cresol	(ug/kg)		1600 U J	1600 U J	1800 U	1700 U
4-Bromophenyl phenyl ether	(ug/kg)		340 U J	340 U J	370 U	360 U
4-Chlorophenyl phenyl ether	(ug/kg)		340 U J	340 U J	370 U	360 U
Acenaphthene	(ug/kg)	50000	340 U J	340 U J	370 U	330 J

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Acenaphthylene	(ug/kg)	41000	210 J	340 U J	370 U	61 J
Anthracene	(ug/kg)	50000	160 J	340 U J	370 U	820
Benzo(a)anthracene	(ug/kg)	224	[890] J	63 J	370 U	[1000]
Benzo(a)pyrene	(ug/kg)	61	[900] J	54 J	370 U	[840]
Benzo(b)fluoranthene	(ug/kg)	1100	[1200] J	340 U J	370 U	930 J
Benzo(ghi)perylene	(ug/kg)	50000	640 J	340 U J	84 J	490
Benzo(k)fluoranthene	(ug/kg)	1100	400 J	340 U J	370 U	310 J
Benzyl alcohol	(ug/kg)		340 U J	340 U J	370 U	360 U
Bis(2-chloroethoxy)methane	(ug/kg)		340 U J	340 U J	370 U	360 U
Bis(2-chloroethyl)ether	(ug/kg)		340 U J	340 U J	370 U	360 U
Bis(2-chloroisopropyl)ether	(ug/kg)		340 U J	340 U J	370 U	360 U
Bis(2-ethylhexyl)phthalate (BEHP)	(ug/kg)	50000	63 J	340 U J	790	66 J
Butyl benzyl phthalate	(ug/kg)	50000	340 U J	340 U J	370 U	360 U
Carbazole	(ug/kg)		340 U J	340 U J	370 U	300 J
Chrysene	(ug/kg)	400	[810] J	59 J	370 U	[1000]
Dibenzo(a,h)anthracene	(ug/kg)	14	[120] J	340 U J	370 U	[96] J
Dibenzofuran	(ug/kg)	6200	340 U J	340 U J	370 U	430
Diethyl phthalate	(ug/kg)	7100	340 U J	340 U J	370 U	360 U
Dimethyl phthalate	(ug/kg)	2000	340 U J	340 U J	370 U	360 U
Di-n-butyl phthalate	(ug/kg)	8100	73 J	340 U J	290 J	360 U
Di-n-octyl phthalate	(ug/kg)	50000	340 U J	340 U J	370 U	360 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Fluoranthene	(ug/kg)	50000	1600 J	140 J	370 U	2500
Fluorene	(ug/kg)	50000	340 U J	340 U J	370 U	450
Hexachlorobenzene	(ug/kg)	410	340 U J	340 U J	370 U	360 U
Hexachlorobutadiene	(ug/kg)		340 U J	340 U J	370 U	360 U
Hexachlorocyclopentadiene	(ug/kg)		340 U J	340 U J	370 U J	360 U
Hexachloroethane	(ug/kg)		340 U J	340 U J	370 U	360 U
Indeno(1,2,3-cd)pyrene	(ug/kg)	3200	650 J	340 U J	49 J	470
Isophorone	(ug/kg)	4400	340 U J	340 U J	370 U	360 U
m-Nitroaniline	(ug/kg)	500	1600 U J	1600 U J	1800 U	1700 U
Naphthalene	(ug/kg)	13000	340 U J	340 U J	370 U	1500
Nitrobenzene	(ug/kg)	200	340 U J	340 U J	370 U	360 U
N-Nitrosodiphenylamine	(ug/kg)		340 U J	340 U J	370 U	360 U
N-Nitrosodipropylamine	(ug/kg)		340 U J	340 U J	370 U	360 U
o-Cresol	(ug/kg)	100	340 U J	340 U J	370 U	360 U
o-Nitroaniline	(ug/kg)	430	1600 U J	1600 U J	1800 U	1700 U
o-Nitrophenol	(ug/kg)	330	340 U J	340 U J	370 U	360 U
p-Chloroaniline	(ug/kg)	220	340 U J	340 U J	370 U	360 U
p-Chloro-m-cresol	(ug/kg)	240	340 U J	340 U J	370 U	360 U
p-Cresol	(ug/kg)	900	340 U J	340 U J	370 U	360 U
Pentachlorophenol	(ug/kg)	1000	1600 U J	1600 U J	1800 U	1700 U
Phenanthrene	(ug/kg)	50000	520 J	45 J	45 J	4100

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Phenol	(ug/kg)	30	340 U J	340 U J	370 U	360 U
p-Nitroaniline	(ug/kg)		680 U J	680 U J	730 U	720 U
p-Nitrophenol	(ug/kg)	100	1600 U J	1600 U J	1800 U	1700 U
Pyrene	(ug/kg)	50000	1700 J	130 J	370 U	2500
Sum of Constituents	(ug/kg)		9936.00	491.00	1258.00	18483.00

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

Notes:

- µg/kg = micrograms per kilogram (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Semivolatile Organic Compound (SVOC) analysis by USEPA SW-846 Method 8270C, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-2
Summary of Soil Sampling Analytical Results
Pesticide Compounds (Pest)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-001 12/08/2005 Primary	SB-9 211601-002 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Starting Depth	(feet)		0.00	0.00	2.00	0.00
Ending Depth	(feet)		2.00	2.00	4.00	2.00
4,4'-DDD	(ug/kg)	2900	3.4 U J	34 U J	4 J	0.74 U
4,4'-DDE	(ug/kg)	2100	3.4 U J	34 U J	19 U	0.74 U
4,4'-DDT	(ug/kg)	2100	3.7 J	1.2 J	14 J	0.08 J
Aldrin	(ug/kg)	41	2.1 U J	21 U J	12 U	0.45 U
alpha-BHC	(ug/kg)	110	1.8 U J	18 U J	9.9 U	0.38 U
alpha-Chlordane	(ug/kg)		150 J	15 J	9.9 U	0.38 U
beta-BHC	(ug/kg)	200	1.8 U J	18 U J	9.9 U	0.38 U
delta-BHC	(ug/kg)	300	0.46 J	18 U J	9.9 U J	0.38 U J
Dieldrin	(ug/kg)	44	3.4 U J	34 U J	19 U	0.74 U
Endosulfan I	(ug/kg)	900	0.9 J	18 U J	9.9 U	0.38 U
Endosulfan II	(ug/kg)	900	2.8 J	0.7 J	19 U	0.74 U
Endosulfan sulfate	(ug/kg)	1000	4.2 J	1.9 J	19 U	0.2 J
Endrin	(ug/kg)	100	5.2 U J	52 U J	29 U	1.1 U
Endrin aldehyde	(ug/kg)		3.4 U J	34 U J	19 U	0.74 U
Endrin ketone	(ug/kg)		3.4 U J	34 U J	19 U	0.74 U
gamma-Chlordane	(ug/kg)		130 J	11 J	9.9 U	0.38 U
Heptachlor	(ug/kg)	100	1.8 U J	18 U J	9.9 U	0.38 U
Heptachlor epoxide	(ug/kg)	20	3.1 J	0.42 J	9.9 U	0.051 J
Lindane	(ug/kg)	60	1.8 U J	18 U J	9.9 U	0.38 U

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Pesticide Compounds (Pest)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-9 211601-001 12/08/2005 Primary	SB-9 211601-002 12/08/2005 Duplicate 1	SB10 211488-003 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Methoxychlor	(ug/kg)		18 U J	180 U J	99 U	0.81 J
Toxaphene	(ug/kg)		70 U J	690 U J	390 U	15 U

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Pesticide Compounds (Pest)
220 Water Street
Brooklyn, New York

Notes:

- µg/kg = micrograms per kilogram (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Pesticide Compound (Pest) analysis by USEPA Method 8081A in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-2
Summary of Soil Sampling Analytical Results
Polychlorinated Biphenyl Compounds (PCBs)
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 12/08/2005 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE	SUBSURFACE PCB RSCO	SB10 211488-003 11/30/2005	SB11 211488-009 12/01/2005
Starting Depth	(feet)		2.00	0.00
Ending Depth	(feet)		4.00	2.00
Aroclor 1016	(ug/kg)	10000	20 U J	19 U J
Aroclor 1221	(ug/kg)	10000	38 U J	37 U J
Aroclor 1232	(ug/kg)	10000	20 U J	19 U J
Aroclor 1242	(ug/kg)	10000	20 U J	19 U J
Aroclor 1248	(ug/kg)	10000	20 U J	19 U J
Aroclor 1254	(ug/kg)	10000	20 U J	19 U J
Aroclor 1260	(ug/kg)	10000	10 J	19 U J

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Polychlorinated Biphenyl Compounds (PCBs)
220 Water Street
Brooklyn, New York

Notes:

- µg/kg = micrograms per kilogram (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Polychlorinated Biphenyl Compound (PCB) analysis by USEPA SW-846 Method 8082, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-2 211562-004 12/07/2005 Primary	SB-2 211562-005 12/07/2005 Primary	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-002 11/30/2005 Primary
Starting Depth	(feet)		4.00	6.00	0.00	0.00	0.00
Ending Depth	(feet)		6.00	8.00	2.00	2.00	2.00
Aluminum	(mg/kg)				4250 J	2960 J	
Antimony	(mg/kg)				14.4 U J	15.3 U J	
Arsenic	(mg/kg)	7.5			[9.3] J	4.7 J	
Barium	(mg/kg)	300			136 J	87.4 J	
Beryllium	(mg/kg)	0.16			2.5 U	2.6 U	
Cadmium	(mg/kg)	10			2.1 J	3.9 U	
Calcium	(mg/kg)				6990 J	4140 J	
Chromium	(mg/kg)	50			23.4 J	13.7 J	
Cobalt	(mg/kg)	30			9.2 J	4.7 J	
Copper	(mg/kg)	25			[466] J	[184] J	
Iron	(mg/kg)	2000			[46000] J	[14400] J	
Lead	(mg/kg)	400	24.1 J	23.2 J	185 J	124 J	[773]
Magnesium	(mg/kg)				4640 J	2740 J	
Manganese	(mg/kg)				379 J	237 J	
Mercury	(mg/kg)	0.1			[0.12] J	0.084 J	
Nickel	(mg/kg)	13			[29.1] J	[17] J	
Potassium	(mg/kg)				1010 J	620 J	
Selenium	(mg/kg)	2			19.7 U	21 U	
Silver	(mg/kg)				0.44 J	3.9 U	

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB-2 211562-004 12/07/2005 Primary	SB-2 211562-005 12/07/2005 Primary	SB-9 211601-002 12/08/2005 Primary	SB-9 211601-001 12/08/2005 Duplicate 1	SB10 211488-002 11/30/2005 Primary
Sodium	(mg/kg)				97.4 J	75.1 J	
Thallium	(mg/kg)				24.6 U J	26.2 U J	
Vanadium	(mg/kg)	150			16.1 J	10.1 J	
Zinc	(mg/kg)	20			[800] J	[487] J	

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB10 211488-003 11/30/2005 Primary	SB10 211488-004 11/30/2005 Primary	SB10 211488-006 11/30/2005 Duplicate 1	SB10 211488-005 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Starting Depth	(feet)		2.00	4.00	4.00	6.00	0.00
Ending Depth	(feet)		4.00	6.00	6.00	8.00	2.00
Aluminum	(mg/kg)		5370				6360
Antimony	(mg/kg)		16.4 U J				14.1 U J
Arsenic	(mg/kg)	7.5	3 J				2.4 J
Barium	(mg/kg)	300	108				49.1
Beryllium	(mg/kg)	0.16	2.8 U				2.4 U
Cadmium	(mg/kg)	10	[13]				3.6 U
Calcium	(mg/kg)		9940				12800
Chromium	(mg/kg)	50	39				10.3
Cobalt	(mg/kg)	30	6.3				[40.5]
Copper	(mg/kg)	25	[27.1]				16.4
Iron	(mg/kg)	2000	[14000]				[10800]
Lead	(mg/kg)	400	99	112 J	15.7 J	50.5	90.8
Magnesium	(mg/kg)		5910				3340
Manganese	(mg/kg)		231				335 J
Mercury	(mg/kg)	0.1	[0.93]				0.044 U
Nickel	(mg/kg)	13	[25.3]				[16.6]
Potassium	(mg/kg)		1580 J				1480 J
Selenium	(mg/kg)	2	22.4 U				19.3 U
Silver	(mg/kg)		4.2 U				3.6 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB10 211488-003 11/30/2005 Primary	SB10 211488-004 11/30/2005 Primary	SB10 211488-006 11/30/2005 Duplicate 1	SB10 211488-005 11/30/2005 Primary	SB11 211488-009 12/01/2005 Primary
Sodium	(mg/kg)		106 J				173
Thallium	(mg/kg)		28 U J				24.1 U J
Vanadium	(mg/kg)	150	20.8				13.5
Zinc	(mg/kg)	20	[99.5]				[47.8]

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB11 211488-010 12/01/2005 Primary	SB11 211488-011 12/01/2005 Primary	SB13 211488-001 11/29/2005 Primary	SB2-2 211488-013 12/02/2005 Primary	SB2-2 211488-014 12/02/2005 Primary
Starting Depth	(feet)		2.00	4.00	1.00	6.00	8.00
Ending Depth	(feet)		4.00	6.00	2.00	8.00	10.00
Aluminum	(mg/kg)						
Antimony	(mg/kg)						
Arsenic	(mg/kg)	7.5					
Barium	(mg/kg)	300					
Beryllium	(mg/kg)	0.16					
Cadmium	(mg/kg)	10					
Calcium	(mg/kg)						
Chromium	(mg/kg)	50					
Cobalt	(mg/kg)	30					
Copper	(mg/kg)	25					
Iron	(mg/kg)	2000					
Lead	(mg/kg)	400	5.0 J	6.1 J	[521]	79.5 J	86.2 J
Magnesium	(mg/kg)						
Manganese	(mg/kg)						
Mercury	(mg/kg)	0.1					
Nickel	(mg/kg)	13					
Potassium	(mg/kg)						
Selenium	(mg/kg)	2					
Silver	(mg/kg)						

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB11 211488-010 12/01/2005 Primary	SB11 211488-011 12/01/2005 Primary	SB13 211488-001 11/29/2005 Primary	SB2-2 211488-013 12/02/2005 Primary	SB2-2 211488-014 12/02/2005 Primary
Sodium	(mg/kg)						
Thallium	(mg/kg)						
Vanadium	(mg/kg)	150					
Zinc	(mg/kg)	20					

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB2-2 211488-015 12/02/2005 Primary	SB2-6 211562-001 12/05/2005 Primary	SB2-6 211562-002 12/05/2005 Primary	SB2-6 211562-003 12/05/2005 Primary	SB5 211488-019 12/02/2005 Primary
Starting Depth	(feet)		10.00	0.00	2.00	4.00	2.00
Ending Depth	(feet)		12.00	2.00	4.00	6.00	4.00
Aluminum	(mg/kg)						
Antimony	(mg/kg)						
Arsenic	(mg/kg)	7.5					
Barium	(mg/kg)	300					
Beryllium	(mg/kg)	0.16					
Cadmium	(mg/kg)	10					
Calcium	(mg/kg)						
Chromium	(mg/kg)	50					
Cobalt	(mg/kg)	30					
Copper	(mg/kg)	25					
Iron	(mg/kg)	2000					
Lead	(mg/kg)	400	17.4 J	[519] J	[592] J	63.1	[531] J
Magnesium	(mg/kg)						
Manganese	(mg/kg)						
Mercury	(mg/kg)	0.1					
Nickel	(mg/kg)	13					
Potassium	(mg/kg)						
Selenium	(mg/kg)	2					
Silver	(mg/kg)						

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB2-2 211488-015 12/02/2005 Primary	SB2-6 211562-001 12/05/2005 Primary	SB2-6 211562-002 12/05/2005 Primary	SB2-6 211562-003 12/05/2005 Primary	SB5 211488-019 12/02/2005 Primary
Sodium	(mg/kg)						
Thallium	(mg/kg)						
Vanadium	(mg/kg)	150					
Zinc	(mg/kg)	20					

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC RSCOs	SB5 211488-020 12/02/2005 Primary	SB6 211488-012 12/02/2005 Primary
Starting Depth	(feet)		4.00	2.00
Ending Depth	(feet)		6.00	3.00
Aluminum	(mg/kg)			
Antimony	(mg/kg)			
Arsenic	(mg/kg)	7.5		
Barium	(mg/kg)	300		
Beryllium	(mg/kg)	0.16		
Cadmium	(mg/kg)	10		
Calcium	(mg/kg)			
Chromium	(mg/kg)	50		
Cobalt	(mg/kg)	30		
Copper	(mg/kg)	25		
Iron	(mg/kg)	2000		
Lead	(mg/kg)	400	28.5 J	[6710] J
Magnesium	(mg/kg)			
Manganese	(mg/kg)			
Mercury	(mg/kg)	0.1		
Nickel	(mg/kg)	13		
Potassium	(mg/kg)			
Selenium	(mg/kg)	2		
Silver	(mg/kg)			

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE		SB5	SB6
	LAB SAMPLE I		211488-020	211488-012
	DATE	NYSDEC	12/02/2005	12/02/2005
	RESULT TYPE	RSCOs	Primary	Primary
Sodium	(mg/kg)			
Thallium	(mg/kg)			
Vanadium	(mg/kg)	150		
Zinc	(mg/kg)	20		

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

Notes:

- mg/kg = milligrams per kilogram (parts per million; ppm).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Analyte List (TAL) Metals analysis with mercury analyzed by USEPA Method 7471A and all other metals analyzed by USEPA Method 6010B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-2
Summary of Soil Sampling Analytical Results
TCLP Lead
220 Water Street
Brooklyn, New York

PERIOD: From 11/29/2005 thru 01/13/2006 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE	EXTERIOR A	EXTERIOR B	INTERIOR A
	LAB SAMPLE I	211864-002	211864-003	211864-001
	DATE	01/13/2006	01/13/2006	01/13/2006
Lead (TCLP)	(mg/l)	2.96 J	198 J	2.27 J

See Endnotes after last page.

