NYC Mayor's Office of Environmental Remediation

NYC Brownfield Cleanup Program

Generic Template for Remedial Investigation Report

507 WEST 24TH STREET GALLERY

MANHATTAN, NEW YORK

Remedial Investigation Report

NYC BCP Site Number: 12CVCP047M

DRAFT

Prepared for:

507 West 24th Street, LLC

375 Park Avenue

Suite 2703

New York NY 10152

Prepared by:

Roux Associates, Inc.

209 Shafter Street, Islandia, New York 11749

nepler@rouxinc.com

(631) 232-2600

March 2012

REMEDIAL INVESTIGATION REPORT
TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

A. Hydro Tech Report

B. Langan Report

C. Moretrench Groundwater Data

D. Roux Associates Groundwater Data

E. Roux Associates Soil Gas Data

F. Roux Associates UST Report

LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC BCP	New York City Brownfield Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

CERTIFICATION

I, Nathan Epler, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the 507 West 24th Street Site, (NYC BCP Site No. 12CVCP047M. I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Qualified Environmental Professional Date Signature

EXECUTIVE SUMMARY

The Remedial Investigation Report (RIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f). The remedial investigation (RI) described in this document is consistent with applicable guidance.

Site Location and Current Usage

The Site is located at 507 West 24th Street in the West Chelsea section in Manhattan, New York and is identified as Block 696 and Lot 28 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 3,943-square feet and is bounded by 508 West 25th Street, which is a vacant lot currently under construction to the north, West 24th street to the south, 245 Tenth Avenue, which is an eleven story condominium built in 2008 with 18 residential units and two commercial galleries on the first floor to the east, and 509-511 West 24th Street, which is a two story building built in 2006 containing a commercial gallery with accessory offices and a caretaker's apartment to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is vacant.

The Site consists of Block 696, Lot 28 in Manhattan, New York, CD 4 and is listed in the West Chelsea Zoning Resolution under CEQR #03DCP069M and OER # 09EH-N109M.

Summary of Proposed Redevelopment Plan

The planned redevelopment of the Site will involve the construction of an art gallery (the Chelsea Gallery). The Chelsea Gallery will be located underneath the elevated Highline structure, which is currently being transformed into a public park.

The current zoning designation is M1-5 (manufacturing and commercial). The proposed use is consistent with existing zoning for the property.

The proposed gallery structure will cover the entire lot and will contain one open space gallery on the ground floor. The existing Highline columns penetrate from above and into the space. The space will open up in the rear, creating a 28-foot high exhibition area. Offices, workshops, archive, lavatories, and a storage area are proposed for the basement level, the floor of which will lie approximately 12 feet below street level.

The proposed gallery will include excavation of the entire site lot down to a depth of approximately 15 feet below current grade for the construction of the foundation.

Summary of Past Uses of Site and Areas of Concern

According to the NYCDOB Certificate of Occupancy (CO) issued June 9, 1999 (CO Number 117191), the Site is zoned M1-5 (manufacturing and commercial) and the Site was formerly used for motor vehicle sales, a tool shed, and auto repair. None of these activities currently occur at the Site.

Summary of the Work Performed under the Remedial Investigation

- Hydro Tech Environmental Corp. (Hydro Tech) performed a Phase II subsurface investigation of the Site and adjacent properties in June 2004. The results of the Hydro Tech Phase II investigation were presented in a Subsurface Assessment Report dated June 4, 2004 (Hydro Tech, 2004 [Appendix A]).
- Roux Associates' 2008 investigation included the installation and sampling of two groundwater monitoring wells on the Site and the collection of soil vapor samples from two onsite locations. The results were first presented to OER in an April 24, 2009 Phase I/II Remedial Investigation Report and Remedial Action Plan and are discussed in this section.
- In 2005, Roux Associates supervised the removal of underground storage tanks (USTs) and the collection of post-excavation samples (Appendix F).
- Langan Engineering and Environmental Services PC prepared a Geotechnical Engineering Report (Appendix B) in April 2008, in which they completed two borings (one to 34 feet and one to 50 feet depth) at the Site. They determined that the upper 12 to 13 feet of the material beneath the Site is fill of undocumented origin.
- Moretrench sampled Monitoring Well GW-2 (Appendix C) on January 31, 2012. No VOCs or SVOCs were detected in groundwater during that sampling event.

Summary of Environmental Findings

The findings of the environmental investigations are summarized below.

- The Site is underlain by historical urban fill of undocumented origin;
- Impacted soil associated with the presence of five former USTs beneath 511 west 24th street was excavated in 2005 and the associated spill was closed;
- Soil/fill samples collected during the RI detected no Volatile Organic Compounds (VOCs), pesticides or PCBs. Several SVOCs (specifically PAHs) were identified in site soil. Five SVOCs including benzo[a]pyrene and benzo(a)anthracene were detected above Track 2 Restricted Residential SCOs and mostly were found in the shallow soil horizon.

The types of PAHs found and the concentrations at which they were identified are commonly found in urban areas with historical fill and are not indicative of an onsite source. Metals including barium, cadmium, copper, lead, mercury and zinc were detected in soil at concentrations above Track 1 SCOs, and of these barium, cadmium, copper and mercury were above Track 2 Restricted Residential SCOs. Mercury exceeded Track 2 Restricted Residential SCOs in five soil samples with concentrations ranging up to 25 ppm (4'-6' depth) and is associated with historic fill. Overall, the Site is lightly to moderately contaminated by historical fill materials and the RI did not reveal any contaminant source areas on this property.

- Groundwater samples collected during the RI detected no VOCs, pesticides or PCBs. Several SVOC were identified in one well at relatively low concentrations above 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). These SVOCs may be a residual impact associated with the closed spill on the site. Dissolved concentrations of manganese and sodium and lead (in one sample) were detected above GQS. Lead was not detected above Track 1 SCOs in onsite soils. A separate sampling event at the same area did not detect lead.

- Soil vapor samples collected during the RI showed low levels of toluene, benzene and petroleum related compounds. Most petroleum compounds were detected at trace concentrations and almost all were below 10 ug/m^3. TCE was detected at 40 µg/m^3 at one location and toluene was detected at 66 ug/m^3. Neither TCE nor toluene was detected within any of the soil and groundwater samples collected at the Site.