Table 3-2
Summary of Soil Sampling Analytical Results
TCLP Lead
220 Water Street
Brooklyn, New York

Notes:

- mg/l = milligrams per liter.
- TCLP = Toxicity Characteristic Leaching Procedure.
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Toxicity Characteristic Leaching Procedure (TCLP) Lead prepared in accordance with USEPA Method 1311 and analyzed by USEPA Method 6010B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*

Qualifiers

J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 10/31/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-1 214086-001 10/31/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-2 214086-002 10/31/2006 Primary	MW-2 214086-005 10/31/2006 Duplicate 1
Chloromethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Vinyl chloride	(ug/l)	2	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromomethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Chloroethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Carbon Disulfide	(ug/l)	60	5 U	5.0 U J	5 U	5.0 U J	5.0 U J
Acetone	(ug/l)	50	10 U J	10 U	10 U J	10 U	10 U
Methylene Chloride	(ug/l)	5	5 U J	5.0 U	5 U J	5.0 U	5.0 U
trans-1,2-Dichloroethene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1-Dichloroethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
2-Butanone (MEK)	(ug/l)	50	10 U	10 U J	10 U	10 U J	10 U
Chloroform	(ug/l)	7	3.5 J	4.6 J	5 U	5.0 U	5.0 U
1,1,1-Trichloroethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U J
Carbon Tetrachloride	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U J
Benzene	(ug/l)	1	5 U	5.0 U	5 U	5.0 U	5.0 U
1,2-Dichloroethane	(ug/l)	0.6	5 U J	5.0 U	5 U J	5.0 U	5.0 U
Trichloroethene	(ug/l)	5	1.3 J	1.5 J	4.9 J	[5.4]	[5.5]
1,2-Dichloropropane	(ug/l)	1	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromodichloromethane	(ug/l)	50	5 U	5.0 U	5 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	(ug/l)	0.4	5 U	5.0 U	5 U	5.0 U	5.0 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3
Summary of Groundwater Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 10/31/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-1 214086-001 10/31/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-2 214086-002 10/31/2006 Primary	MW-2 214086-005 10/31/2006 Duplicate 1
4-Methyl-2-pentanone	(ug/l)		10 U	10 U	10 U	10 U	10 U
Toluene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	(ug/l)	0.4	5 U	5.0 U	5 U	5.0 U	5.0 U
1,1,2-Trichloroethane	(ug/l)	1	5 U	5.0 U	5 U	5.0 U	5.0 U
Tetrachloroethene	(ug/l)	5	3.3 J	4.6 J	[6.2]	[6.9]	[7.1]
2-Hexanone	(ug/l)	50	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	(ug/l)	50	5 U	5.0 U	5 U	5.0 U	5.0 U J
Chlorobenzene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Ethylbenzene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Styrene	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Bromoform	(ug/l)	50	5 U	5.0 U	5 U	5.0 U	5.0 U J
1,1,2,2-Tetrachloroethane	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Xylene (total)	(ug/l)	5	5 U	5.0 U	5 U	5.0 U	5.0 U
Sum of Constituents	(ug/l)		8.10	10.70	11.10	12.30	12.60

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3
Summary of Groundwater Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 10/31/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1	MW-3 214086-003 10/31/2006 Primary	MW-4 214086-004 10/31/2006 Primary
Chloromethane	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Vinyl chloride	(ug/l)	2	5 U	5 U	5.0 U	5.0 U
Bromomethane	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Chloroethane	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
1,1-Dichloroethene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Carbon Disulfide	(ug/l)	60	5 U	5 U	5.0 U J	5.0 U J
Acetone	(ug/l)	50	10 U J	10 U J	10 U	10 U
Methylene Chloride	(ug/l)	5	5 U J	5 U J	5.0 U	5.0 U
trans-1,2-Dichloroethene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
1,1-Dichloroethane	(ug/l)	5	3 J	2.6 J	1.4 J	5.0 U
cis-1,2-Dichloroethene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
2-Butanone (MEK)	(ug/l)	50	10 U	10 U	10 U J	10 U J
Chloroform	(ug/l)	7	1.3 J	1.3 J	2.7 J	3.2 J
1,1,1-Trichloroethane	(ug/l)	5	4.5 J	4.3 J	0.62 J	1.6 J
Carbon Tetrachloride	(ug/l)	5	5 U	5 U J	5.0 U	5.0 U
Benzene	(ug/l)	1	5 U	5 U	5.0 U	5.0 U
1,2-Dichloroethane	(ug/l)	0.6	5 U J	5 U J	5.0 U	5.0 U
Trichloroethene	(ug/l)	5	[15]	[15]	[13]	[6.3]
1,2-Dichloropropane	(ug/l)	1	5 U	5 U	5.0 U	5.0 U
Bromodichloromethane	(ug/l)	50	5 U	5 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	(ug/l)	0.4	5 U	5 U	5.0 U	5.0 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3
Summary of Groundwater Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 10/31/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1	MW-3 214086-003 10/31/2006 Primary	MW-4 214086-004 10/31/2006 Primary
4-Methyl-2-pentanone	(ug/l)		10 U	10 U	10 U	10 U
Toluene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	(ug/l)	0.4	5 U	5 U	5.0 U	5.0 U
1,1,2-Trichloroethane	(ug/l)	1	5 U	5 U	5.0 U	5.0 U
Tetrachloroethene	(ug/l)	5	[7.4]	[7.2]	[7.2]	2.1 J
2-Hexanone	(ug/l)	50	10 U	10 U	10 U	10 U
Dibromochloromethane	(ug/l)	50	5 U	5 U	5.0 U	5.0 U
Chlorobenzene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Ethylbenzene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Styrene	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Bromoform	(ug/l)	50	5 U	5 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Xylene (total)	(ug/l)	5	5 U	5 U	5.0 U	5.0 U
Sum of Constituents	(ug/l)		31.20	30.40	24.92	13.20

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3
Summary of Groundwater Sampling Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Volatile Organic Compound (VOC) analysis by USEPA SW-846 Method 8260B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Phenol	(ug/l)	1	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	(ug/l)	1	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	(ug/l)	3	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	(ug/l)	3	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	(ug/l)	3	10 U	10 U	10 U	10 U
Benzyl alcohol	(ug/l)		10 U	10 U	10 U	10 U
2-Methylphenol	(ug/l)	1	10 U	10 U	10 U	10 U
Bis(2-chloroisopropyl) ether	(ug/l)		10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	(ug/l)		10 U	10 U	10 U	10 U
Hexachloroethane	(ug/l)	5	10 U	10 U	10 U	10 U
4-Methylphenol	(ug/l)	1	10 U	10 U	10 U	10 U
2-Chlorophenol	(ug/l)	1	10 U	10 U	10 U	10 U
Nitrobenzene	(ug/l)	0.4	10 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	(ug/l)	5	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	(ug/l)	5	10 U	10 U	10 U	10 U
Isophorone	(ug/l)	50	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	(ug/l)	1	10 U	10 U	10 U	10 U
Hexachlorobutadiene	(ug/l)	0.5	10 U	10 U	10 U	10 U
Naphthalene	(ug/l)	10	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	(ug/l)	5	10 U	10 U	10 U	10 U
4-Chloroaniline	(ug/l)	5	10 U	10 U	10 U	10 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
2,4,6-Trichlorophenol	(ug/l)	1	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	(ug/l)	1	50 U	50 U	50 U	50 U
Hexachlorocyclopentadiene	(ug/l)	5	10 U	10 U	10 U	10 U
2-Methylnaphthalene	(ug/l)		10 U	10 U	10 U	10 U
2-Nitroaniline	(ug/l)	5	50 U	50 U	50 U	50 U
2-Chloronaphthalene	(ug/l)	10	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	(ug/l)	1	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	(ug/l)	5	10 U	10 U	10 U	10 U
2-Nitrophenol	(ug/l)	1	10 U	10 U	10 U	10 U
3-Nitroaniline	(ug/l)	5	50 U	50 U	50 U	50 U
Dimethyl phthalate	(ug/l)	50	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	(ug/l)	10	50 U	50 U	50 U	50 U
Acenaphthylene	(ug/l)		10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	(ug/l)	5	10 U	10 U	10 U	10 U
Acenaphthene	(ug/l)	20	10 U	10 U	10 U	10 U
Dibenzofuran	(ug/l)		10 U	10 U	10 U	10 U
4-Nitrophenol	(ug/l)	1	50 U	50 U	50 U	50 U
Fluorene	(ug/l)	50	10 U	10 U	10 U	10 U
4-Nitroaniline	(ug/l)	5	20 U	20 U	20 U	20 U
4-Bromophenyl phenyl ether	(ug/l)		10 U	10 U	10 U	10 U
Hexachlorobenzene	(ug/l)	0.04	10 U	10 U	10 U	10 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Diethyl phthalate	(ug/l)	50	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	(ug/l)		10 U	10 U	10 U	10 U
Pentachlorophenol	(ug/l)	1	50 U	50 U	50 U	50 U
N-Nitrosodiphenylamine	(ug/l)	50	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	(ug/l)	1	50 U	50 U	50 U	50 U
Phenanthrene	(ug/l)	50	10 U	10 U	10 U	10 U
Anthracene	(ug/l)	50	10 U	10 U	10 U	10 U
Carbazole	(ug/l)		10 U	10 U	10 U	10 U
Di-n-butyl phthalate	(ug/l)	50	10 U	10 U	10 U	10 U
Fluoranthene	(ug/l)	50	10 U	10 U	10 U	10 U
Pyrene	(ug/l)	50	10 U	10 U	10 U	10 U
Butyl benzyl phthalate	(ug/l)	50	10 U	10 U	10 U	10 U
Benzo(a)anthracene	(ug/l)	0.002	10 U	10 U	10 U	10 U
Chrysene	(ug/l)	0.002	10 U	10 U	10 U	10 U
3,3-Dichlorobenzidine	(ug/l)	5	20 U	20 U	20 U	20 U
Bis(2-ethylhexyl)phthalate	(ug/l)	5	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	(ug/l)	50	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	(ug/l)	0.002	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	(ug/l)	0.002	10 U	10 U	10 U	10 U
Benzo(a)pyrene	(ug/l)	0	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	(ug/l)	0.002	10 U	10 U	10 U	10 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Dibenzo(a,h)anthracene	(ug/l)		10 U	10 U	10 U	10 U
Benzo(ghi)perylene	(ug/l)		10 U	10 U	10 U	10 U
Sum of Constituents	(ug/l)		0.00	0.00	0.00	0.00

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Semivolatile Organic Compounds (SVOCs)
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Semivolatile Organic Compound (SVOC) analysis by USEPA SW-846 Method 8270C, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Pesticide Compounds (Pest)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
alpha-BHC	(ug/l)	0.01	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	(ug/l)	0.04	0.05 U	0.05 U	0.05 U	0.05 U
delta-BHC	(ug/l)	0.04	0.05 U	0.05 U	0.05 U	0.05 U
gamma-BHC (Lindane)	(ug/l)	0.05	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor	(ug/l)	0.04	0.05 U	0.05 U	0.05 U	0.05 U
Aldrin	(ug/l)	0	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	(ug/l)	0.03	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan I	(ug/l)		0.05 U	0.05 U	0.05 U	0.05 U
Dieldrin	(ug/l)	0.004	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	(ug/l)	0.2	0.1 U	0.1 U	0.1 U	0.1 U
Endrin	(ug/l)	0	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan II	(ug/l)		0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD	(ug/l)	0.3	0.15 U	0.15 U	0.15 U	0.15 U
Endosulfan sulfate	(ug/l)		0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	(ug/l)	0.2	0.1 U	0.1 U	0.1 U	0.1 U
Methoxychlor	(ug/l)	35	0.5 U	0.5 U	0.5 U	0.5 U
alpha-Chlordane	(ug/l)		0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane	(ug/l)		0.05 U	0.05 U	0.05 U	0.05 U
Toxaphene	(ug/l)	0.06	2.5 U	2.5 U	2.5 U	2.5 U
Endrin aldehyde	(ug/l)	5	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	(ug/l)	5	0.1 U	0.1 U	0.1 U	0.1 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Pesticide Compounds (Pest)
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Pesticide Compound (Pest) analysis by USEPA Method 8081A in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Polychlorinated Biphenyl Compounds (PCBs)
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Aroclor 1016	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1221	(ug/l)	0.09	1 U	1 U	1 U	1 U
Aroclor 1232	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1242	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1248	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1254	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U
Aroclor 1260	(ug/l)	0.09	0.5 U	0.5 U	0.5 U	0.5 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Polychlorinated Biphenyl Compounds (PCBs)
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Polychlorinated Biphenyl Compound (PCB) analysis by USEPA SW-846 Method 8082, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Aluminum	(ug/l)		500 U	500 U	500 U	500 U
Antimony	(ug/l)	3	20 U	20 U	20 U	20 U
Arsenic	(ug/l)	25	40 U	40 U	40 U	40 U
Barium	(ug/l)	1000	325	207	99.4	104
Beryllium	(ug/l)	3	5 U	5 U	5 U	5 U
Cadmium	(ug/l)	5	10 U	10 U	10 U	10 U
Calcium	(ug/l)		125000	166000	194000	210000
Chromium	(ug/l)	50	1.4 J	19.2	6 J	5.3 J
Cobalt	(ug/l)		2.9 J	10 U	10 U	1.8 J
Copper	(ug/l)	200	10 U	10 U	39.9 J	10 U J
Iron	(ug/l)	300	200 U	186 J	200 U	200 U
Lead	(ug/l)	25	10 U	10 U	10 U	10 U
Magnesium	(ug/l)	35000	[50300]	[50200]	[45600]	[48100]
Manganese	(ug/l)	300	[1000]	[442]	[383]	[407]
Mercury	(ug/l)	0.7	0.2 U	0.2 U	0.092 J	0.086 J
Nickel	(ug/l)	100	8.4 J	3.2 J	3.6 J	3.6 J
Potassium	(ug/l)		8680 J	11300 J	8560 J	8970 J
Selenium	(ug/l)	10	30 U	6.1 J	30 U	30 U
Silver	(ug/l)	50	1.1 J	6 U	6 U	6 U
Sodium	(ug/l)	20000	[113000]	[103000]	[109000]	[112000]
Thallium	(ug/l)	0.5	40 U	40 U	40 U	40 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3
Summary of Groundwater Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

PERIOD: From 01/11/2006 thru 01/11/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE RESULT TYPE	NYSDEC TOGS	MW-1 211850-003 01/11/2006 Primary	MW-2 211850-002 01/11/2006 Primary	MW-3 211850-001 01/11/2006 Primary	MW-3 211850-006 01/11/2006 Duplicate 1
Vanadium	(ug/l)		6 U	6 U	6 U	6 U
Zinc	(ug/l)	2000	50 U	50 U	50 U	50 U

See Endnotes after last page.

Table 3-3
Summary of Groundwater Sampling Analytical Results
Metals
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Analyte List (TAL) Metals analysis with mercury analyzed by USEPA Method 7471A and all other metals analyzed by USEPA Method 6010B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL) or, the value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.
UJ	The compound was analyzed for, but not detected. The associated numerical value is the detection limit. However, due to a QC exceedance the value is an estimated quantity. The value is usable as a non-detect at the estimated detection limit.

Table 3-3A
Summary of Temporary Geoprobe Groundwater Sampling
Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 09/07/2006 thru 09/08/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE	NYSDEC TOGS	GP-1 213643-006 09/08/2006	GP-2 213643-004 09/08/2006	GP-3 213643-003 09/07/2006	GP-4 213643-001 09/07/2006
Chloromethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	(ug/l)	2	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	(ug/l)	60	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	(ug/l)	50	10 U	10 U	10 U	10 U
Methylene Chloride	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (MEK)	(ug/l)	50	10 U	10 U	10 U	10 U
Chloroform	(ug/l)	7	5.0 U	5.0 U	0.97 J	5.0 U
1,1,1-Trichloroethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	(ug/l)	1	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	(ug/l)	0.6	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	(ug/l)	5	4.0 J	4.2 J	[5.6]	1.7 J
1,2-Dichloropropane	(ug/l)	1	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	(ug/l)	50	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	(ug/l)	0.4	5.0 U	5.0 U	5.0 U	5.0 U

See Endnotes after last page.

[x]=Greater than Action Level

Table 3-3A
Summary of Temporary Geoprobe Groundwater Sampling
Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

PERIOD: From 09/07/2006 thru 09/08/2006 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE LAB SAMPLE I DATE	NYSDEC TOGS	GP-1 213643-006 09/08/2006	GP-2 213643-004 09/08/2006	GP-3 213643-003 09/07/2006	GP-4 213643-001 09/07/2006
4-Methyl-2-pentanone	(ug/l)		10 U	10 U	10 U	10 U
Toluene	(ug/l)	5	5.0 U	1.2 J	5.0 U	0.69 J
trans-1,3-Dichloropropene	(ug/l)	0.4	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	(ug/l)	1	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	(ug/l)	5	5.0 U	5.0 U	0.82 J	5.0 U
2-Hexanone	(ug/l)	50	10 U	10 U	10 U	10 U
Dibromochloromethane	(ug/l)	50	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	(ug/l)	50	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	(ug/l)	5	5.0 U	5.0 U	5.0 U	5.0 U
Sum of Constituents	(ug/l)		4.00	5.40	7.39	2.39

See Endnotes after last page.

Table 3-3A
Summary of Temporary Geoprobe Groundwater Sampling
Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, New York

Notes:

- µg/l = micrograms per liter (parts per billion; ppb).
- The samples were analyzed by Severn Trent Laboratories (STL) – Shelton, Connecticut, for Target Compound List (TCL) Volatile Organic Compound (VOC) analysis by USEPA SW-846 Method 8260B, in accordance with *"Test Methods for Evaluation Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions."*
- NYSDEC TOGS = Standards listed are the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 values.
- Bracketed values indicate exceedances of TOGS.