For environmental investigation data, consult reports listed in Section 1.4. Based on an evaluation of the environmental data and information, disposal of significant amounts of hazardous waste is not suspected at this site. However, mercury was detected in soil at concentrations up to 25.7 mg/kg (Table 8). Disposal requirements for soil impacted with mercury will be determined based upon pre-excavation waste characterization data to be collected.

REMEDIAL INVESTIGATION REPORT

1.0 SITE BACKGROUND

507 West 24th Street LLC has enrolled in the New York City Brownfield Cleanup Program (NYC BCP) to investigate and remediate a 0.09-acre site located at 507 West 24th Street in West Chelsea section ofManhattan, New York. Mixed commercial use is proposed for the property. The RI work was performed in 2004 and 2008. This RIR summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

1.1 SITE LOCATION AND CURRENT USAGE

The Site is located at 507 West 24th Street in the West Chelsea section in Manhattan, New York and is identified as Block 696 and Lot 28 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 3,943-square feet and is bounded by 508 West 25th Street, which is a vacant lot currently under construction to the north, West 24th street to the south, 245 Tenth Avenue, which is an eleven story condominium built in 2008 with 18 residential units and two commercial galleries on the first floor to the east, and 509-511 West 24th Street, which is a two story building built in 2006 containing a commercial gallery with accessory offices and a caretaker's apartment to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is vacant.

The Site consists of Block 696, Lot 28 in Manhattan, New York, CD 4 and is listed in the West Chelsea Zoning Resolution under CEQR #03DCP069M and OER # 09EH-N109M.

1.2 Proposed Redevelopment Plan

The planned redevelopment of the Site will involve the construction of an art gallery (the Chelsea Gallery). The Chelsea Gallery will be located underneath the elevated Highline structure, which is currently being transformed into a public park.

The current zoning designation is M1-5 (manufacturing and commercial). The proposed use is consistent with existing zoning for the property.

The proposed gallery structure will cover the entire lot and will contain one open space gallery on the ground floor. The existing Highline columns penetrate from above and into the space. The space will open up in the rear, creating a 28-foot high exhibition area. Offices, workshops, archive, lavatories, and a storage area are proposed for the basement level, the floor of which will lie approximately 12 feet below street level.

The proposed gallery will include excavation of the entire site lot down to a depth of approximately 15 feet below current grade for the construction of the foundation.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The property to the west of the site (509-511 West 24th Street) is a two story building built in 2006 containing a commercial gallery with accessory offices and a caretaker's apartment. The property to the east (245 Tenth Avenue) is an eleven story condominium built in 2008 with eighteen residential units and two commercial galleries on the first floor. The site to the north (508 West 25th Street) is a vacant lot currently under construction. Plans are in place for a one story commercial gallery with accessory offices.

Further to the east is a gasoline filling station (formerly Getty Service Station #341) currently operating as Lukoil located at 239 10th Avenue (see Figure 2).

Figure 2 shows the surrounding land usage.

2.0 SITE HISTORY

2.1 PAST USES AND OWNERSHIP

According to the NYCDOB Certificate of Occupancy (CO) issued June 9, 1999 (CO Number 117191), the Site is zoned M1-5 (manufacturing and commercial) and the was formerly used for motor vehicle sales, a tool shed, and auto repair. None of these activities currently occur at the Site.

2.2 PREVIOUS INVESTIGATIONS

The following environmental work plans and reports were developed for the Site:

- Hydro Tech Environmental Corp. (Hydro Tech) performed a Phase II subsurface investigation of the Site and adjacent properties in June 2004. The results of the Hydro Tech Phase II investigation were presented in a Subsurface Assessment Report dated June 4, 2004 (Hydro Tech, 2004).
- Roux Associates March 9, 2005 tank removal and post-excavation soilsampling. The bulk of this work was performed on the adjacent property immediately west. However, a portion of the excavation extended onto the 507 West 24th street lot.
- Roux Associates' 2008 investigation included the installation and sampling of two groundwater monitoring wells on the Site and the collection of soil vapor samples from two onsite locations. The results were first presented to OER in an April 24, 2009 Phase I/II Remedial Investigation Report and Remedial Action Plan and are discussed in this section.
- Langan Engineering and Environmental Services PC prepared a Geotechnical Engineering Report in April 2008, in which they completed two borings (one to 34 feet and one to 50 feet depth) at the Site. They determined that the upper 12 to 13 feet of the material beneath the Site is fill of undocumented origin.
- Moretrench sampled Monitoring Well GW-2 on January 31, 2012. No VOCs or SVOCs were detected in groundwater during that sampling event.

2.3 SITE INSPECTION

The Site was formerly part of a three-lot parcel that included Lots 28 (the subject property), 33 and 42, that were collectively referred to as the West Chelsea Assemblage. The three lots of the Assemblage contained auto-body repair shops when the first Phase 2 Site assessment was performed by Hydro Tech in 2004. At that time, the subject property was paved with asphalt and contained several abandoned automobiles.

The Site is currently vacant, and the asphalt has been removed. The adjacent lots have been, or are in the process of being redeveloped. There are no longer any automotive repair operations.

2.4 AREAS OF CONCERN

There were no Areas of Concern identified based on the results of the previous investigations. The Site is underlain by historical urban fill of undocumented origin and is impacted by elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals.

3.0 PROJECT MANAGEMENT

3.1 PROJECT ORGANIZATION

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Nathan Epler, Ph.D. Dr. Epler is a Principal Hydrogeologist with Roux Associates, having 20 years of experience in site assessment, site remediation and redevelopment, and chemical fate and transport evaluations. He holds a Ph.D. in Hydrogeology from the State University of New York at Stony Brook, an MS in Geology from the State University of New York at Stony Brook, and a BS in Geology from the City University of New York at Queens College. Dr. Epler has extensive expertise in the redevelopment of hazardous waste sites, and Brownfield sites, and has managed remedial investigations at major industrial facilities, petroleum refineries, Manufactured Gas Plant (MGP) sites, and Brownfield redevelopment sites throughout the Northeast. He has extensive expertise and experience with issues related to redevelopment in urban areas, including addressing petroleum spills, vapor intrusion and historical urban fill.

3.2 HEALTH AND SAFETY

All work described in this RIR was performed in full compliance with applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements.

3.3 MATERIALS MANAGEMENT

All material encountered during the RI was managed in accordance with applicable laws and regulations.

4.0 REMEDIAL INVESTIGATION ACTIVITIES

The following environmental work plans and reports were developed for the Site:

- Hydro Tech Environmental Corp. (Hydro Tech) performed a Phase II subsurface investigation of the Site and adjacent properties in June 2004. The results of the Hydro Tech Phase II investigation were presented in a Subsurface Assessment Report dated June 4, 2004 (Hydro Tech, 2004 [Appendix A]).
- Roux Associates' 2008 investigation included the installation and sampling of two groundwater monitoring wells on the Site and the collection of soil vapor samples from two onsite locations. The results were first presented to OER in an April 24, 2009 Phase I/II Remedial Investigation Report and Remedial Action Plan and are discussed in this section.
- In 2005, Roux Associates supervised the removal of underground storage tanks (USTs) and the collection of post-excavation samples (Appendix F).
- Langan Engineering and Environmental Services PC prepared a Geotechnical Engineering Report (Appendix B) in April 2008, in which they completed two borings (one to 34 feet and one to 50 feet depth) at the Site. They determined that the upper 12 to 13 feet of the material beneath the Site is fill of undocumented origin.
- Moretrench sampled Monitoring Well GW-2 (Appendix C) on January 31, 2012. No VOCs or SVOCs were detected in groundwater during that sampling event.

The Hydro Tech report is provided in Appendix A. Note that the soil samples summarized in the Hydro Tech report that were obtained on the 507 West 24th Street property are highlighted in red.

The results of the Roux Associates groundwater and soil vapor sampling are presented in Appendices D and E, respectively.

Hydro Tech Phase II Investigation

Hydro Tech Environmental Corp. (Hydro Tech) performed a Phase II subsurface investigation of the Site and adjacent properties in June 2004 in accordance with the New York State Department of Environmental Conservation (NYSDEC) Bureau of Spill Prevention & Response Sampling Guidelines and Protocols (March 1991) and the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation (December 2002). The Hydro Tech investigation involved the completion of a geophysical survey using ground penetrating radar (GPR) to search for potential USTs and the collection and analysis of soil and groundwater samples from the Site and adjacent lots. The results of the Hydro Tech Phase II investigation were presented in a Subsurface Assessment Report dated June 4, 2004 (Hydro Tech, 2004) and are summarized below.

Roux Associates Environmental Investigation

To update environmental quality at the Site, and because Hydro Tech's groundwater investigation did not include monitoring wells placed directly on the site lot, Roux Associates' 2008 investigation included the installation and sampling of two groundwater monitoring wells (Appendix D) on the Site and the collection of soil vapor samples (Appendix E) from two onsite locations.

4.1 GEOPHYSICAL INVESTIGATION

The geophysical survey performed by Hydro Tech utilized a GSSR SIR-3000 GPR control unit equipped with a 400-megahertz antenna over a grid pattern. The GPR was run at a setting of 50 scans per linear foot. The results of the GPR survey (Figure 3 of the Hyro Tech report [Appendix A]) indicated that a geophysical anomaly (#3) was observed beneath the adjacent property to the west, and beneath a portion of the western portion of the subject property. This anomaly turned out to be related to the presence of several underground storage tanks that were located beneath the adjacent property to the west (511 West 24th street). Further discussion of the USTs is provided below.

4.1.1 Tank Removal and Post-Excavation Soil Sampling 507-511 West 24th Street

On February 16, 2005, a spill was reported to the NYSDEC for the property immediately to the west of the site (511 West 24th Street), in response to observations of potentially impacted soil (i.e., staining and petroleum odors) during the removal of several underground storage tanks (USTs). The potentially impacted soil was stockpiled adjacent to the excavation and covered with plastic sheeting. A total of five USTs (one 2,000-gallon tank and four 550-gallon tanks) were removed from the excavation and staged onsite.

Following removal of the tanks and excavation of the potentially impacted soil, the NYSDEC was notified of the observations made at the site and Spill Number 04-12228 was issued. NYSDEC requested that post-excavation soil samples be collected. On February 18, 2005, Roux Associates mobilized to the site and collected six post-excavation soil samples. A site map showing the sample locations is provided as Figure 1 in the March 9, 2005 report (Appendix F). A total of six post-excavation samples were collected. One soil sample was collected from each of the four sidewalls of the excavation (Samples PX-1 through PX-4) and two samples .were collected from the bottom of the excavation (Samples PX-5 and PX-6). Three additional quality

assurance/quality control (QA/QC) samples were submitted for analysis: field blank sample (FB-l), duplicate sample (PX-2DUP), and a trip blank.

Low concentrations of VOCs were detected in all of the post-excavation samples collected. The VOCs detected included acetone, benzene, toluene, ethylbenzene, and xylenes. None of the samples contained concentrations of VOCs exceeding NYSDEC Part 375 unrestricted residential criteria.

Low concentrations of SVOCs were detected in all of the post-excavation samples collected, except for sample PX-3. Samples PX-l, PX-2 (and duplicate), PX-4, PX-5, and PX-6 contained several polycyclic aromatic hydrocarbons (PAHs) at concentrations above their respective Part 375 unrestricted residential criteria. The PAHs detected at concentrations exceeding the unrestricted residential criteria included benzo[a]anthracene, fluoranthene, phenanthrene, pyrene, and benzo[a]pyrene. These concentrations of SVOCs have been observed consistently in fill at other sites in the surrounding area and are attributable to the historical nature of the fill in an urban area.

Subsequent to submittal of the report summarized above, the NYSDEC closed Spill No. 04-12228. The spill record documenting this is provided in Appendix F.

4.2 BORINGS AND MONITORING WELLS

Drilling and Soil Logging

Five soil borings (SP-5 through SP-8 and SP-10) were installed by Hydro Tech on the Site. One shallow and one deep soil sample was collected from each of the soil borings for a total of ten soil samples collected from the Site. The shallow samples were from either 0 to 2 feet or 2 to 4 below land surface (ft bls) and the deep samples averaged 8 to 10 ft bls. The soil samples were analyzed for volatile organic compounds (VOCs) using USEPA Method 8260, semivolatile organic compounds (SVOCs) using USEPA Method 8270, polychlorinated biphenyls (PCBs) using USEPA Method 8082, pesticides using USEPA Method 8081, and Target Analyte List (TAL) metals. Summaries of the soil data obtained by Hydro Tech are provided in Tables 6 through 10.