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The compound was detected at a concentration below the detection limit but greater than the method detection limit (MDL). The value is usable as an estimated result.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	IA-01 664919 04/06/2006	IA-02 664920 04/06/2006	IA-03 664921 04/06/2006	IA-04 664922 04/06/2006
1,1,1-Trichloroethane	(ug/m3)	0.87 U	0.87 U	0.87 U	0.87 U
1,1,2,2-Tetrachloroethane	(ug/m3)	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichloroethane	(ug/m3)	0.87 U	0.87 U	0.87 U	0.87 U
1,1-Dichloroethane	(ug/m3)	0.65 U	0.65 U	0.65 U	0.65 U
1,1-Dichloroethene	(ug/m3)	0.63 U	0.63 U	0.63 U	0.63 U
1,2,4-Trichlorobenzene	(ug/m3)	3.0 U J	3.0 U J	3.0 U J	3.0 U J
1,2,4-Trimethylbenzene	(ug/m3)	1.4	0.79 U	0.88	1.3
1,2-Dibromoethane	(ug/m3)	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichlorobenzene	(ug/m3)	0.96 U	0.96 U	0.96 U	0.96 U
1,2-Dichloroethane	(ug/m3)	0.65 U	0.65 U	0.65 U	0.65 U
1,2-Dichloroethene	(ug/m3)	0.63 U	2.6	0.63 U	0.63 U
1,2-Dichloropropane	(ug/m3)	0.74 U	0.74 U	0.74 U	0.74 U
1,3,5-Trimethylbenzene	(ug/m3)	0.79 U	0.79 U	0.79 U	0.79 U
1,3-Butadiene	(ug/m3)	0.88 U	0.88 U	0.88 U	0.88 U
1,3-Dichlorobenzene	(ug/m3)	0.96 U	0.96 U	0.96 U	0.96 U
1,4-Dichlorobenzene	(ug/m3)	0.96 U	0.96 U	0.96 U	0.96 U
1,4-Dioxane	(ug/m3)	14 U	14 U	14 U	14 U
2-Butanone	(ug/m3)	1.4	1.2 U	1.3	1.5
2-Chlorotoluene	(ug/m3)	0.83 U	0.83 U	0.83 U	0.83 U
2-Hexanone	(ug/m3)	1.6 U	1.6 U	1.6 U	1.6 U
4-Ethyltoluene	(ug/m3)	1.2	0.79 U	0.79 U	1.1
4-Methyl-2-Pentanone	(ug/m3)	1.6 U	1.6 U	1.6 U	1.6 U
Acetone	(ug/m3)	9.5 U	9.5 U	9.5 U	10
Allyl chloride	(ug/m3)	1.3 U	1.3 U	1.3 U	1.3 U
Benzene	(ug/m3)	1.0	0.51 U	0.86	1.1
Bromodichloromethane	(ug/m3)	1.1 U	1.1 U	1.1 U	1.1 U
Bromoform	(ug/m3)	1.7 U J	1.7 U J	1.7 U J	1.7 U J
Bromomethane	(ug/m3)	0.62 U	0.62 U	0.62 U	0.62 U
Carbon Disulfide	(ug/m3)	1.2 U	1.2 U	1.2 U	1.2 U
Carbon Tetrachloride	(ug/m3)	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	(ug/m3)	0.74 U	0.74 U	0.74 U	0.74 U
Chloroethane	(ug/m3)	0.42 U	0.42 U	0.42 U	0.42 U
Chloroform	(ug/m3)	0.78 U	2.3	0.78 U	0.78 U
Chloromethane	(ug/m3)	1.7	0.83 U	1.8	1.7
cis-1,2-Dichloroethene	(ug/m3)	0.63 U	2.6	0.63 U	0.63 U
cis-1,3-Dichloropropene	(ug/m3)	0.73 U	0.73 U	0.73 U	0.73 U
Cyclohexane	(ug/m3)	0.55 U	1.3	0.55 U	0.55 U
Dibromochloromethane	(ug/m3)	1.4 U	1.4 U	1.4 U	1.4 U
Dichlorodifluoromethane	(ug/m3)	3.8	2.0 U	4.2	3.6

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	IA-01 664919 04/06/2006	IA-02 664920 04/06/2006	IA-03 664921 04/06/2006	IA-04 664922 04/06/2006
Ethylbenzene	(ug/m3)	0.69 U	0.69 U	0.69 U	0.69 U
Freon 113	(ug/m3)	1.2 U	1.2 U	2.8	1.2 U
Freon 114	(ug/m3)	1.1 U	1.1 U	1.1 U	1.1 U
Hexachlorobutadiene	(ug/m3)	1.7 U J	1.7 U J	1.7 U J	1.7 U J
Isooctane	(ug/m3)	0.75 U	0.75 U	0.75 U	0.75 U
Isopropyl Alcohol	(ug/m3)	9.8 U	9.8 U	9.8 U	9.8 U
m+p-Xylene	(ug/m3)	2.0	1.7 U	1.7 U	2.0
Methyl Tertiary Butyl Ether	(ug/m3)	1.4 U	1.4 U	1.4 U	1.4 U
Methylene Chloride	(ug/m3)	1.8	1.9	1.4 U	1.6
n-Heptane	(ug/m3)	0.66 U	0.66 U	0.66 U	0.66 U
n-Hexane	(ug/m3)	1.4 U	1.5	1.4 U	1.4 U
o-Xylene	(ug/m3)	0.78	0.69 U	0.69 U	0.74
Styrene	(ug/m3)	0.68 U	0.68 U	0.68 U	0.68 U
Tertiary Butyl Alcohol	(ug/m3)	12 U	12 U	12 U	12 U
Tetrachloroethene	(ug/m3)	1.1 U	5.6	1.1 U	1.1 U
Tetrahydrofuran	(ug/m3)	12 U	12 U	12 U	12 U
Toluene	(ug/m3)	3.5	7.9	4.1	5.3
trans-1,2-Dichloroethene	(ug/m3)	0.63 U	0.63 U	0.63 U	0.63 U
trans-1,3-Dichloropropene	(ug/m3)	0.73 U	0.73 U	0.73 U	0.73 U
Trichloroethene	(ug/m3)	7.0	28	0.86 U	1.1
Trichlorofluoromethane	(ug/m3)	1.7	0.90 U	2.5	1.7
Vinyl bromide	(ug/m3)	0.70 U	0.70 U	0.70 U	0.70 U
Vinyl chloride	(ug/m3)	0.41 U	0.41 U	0.41 U	0.41 U
Xylene (total)	(ug/m3)	2.9	0.69 U	0.69 U	2.8
Sum of Constituents	(ug/m3)	30.18	53.70	18.44	35.54

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	OA-01 664923 04/06/2006	SG-01 650526 12/01/2005	SG-01 664917 04/06/2006	SG-02 651472 12/08/2005
1,1,1-Trichloroethane	(ug/m3)	0.87 U	27 U	53 U	53
1,1,2,2-Tetrachloroethane	(ug/m3)	1.1 U	34 U	67 U	42 U
1,1,2-Trichloroethane	(ug/m3)	0.87 U	27 U	53 U	33 U
1,1-Dichloroethane	(ug/m3)	0.65 U	20 U	39 U	25 U
1,1-Dichloroethene	(ug/m3)	0.63 U	20 U	38 U	24 U
1,2,4-Trichlorobenzene	(ug/m3)	3.0 U J	96 U	180 U J	110 U
1,2,4-Trimethylbenzene	(ug/m3)	1.0	25 U	48 U	30 U
1,2-Dibromoethane	(ug/m3)	1.2 U	38 U	75 U	47 U
1,2-Dichlorobenzene	(ug/m3)	0.96 U	30 U	58 U	37 U
1,2-Dichloroethane	(ug/m3)	0.65 U	20 U	39 U	25 U
1,2-Dichloroethene	(ug/m3)	0.63 U	44	63	48
1,2-Dichloropropane	(ug/m3)	0.74 U	23 U	45 U	28 U
1,3,5-Trimethylbenzene	(ug/m3)	0.79 U	25 U	48 U	30 U
1,3-Butadiene	(ug/m3)	0.88 U	29 U	53 U	33 U
1,3-Dichlorobenzene	(ug/m3)	0.96 U	30 U	58 U	37 U
1,4-Dichlorobenzene	(ug/m3)	0.96 U	30 U	58 U	37 U
1,4-Dioxane	(ug/m3)	14 U	470 U	860 U	540 U
2-Butanone	(ug/m3)	1.5	710 J	71 U	44 U
2-Chlorotoluene	(ug/m3)	0.83 U	26 U	50 U	32 U
2-Hexanone	(ug/m3)	1.6 U	53 U	98 U	61 U
4-Ethyltoluene	(ug/m3)	1.0	25 U	48 U	30 U
4-Methyl-2-Pentanone	(ug/m3)	1.6 U	120	98 U	61 U
Acetone	(ug/m3)	9.5 U	310	570 U	360 U
Allyl chloride	(ug/m3)	1.3 U	41 U	75 U	47 U
Benzene	(ug/m3)	0.80	16 U	31 U	19 U
Bromodichloromethane	(ug/m3)	1.1 U	34 U	65 U	41 U
Bromoform	(ug/m3)	1.7 U J	52 U	100 U J	63 U
Bromomethane	(ug/m3)	0.62 U	19 U	38 U	24 U
Carbon Disulfide	(ug/m3)	1.2 U	110	75 U	47 U
Carbon Tetrachloride	(ug/m3)	1.0 U	31 U	61 U	38 U
Chlorobenzene	(ug/m3)	0.74 U	23 U	45 U	28 U
Chloroethane	(ug/m3)	0.42 U	34 U	26 U	40 U
Chloroform	(ug/m3)	0.78 U	24 U	47 U	170
Chloromethane	(ug/m3)	1.5	27 U	50 U	31 U
cis-1,2-Dichloroethene	(ug/m3)	0.63 U	44	63	48
cis-1,3-Dichloropropene	(ug/m3)	0.73 U	23 U	44 U	28 U
Cyclohexane	(ug/m3)	0.55 U	27	33 U	21 U
Dibromochloromethane	(ug/m3)	1.4 U	43 U	83 U	52 U
Dichlorodifluoromethane	(ug/m3)	3.6	64 U	120 U	74 U

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	OA-01 664923 04/06/2006	SG-01 650526 12/01/2005	SG-01 664917 04/06/2006	SG-02 651472 12/08/2005
Ethylbenzene	(ug/m3)	0.69 U	22 U	42 U	26 U
Freon 113	(ug/m3)	1.2 U	38 U	74 U	47 U
Freon 114	(ug/m3)	1.1 U	35 U	68 U	43 U
Hexachlorobutadiene	(ug/m3)	1.7 U J	53 U	100 U J	65 U
Isooctane	(ug/m3)	0.75 U	23 U	45 U	1300
Isopropyl Alcohol	(ug/m3)	9.8 U	320 U	590 U	370 U
m+p-Xylene	(ug/m3)	1.7 U	56 U	100 U	91
Methyl Tertiary Butyl Ether	(ug/m3)	1.4 U	47 U	87 U	54 U
Methylene Chloride	(ug/m3)	1.8	45 U	83 U	52 U
n-Heptane	(ug/m3)	0.66 U	20 U	40 U	25 U
n-Hexane	(ug/m3)	1.4 U	46 U	85 U	53 U
o-Xylene	(ug/m3)	0.69 U	22 U	42 U	26 U
Styrene	(ug/m3)	0.68 U	21 U	41 U	26 U
Tertiary Butyl Alcohol	(ug/m3)	12 U	390 U	730 U	450 U
Tetrachloroethene	(ug/m3)	1.1 U	560	440	480
Tetrahydrofuran	(ug/m3)	12 U	380 U	710 U	440 U
Toluene	(ug/m3)	3.3	53	37 U	24
trans-1,2-Dichloroethene	(ug/m3)	0.63 U	20 U	38 U	24 U
trans-1,3-Dichloropropene	(ug/m3)	0.73 U	23 U	44 U	28 U
Trichloroethene	(ug/m3)	0.86 U	3700	7500	5100
Trichlorofluoromethane	(ug/m3)	1.6	28 U	54 U	34 U
Vinyl bromide	(ug/m3)	0.70 U	22 U	42 U	27 U
Vinyl chloride	(ug/m3)	0.41 U	13 U	25 U	16 U
Xylene (total)	(ug/m3)	0.69 U	22 U	42 U	91
Sum of Constituents	(ug/m3)	16.10	5678.00	8066.00	7405.00

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	SG-02 664918 04/06/2006
1,1,1-Trichloroethane	(ug/m3)	36 U
1,1,2,2-Tetrachloroethane	(ug/m3)	45 U
1,1,2-Trichloroethane	(ug/m3)	36 U
1,1-Dichloroethane	(ug/m3)	27 U
1,1-Dichloroethene	(ug/m3)	26 U
1,2,4-Trichlorobenzene	(ug/m3)	130 U J
1,2,4-Trimethylbenzene	(ug/m3)	32 U
1,2-Dibromoethane	(ug/m3)	51 U
1,2-Dichlorobenzene	(ug/m3)	40 U
1,2-Dichloroethane	(ug/m3)	27 U
1,2-Dichloroethene	(ug/m3)	27
1,2-Dichloropropane	(ug/m3)	31 U
1,3,5-Trimethylbenzene	(ug/m3)	32 U
1,3-Butadiene	(ug/m3)	38 U
1,3-Dichlorobenzene	(ug/m3)	40 U
1,4-Dichlorobenzene	(ug/m3)	43
1,4-Dioxane	(ug/m3)	610 U
2-Butanone	(ug/m3)	50 U
2-Chlorotoluene	(ug/m3)	34 U
2-Hexanone	(ug/m3)	70 U
4-Ethyltoluene	(ug/m3)	32 U
4-Methyl-2-Pentanone	(ug/m3)	70 U
Acetone	(ug/m3)	400 U
Allyl chloride	(ug/m3)	53 U
Benzene	(ug/m3)	21 U
Bromodichloromethane	(ug/m3)	44 U
Bromoform	(ug/m3)	68 U J
Bromomethane	(ug/m3)	26 U
Carbon Disulfide	(ug/m3)	53 U
Carbon Tetrachloride	(ug/m3)	42 U
Chlorobenzene	(ug/m3)	30 U
Chloroethane	(ug/m3)	17 U
Chloroform	(ug/m3)	110
Chloromethane	(ug/m3)	35 U
cis-1,2-Dichloroethene	(ug/m3)	27
cis-1,3-Dichloropropene	(ug/m3)	30 U
Cyclohexane	(ug/m3)	23 U
Dibromochloromethane	(ug/m3)	56 U
Dichlorodifluoromethane	(ug/m3)	84 U

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds
220 Water Street
Brooklyn, New York

PERIOD: From 12/01/2005 thru 04/06/2006 - Inclusive
SAMPLE TYPE: Air

CONSTITUENT	SITE LAB SAMPLE I DATE	SG-02 664918 04/06/2006
Ethylbenzene	(ug/m3)	29 U
Freon 113	(ug/m3)	51 U
Freon 114	(ug/m3)	46 U
Hexachlorobutadiene	(ug/m3)	70 U J
Isooctane	(ug/m3)	31 U
Isopropyl Alcohol	(ug/m3)	420 U
m+p-Xylene	(ug/m3)	74 U
Methyl Tertiary Butyl Ether	(ug/m3)	61 U
Methylene Chloride	(ug/m3)	59 U
n-Heptane	(ug/m3)	27 U
n-Hexane	(ug/m3)	60 U
o-Xylene	(ug/m3)	29 U
Styrene	(ug/m3)	28 U
Tertiary Butyl Alcohol	(ug/m3)	520 U
Tetrachloroethene	(ug/m3)	350
Tetrahydrofuran	(ug/m3)	500 U
Toluene	(ug/m3)	25 U
trans-1,2-Dichloroethene	(ug/m3)	26 U
trans-1,3-Dichloropropene	(ug/m3)	30 U
Trichloroethene	(ug/m3)	3600
Trichlorofluoromethane	(ug/m3)	37 U
Vinyl bromide	(ug/m3)	29 U
Vinyl chloride	(ug/m3)	17 U
Xylene (total)	(ug/m3)	29 U
Sum of Constituents	(ug/m3)	4157.00

See Endnotes following last page.

Table 3-4
Summary of Soil Vapor and Indoor Air Sampling
Analytical Results
Volatile Organic Compounds (VOCs)
220 Water Street
Brooklyn, NY

Notes:

- $\mu g/m^3$ = micrograms per cubic meter.
- The samples were analyzed by Severn Trent Laboratories (STL) – Burlington, Vermont, following "*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition 1997, EPA/625/R-96/010B"*, Compendium Method TO-15, "*Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*".

Qualifiers

no qualifier	The compound was positively identified at the associated numerical value which is the concentration of the compound in the sample.
U	Non-Detect. The compound was analyzed for, but not detected. The associated numerical value is the detection limit. The value is usable as a non-detect at the detection limit.
J	Estimated value. The value was designated as estimated as a result of the data validation criteria. The value is usable as an estimated result.

APPENDIX A

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

Boring Number SB-2

BORING LOG

Project Name & Location	Project Number	Date & Time Started:	12/7/2005	7:00 AM	
220 Water Street	22103	Date & Time Completed:	12/7/2005	9:30 AM	
Drilling Company	Foreman	Sampler(s)	Sampler Hammer		Drop
Warren George	Reynolds	Warren George	140 Lbs. Slide Hammer		30" Via Cathead Line
Drilling Equipment	Method	Elevation & Datum	Completion Depth		Rock Depth
Direct Push Drill Rig	Split Spoon.		10ft.		Not Encountered
Bit Size(s)	Core Barrel(s)	ERM Representative			
2"	2 ft. split spoon	Joseph Caniano			

DEPTH (ft below grade)	SAMPLES Sample Number	Recovery (feet)		SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 3 to 6-inches of Concerete sidewalk
4-6	SB-2, 4-6ft	1 ft.		Brown Sand- some building material debris
6-8	SB-2, 6-8ft	1 ft.		Brown Sand- some building material debris
8-10	SB-2, 8-10ft	1 ft.		Brown Sand- some building material debris

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-5

Project Name & Location: 220 Water Street	Project Number: 22103	Date & Time Started: 12/2/2005 12:45 PM			
		Date & Time Completed: 12/2/2005 1:56 PM			
Drilling Company: Warren George	Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line	
Drilling Equipment: Direct Push Drill Rig	Method: Split Spoon.	Elevation & Datum:	Completion Depth: 6ft.	Rock Depth: Not Encountered	
Bit Size(s): 2"	Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano			

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)		SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 3 to 6-inches of Concerete sidewalk
2-4	SB-5, 2-4ft	1 ft.		Brown Sand- some building material debris
4-6	SB-5, 4-6ft	1 ft.		Brown Sand- some building material debris
				Boring Refusal. No additional samples collected

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-06

Project Name & Location: 220 Water Street		Project Number: 22103	Date & Time Started: 12/2/2005 7:00 AM		
			Date & Time Completed: 12/2/2005 8:30 AM		
Drilling Company: Warren George		Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line
Drilling Equipment: Direct Push Drill Rig		Method: Split Spoon.	Elevation & Datum:	Completion Depth: 3ft	Rock Depth: Not Encountered
Bit Size(s): 2"		Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	PID (ppm)	SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 3 to 6-inches of Concerete sidewalk
2-3	SB-06, 0-2 ft	1 ft.	0.1	Brown Sand- some organic material, building material debris
				Boring Refusal. No additional samples collected

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-10

Project Name & Location: 220 Water Street		Project Number: 22103	Date & Time Started: 11/30/2005 10:45 AM		
			Date & Time Completed: 11/30/2005 1:30 PM		
Drilling Company: Warren George		Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line
Drilling Equipment: Direct Push Drill Rig		Method: Split Spoon.	Elevation & Datum:	Completion Depth: 8ft	Rock Depth: Not Encountered
Bit Size(s): 2"		Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	PID (ppm) See Note	SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Dark and silty sand with organic material
0-2	SB-10, 0-2 ft	1 ft.	209 (1)	Dark and silty sand with organic material
2-4	SB-10, 2-4 ft	2 ft.	4784 (1)	Dark and silty sand with organic material
4-6	SB-10, 4-6 ft	2 ft.	1787 (1)	Dark Brown Sand
6-8	SB-10, 6-8 ft	2 ft.	3884 (1)	Dark and silty sand with organic material

Notes

(1) PID was malfunctioning; readings suspect since PID maxed out at 10,000 and then continued to only read 10,000 ppm.