Boring logs were prepared by a Hydro Tech are attached in Appendix A. A map showing the location of soil borings and monitor wells is shown in Figure 2.

Groundwater Monitoring Well Construction

The Hydro Tech investigation involved the installation of four groundwater monitoring wells (MW-1 through MW-4) on adjacent lots east, west, and north of the Site, but none on the lot comprising the Site. MW-2 is the closest to the site lot, approximately 15 feet west. Depth to groundwater ranged between 8.3 and 9.7 feet below grade. The four groundwater monitoring wells were surveyed and, in conjunction with groundwater elevations, a groundwater contour map was generated. Based on the Hydro Tech groundwater flow map, the direction of groundwater flow was northwest. One groundwater sample was collected from each of the four monitoring wells and analyzed for VOCs, SVOCs, PCBs, Pesticides, and TAL Metals.

On February 14, 2008, Roux Associates installed two groundwater monitoring wells (GW-1 and GW-2) at the Site (Figure 2). The two groundwater monitoring wells were installed in borings completed with a Geoprobe and were constructed of 10 feet of pre-packed 2-inch diameter PVC screen and five-foot blank PVC riser and secured with locking caps. On February 25, 2008, Roux Associates collected one groundwater sample from each of the monitoring wells. The samples were analyzed for VOCs, SVOCs, PCBs, and TAL metals. GW-2 ran dry during sampling; therefore, due to insufficient quantity, the TAL metals analysis was not run on the sample from GW-2. A copy of the Chain of Custody and the groundwater results are provided in Appendix D.

Monitor well locations are shown in Figure 2.

Water Level Measurement

According to Hydro Tech, Depth to groundwater ranged between 8.3 and 9.7 feet below grade. The four groundwater monitoring wells were surveyed and, in conjunction with groundwater elevations, a groundwater contour map was generated. Based on the Hydro Tech groundwater flow map, the direction of groundwater flow was northwest. Water level data are included in the Hydro Tech report in Appendix A.

4.3 SAMPLE COLLECTION AND CHEMICAL ANALYSIS

Sampling performed as part of the field investigation was conducted for all Areas of Concern and also considered other means for bias of sampling based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators. All media including soil, groundwater and soil vapor have been

sampled and evaluated in the RIR. Discrete (grab) samples have been used for final delineation of the nature and extent of contamination and to determine the impact of contaminants on public health and the environment. The sampling performed and presented in this RIR provides sufficient basis for evaluation of remedial action alternatives, establishment of a qualitative human health exposure assessment, and selection of a final remedy.

Soil Sampling

Ten soil samples were collected for chemical analysis during this RI. Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in Tables 6 through 10. Figure 2 shows the location of samples collected in this investigation. Laboratories and analytical methods are shown below.

Groundwater Sampling

Four groundwater samples were collected by Hydro Tech from adjacent lots and two from the Site for chemical analysis during this RI. The data from the adjacent lots are provided in the Hydro Tech report in Appendix A. Groundwater sample collection data from the onsite wells are reported in Tables 2 though 5. Figure 2 shows the location of groundwater sampling. Laboratories and analytical methods are shown below.

Soil Vapor Sampling

On February 14, 2008, Roux Associates installed two soil vapor sampling points (SVP-1 and SVP-2) on the Site. Soil vapor point SVP-1 was installed on the west side of the Site and SVP-2 was installed on the east side of the Site (see Figure 2). A ½-inch diameter hole was drilled through the asphalt into the soil surface and extended approximately two-feet below grade. Acetate-lined Teflon tubing was inserted into a stainless steel screened rod, which was then inserted into the hole. The hole was filled with sand to just beneath grade. The hole was then topped off with cement grout up to grade to prevent ambient air from entering the soil-vapor sampling point. The soil vapor sampling was conducted using two individually-certified-clean Summa canisters equipped with two-hour regulators. At the conclusion of the two-hour sampling period, the Summa canisters were disconnected from the sampling points and transported under chain-of-custody procedures for laboratory analysis at Test America Laboratories (TAL) in Shelton, Connecticut. STL is a New York State Department of Health (NYSDOH)-certified environmental testing laboratory. The samples were analyzed for VOCs

using laboratory method TO-15. The chain of custody and the soil vapor laboratory results are provided in Appendix E.

Chemical Analysis

Chemical analytical work presented in this RIR has been performed in the following manner:

Factor	Description
Chemical Analytical Laboratory	Chemical analytical laboratory(s) used in the RI by Roux Associates was NYS ELAP certified and was Test America Laboratories (TAL) in Shelton, Connecticut.
Chemical Analytical Methods	Soil analytical methods: • TAL Metals by EPA Method 6010C (rev. 2007); • VOCs by EPA Method 8260C (rev. 2006); • SVOCs by EPA Method 8270D (rev. 2007); • Pesticides by EPA Method 8081B (rev. 2000); • PCBs by EPA Method 8082A (rev. 2000); Groundwater analytical methods: • TAL Metals by EPA Method 6010C (rev. 2007); • VOCs by EPA Method 8260C (rev. 2006); • SVOCs by EPA Method 8270D (rev. 2007); • Pesticides by EPA Method 8081B (rev. 2000); • PCBs by EPA Method 8082A (rev. 2000); Soil vapor analytical methods: • VOCs by TO-15 VOC parameters..

Results of Chemical Analyses

Laboratory data for soil vapor, groundwater and soil are summarized in Tables 1 through 10, respectively.

5.0 ENVIRONMENTAL EVALUATION

5.1 GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS

The following summary of subsurface stratigraphy was based on observations in the following report (Appendix B):

- Geotechnical Engineering Report, 507 W24th Street, New York, New York (Langan Engineering and Environmental Services, P.C., April 2008).

Stratigraphy

Subsurface soil consisted generally of fill overlaying a layer of fine sand, followed by a thin layer of clay and clayey silt with trace organics. The clay and clayey silt was in turn followed by a layer of sand overlaying silty sand followed by the bedrock. A detailed description of each layer is given below in order of increasing depth.

Fill

Below the 6-in-thick asphalt pavement, a layer of fill. generally consisting of brown sand with varying amounts of gravel, brick and concrete was encountered. The thickness of the fill was about 12 to 13 ft; the bottom of the fill ranged from about el -3 to -4. Standard penetration resistance N-values ranged from 3 blows per ft (bpf) to refusal (over 100 bpf) and averaged about 12 bpf. The higher N-values are likely the result of obstructions in the fill that impeded the advance of the split spoon. The fill layer is classified as Building Code Class 11-65.

Fine Sand

A 3-ft layer of brown sand with trace silt was encountered below the fill in boring B-1. The depth to the top of the sand layer ~as at about el -4. The single. N-value recorded was 27 bpf. The sand layer is designated as SP in accordance with the Unified Soil Classification System (USCS) and is classified .as Building Code Class 8-65.

Clay and Clayey Silt

A layer of grey clay and clayey silt with trace organics was encountered in both borings. The depth to top of the clayey silt layer ranged from about 13 to 15 ft below the ground surface and the corresponding elevation of top of the layer was at about el -3. The N-values in this layer ranged from about 8 to 11 bpf and averaged about 10 bpf. Atterberg Limits test performed on

two samples from this layer resulted in a liquid limit of 27 and 36 and a plasticity index of 1 and 14. The natural water content determined for two samples were 24% and 35%. The organic content of the samples were 1.5% and 2%.The clay and clayey silt are designated as CL and ML in accordance with the USCS and is classified as Building Code Class 9-65 and 10-65, respectively.

Sand

Brown coarse to fine sand with some silt and gravel was encountered below the clay and clayey silt. The thickness of the layer was about 10ft; the depth to the top of layer was about 18 ft below the surface grade corresponding to el -8 to -10. The N-values in this layer ranged from about 17 to 41 bpf and averaged about 27 bpf. The layer is designated as SP in accordance with USCS and is classified as Building Code Ctass 7-65.

Silty Sand

Brown medium to fine silty sand with trace clay was en90untered below the sand layer. The depth to the top of layer was about 28 ft below. the surface grade, corresponding to el -18 to -20. The silty sand layer extended to the terminating depths of borings, where bed rock was encountered. The N-values in this layer ranged from about 10 to 29 bpf and averaged about 16 bpf. The layer is designated as SM in accordance with USCS and is classified as Building Code Class 8-65.

5.5.1 Hydrogeology

Groundwater level was measure at the observation well B-1by Langan (Appendix B) The stabilized water level was measured at about 11 ft below the ground surface. The corresponding elevation is el -3.The Hydro Tech investigation also involved the installation of four groundwater monitoring wells (MW-1 through MW-4) on adjacent lots east, west, and north of the Site, but none on the lot comprising the Site. MW-2 is the closest to the site lot, approximately 15 feet west. Depth to groundwater ranged between 8.3 and 9.7 feet below grade. The four groundwater monitoring wells were surveyed and, in conjunction with groundwater elevations, a groundwater contour map was generated. Based on the Hydro Tech groundwater flow map, the direction of groundwater flow was northwest.

5.2 SOIL CHEMISTRY

Summaries of the soil data obtained by Hydro Tech are provided in Tables 6 through 10.

VOCs, PCBs, and Pesticides – No VOCs, PCBs, or pesticides were detected in the soil samples collected from soil borings SP-5 through SP-8 and SP-10 at concentrations above NYSDEC Part 375 unrestricted use criteria.

SVOCs – Two soil samples collected from the Site (SP-6 2 to 4 ft bls and SP-7 8 to 10 ft bls) contained one benzo[a]pyrene at concentrations above NYSDEC Part 375 Restricted Use Criteria (Commercial). Seven SVOCs in three samples (SP-6 2 to 4 ft bls; SP-7 8 to 10 ft bls; and, SP-8 4 to 6 ft bls) were detected at concentrations above NYSDEC Part 375 unrestricted use criteria. The SVOCs detected above criteria were polycyclic aromatic hydrocarbons (PAHs). The types of PAHs found, and the concentrations at which they were identified, are commonly associated with historical fill of undocumented origin found in urban areas and are not necessarily indicative of an onsite source.

TAL Metals – Four metals (barium, cadmium, copper and mercury) were detected in soil at concentrations above NYSDEC Part 372 Restricted Use (Commercial) Criteria (Table 8).

- Barium was detected above the Criteria only in sample SP-5 (0 to 2 ft bls) at 1,533 milligrams per kilogram (mg/kg).

- Cadmium was detected above the Criteria in SP-5 (8 to 10 ft bls), SP-6 (2 to 4 ft bls) and SP-8 (8 to 10 ft bls) at concentrations from 9.8 to 33.3 mg/kg.

- Copper was detected above the Criteria in SP-5 (0 to 2 ft bls), SP-6 (2 to 4 and 8 to 10 ft bls), SP-7 (8 to 10 ft bls) and SP-10 (0 to 2 ft bls) at concentrations ranging from 298 to 3,060 mg/kg.

- Mercury was detected above the Criteria in SP-5 (0 to 2 ft bls), SP-7 (2 to 4 and 8 to 10 ft bls) and SP-8 (4 to 6 and 8 to 10 ft bls) at concentrations ranging from 6.29 mg/kg to 25.7 mg/kg.

- Soil/fill samples collected during the RI detected no Volatile Organic Compounds (VOCs), pesticides or PCBs. Several SVOCs (specifically PAHs) were identified in site

soil. Five SVOCs including benzo[a]pyrene and benzo(a)anthracene were detected above Track 2 Restricted Residential SCOs and mostly were found in the shallow soil horizon. The types of PAHs found and the concentrations at which they were identified are commonly found in urban areas with historical fill and are not indicative of an onsite source. Metals including barium, cadmium, copper, lead, mercury and zinc were detected in soil at concentrations above Track 1 SCOs, and of these barium, cadmium, copper and mercury were above Track 2 Restricted Residential SCOs. Mercury exceeded Track 2 Restricted Residential SCOs in five soil samples with concentrations ranging up to 25 ppm (4'-6' depth) and is associated with historic fill. Overall, the Site is lightly to moderately contaminated by historical fill materials and the RI did not reveal any contaminant source areas on this property.

Data collected during the RI are sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site. A summary table of data for chemical analyses performed on soil samples is included in Tables 6 through 10.

5.3 GROUNDWATER CHEMISTRY

SVOCs, PCBs, and Pesticides – No SVOCs, PCBs, or pesticides were detected in the four groundwater samples obtained by Hydro Tech at concentrations exceeding their respective NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSGVs).