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-11

Project Name & Location: 220 Water Street		Project Number: 22103	Date & Time Started: 12/1/2005 11:15 AM		
			Date & Time Completed: 12/1/2005 12:00 PM		
Drilling Company: Warren George		Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: none	Drop: none
Drilling Equipment: Direct Push Drill Rig		Method: Hand Auger	Elevation & Datum:	Completion Depth: 6ft.	Rock Depth: Not Encountered
Bit Size(s): 4"		Core Barrel(s): 1ft hand auger	ERM Representative: Joseph Caniano		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	PID (ppm)	SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 6-inches of Concrete
0-2	SB-11, 0-2 ft	1 ft.	110.0	Brown Sand- stained darker brown
2-4	SB-11, 2-4 ft	1 ft.	32.0	Brown Sand
4-6	SB-11, 4-6 ft	1 ft.	45.0	Brown Sand
				Boring Refusal. No additional samples collected

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-13

Project Name & Location: 220 Water Street	Project Number: 22103	Date & Time Started: 11/29/2005 8:00 AM			
		Date & Time Completed: 11/29/2005 9:30 AM			
Drilling Company: Warren George	Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line	
Drilling Equipment: Direct Push Drill Rig	Method: Split Spoon.	Elevation & Datum:	Completion Depth: 2 ft	Rock Depth: Not Encountered	
Bit Size(s): 3.25	Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano			

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)		SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 6-12 inches of concrete floor and sub-base
1-2	SB-13 1-2 ft.	< 1 ft.		Brown Sand
				Boring Refusal. No additional samples collected

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-2-2

Project Name & Location: 220 Water Street		Project Number: 22103	Date & Time Started: 12/2/2005 10:00 AM		
			Date & Time Completed: 12/2/2005 10:45 AM		
Drilling Company: Warren George		Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line
Drilling Equipment: Direct Push Drill Rig		Method: Split Spoon.	Elevation & Datum:	Completion Depth: 12ft.	Rock Depth: Not Encountered
Bit Size(s): 2"		Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)	PID (ppm)	SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 3 to 6-inches of Concerete sidewalk
6-8	SB-2-2, 6-8ft	1 ft.	0.0	Brown Sand- some building material debris
8-10	SB-2-2, 6-8ft	1 ft.	0.1	Brown Sand- some building material debris
10-12	SB-2-2, 6-8ft	1 ft.	0.0	Brown Sand- some building material debris

ERM Northeast

520 Broad Hollow Road, Suite 210, Melville, NY 11747

BORING LOG

Boring Number: SB-2-6

Project Name & Location: 220 Water Street		Project Number: 22103	Date & Time Started: 12/5/2005 7:20 AM		
			Date & Time Completed: 12/5/2005 10:00 AM		
Drilling Company: Warren George		Foreman: Reynolds	Sampler(s): Warren George	Sampler Hammer: 140 Lbs. Slide Hammer	Drop: 30" Via Cathead Line
Drilling Equipment: Direct Push Drill Rig		Method: Split Spoon.	Elevation & Datum:	Completion Depth: 6ft.	Rock Depth: Not Encountered
Bit Size(s): 2"		Core Barrel(s): 2 ft. split spoon	ERM Representative: Joseph Caniano		

DEPTH (ft below grade)	SAMPLES: Sample Number	Recovery (feet)		SOIL DESCRIPTION
	LOCATION:			SURFACE DESCRIPTION: Approximately 3 to 6-inches of Concerete sidewalk
0-2	SB-2-6, 0-2ft	1 ft.		Brown Sand- some building material debris
2-4	SB-2-6, 2-4ft	1 ft.		Brown Sand- some building material debris
4-6	SB-2-6, 4-6ft	1 ft.		Brown Sand- some building material debris

ERM, INC.

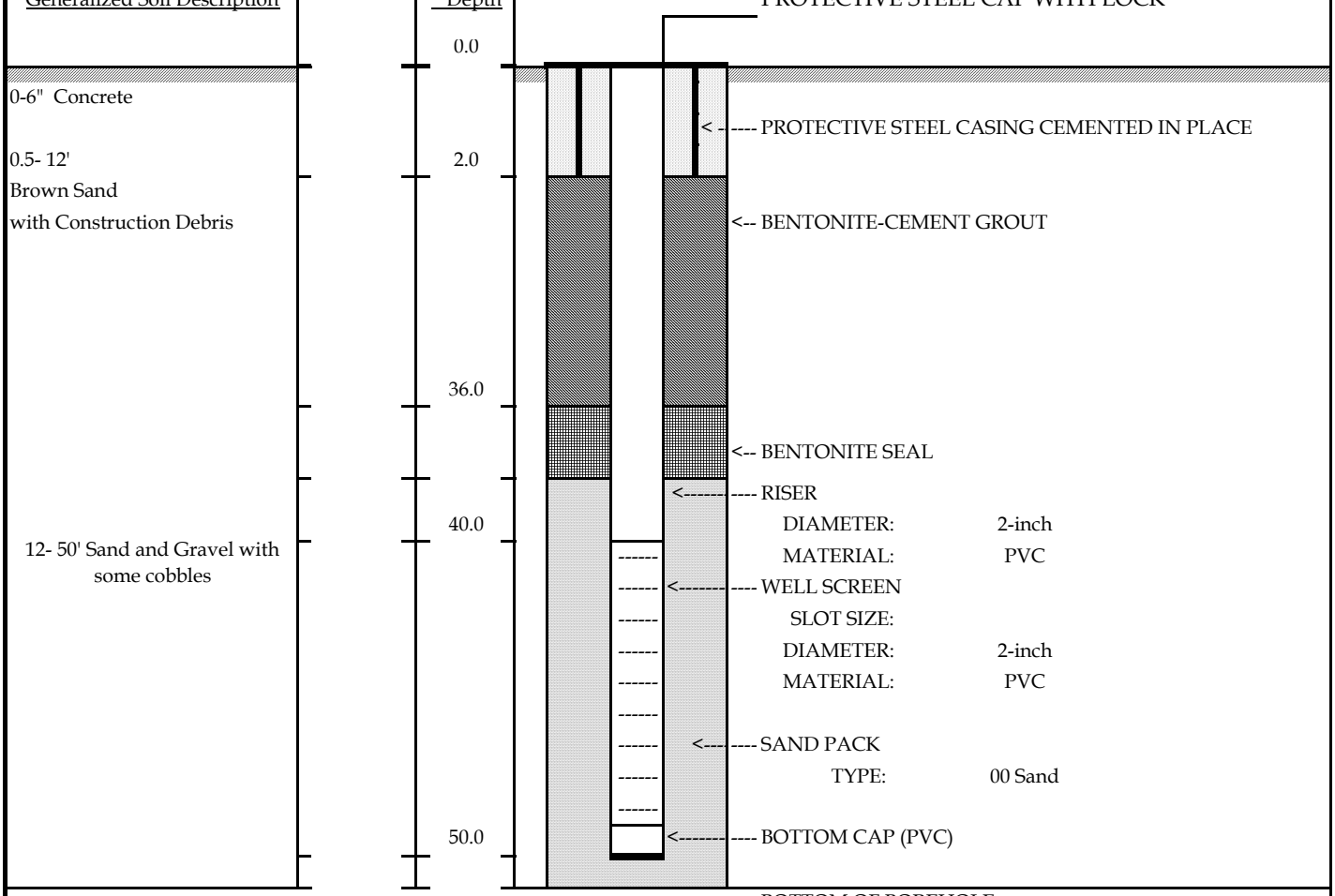
WELL : MW-1

520 Broad Hollow Road, Suite 210, Melville, NY 11747

MONITORING WELL CONSTRUCTION

Project Name & Location		*Water Level(s)*			*Site Elevation Datum*
220 Water Street	**0022103**	*(ft below top of PVC casing)*			Not Available
Drilling Company				Level	*Ground Elevation*
Warren George		Date	Time	(feet)	Not Available
Surveyor		**12/14/2005**	**15:00**	**35.38**	*Top of Protective Steel Cap Elevation*
					Not Available
ERM Representative					*Top of Riser Pipe Elevation*
Joseph Caniano					Not Available

CONSTRUCTION DETAILS



REMARKS Well development was performed on Thursday 12/29/05. Approximately 15 gallons of purge water was recovered.

Soil description was obtained from cuttings from well installation.

* Elevation (feet) above mean sea level unless noted ** Depth in feet below grade

ERM, INC.

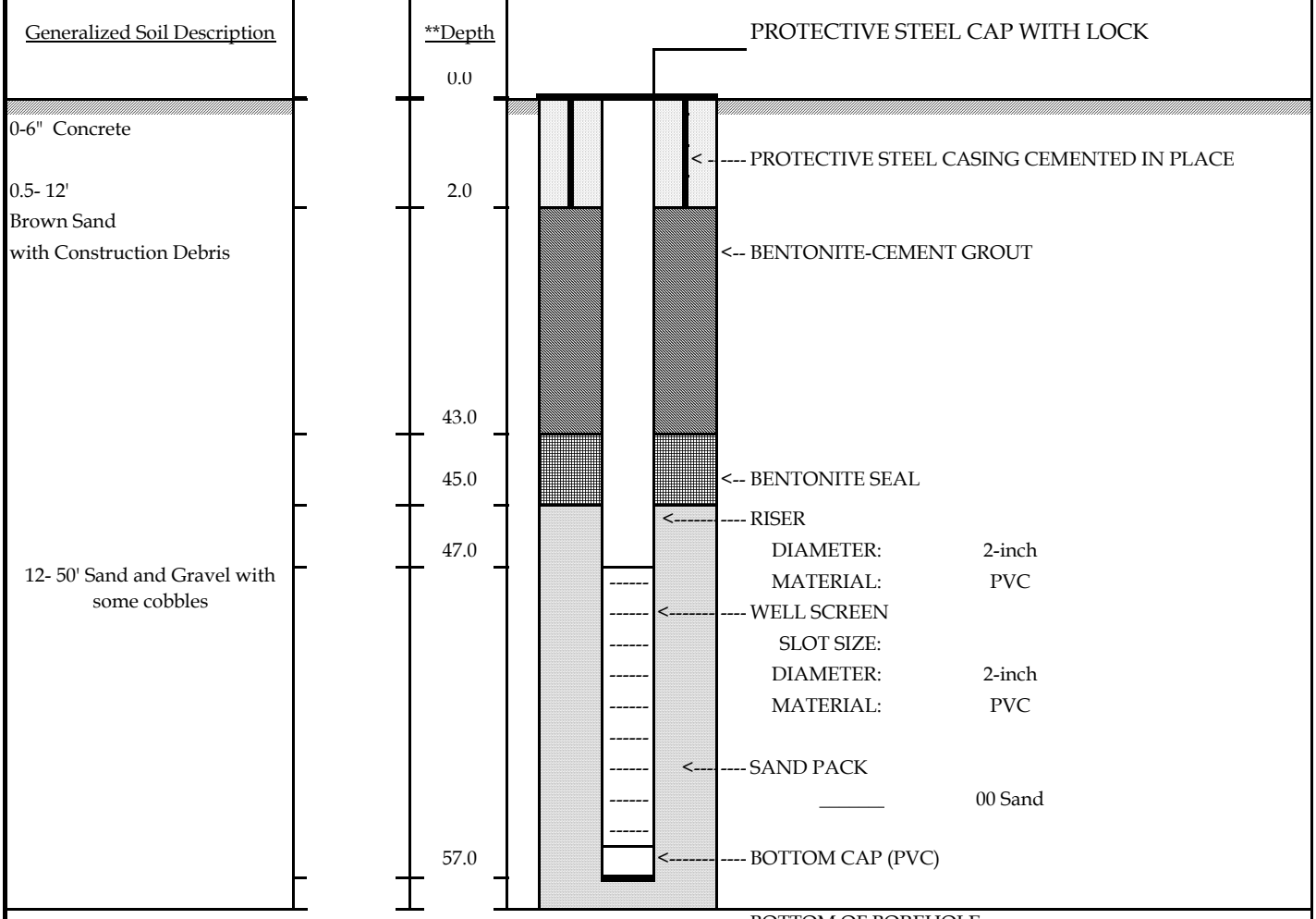
520 Broad Hollow Road, Suite 210, Melville, NY 11747

WELL : MW-2

MONITORING WELL CONSTRUCTION

Project Name & Location		Water Level(s) (ft below top of PVC casing)			Site Elevation Datum
220 Water Street	**0022103**				Not Available
Drilling Company		Date	Time	Level (feet)	*Ground Elevation*
Warren George					Not Available
Surveyor		**12/12/2005**	**1430**	**30.6**	*Top of Protective Steel Cap Elevation*
					Not Available
ERM Representative					*Top of Riser Pipe Elevation*
Joseph Caniano					Not Available

CONSTRUCTION DETAILS



REMARKS Well development was performed on Thursday 12/29/05. Approximately 40 gallons of purge water was recovered.

Soil description was obtained from cuttings from well installation.

* Elevation (feet) above mean sea level unless noted ** Depth in feet below grade

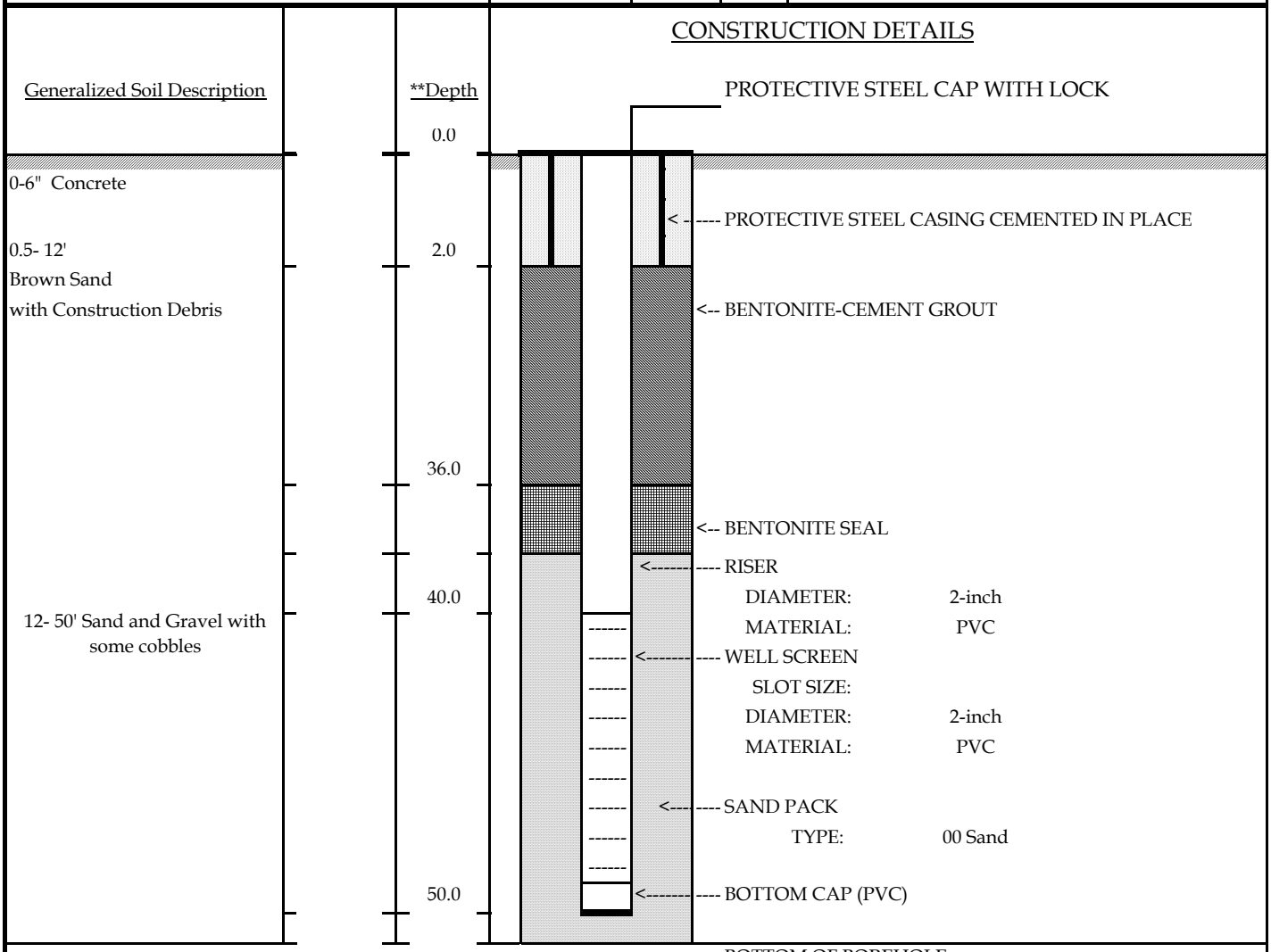
ERM, INC.

WELL : MW-3

520 Broad Hollow Road, Suite 210, Melville, NY 11747

MONITORING WELL CONSTRUCTION

Project Name & Location		*Water Level(s)* (ft below top of PVC casing)			*Site Elevation Datum*
220 Water Street	**0022103**				Not Available
Drilling Company				Level	*Ground Elevation*
Warren George		Date	Time	(feet)	Not Available
Surveyor		**12/13/2005**	**15:30**	**24.4**	*Top of Protective Steel Cap Elevation*
					Not Available
ERM Representative					*Top of Riser Pipe Elevation*
Joseph Caniano					Not Available



REMARKS Well development was performed on Thursday 12/29/05. Approximately 40 gallons of purge water was recovered.

Soil description was obtained from cuttings from well installation.

* Elevation (feet) above mean sea level unless noted ** Depth in feet below grade

ERM, INC.