VOCs – Three of the four groundwater monitoring wells (MW-2 through MW-4) did not contain any VOCs at concentrations above their respective NYSDEC AWQSGVs. The groundwater sample from MW-1 contained VOCs at concentrations exceeding their NYSDEC AWQSGVs. The VOCs identified included ethylbenzene and other petroleum-hydrocarbon-related constituents and cis-1,2-dichloroethene, which is a degradation product of tetrachloroethene. MW-1 is hydraulically cross gradient of the Site based on the Hydro Tech interpretation of flow and immediately downgradient of the Lukoil gasoline filling station located 75 feet to the east of the Site, where there is a known spill.

TAL Metals – Two of the monitoring wells (MW-1 and MW-4) did not contain any TAL metals at concentrations above their respective NYSDEC AWQSGVs. Monitoring wells MW-2 and MW-3 contained cadmium, chromium, lead, and magnesium at concentrations slightly exceeding their respective NYSDEC AWQSGVs. It is likely that these detections were the

result of excess turbidity in the samples and, therefore, are not necessarily indicative of groundwater quality.

A review of the groundwater results obtained by Roux Associates for GW-1 (Tables 2 through 5) indicated no VOCs, SVOCs, or PCBs detected at concentrations above their respective AWQSGVs. Two metals (manganese and sodium) exceeded their respective AWQSGVs.

A review of groundwater results obtained by Roux Associates for GW-2 (Tables 2 through 5) indicated no VOCs or PCBs detected at concentrations above their respective AWQSGVs. Several PAHs were detected at concentrations above their respective AWQSGVs.

Data collected during the RI is sufficient to delineate the distribution of contaminants in groundwater at the Site. A summary table of data for chemical analyses performed on groundwater samples is included in Tables 2 through 5.. Exceedence of applicable groundwater standards are shown.

5.4 SOIL VAPOR CHEMISTRY

A review of the results (Appendix E) indicated that no VOCs were detected in soil vapor on the west side of the Site (SVP-1). Several VOCs were detected in soil vapor on the east side of the Site (SVP-2). Those VOCs detected included benzene at 12 micrograms per cubic meter (µg/m3); toluene at 66 µg/m3; and trichloroethene at 40 µg/m3. The State of New York does not have any standards, criteria, or guidance values for concentrations of VOCs in subsurface soil vapor. However, the detections are most likely attributable to the known spills at the gasoline service station east of the Site.

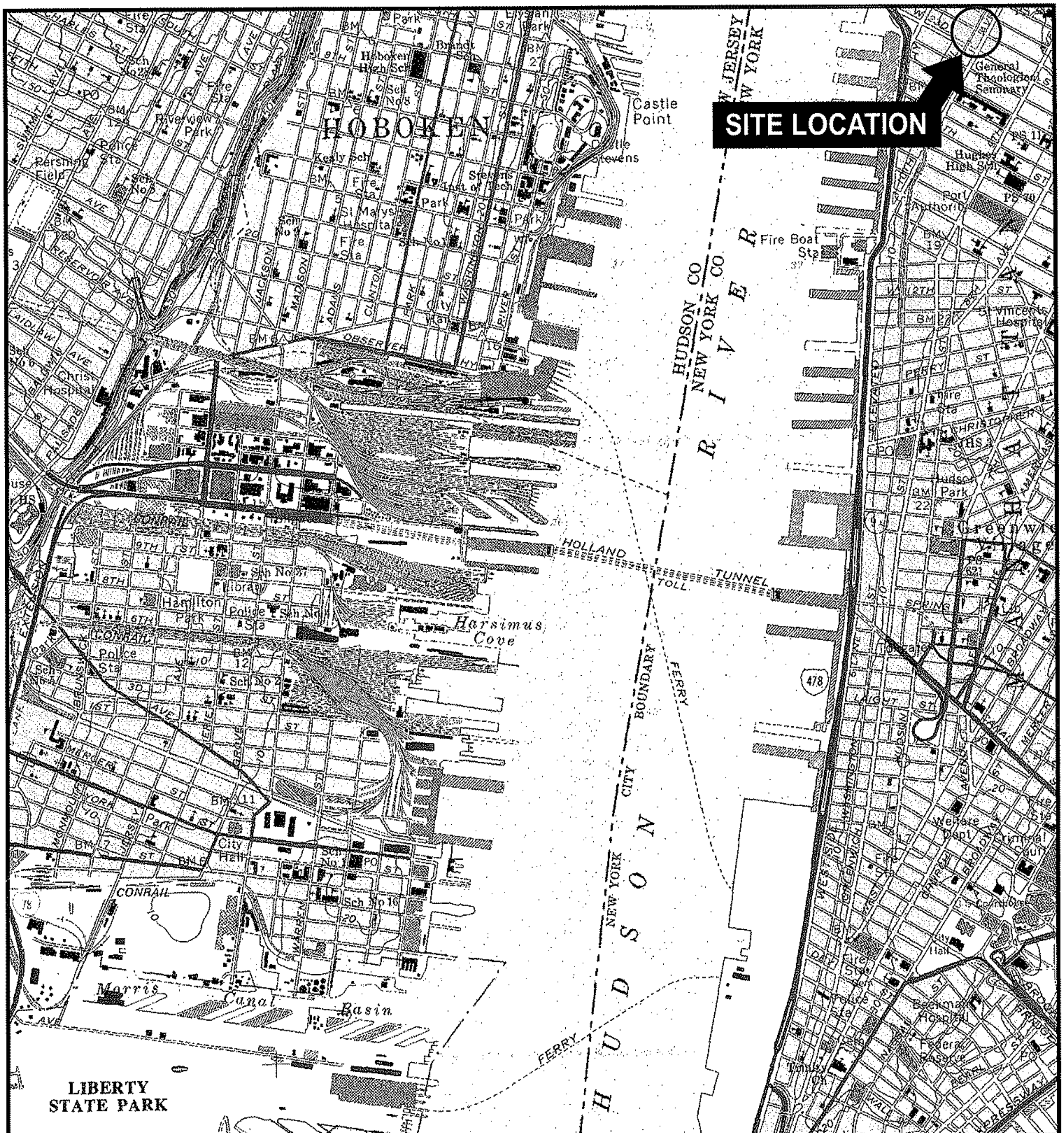
Data collected during the RI is sufficient to delineate the distribution of contaminants in soil vapor at the Site. A summary table of data for chemical analyses performed on soil vapor samples is included in Appendix E.

5.5 PRIOR ACTIVITY

Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

5.6 IMPEDIMENTS TO REMEDIAL ACTION

There are no known impediments to remedial action at this property.



QUADRANGLE LOCATION

N

SOURCE:
USGS; 1981, Jersey City, NY-NJ
7.5 Minute Topographic Quadrangle

0 2000'

Title:

SITE LOCATION PLAN

507 WEST 24th STREET
NEW YORK, NEW YORK

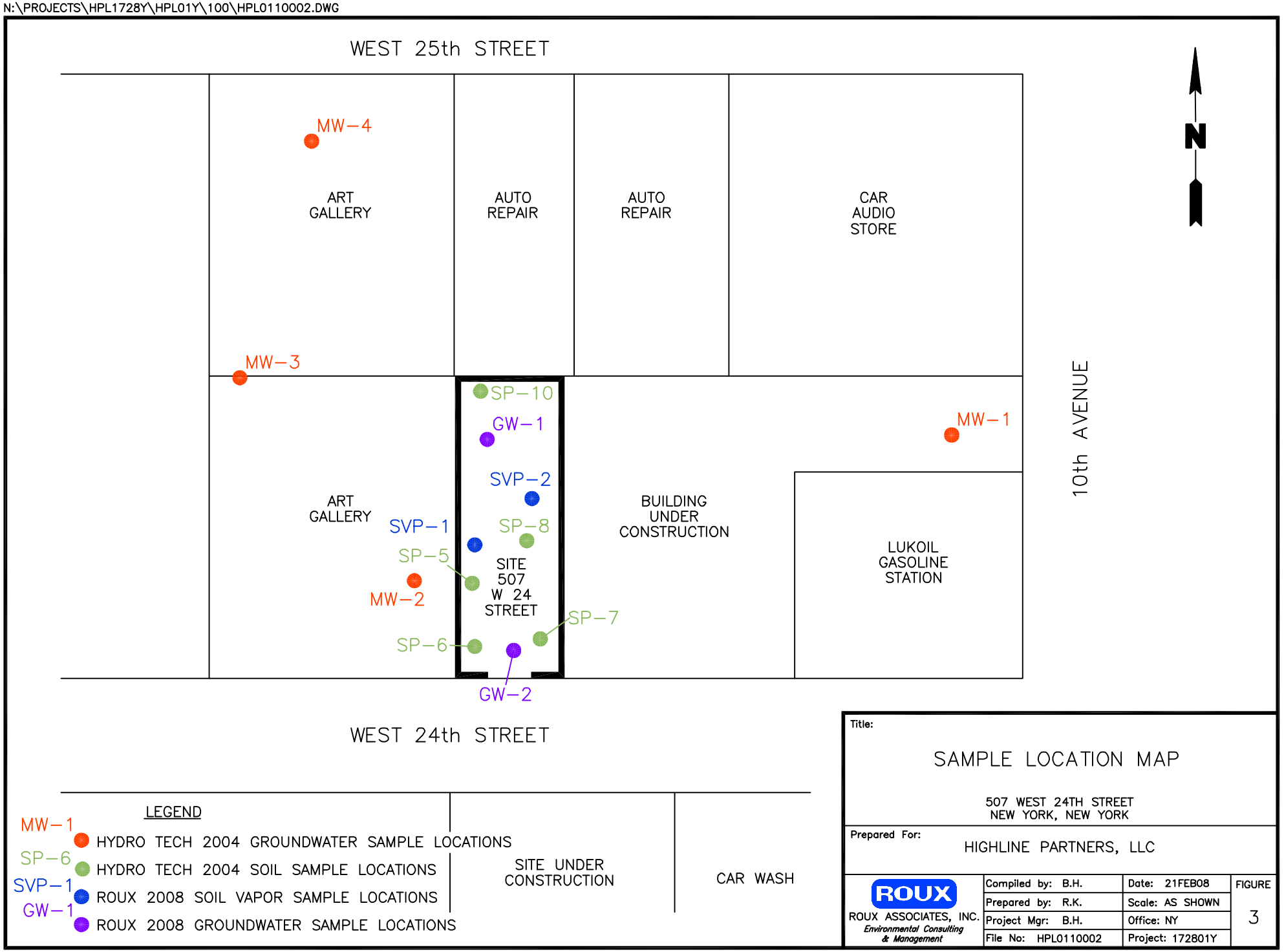
Prepared for:
HIGHLINE PARTNERS, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: BH	Date: 21FEB08	FIGURE
Prepared by: RK	Scale: AS SHOWN	1
Project Mgr.: BH	Office: NY	
File No.: 0110003.CDR	Project No.: 172801Y	

N:\PROJECTS\1728Y\01Y\100\0110003.CDR

N:\PROJECTS\HPL1728Y\HPL01Y\100\HPL0110002.DWG



Title:

SAMPLE LOCATION MAP

507 WEST 24TH STREET
NEW YORK, NEW YORK

Prepared For:
HIGHLINE PARTNERS, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: B.H.	Date: 21FEB08	FIGURE
Prepared by: R.K.	Scale: AS SHOWN	3
Project Mgr: B.H.	Office: NY	
File No: HPL0110002	Project: 172801Y	

Historical soil + gw data

SUBSURFACE ASSESSMENT REPORT

Block 696, Lots 28, 33, & 42
West Chelsea Assemblage
New York, New York

June 4, 2004

Hydro Tech Environmental, Corp. appreciates the opportunity to work for Mr. Timothy Simmons of Alf Naman Real Estate at the property located at West Chelsea Assemblage in New York, New York.

Should you require any additional information or have any comments regarding the contents of this report, please feel free to contact our office at your convenience.

Very Truly Yours,
Hydro Tech Environmental, Corp.

X Kathleen DeVoe
Kathleen De Voe
Project Geologist

X
Mark E. Robbins, C.P.G., C.E.I.
Senior Geologist

X
Mostafa El Sehamy, P.G., C.G.W.P.
Operations Director

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

1.0 EXECUTIVE SUMMARY

Hydro Tech Environmental, Corp. (HTE) has performed a subsurface assessment at the properties located at 501 – 511 west 24th Street, 510 West 25th Street and 245 Tenth Avenue in New York, New York. The properties are also referred to as the West Chelsea Assemblage. The assessment was performed on behalf of Alf Naman Real Estate.