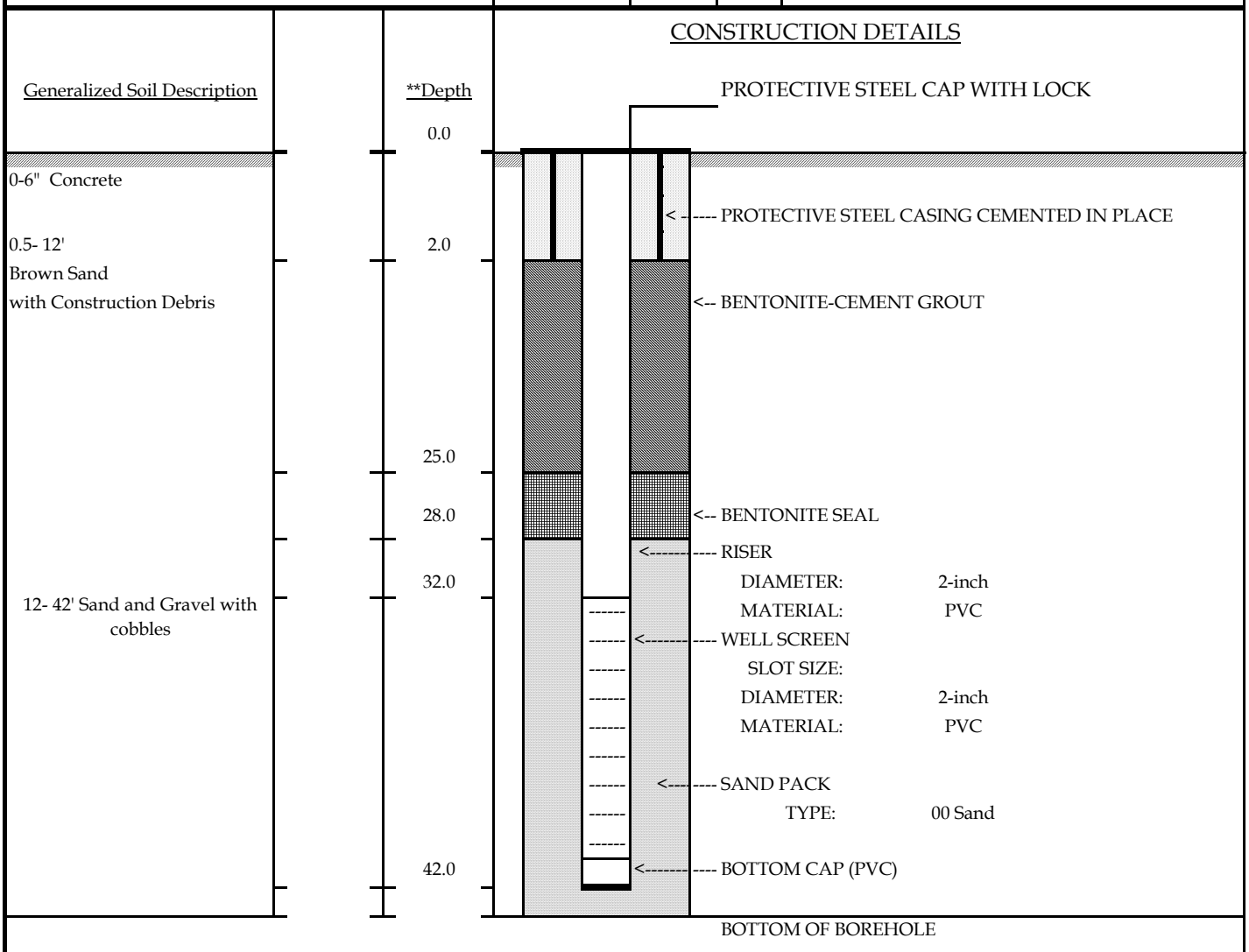
WELL : MW-4

520 Broad Hollow Road, Suite 210, Melville, NY 11747

MONITORING WELL CONSTRUCTION

Project Name & Location	*Water Level(s)*			*Site Elevation Datum*
220 Water Street **0022103**	*(ft below top of PVC casing)*			Not Available
Drilling Company			Level	*Ground Elevation*
Aquifer Drilling and Testing	Date	Time	(feet)	37.05 feet above mean sea level
Surveyor				*Top of Protective Steel Cap Elevation*
Keller & Kirkpatrick	10/31/2006	12:30	34.32	Not Available
ERM Representative				*Top of Riser Pipe Elevation*
Elena Ponce				36.41 feet above mean sea level

CONSTRUCTION DETAILS



REMARKS Well development was performed on Saturday 10/14/06 and again on Tuesday 10/17/06. The well was pumped multiple times successively until it was dry and recovered. Approximately 30 gallons of purge water was removed. Soil description was obtained from cuttings from well installation.

* Elevation (feet) above mean sea level unless noted ** Depth in feet below grade

APPENDIX B

IF FOUND PLEASE RETURN TO:

NAME ENVIRONMENTAL RESOURCES MANAGEMENT

COMPANY ERM

STREET 520 BROAD HOLLOW RD

CITY MELVILLE STATE NY ZIP 11747

PHONE 631 756-8900

JOB BOOK

FROM BEN MEADOWS COMPANY

PROJECT NAME 220 WATER STREET

PROJECT NUMBER 0022103

CREW J. CARLANO

DATE 11/28/05 BOOK # 1 OF 2

WEATHER

Book # 1

FIELD BOOK
16 PAGE
8 LEAVES
50% RAG

CURVE FORMULAS

$T = R \tan \frac{1}{2} I$

$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin.} \frac{1}{2} D}$

$\text{Sin.} \frac{1}{2} D = \frac{50}{R}$

$\text{Sin.} \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$

$R = T \text{ cot. } \frac{1}{2} I$

$R = \frac{50}{\text{Sin.} \frac{1}{2} D}$

$E = R \text{ ex. sec } \frac{1}{2} I$

$E = T \tan \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{I}{D}$

Tan. def. = ½ chord def.

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

Right Angle Triangles. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10.10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25.25^2 \div 200 = 3.125$; $100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

Leveling. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3} d^2$. The combined correction is negative.

Probable Error. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean = $\pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	⅛	3-16	¼	5-16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

DJC

MONDAY NOV 28, 2005

8:30 JC onsite, CW on-site

RAY 347-415-4257 superintendent

Kevin Hoogerhide : 201-847-2951 - 201 819-0402

STL LAB. : 203: 929-8140.

Fed #699155087219

220 Water

SB-3-5 IN BOILERROOM.

- Pre-Performed site walk with Cathy Weber/Joe Cassano to locate the proposed borings.

Weather: Overcast

9:20 Waiting for the Driller and Fed-ex

WARREN GEORGE - driller

201-433-9797 - TONY TIRRO

9:45 CATHY WEBER OFF-SITE

10:20 am: WARREN GEORGE - Driller - still has not arrived.

11:00 WARREN GEORGE (WG) ON-SITE.

WG WAS INFORMED THERE WOULD BE AN ELECTRICIAN AVAILABLE TO DO 220 V HOOK-UP.

JC SPOKE WITH RICHARD AT WG. THEY WILL BE SENDING AN ELECTRICIAN FOR THE HOOK-UP

JC INFORMED CATHY WEBER.

- TWO WG WORKERS on site w/ 1 site vehicle.
12:00 ERM - offsite. 2 min
12:15 TWO WG ELECTRICIANS ON SITE TO PERFORM 220 V. Hook-up.
12:20 ERM BREAK FOR LUNCH
13:00 WG HAS FINISHED THE CONNECTION FOR 220 V. WG setting up at Boring SB 3-5, inside the boiler room
14:10 First attempt SB 3-5 met refusal at 2-ft. The split spoon encountered concrete.
14:30 Second Attempt @ SB 3-5 met refusal again at approximately 2 ft
15:00 3rd attempt met refusal @ 2 ft. There appears to be a concrete slab or deadman at a 2 ft depth.
15:15 WG & ERM off site.

Tuesday 11/29/05

7:00 WG onsite.
8:00 ERM onsite due to excessive traffic. ERM directs WG to perform SB3-5 outside the boiler room ~~the~~ in the hallway.
WARREN GEORGE ONSITE WITH TWO WORKERS and 1 site vehicle.
- Performing concrete coring for SB3-5, now located immediately outside the boiler room.
9:20 Starting boring at SB3-5.
9:30 Boring hit refusal at 2 ft - 4 inches. One sample collected ~~SB3-5~~ SB-13 2 ft - 4 inch
10# ~~SB3-5~~ SB-13 2-2 ft. SB-13 change 11/30/05
9:45 WG setting up to perform boring at SB-12

~~SB3-5~~ SB-13 1-2 ft: Brown Sand

10:40 WG still performing concrete coring @ SB-12. Slab thickness > 1 ft.
12:00 Approximately 2½ to 3 ft of concrete was cored at the proposed location for SB-12. Additional concrete coring needs to be performed to penetrate the slab however we are at the limit

(4) JC

220 WATER STREET

WG WG's coring caps & Utes.
ERM (JC) called mobile office for approval to relocate the boring.
12:30 spoke w.th Cathy Weber, SB-12 To be relocated 8-ft towards the interior of the building.
WG relocating the core drill to the new location of SB-12.
13:10 ERM directed WG to perform a test drilling to determine slab thickness. Slab thickness greater than 8-inches.
14:00 approximately 7-foot of concrete cored.
14:30 2 Feet of concrete cored.
15:15 The new location appears to have 2 3 feet of concrete. No ~~boring~~ sample will be collect from this location.
15:20 ERM & W.G. off site

(5) JC

220 Water Street Wednesday 11/30/05

7:00 W.G. onsite ERM onsite
W.G. breaking down the equipment to be relocated in the basement of the concrete building
8:30 on W.G. and ERM investigated the floor drain in the basement of the concrete building. The floor drain grade was removed to reveal a 4x4 ft sump, approximately 1 ft deep. There is no evident piping connected to the sump.
9:30 W.G. started boring for SB-10 in the Concrete building basement ± Winch system is not running. There may be a problem with one of the extension cords.
10:00 WG's winch is not working. Repairs (WG knows) calling their shop for assistance
10:45 Winch has been repaired, boring commencing
→ Sample collected SB10 0-2ft.
PID Reading unstable between 127 to 209 ppm. Material was dark grey silty sand with some styrofoam debris

(6) JC

Wednesday

SB10 0-2ft collected at 11:05

Had to reset the split spoon at a different location with ~~split~~ sump due to refusal at the first attempt shortly after the two ft range. 2nd attempt met refusal at the two foot range.

12:15 3rd attempt recovered about 1ft of soil from the 2 to 4 ft range.

PID Reading - 4,784 ppm

Sample time - 12:30 pm

* Soil PID readings are being collected by placing a soil sample into a zip-loc bag and sampling with the PID tip into the bag.

* A field test on ~~the Ziploc bag~~ ~~stock~~ a plain unused ziplock bag showed 0.0 ppm.

13:00 ~~Co~~ Retrieved a soil sample from 4-6 ft range. Dark brown Sand.

SB10 4-6 range 1,787 ppm

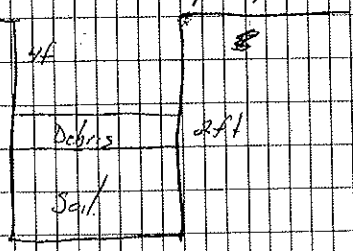
Sample time 13:10

(7) JC

Wednesday

13:15 WG working to retrieve sample at the 8 ft range.

SB-10 floor drain/sump



13:30 SB 10 6-8 ft collected

PID 3,884 ppm

Sample time 13:30

Soil: dark brown Sand

* Duplicate Sample from SB10 4-6 ft range.

13:57 Collected 3 samples for field blank from WG's equipment.

- WG Decontaminated the soil & spoon in between each boring with water and Alconox.

J.K Dobarcyk @ STL

Spoke with JVK at STL labs regarding

(8) JC

Wednesday

quantities needed for running the analyses.

4 oz. for lead only on samples not needed ~~for~~ needing VOC/SVOC etc.

8 oz: SVOC TAL Metals etc.

4 oz: VOC only

14:05 ERM organizing samples collected and filling out chain of custodies - WG. cleaning boring equipment out of basement and cleaning the area

15:00 W.G. Off-site.

15:30 ERM off-site

COC # 07426

SB 13 1-2

SB 10 0-2

SB 10 2-4 * SVOC/VOC

SB 10 4-6 * Dup Lead

SB 10 6-8 * Hold

Dup 113005 - Lead only

FB 113005

TB 113005

(9) JC

~~Wednesday~~ Thursday 12/1/05

7:00 ERM on site.

7:00 ERM (JC) called WG - office. The crew left the shop 20 min ago

10:15 WG on site with Sandy and (1) site worker. Setting up for the hand auger in the elevator equipment room.

Due to the space constraints and the method of concrete boring, the hand auger location is being moved to just outside the equipment room.

~11:15 am SB" 0-2ft : ~10 ppm - Brown Sand

SB" 2-4 ft : ~32 ppm - Brown Sand

PID Readings 4-6ft: 45 ppm - Brown Sand

6-8 ft: Sample could not be collected.

SB 11 0-2 11:15 * SVOC/VOC etc.

SB 11 2-4 11:40 lead

SB 11 4-6 12:00 lead

12:45 13:00 WG setting up the drill rig in front of the roll-up door. SB 2-2.

Kurtland Paulina on-site to perform the confined spaced entry to the sub-basement in the wood building. PID Readings in the confined space are reading > 1,000 ppm

(D) SC

13:15 W.G. Finished coring through concrete on side walk.

13:30 W.G Performed hand augering on the side walk for boring SB2-2. Hand augering revealed a steel conduit narrowly missed by the hand augering

* Contacted W.G. to verify the utility mark-out. Mark-out was performed and copies of the verification are being faxed to ERM Melville office.

14:10 ERM directed W.G to start concrete coring through the sidewalk for SB-6.

14:25 Concrete coring completed and Hand augering for SB-6.

* Approximately 4-INCH below the concrete a steel plate was encountered

14:45 W.G. performing Restoration of the side walk concrete for the abandoned SB2-2.

14:55 W.G. OFF-SITE.

15:00 ERM (Paulina and Kent) performing subslab gas sampling for SG-2

15:30 Paulina off-site

W.G. Off site.

(D) SC.

17:10 SG-2 sample completed. Kent Muldic and Joe Cannino cleaning sample area

17:30 ERM off-site

Summary

SB 11 Hand auger sample collected @ 2-4, 4-6

Field blank from the Hand auger.

SB2-2 - NOT collected due to utility

SB-6 Not collected duet obstruction

* SG-3 - not collected from confined space due to hazardous conditions

SG-2 - Collected.

* Confined space entry to the basement of the wood building was not allowed due to excessive PID reading from the ambient air. LEL meter showed no readings. Another PID meter was ordered for delivery to the site.

FB 120103 collected from the hand auger.

(12) JC Friday 12/2/05-

7:00 a ERM & WG on-site.

~~WG not~~

ERM relocating SB-6 to a location a couple of ft from the original.

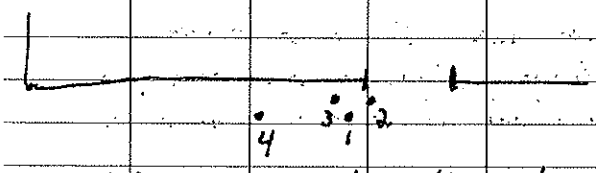
	Depth	PID
SB-6	2-4	0.1 ppm

Brown sand with some organic.

Sample taken 8:00 am

8:30 The boring could not be advanced past ~3ft. A new location is now being picked away from possible building footing.

3rd Attempt at SB-6 advanced 2 ft before refusal. Moving the boring location ~10 ft towards Bridge St.



ERM (JC) spoke with Cathy Weber. SB-6 2-4 is to be relabled 2-3. and will move on to SB2-2.

(13) JC

10:00 2nd attempt at SB2-2 showed a PVC pipe at ~18 inch. towards the building. Now shifting the location 6-inch towards the street.

10:30 Second PID was delivered by Fed-Ex from Ashland Rental. ERM (JC) recalibrated both PIDs using 100ppm Isobutylene.

10:45 The 3rd boring for SB2-2 is successful. WG advanced to 8ft and collected a sample from the 6-8ft zone. ~6-inch of soil was collected by the split spoon.

	SB2-2	PID (US Envr.)	PID (Ashland)
*	6-8	brown Sand 1.2ppm	0ppm
*	8-10	brown Sand multicolored	0.1ppm
*	10-12	brown Sand —	0.0

* These samples showed signs of broken building debris (bricks, broken concrete.)

ERM (JC) checked the air quality of the Wood building basement the 1st PID from US environmental showed reading of >1,000 ppm and slowly climbing

(19) JC

-The conclusion reached, the 1st PID has malfunctioned.

11:45 W.G. setting up to perform SB-5. ~~the~~ at the corner of ~~Water street and~~ offset from the corner of Water and Bridge St.

11:50 Spoke with Cathy Weber the lab has a question regarding the previous shipment of samples

12:15 W.G. performing concrete repairs at the # SB-2-2 and SB-6 locations

12:45 starting boring for SB-5.

* Encountered a concrete slab at 2ft depth. Relocating SB-5 12-inches toward the building

13:34 Collected Sample for SB-5 2.4ft No PID reading noted per Cathy Weber. SB-5 sample time 13:34 Brown Sand with Building debris (Brick concrete).

SB-5 4-6 collected at 18:56 Brown Sand wit Boiding debris.

SB 6-8 could not be achieved

(20) JC.

due to split spoon boring refusal

14:30 W.G. performing Site clean-up and securing the drill rig for the weekend ERM - organizing and packing the samples collected

15:15 ERM + W.G. off-site.

17:00 ERM at Melville office to drop PIDs and samples.

Summary

FRANK: 917 709 - 8615

917-709-8615

SB3-6	2-3ft	0.1 ppm
SB2-2	6-8ft	0.0 ppm
SB2-2	8-10	0.1 ppm
SB2-2	10-12ft	0.0 ppm
SB-5	2-4ft	—
SB-5	4-6	—

IF FOUND PLEASE RETURN TO:

NAME Environmental Resources Management

COMPANY ERM

STREET 520 Broad Hollow Rd.

CITY Melville STATE NY ZIP 11747

PHONE 631 756-8900

Reorder part # 101650
Phone # 800-241-6401

JOB BOOK

FROM BEN MEADOWS COMPANY

PROJECT NAME 220 Water St

PROJECT NUMBER 0022103

CREW S. Caniano

DATE 12/5/05 BOOK # 2 OF 2

WEATHER

Book # 2

FIELD BOOK
16 PAGE
8 LEAVES
50% RAG

CURVE FORMULAS

$T = R \tan \frac{1}{2} I$

$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin.} \frac{1}{2} D}$

$\text{Sin.} \frac{1}{2} D = \frac{50}{R}$

$\text{Sin.} \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$

$R = T \text{ cot.} \frac{1}{2} I$

$R = \frac{50}{\text{Sin.} \frac{1}{2} D}$

$E = R \text{ ex. sec} \frac{1}{2} I$

$E = T \tan \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{I}{D}$

$\text{Tan. def.} = \frac{1}{2} \text{chord def.}$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. 10. $10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. 25. $25^2 \div 200 = 3.125$; $100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3} d^2$. The combined correction is negative.

PROBABLE ERROR. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean = $\pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	⅛	3-16	¼	5-16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

(1) JC

Monday 12/8/08

7:00 ERM & W.G. onsite

2 member Crew w/ (1) drill rig.

7:20 ERM directs W.G. to start concrete coring at SB2-6 location ~~with~~ at the corner of Front and Bridge St.

7:45 1st attempt, boring hit refusal at ~~~~ 8 inches.

8:00 2nd attempt, using the hand auger to advance below the utility to elevation ~~≡~~

SB2-6 0-2 ft 8:38 am

~~eco~~ brown Sand with pebbles and building debris / fill material.

~~SB 26~~ SB2-6 2-4 9:15 am

sand and building material fill.

SB2-6 4-6 sample time 10:00

→ TS 6e held by lab

10:00 W.G. starting installation of MW-1. Per W.G. foreman, the monitoring well must be installed using ~~direct~~ direct push, since the debris in the ~~soils~~ soil (building debris, rocks) would foul the augers.

JC contacted Kathy Weber regarding

the change from augering.
JC to Contact W.G. office to verify the MW installation
12:00 Direct push installed ≈ 10 to 14 ft with no indication of ground water.

Weather: overcast 20°-30°F.

13:00 Continuing with installation of MW-1 have reached approximately 15ft depth.
↳ Verified: W.G. believes MW-1 cannot be installed using augers.

14:15 MW-1 Installation continuing approximately 20 ft depth below the side walk.

14:30 ≈ 20-24 ft. W.G. starting clean-up and securing the site.
Tomorrow morning W.G. and ERM will check the bottom of the boring for the groundwater elevation.
Reynolds # 973-704-6402 cell.
↳ W.G. foreman, Incase of Weather

15:00 W.G & ERM off-site.

TUESDAY 12/6/05

7:00 W.G. on site. JC spoke with W.G foreman from the road W.G. to continue advancing MW-1

8:00 ERM on-site, late due to weather related traffic.
Weather: 30°F partly cloudy. Previous night and early morning. 2-4 inch of snow.

8:15 2nd W.G. worker on-site. setting auger to ground through boulders at ≈ 22 ft.

9:00 MW-1 boring advanced to ≈ 25 with same groundwater content.

11:00 MW-1 advanced to ~~23ft~~ 27.5' the bottom of the auger casing is ≈ 23' W.G. used water when caving through the cobbles/rock in the subgrade. DTW is 18ft and dropping.

12:30 DTW 24.0 ft and dropping.

13:00 water stabilized at 24.6 ft from the top of casing.

W.G. setting up the 2-inch casing for MW-1.

14:40 W.G removing the steel boring casing and placing sand pack and bentonite.

15:00 MW-1 is mostly installed. The well casing is not set.
W.G cleaning the location of MW-1.
15:15 ERM off-site.

Summary

MW-1 set to approximate 30-32 ft.

Wednesday 12/7/05

7:00 ERM & W.G. on-site.
W.G finishing installation MW-1
8:00 am W.G starting concrete casing for SB-2.
* ERM (JC) perform depth to Water at MW-1, the well is dry.
8:45 collect sample SB-2 4-6 ft.
sample time 8:45. Sample consisted of pulverized brick and other building material and brown sand.
SB-2 6-8 8:50 a.m.
SB-2 8-10 ft Brn sand with building debris
* Held at Lab

Bernard Fier 609-585-6890
US Environmental
9:30 W.G Mobilizing to MW-2 location, next to Bridge St and Water St. intersect.
↳ JC. Spoke with RICH from W.G regarding well installation methods. Rich insists that this method (direct push with split spoon) is the preferred

⑥ JC

Method given the underlying soil conditions.
* JC informs Cathy Weber, Jim Pelazzo and verifies the method with Chris W. and Kent M in the Melville office.
10:00 W.G ~~St~~ positions the drill rig for MW-2
10:45 Start concrete coring
11:00 Direct push of ~~St~~ MW-2 reaches refusal at 4ft. W.G. using the coring bit to break up the obstruction.
12:45 The water pump used for keeping the coring bit wet is broken. The W.G. foreman ~~wit~~ will be bringing the pump back to the W.G shop.
~~Wot~~ Work concluded for the day.

13:00 ERM finishing sample packaging
13:15 ERM offsite → To Melville office
W.G loading out the drill rig pump for repair.

⑦ JC

THURSDAY 12/08/05

7:00 : ERM & W.G. onsite. W.G. reinstalling the repaired pump to the drill rig. ERM inspected the boring for MW-2 numerous large boulders were identified to depth of 5 ft.
8:15 W.G. Continuing with Boring for MW-2.
9:00 LWDA Lo (ERM) onsite
9:15 Pauline Graver (ERM) onsite
Kent Murdick (ERM) onsite
~~10:30~~ 10:40 PID delivered to the site
Pauline + Kent setting up for the Wood Building sub-basement confined spaces entry.
~~12:00~~ 12:20 started sample for SG-2
~~12:25~~
W.G Approximately 20 ft down Driller is using a biopolymer slurry to aid in drilling.
Sample SG-2 + SB-9 has been set up for Collection.
14:20 Sample Collection is completed
W.G. drillers at ≈ 40 ft. ERM directed to collected some soil S/f

Spoon Samples for investigation soil and ground water conditions - 40-45 ft. is inclusive of ground water

14:30 W.G starting to pack up and clean the site. Static water level in the boring casing will be investigated the next morning.

14:30 Wood building sub basement is secure

15:10 ERM (Paulina, Keith, Joe) offsite to W.G office site

Monday 12/12/05 -22° Water St.

7:00 ERM and W.G. on site

ERM investigated the conditions at the MW-2 boring. The depth to water is ~ 30ft, due to the drilling slurry not fully breaking down

The boring hole collapsed to a depth of ~ 40 ft.

7:45 W.G retrieving their equipment

8:00 W.G advancing the boring for approximately 5 ft. and collected a split spoon. The soil samples appeared to be saturated at ~ 50 ft.

The MW-2 well screen is set between 47 - 57 ft depths

9:00 - W.G placing sand pack around the PVC casing followed by #00 sand above the casing

10:00 W.G breaks for morning coffee.

10:30a W.G finishing setting MW-2. ERM assisted in locating for MW-3.

11:30 1st location for MW-3, boring not refusal at ~ 14 ft.

(10) JC.

12:00 2nd location for MW-3 is ~1ft closer to the building.
Weather: Overcast, 30°F.
13:00 2nd boring for ~~MW-3~~ MW-3 has succeeded, W.G using combination of direct push and coring with H2O slurry.
14:00 W.G advanced to 10 ft, hit an obstruction. They are using the coring bit to clear it.
14:30 W.G. advanced the MW-3 boring to ~20 ft.
- Cleaning the site.
- W.G. Set the well box for MW-3 in concrete.
15:10 W.G & ERM offsite.

(11)

TUESDAY - JOE CANNING not onsite. Kurt Muller on-site. This page is reserved for his summary to be added later.

(12) JC

Wednesday 12/14

7:20 ERM on-site late due to traffic

7:25 W.G. on-site late due to traffic.

7:30 W.G. starting the drilling equipment, to warm it up.

Weather: Sunny ~20°F, cold!

10:00 am W.G using bio-polymer slurry to add to drilling. Boring has been advanced to 38 Ft.

- Weather: 20-22°F - Cold.

11:00 performed a split spoon sample at 40-45 ft. The material used retrieved was wet granular, with some silty sand.

* ERM performed a depth to water at MW-2, DTW ~ 30 ft.

- The depth of MW-1 will be screened 40-50 ft.

12:00 The PVC casing has been installed with screened interval 40-50 ft.

(13) JC

Thursday 12/29/05

8:00 ~ ERM on-site.

9:30 ERM calls Warren George (WG) WG has overheard work, and did not contact ERM.

9:45 ERM locks site and off site.

Tuesday ~~12~~ 1/3/06

9:45 ERM on-site. heavy traffic

Weather ~ 32°F Rain / Sleet.

W.G. on-site (2 workers and Acker travels)

DTW-init MW-2 30.6 ft

DTB of MW-2 57.1 ft

W.G. & Start developing MW-2

20 ga 7.09 pH
1.76 ms/cm
1.77 turbidity
11.65 DO mg/L
12.9°C

	pH	Cond.	DO	Temp	Turb
30 gal	8.18	1.72	11.44	13.2	114
40	8.34	1.71	11.38	13.4	44

11:20 WG backing down and setting up at next well.

(14)

MW-3 DTW = 24.4 DTB = 45 ft

Vol	pH	Cond.	DO	Temp.	Turb
7.58					
20	7.58	1.83	11.13	13.7	165
30	8.38	1.83	10.94	13.5	85
40	78.2	1.81	11.28	13.8	29

MW-01

DTW = Not taken, during set up the pump before it could be measured.

- W.G started pumping MW-1, an initial spurt of water ~~then~~ ~1 gal then pumped dry. The pump was turned off, then ran. Another spurt of water then pumped dry.

Vol	pH	Cond	DO	Temp	Turb
~~10 gal~~	5.1	1.61	12.52	8.0	210
15 gal	5.2	1.53	17.50	5.8	111

-> Hauling decontaminant for 2hr 15 min

14:15 W.G Breaking down equipment & Barrels or Drums are being stored inside the wood building per request of Ray.

(15)

1/11/06

7:45 Joe Canosa and Ron Taylor on site.

Setting Sample equipment at MW-3

DTW: 24.45'

DTB:

Inner PVC casing was marked by JC at location of Water Measurement.

VOC: Two (2) 40 ml

SVOC: Two (2) 1 liter

Metals: One (1) 500 ml HNO3

Pest/PCB: Two (2) 1 lb

Metals Dissolve one (1) 500 ml unpreserved

MW-3 purge start 08:00 a.m.

~~Turb~~ Turb. below 50 and reading stabilized. (See Separate Sampling logs)

MW-3 sample start 09:20

COC sample time 09:20

16

Joe Caniano spoke with Erin from STL regarding bottles and Samples

Volatiles

2 - MW-3
2 - MW-2
2 - MW-7
2 - DUP
2 - MS/MSD or FB
10 TOTAL.

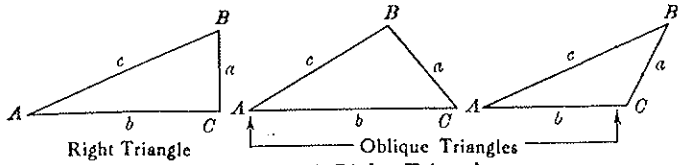
2 VIAL SHIFT

SVOC + PCB/Pest each

2 - MW-3
2 - MW-2
2 - MW-7
2 - DUP
2 - FB
2 - MS/MSD
12 TOTAL.

DUP + MS/MS was collected from MW-3
DUP collected at MS/MSD collected 10:35/10:40
MW-2 collected @ 12:35
MW-7 collected 14:20.

TRIGONOMETRIC FORMULAS



Solution of Right Triangles

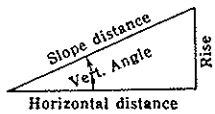
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180° - C, \tan \frac{1}{2}(A - B) = \frac{(a-b)\tan \frac{1}{2}(A+B)}{a+b}, c = \frac{a \sin C}{\sin A}$.
a, b, c	A, B, C	$s = \frac{a+b+c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}}, \sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}}, C = 180° - (A + B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10'. Since cos 5° 10' = .9959, horizontal distance = 319.4 × .9959 = 318.09 ft.

Horizontal distance also = Slope distance minus slope distance times (1 − cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10' = .9959. 1 − .9959 = .0041. 319.4 × .0041 = 1.31. 319.4 − 1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

220 Water S-1

① Sunny 60 F 9/7/06 ①

8:30 am TRC on-site

9:00 am ADT on-site

9:05 am DTW = 35.31 at MW-01

Site walk with driller, identified possible boring locations

10:00 Commenced drilling PID=0.0 ppm refusal at 12 ft

10:30 Moved to another location 2 ft away. PID=0.0 ppm Bot refused at approx 14 ft.

11:00 Moved to another location 2 ft away refused at 12 ft approximately

11:15 Moved to another location within the GP-4 boring area PID=0.0 ppm

11:30 Changed bit to scraper

12:30 pm Reached 40 ft on the fourth attempt Driller proceeds to install temporary well.

Boring collapsed at the bottom so temporary well could not be installed.

13:00 pm Discussed an alternate method with PM. Driller will drive a 2-foot slotted rod to sampling depth, will insert the tubing and collect the sample.
The 2-ft slotted rod section will be decontaminated before and after sampling.

13:35 pm Slotted rod is at 40 ft
Placing tubing at 40 ft
Purging sample with
pump 2. Purged
approximately 1 gallon of
GW.

14:10 pm Collected GP-4 sample,
and placed in cooler w.
ice

14:30 pm Collected field blank

14:45 pm Moved to the second boring location (GP-3)

Two attempts had refusal at 10-11 ft. Third attempt seemed ok.

15:00 Lab picked up samples (GP-4 and FB)

16:35 Slotted rod at 40 ft at the second boring location.

16:52 pm Collected GP-3 sample and placed in cooler with ice.

17:30 pm Patching borehole with cement

9/7/06

④ 220 Water St 9/8/06 ①
Clear, 60-70 F

8:00 am Gene Gubey, ERT on-site

8:15 am Elena Roca, ERT on-site

8:30 am ADT on-site. Conducted a site walk and identified safe areas for borings GP-2 and GP-1. Gene Gubey instructed the driller to hand dig to 4 ft

Hand digging first location. ERT thought to be too close to building structure and moved away 2 feet.

9:00 am Driller hand-digging second attempt. PID = 0.0 ppm

10:15 am Geoprobe at 40 ft bgs
10:30 am Driller decon slotted pipe
11:40 am Slotted rod at 40 ft bgs
Placed tubing
12:20 pm Collected GP-2 sample

⑤ 9/8/06 ②

12:35 pm Moved to fourth (and last) boring location. Commenced hand digging PID = 0.0 ppm

12:45 pm Commenced geoprobe to 40 ft.

12:55 pm Collected field blank.

13:30 pm Geoprobe reached 40 ft

13:45 pm Driller decon slotted rod.

14:15 pm Slotted rod at 40 ft bgs Inserting tubing and purging.

14:30 pm Collected GP-1 sample.

15:00 pm Driller patching borehole with cement
Lab picked-up samples.

15:30 pm Off-site

9/8/06

⑥ 220 water st. 9/11/06 ①

8:00 am ~~ERT~~ on-site.

9:00 am ADT on-site
ADT's drilling rig is not on tracks as discussed, it is truck mounted and cannot fit through the sidewalk.

9:30 am ADT discussing the possibility of bringing another rig.

9:45 am ADT cannot bring another rig.

10:00 am ADT demobilizes, ~~ERT~~ off-site.

⑦ 220 water st. 9/15/06 ①

Rain (light), 50 F

8:00 am ~~ERT~~ and ADT on-site with a track hollow stem auger rig.

8:30 am Selected location/area for well installation in the vicinity of GP-3 (per the lab results).

9:00 am Driller hand digs first 4 feet (after breaking up the concrete)

9:15 am Auger commence. PID=00 ppm

10:05 am Refusal at approximately 13 ft.

10:15 am Patching the hole with soil cutting, gravel & cement.

11:00 am Moved to a different location 2 ft away

11:10 am Hand digging second location. PID=0.0 ppm

12:00 pm Refusal at approx 15 ft.

12:20 pm Patching up the hole with soil cuttings, gravel and cement.

12:45 pm Lunch break.

13:15 pm Moved to a third location in the vicinity of GP-3.

13:25 pm Hand digging third location.

13:35 pm Drilling commences on third location PID=0.9ppm

14:00 pm Refusal at approximately 12-15 ft.

14:15 pm Patching up hole.

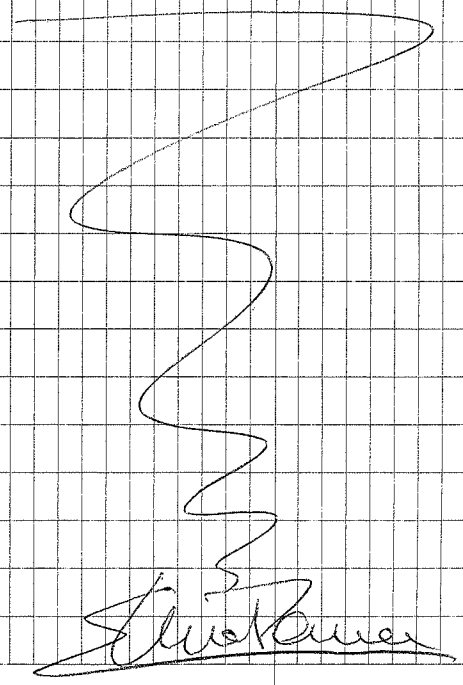
14:35 pm Moved to another location

14:40 pm Hand digging fourth drilling location. PID=0.0 ppm

15:10 pm Refusal at 10 ft Drilling experiencing some fluid leakage problems. and AOT decide to finish for today

15:25 pm AOT patching up the hole

16:00 pm Everybody off-site



9/15/06

(10) 220 Water St 10/6/06 (1)

Clear, 50 F, light wind

8:00 am ~~TRT~~ on-site

8:30 am ADT on-site with mud rotary truck rig.

9:00 am Breakup concrete in drilling location (in the vicinity of GP-3).

9:30 am Need digging to 4 ft Mixing bentonite and water Prepare for air/mud rotary drilling.

10:00 am Commenced drilling.

10:30 am Hydraulic pump failed at approximately 5-10 ft. ADT called their maintenance to bring spare parts for repair.

11:20 am ADT maintenance on-site

11:40 am ADT cannot repair hydraulic pump.

12:20 pm Everybody off-site

S. Chiotti 10/6/06

(11) 220 Water St 10/14/06 (1)

Clear, 40 F, light wind
60 F

8:00 am ~~TRT~~ on-site

9:10 am ADT on-site
ADT preping for drilling.

10:00 am ADT commenced drilling.

11:00 am ADT at 10 ft bgs

11:40 am at 15 ft bgs

12:10 pm at 20 ft bgs

12:30 pm Lunch break.

13:20 pm at 25 ft bgs.

13:30 pm at 30 ft bgs

14:00 pm at 35 ft

14:30 pm at 40 ft

14:45 pm at 45 ft bgs

15:20 pm Placed well at 42 ft with ~~screen (10 ft)~~ between 42 ft and 32 ft

(12) 10/14/06 (2)

15:25 Packing well with sand

15:35 Packing well with bentonite
watering the bentonite.
Grouting well.

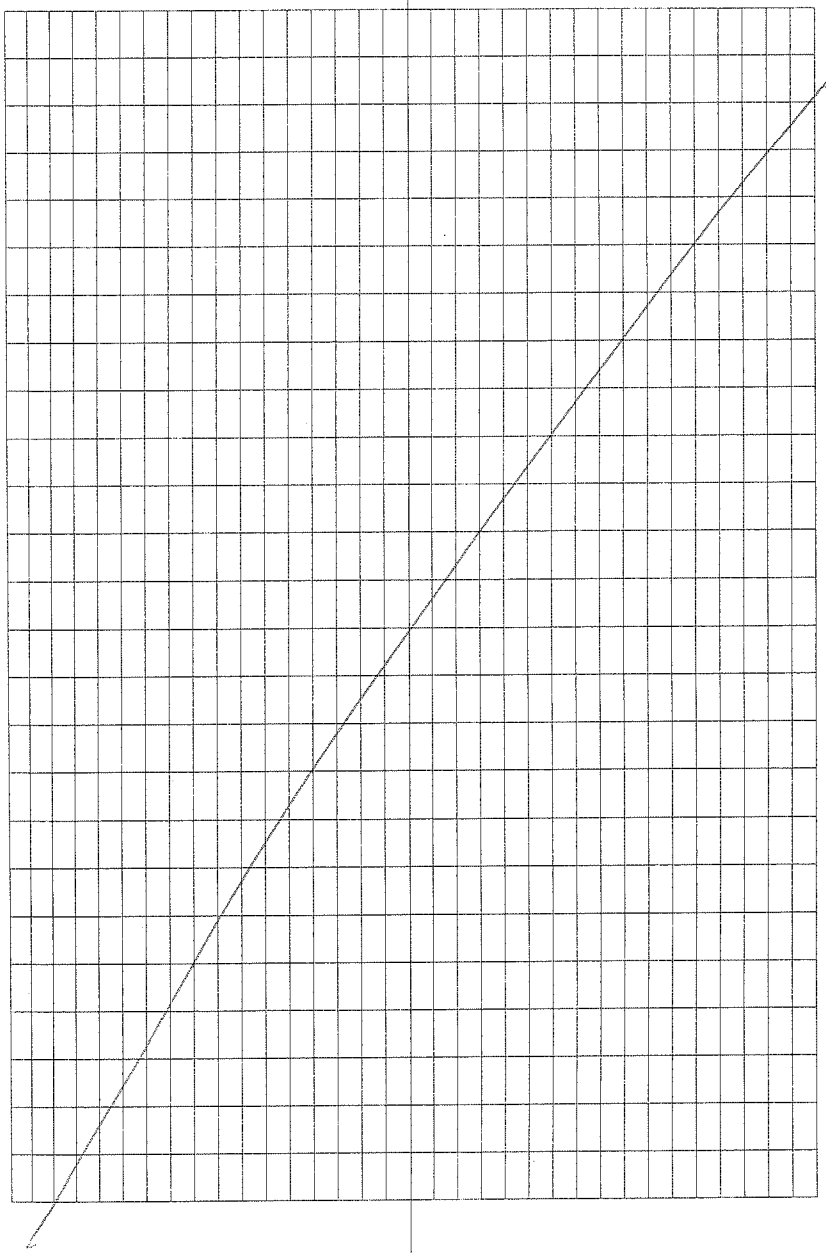
16:45 pm start well development

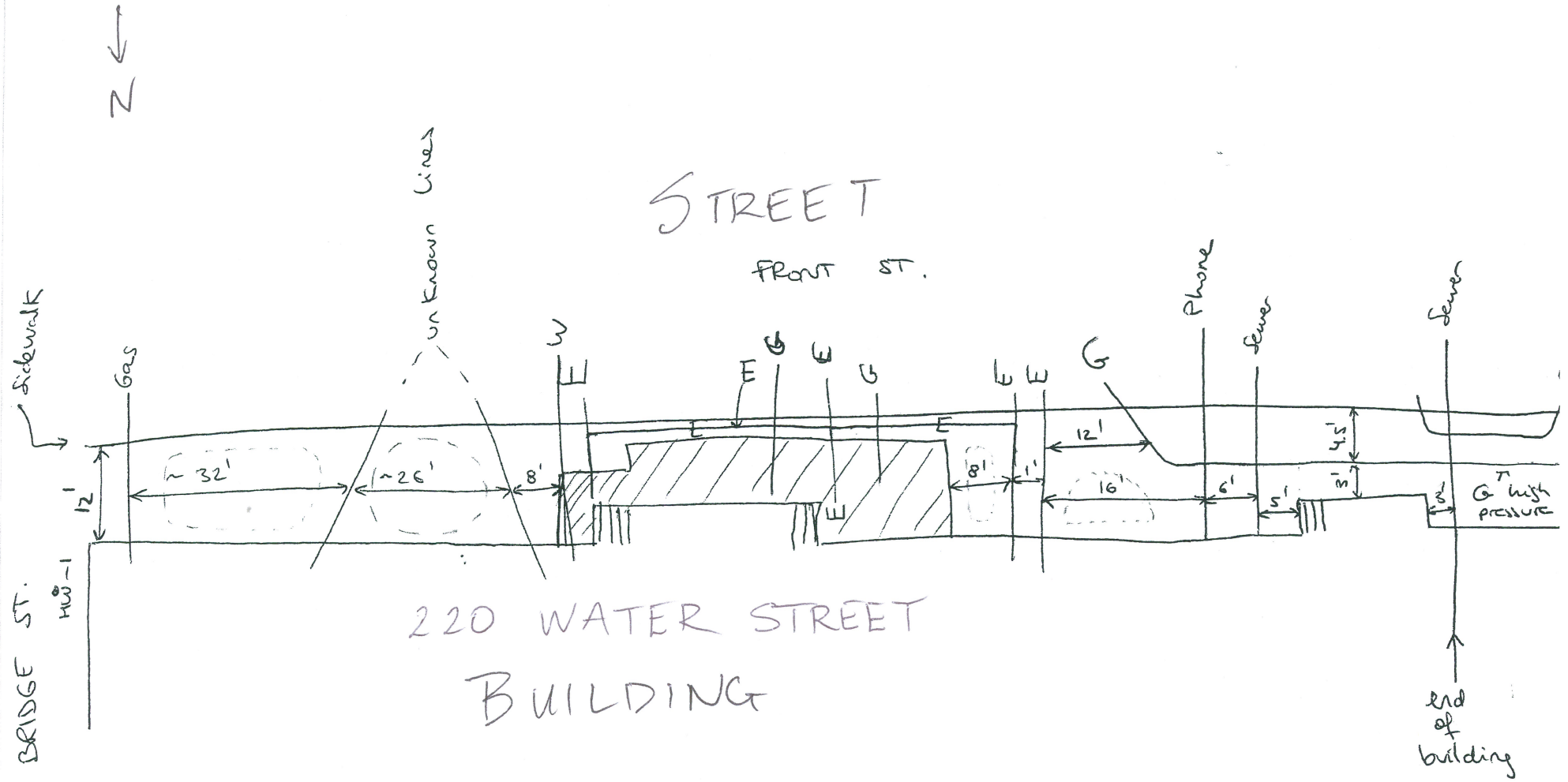
17:25 pm Placed well marlde
well sealed in-place
with cement, then placed
marlde.

17:55 pm Continue well development

18:05 pm Pump supplied by ADT does
not have enough suction
and stops pumping or
extremely slow.
Decided to finish
developing the well
with a different pump
on Monday or Tuesday.
Purged approximately 15-20 gal

18:35 pm Everybody off-site.




N
STREET
FRONT ST.
Unknown Line?
Sidewalk
Gas
W
E
G
Phone
Sewer
Sewer
~32'
~26'
8'
12'
8'
1'
16'
6'
5'
3'
3'
4.5'
12'
G high pressure
BRIDGE ST.
220 WATER STREET
BUILDING
end of building

0002103

10/31/06 220 Water St. Brooklyn, NY 11

- Arrive 0800 at 220 w/ N. Zerkas & Elena Pace
- Water Levels & PID Readings

MW-02
PID 0.4 ppm
28.86 dtw

- MW-03 (needs J-plug)
PID 0.0 ppm
24.41 dtw

- MW-01
PID = 0.2 ppm
35.50 dtw

- MW-04
PID = 0.2 ppm
34.35 dtw

Ambient PID = 0-0.4 ppm

- Issue w/ 2nd backpack Sampler. Could not operate, used 1 pack to sample all wells.

11-3-06

10/31/00 220 Water St. (cont)

- Confirmed w/ rental company that Backpack was not functional. Utilization of Keck set up for all wells. (used both pumps, both water levels (interface probes)
- Discard of all purgewater in 55gal drums, inside 220 Water St.

- Offsite 1500

11/30

APPENDIX C

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street Brooklyn DATE 1/11/10

SAMPLE ID : MW-3
WELL ID : MW-3
NJDEP WELL PERMIT NO. :

SAMPLERS :	Time Onsite:	Time Offsite:
R. Taylor	0745	
J. Caniano	0745	

PID reading (ppm) ..... — Time: — (hrs)
Depth of well (from top of casing) ..... ~~35.38~~ 52.57 Time: 13:33 (hrs)
DNAPL Level (from top of casing) ..... — Time: 1333 (hrs)
Static water level (from top of casing) ..... 35.38 Time: 1333 (hrs)
Static water level (after pump installation) ..... 35.48 Time: 13:38 (hrs)
Water level after purging (from top of casing) ..... Time: (hrs)
Water level before sampling (from top of casing) .... Time: (hrs)
Depth of screened interval (from top of casing) .....

Purging Method:

___ Peristaltic ___ Centrifugal
___ Bailer ___ Pos. Displ.
X Submersible ___ Ded. Pump

Depth of Pump: ~50.5 (ft)

Well Volume Calculation:

	1 volume	3 volumes
4 in. well: ___ ft. of water x 0.65 =	___ gal.	x 3 = ___ gal.
6 in. well: ___ ft. of water x 1.47 =	___ gal.	x 3 = ___ gal.

2 in well

Purge Start Time: 1342 (hrs)
Purge End Time: 1411 (hrs)
Purge Duration: 29 (min)
Purge Flow Rate: .3 ~~(lpm)~~ gpm

Volume of water removed: 1/4 ~~liter~~ gal >3 volumes: yes ___ no X purged dry? yes ___ no X

Field Tests:

Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
units	(min)	(m S/	(S/cm)	U-22 (ntu Hach	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range		*0.1*	*3%*	*10%*	*10%*		*10%*		*0.3*	*0.2 - 0.5*
1346	4	7.70	1075	11	7.97	14.79	150.6	35.39	—	.3
1351	9	7.54	1127	5.4	5.86	15.06	155.1	35.38	+0.01	.3
1356	14	7.52	1170	2.2	5.48	15.35	153.9	35.38	+0.01	
1401	19	7.51	1190	3.0	5.23	15.42	152.0	—		
1406	24	7.51	1192	3.3	5.12	15.50	150.3	—		
1411	29	7.50	1191	2.1	5.08	15.53	149.4			
After Sample	1445	59	7.57	1172	3.8	6.33	15.48	114.9	—		—

Sampling:

Time readings stabilized: 1411 (hrs)
Sample Start Time: 1420 (hrs)
Sample End Time: 1443 (hrs)
Chain of Custody sample time: 1420 (min)
Sample Flow Rate: .4 ~~(lpm)~~ gpm
Duration of sample time: 23 (min)

2 VOA 8270
2 PEST/PCB
2 VOA 40mL
1 metals

Collection Method:

___ Stainless steel bailer
___ Teflon bailer
___ Pos. Disp. Pump
___ Disposable bailer
___ Dedicated pump
X Other: Submersible Pump

Analyses:

X VOCs - Analytical Method: 602 ___ 503 ___ Other 601
X SVOCs
X PP Metals
X PCB/Pest
___ Physical
___ Other

Observations

Weather/Temperature: 45°F Cloudy Slight mist/humidity is high
Sample Description: Turbidity: (circle one) HIGH MODERATE LOW
Free Product? yes ___ no ___ describe
Sheen? yes ___ no ___ describe
Odor? yes ___ no ___ describe

Comments:
- Bladder pump is polyethelyne instead of teflon

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street Brooklyn DATE 1/11/06

SAMPLE ID : MW-2
WELL ID : MW-2
NJDEP WELL PERMIT NO. :

SAMPLERS :	Time Onsite:	Time Offsite:
R. Taylor	0945	
J. Caniano	0745	

PID reading (ppm)	—	Time: —	(hrs)
Depth of well (from top of casing)	57.54	Time: 1155	(hrs)
DNAPL Level (from top of casing)	—	Time: —	(hrs)
Static water level (from top of casing)	—	Time: —	(hrs)
Static water level (after pump installation)	—	Time: —	(hrs)
Water level after purging (from top of casing)	—	Time: —	(hrs)
Water level before sampling (from top of casing)	—	Time: —	(hrs)
Depth of screened interval (from top of casing)	—		

Purging Method:

___	Peristaltic	___	Centrifugal
___	Bailer	___	Pos. Displ.
X	Submersible	___	Ded. Pump

Depth of Pump: ~49 (ft)
Purge Start Time: 1202 (hrs)
Purge End Time: 1233 (hrs)
Purge Duration: 31 (min)
Purge Flow Rate: .3 ~~(lpm)~~ gpm

Well Volume Calculation:

		1 volume	3 volumes
4 in. well:	___ ft. of water x 0.65 =	___ gal.	x 3 = ___ gal.
6 in. well:	___ ft. of water x 1.47 =	___ gal.	x 3 = ___ gal.

Volume of water removed: ~1 ~~ltr~~ gal. >3 volumes: yes ___ no Y purged dry? yes ___ no X

Field Tests:

Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
units	(min)	(m S/	(S/cm)	(ntu U-22 / Hach)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range		*0.1*	*3%*	*10%*	*10%*		*10%*		*0.3*	*0.2 - 0.5*
1205	3	7.79	1173	90	10.11	14.54	160.8			.3
1210	5	7.70	1187	60	9.99	14.32	167.8			
1213	10	7.66	1198	50	9.86	14.22	172.1			
1218	15	7.63	1213	34	9.75	14.19	175.6			
1223	20	7.61	1216	26	9.73	14.15	178.6			
1228	25	7.60	1222	24	9.74	14.10	180.7			
1233	28	7.59	1230	22	9.71	14.15	182.3			
After Sample	1315	50	7.54	1217	16	10.09	15.03	156.2		

Sampling:

Time readings stabilized: 1233 (hrs)
Sample Start Time: 1235 (hrs)
Sample End Time: 1310 (hrs)
Chain of Custody sample time: 1235 (min)
Sample Flow Rate: .3 ~~(lpm)~~ gpm
Duration of sample time: 35 (min)

Collection Method:

				Analytical Method:				
___	Stainless steel bailer	X	VOCs -	602 ___	503 ___	Other	601	
___	Teflon bailer	X	SVOCs					
___	Pos. Disp. Pump	X	PP Metals					
___	Disposable bailer	X	PCB/Pest					
___	Dedicated pump	___	Physical					
X	Other: Submersible Pump	___	Other					

2 VOA 8270
2 Pest/PCB
1 metals
2 VOA 40 mL

Observations

Weather/Temperature: 45°F Cloudy Slight mist
Sample Description: Turbidity: (circle one) HIGH MODERATE LOW
Free Product? yes ___ no ___ describe
Sheen? yes ___ no ___ describe
Odor? yes ___ no ___ describe

Comments:
- Water level still not working properly.
- There is a polyethelene bladder in pump instead of a teflon

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GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street Brooklyn DATE 1/11/04

SAMPLE ID : MW-3 MS/MSD/DUP

WELL ID : MW-3

NJDEP WELL PERMIT NO. :

SAMPLERS :	Time Onsite:	Time Offsite:
R. Taylor	0745	
J. Caniano	0745	

PID reading (ppm)	—	Time: —	(hrs)
Depth of well (from top of casing)	47.50	Time: 0810	(hrs)
DNAPL Level (from top of casing)	—	Time: 0800	(hrs)
Static water level (from top of casing)	24.40	Time: 0800	(hrs)
Static water level (after pump installation)	24.37	Time: 0817	(hrs)
Water level after purging (from top of casing)	—	Time: —	(hrs)
Water level before sampling (from top of casing)	—	Time: —	(hrs)
Depth of screened interval (from top of casing)	—		

Purging Method:

____ Peristaltic ____ Centrifugal

____ Bailer ____ Pos. Displ.

X Submersible ____ Ded. Pump

Depth of Pump: ~47.50 (ft)

Purge Start Time: 0818 (hrs)

Purge End Time: 0913 (hrs)

Well Volume Calculation:

		1 volume	3 volumes
4 in. well:	____ ft. of water x 0.65 =	____ gal.	x 3 = ____ gal.
6 in. well:	____ ft. of water x 1.47 =	____ gal.	x 3 = ____ gal.

2 inwell

Purge Duration: 50 (min)

Purge Flow Rate: .7 ~~(lpm)~~ gpm

Volume of water removed: ~1.5 ~~ltr.~~ gal >3 volumes: yes ____ no X purged dry? yes ____ no X

Field Tests:

Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
units	(min)	(m S/	(S/cm)	U-22 (ntu Hach	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range		0.1	3%	10%	10%		10%		0.3	0.2 - 0.5
8:23	5	7.71	1358	180	11.64	15.10	72.8			.04
0832	13	7.54	1390	180	10.95	15.48	91.0			
0837	18	7.51	1397	200	10.67	15.62	99.5			
0843	23	7.50	1400	150	10.38	15.74	109.3			
0848	28	7.50	1400	120	10.17	15.81	115.6			
0853	33	7.49	1398	100	10.02	15.80	120.6			
0858	38	7.49	1395	85	9.93	15.80	125.0			
0903	43	7.49	1392	80	9.85	15.82	128.7			
0908	48	7.49	1392	60	9.81	15.80	132.1			
0913	53	7.48	1389	55	9.75	15.82	135.2			
0918	58	7.48	1387	50	9.71	15.84	138.1			
After Sample 11:18		7.47	1364		10.23	15.58	185.3	24.33		

Sampling:

Time readings stabilized: 0918 (hrs)

Sample Start Time: 0920 (hrs)

Sample End Time: 1120 (hrs)

Chain of Custody sample time: 0920 (min)

Sample Flow Rate: 08 (lpm)

Duration of sample time: 120 (min)

Collection Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

____ Disposable bailer

____ Dedicated pump

X Other: Submersible Pump

Analyses:

X VOCs - 602 ____ 503 ____ Other 601

X SVOCs

X PP Metals

X PCB/Pest

____ Physical

____ Other

Observations

Weather/Temperature: 48°F Cloudy

Sample Description: Turbidity: (circle one) HIGH (MODERATE) LOW

Free Product? yes ____ no X describe

Sheen? yes ____ no X describe

Odor? yes ____ no X describe

Comments:

Water level is not working properly

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GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street, Brookln, NY — DATE 10/31/2006

SAMPLE ID : MW-1

WELL ID : MW-1

NJDEP WELL PERMIT NO. :

SAMPLERS :	Time Onsite:	Time Offsite:
Elena Ponce	0730	1500
Nicole Zorskas	0800	1500

PID reading (ppm)	0.2 ppm	Time: 0805	(hrs)
Depth of well (from top of casing)	51	Time: 1120	(hrs)
DNAPL Level (from top of casing)	—	Time: —	(hrs)
Static water level (from top of casing)	35.5	Time: 1125	(hrs)
Static water level (after pump installation)	35.46	Time: 1135	(hrs)
Water level after purging (from top of casing)	35.49	Time: 1220	(hrs)
Water level before sampling (from top of casing)	35.49	Time: 1220	(hrs)
Depth of screened interval (from top of casing)	—		

Purging Method:

- ____ Peristaltic
- ____ Bailer
- X Submersible
- ____ Teflon Bladder
- ____ Centrifugal
- ____ Pos. Displ.
- ____ Ded. Pump

Well Volume Calculation: 2 in. well

4 in. well: ____ ft. of water x 0.65 = ____ gal. (1 volume) x 3 = ____ gal. (3 volumes)

6 in. well: ____ ft. of water x 1.47 = ____ gal. (1 volume) x 3 = ____ gal. (3 volumes)

Depth of Pump: 48 (ft)

Purge Start Time: 1145 (hrs) — Purge Duration: 25 (min)

Purge End Time: 1220 (hrs) — Purge Flow Rate: 0.2 (lpm)

Volume of water removed: ~1.5 gal lit. >3 volumes: yes ____ no X — purged dry?: yes ____ no X

Field Tests:

	Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
Units	hr/min	min elap.		(mS/cm)	(ntu)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range	1145	0	0.1	3%	10%	10%		10%		0.3	0.2-0.5
	1150	5	7.59	1064	16.7	10.39	19.07	71.6	35.46	0	0.2
	1155	10	7.23	1083	15.2	5.68	18.32	78.3	35.46	0	
	1200	15	7.23	1083	7.69	5.68	18.30	78.5	35.48	0.02	
	1205	20	7.24	1068	5.96	4.96	17.73	77.6	35.47	0.01	
	1210	25	7.22	1068	4.24	4.39	17.73	81.0	35.47	0.01	
	1215	30	7.21	1066	3.80	4.32	17.70	86.0	35.46	0	
	1220	35	7.20	1065	3.34	4.24	17.69	88.7	35.49	0.03	
Sample	1230	45	7.20	1058	2.92	4.41	17.60	91.8	35.48	0.03	

Sampling:

Time readings stabilized: 1220 (hrs) — Chain of Custody sample time: 1225 (hrs)

Sample Start Time: 1225 (hrs) — Sample Flow Rate: 0.2 (lpm)

Sample End Time: 1227 (hrs) — Duration of sample time: 3 (min)

Collection Method:

- ____ Stainless steel bailer
- ____ Teflon bailer
- ____ Pos. Disp. Pump
- ____ Disposable bailer
- ____ Dedicated pump
- X Other: Submersible Pump

Analyses / Analytical Method:

- X TCL VO+10 TIC's, MTBE, TBA-Methane, Ethane, Ethene
- ____ Alkalinity
- ____ Chloride
- ____ Nitrate
- ____ Sulfate
- ____ Ferrous Iron (Fe++)
- ____ Lead (Pb)

Observations:

Weather/Temperature: Sunny 70° W/0-5mph

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no X describe ____

Sheen? yes ____ no X describe ____

Odor? yes ____ no X describe ____

Calibration:

YSI 600XL calibrated using calibration solutions provided by US Environmental;

Turbidimeter - LaMotte - Std 1 NTU = 1 / 10 NTU = 10

PID - Calibrated Microtip zeroing using ambient air and spanning using 100-ppm isobutylene. 100-ppm Std =100-ppm Meas.

Comments:

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street, Brookln, NY

DATE 10/31/2006

SAMPLE ID : ~~MW-03~~ MW-3

WELL ID : MW-3

~~NJDEP WELL PERMIT NO.~~ :

SAMPLERS : Elena Ponce, Nicole Zorskas

	Time Onsite:	Time Offsite:
	0730	1500
	0800	1500

PID reading (ppm)	0.4 ppm	Time: 0801	(hrs)
Depth of well (from top of casing)	56.9	Time: 0830	(hrs)
DNAPL Level (from top of casing)		Time:	(hrs)
Static water level (from top of casing)	28.86	Time: 0830	(hrs)
Static water level (after pump installation)	28.91	Time: 0844	(hrs)
Water level after purging (from top of casing)	28.91	Time: 1050	(hrs)
Water level before sampling (from top of casing)	28.91	Time: 1050	(hrs)
Depth of screened interval (from top of casing)			

Purging Method:

_____ Peristaltic
_____ Bailer
X Submersible
_____ Teflon Bladder
_____ Centrifugal
_____ Pos. Displ.
_____ Ded. Pump

Well Volume Calculation:

4 in. well: _____ ft. of water x 0.65 = ___ gal. 1 volume; x 3 = ___ gal. 3 volumes
6 in. well: _____ ft. of water x 1.47 = ___ gal. 1 volume; x 3 = ___ gal. 3 volumes

Depth of Pump: 54 (ft)

Purge Start Time: ~~1054~~ 1000 (hrs)

Purge End Time: 1050 (hrs)

Purge Duration: 50 (min)

Purge Flow Rate: 0.2 (lpm)

Volume of water removed: ~ 3 g ~~lit.~~ >3 volumes: yes ___ no X purged dry? yes ___ no X

Field Tests:

	Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
Units	hr/min	min elap.		(mS/cm)	(ntu)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range	~~1015~~	~~15~~	0.1	3%	10%	10%		10%		0.3	0.2-0.5
	1015	15	7.55	~~1331~~ 1330	17.4	9.11	17.04	66.3	28.91	0	0.2
	1020	20	7.33	1224	17.0	4.22	17.18	65.0	28.91	0	0.2
	1025	25	7.30	1250	15.4	3.21	17.18	67.9	28.91	0	
	1030	30	7.27	1260	13.4	1.83	17.12	67.0	28.91	0	
	1035	35	7.27	1263	12.2	1.53	17.09	66.4	28.91	0	
	1040	40	7.26	1265	10.4	1.31	17.07	65.8	28.91	0	
	1045	45	7.26	1266	8.09	1.19	17.05	65.5	28.91	0	
	1050	50	7.26	1265	6.01	1.05	17.06	64.9	28.91	0	
Sample	~~1055~~ 1105	65	7.26	1271	5.01	10.1	17.08	64.8	28.91	0	

Sampling:

Time readings stabilized: 1050 (hrs)
Sample Start Time: 1050 (hrs)
Sample End Time: 1058 (hrs)
Chain of Custody sample time: 1050 (hrs)
Sample Flow Rate: 0.2 (lpm)
Duration of sample time: 8 (min) ~~10~~ 8

Collection Method:

_____ Stainless steel bailer
_____ Teflon bailer
_____ Pos. Disp. Pump
_____ Disposable bailer
_____ Dedicated pump
X Other: Submersible Pump

Analyses:

X TCL VO+10 TIC's, MTBE, TBA-
_____ Methane, Ethane, Ethene
_____ Alkalinity
_____ Chloride
_____ Nitrate
_____ Sulfate
_____ Ferrous Iron (Fe++)
_____ Lead (Pb)

Analytical Method:

Observations:

Weather/Temperature: Sunny 65° E/ 0-5 mph

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ___ no X describe _____

Sheen? yes ___ no X describe _____

Odor? yes ___ no X describe _____

Calibration:

YSI 600XL calibrated using calibration solutions provided by US Environmental;
Turbidimeter - LaMotte - Std 1 NTU = 1 / 10 NTU = 10
PID - Calibrated Microtip zeroing using ambient air and spanning using 100-ppm isobutylene. 100-ppm Std =100-ppm Meas.

Comments:

* Duplicate Taken 1050 → COC time = 0800

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street, Brookln, NY — DATE 10/31/2006

SAMPLE ID : MW-3

WELL ID : MW-3

NJDEP WELL PERMIT NO. :

SAMPLERS : Elena Ponce, Nicole Zorskas

	Time Onsite:	Time Offsite:
	7:30 0800	1000 1500

PID reading (ppm)	0.2	Time: 8:45	(hrs)
Depth of well (from top of casing)	50	Time:	(hrs)
DNAPL Level (from top of casing)	—	Time:	(hrs)
Static water level (from top of casing)	24.44	Time: 8:50	(hrs)
Static water level (after pump installation)	24.41	Time: 9:06	(hrs)
Water level after purging (from top of casing)	24.44	Time: 0950	(hrs)
Water level before sampling (from top of casing)	24.44	Time: 0951	(hrs)
Depth of screened interval (from top of casing)			

Purging Method:

- ____ Peristaltic
- ____ Bailer
- X Submersible
- ____ Teflon Bladder
- ____ Centrifugal
- ____ Pos. Displ.
- ____ Ded. Pump

Well Volume Calculation: 2 in well

4 in. well: ____ ft. of water x 0.65 = ____ gal. — 1 volume ____ gal. — x 3 = ____ gal. (3 volumes)

6 in. well: ____ ft. of water x 1.47 = ____ gal. — x 3 = ____ gal.

Depth of Pump: 47 (ft)

Purge Start Time: 915 (hrs) — Purge Duration: 35 (min)

Purge End Time: 0950 (hrs) — Purge Flow Rate: 0.2 (lpm)

Volume of water removed: ~3 lit. — >3 volumes: yes ____ no ✓ — purged dry? yes ____ no ✓

Field Tests:

	Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
Units	hr/min	min elap.		(mS/cm)	(ntu)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range	9:15		0.1	3%	10%	10%		10%		0.3	0.2-0.5
	9:20	5	7.63	1249	20.9	9.93	16.34	29.7	24.44	0	0.2
	9:25	10	7.37	1283	21.0	5.98	16.57	33.6	24.44	0	
	9:30	15	7.29	1297	20.6	4.24	16.66	43.1	24.45	0.01	
	9:35	20	7.27	1297	19.4	3.62	16.65	46.4	24.44	0	
	9:40	25	7.27	1295	20.1	3.29	16.75	49.4	24.44	0	
	9:45	30	7.27	1286	20.6	2.99	16.73	52.0	24.44	0	
	9:50	35	7.27	1282	21.3	2.90	16.76	53.7	24.44	0	
Sample	10:00	45	7.27	1273	20.7	2.85	16.48	57.0	24.44	0	0.2

Sampling:

Time readings stabilized: 9:50 (hrs) — Chain of Custody sample time: 0952 (hrs)

Sample Start Time: 9:52 (hrs) — Sample Flow Rate: ~0.2 (lpm)

Sample End Time: 9:54 (hrs) — Duration of sample time: 2 (min)

Collection Method:

- ____ Stainless steel bailer
- ____ Teflon bailer
- ____ Pos. Disp. Pump
- ____ Disposable bailer
- ____ Dedicated pump
- X Other: Submersible Pump

Analyses / Analytical Method:

- X TCL VO+10 TIC's, MTBE, TBA-Methane, Ethane, Ethene
- ____ Alkalinity
- ____ Chloride
- ____ Nitrate
- ____ Sulfate
- ____ Ferrous Iron (Fe++)
- ____ Lead (Pb)

Observations:

Weather/Temperature:

Sample Description: Turbidity: (circle one) HIGH MODERATE (LOW)

Free Product? yes ____ no ✓ describe ____

Sheen? yes ____ no ✓ describe ____

Odor? yes ____ no ✓ describe ____

Calibration:

YSI 600XL calibrated using calibration solutions provided by US Environmental;

Turbidimeter - LaMotte - Std 1 NTU = 1 / 10 NTU = 10

PID - Calibrated Microtip zeroing using ambient air and spanning using 100-ppm isobutylene. 100-ppm Std =100-ppm Meas.

Comments: Clear, 55 F, 0-5 mph wind

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street, Brookln, NY — DATE 10/31/2006

SAMPLE ID : MW-4

WELL ID : MW-4

~~NJDEP WELL PERMIT NO:~~

SAMPLERS :	Time Onsite:	Time Offsite:
Elena Ponce	0730	1500
Nicole Zorskas	0800	1500

PID reading (ppm)	0.2 ppm	Time: 0805	(hrs)
Depth of well (from top of casing)	41.24	Time: 1230	(hrs)
DNAPL Level (from top of casing)	—	Time: —	(hrs)
Static water level (from top of casing)	34.32	Time: 1230	(hrs)
Static water level (after pump installation)	34.42	Time: 1235	(hrs)
Water level after purging (from top of casing)	34.42	Time: 1300	(hrs)
Water level before sampling (from top of casing)	34.42	Time: 1350	(hrs)
Depth of screened interval (from top of casing)			

Purging Method:

- ___ Peristaltic
- ___ Bailer
- X Submersible
- ___ Teflon Bladder
- ___ Centrifugal
- ___ Pos. Displ.
- ___ Ded. Pump

Well Volume Calculation: 4 in. well: ___ ft. of water x 0.65 = ___ gal. (1 volume) x 3 = ___ gal. (3 volumes)

6 in. well: ___ ft. of water x 1.47 = ___ gal. (1 volume) x 3 = ___ gal. (3 volumes)

Depth of Pump: ~37 (ft)

Purge Start Time: 1240 (hrs) — Purge Duration: 70 (min)

Purge End Time: 1350 (hrs) — Purge Flow Rate: ~0.2 (lpm)

Volume of water removed: ~1.5G lit. >3 volumes: yes ___ no X purged dry? yes ___ no X

Field Tests:

	Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
Units	hr/min	min elap.		(mS/cm)	(ntu)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range	1240	0	0.1	3%	10%	10%		10%		0.3	0.2-0.5
	1245	5	8.77	1167	657	7.33	18.58	84.8	34.52	0.10	0.2
	1250	10	8.63	1228	527	3.60	18.47	82.4	34.42	0.00	
	1255	15	8.60	1240	489	3.61	18.90	77.8	34.42	0	
	1300	20	8.08	1326	388	3.23	19.46	77.9	34.42	0	
	1305	25	7.76	1442	296	3.42	19.83	75.9	34.42	0	
	1310	30	7.65	1469		4.18	19.85	76.1	34.42	0	
	1315	35	7.57	1501	197	4.71	19.96	76.8	34.42	0	
	1320	40	7.53	1534	150	4.94	20.06	77.7	34.42	0	
	1325	45	7.52	1550	125	5.04	20.10	78.5	34.42	0	
	1330	50	7.50	1578	97.3	5.11	20.46	80.5	34.42	0	
	1335	55	7.49	1592	85.9	5.23	20.33	82.7	34.42	0	
~~Sample~~	1340	60	7.48	1592	90.0	5.28	20.20	83.9	34.42	0	

~~Sampling~~:

Time readings stabilized: 1350 (hrs) — Chain of Custody sample time: 1350 (hrs)

Sample Start Time: 1350 (hrs) — Sample Flow Rate: 0.2 (lpm)

Sample End Time: 1355 (hrs) — Duration of sample time: 5 (min)

Collection Method:

- ___ Stainless steel bailer
- ___ Teflon bailer
- ___ Pos. Disp. Pump
- ___ Disposable bailer
- ___ Dedicated pump
- X Other: Submersible Pump

Analyses:

- X TCL VO+10 TIC's, MTBE, TBA-Methane, Ethane, Ethene
- ___ Alkalinity
- ___ Chloride
- ___ Nitrate
- ___ Sulfate
- ___ Ferrous Iron (Fe++)
- ___ Lead (Pb)

Analytical Method:

Observations:

Weather/Temperature: Sunny 89° W/5-10 mph

Sample Description: Turbidity: (circle one) HIGH (MODERATE) LOW

Free Product? yes ___ no X describe ___

Sheen? yes ___ no X describe ___

Odor? yes ___ no X describe ___

Calibration:

YSI 600XL calibrated using calibration solutions provided by US Environmental;

Turbidimeter - LaMotte - Std 1 NTU = 1 / 10 NTU = 10

PID - Calibrated Microtip zeroing using ambient air and spanning using 100-ppm isobutylene. 100-ppm Std =100-ppm Meas.

Comments:

GROUND WATER SAMPLING RECORD

Low Flow Sampling Technique

SITE: 220 Water Street, Brookln, NY

DATE: 10/31/2006

SAMPLE ID: MW-4 Cond.

WELL ID: MW-4 Cond.

NJDEP WELL PERMIT NO.:

SAMPLERS: Elena Ponce, Nicole Zorskas

	Time Onsite:	Time Offsite:

PID reading (ppm)		Time: (hrs)
Depth of well (from top of casing)		Time: (hrs)
DNAPL Level (from top of casing)		Time: (hrs)
Static water level (from top of casing)		Time: (hrs)
Static water level (after pump installation)		Time: (hrs)
Water level after purging (from top of casing)		Time: (hrs)
Water level before sampling (from top of casing)		Time: (hrs)
Depth of screened interval (from top of casing)		

Purging Method:

- ___ Peristaltic
- ___ Bailer
- X Submersible
- ___ Teflon Bladder
- ___ Centrifugal
- ___ Pos. Displ.
- ___ Ded. Pump

Well Volume Calculation: 1 volume / 3 volumes

- 4 in. well: ___ ft. of water x 0.65 = ___ gal. x 3 = ___ gal.
- 6 in. well: ___ ft. of water x 1.47 = ___ gal. x 3 = ___ gal.

Depth of Pump: ___ (ft)

Purge Start Time: ___ (hrs)

Purge End Time: ___ (hrs)

Purge Duration: ___ (min)

Purge Flow Rate: ___ (lpm)

Volume of water removed: ___ lit. >3 volumes: yes ___ no ___ purged dry? yes ___ no ___

Field Tests:

	Time/Duration		pH	Cond.	Turbidity	D.O.	Temp.	ORP	DTW	Drawdown	Flow Rate
Units	hr/min	min elap.		(mS/cm)	(ntu)	(mg/L)	(deg C)	(mV)	(ft. toc)	(feet)	(lpm)
Range	~~1345~~	~~65~~	0.1	3%	10%	10%		10%		0.3	0.2-0.5
	1345	65	7.48	1597	94.6	5.34	20.18	85.0	34.42	0	0.2
	1350	70	7.49	1604	100	5.49	20.07	85.6	34.42	0	0.2
Sample	1400	80	7.49	1611	95	5.65	20.12	86.4	34.42	0	0.2

See Sheet 1

Sampling:

Time readings stabilized: ___ (hrs)

Sample Start Time: ___ (hrs)

Sample End Time: ___ (hrs)

Chain of Custody sample time: ___ (hrs)

Sample Flow Rate: ___ (lpm)

Duration of sample time: ___ (min)

Collection Method:

- ___ Stainless steel bailer
- ___ Teflon bailer
- ___ Pos. Disp. Pump
- ___ Disposable bailer
- ___ Dedicated pump
- X Other: Submersible Pump

Analyses / Analytical Method:

- X TCL VO+10 TIC's, MTBE, TBA-Methane, Ethane, Ethene
- ___ Alkalinity
- ___ Chloride
- ___ Nitrate
- ___ Sulfate
- ___ Ferrous Iron (Fe++)
- ___ Lead (Pb)

Observations:

Weather/Temperature:

Sample Description:

Turbidity: (circle one) HIGH MODERATE LOW

Free Product? yes ___ no ___ describe

Sheen? yes ___ no ___ describe

Odor? yes ___ no ___ describe

Calibration:

YSI 600XL calibrated using calibration solutions provided by US Environmental;

Turbidimeter - LaMotte - Std 1 NTU = 1 / 10 NTU = 10

PID - Calibrated Microtip zeroing using ambient air and spanning using 100-ppm isobutylene. 100-ppm Std =100-ppm Meas.

Comments:

APPENDIX D

Appendix D

CD of Data Usability Summary Reports and Laboratory Analytical Reports

To be included in final report to NYSDEC