The purpose of the assessment was to investigate environmental concerns such as underground storage tanks, the use of the properties for auto repairs and a trucking company and the presence of an adjacent gasoline station. The field portion of the assessment consisted of the performance of a Ground-Penetrating Radar (GPR) survey to identify the presence of subsurface anomalies. Next, soil probes and monitoring wells were installed and sampled to characterize the subsurface soil and groundwater quality beneath the Site. The results of soil and groundwater analyticals were compared to applicable New York State Department of Environmental Conservation (NYSDEC) Standards.

The results of the investigation are contained in this report. The subsurface assessment has revealed subsurface anomalies in 5 locations. Elevated levels of semi-volatile organic compounds were identified at concentrations exceeding applicable regulatory standards in shallow soil beneath 507 – 511 West 24th Street. The groundwater flow direction was determined to be toward the northwest. Dissolved constituents indicative of lighter-grade petroleum were identified in groundwater beneath 245 Tenth Avenue.

No effort has been made to perform any investigation beyond what is included in this report. The observations included herein summarize the results of the investigation up to the date of the fieldwork and the date of this report.

The following sections provide the details and specific information pertaining to the various components of the subsurface assessment.

2.0 INTRODUCTION

Hydro Tech Environmental Corp. (HTE) has been retained by Alf Naman Real Estate (the *"Client"*) to perform a subsurface assessment of the properties located at 501 – 511 West 24th Street, 510 West 25th Street and 245 Tenth Avenue in New York, New York. The properties, also commonly referred to as the West Chelsea Assemblage, will hereafter be collectively referred to as the "Site".

The Site is located along the west side of Tenth Avenue, between West 25th Street to the north and West 24th Street to the south, in the southwest portion of New York County, New York. The elevation of the Site is approximately 16 feet above mean sea level *(U.S.G.S. Jamaica, New York Quadrangle, 1969)*.

Figure 1 provides a Site Location Map

2.1 Site Description

The Site consists of several current and former auto body shops. The portion of the Site located on Tenth Avenue consists of a 1-story auto body shop that is currently active. The portions of the Site situated to the south of West 25th Street and to the north of West 24th Street both consist of former auto body shops. Several abandoned automobiles are situated along the property located on 24th Street.

Figure 2 provides a Site Plan.

2.2 Environmental Setting

The Site is situated in the southwest portion of New York County. New York County is also commonly referred to as Manhattan, New York.

The vicinity of the site is characterized by metamorphosed sequences of bedrock known as the Manhattan Prong of the Hartland Formation. The Hartland Formation was formed during the late Cambrian to early Ordovician period and consists of undivided pelitic schist with gneiss and amphibolite. The formation is frequently cross cut by transverse and parallel faults. The area is overlain by Pleistocene aged glacial till deposits.

Outcrops of bedrock are commonplace in the borough of Manhattan, as can be seen in Central Park. No bedrock outcroppings were identified at the Site or in the immediate vicinity of the Site.

2.3 Scope of Work

The purpose of the scope of work was to address concerns associated with aboveground and underground storage tanks, the use of the property for auto repairs and a trucking company and the presence of an adjacent gasoline station. The scope of work was developed based upon information and specifications provided by the Client.

All related portions of the field portion of the Phase II Assessment were performed in accordance with acceptable industry standards. These acceptable industry standards include, but are not limited to, the ASTM Standard Guide for Phase II Environmental Site Assessments (E 1903-97) and the New York State Department of Environmental Conservation Bureau of Spill Prevention & Response Sampling Guidelines and Protocols, March 1991 and Draft DER-10 Technical Guidance for Site Investigation and Remediation, December 2002.

3.0 FIELD WORK

3.1 Introduction

The field portion of the investigation was performed on May 12 to 19, 2004 and consisted of the performance of a Ground-Penetrating Radar (GPR) survey and the installation and sampling of 10 soil probes and 4 monitoring wells. All fieldwork was performed under the direct guidance and oversight of an HTE Geologist and under the supervision of an HTE Project Manager. The scope of work regarding this portion of the project consisted of the following tasks:

- The performance of Ground-Penetrating Radar (GPR) Survey.
- The installation and sampling of 10 soil probes.
- Installation and sampling of 4 monitoring wells.
- The field screening of all soil samples utilizing a Photoionization Detector.

Appendix A provides photographs of the field portion of the Assessment

The following sections provide the details of the fieldwork.

3.2 Ground-Penetrating Radar Survey

The purpose of the GPR survey was to identify the presence of subsurface anomalies, primarily focusing on underground storage tanks (USTs). In addition, the GPR was utilized to clear all sampling locations of potential subsurface obstructions.

3.2.1 Protocol

The GPR Survey was performed on May 13, 2004. The GPR Survey was performed utilizing a GSSI SIR-3000 Control Unit and a 400-megahertz shielded antenna over a grid pattern that was determined immediately prior to the survey. The GPR survey was performed throughout the entire property.

The GPR takes one "scan" per set unit. The number of scans per unit is based upon the estimated sizes of targets. For this investigation the GPR was set to run 50 scans per foot. As each scan is performed, the antenna emits specific radar amplitude into the subsurface. The amplitude of the radar reflected back to the antenna is based upon the differences in the dielectric constants of the

subsurface materials. The difference in amplitude obtained during each scan is graphically displayed at the Control Unit, which are then interpreted by the GPR operator at the time of the survey.

3.2.2 Survey Results

Subsurface anomalies were identified at 5 locations throughout the Site. A breakdown of the details of each anomaly is provided in **Table 1**. As Table 1 indicates, anomalies indicative of underground tanks were identified at 4 of the 5 locations. These anomalies correspond to the NYFD Affidavits provided by the client, which indicate that two (2) 2,000-gallon and three (3) 550-gallon underground tanks have been abandoned in-place at the Site, and the presence of the known 550-gallon waste oil tank beneath 245 Tenth Avenue. The remaining anomaly is situated in the sidewalk along West 24th Street and was likely a remote fill pipe for the underground tanks located in the southern portion of 507- 511 West 24th Street.

Figure 3 provides the GPR Anomaly Diagram.

Appendix B contains copies of the GPR reports.

Appendix C contains NYFD Affidavits.

3.3 Soil Probes

3.3.1 Protocol and Sampling Locations

The soil probes were installed utilizing HTE's Geoprobe® 5410 mounted inside a Ford F350 pickup truck. The Geoprobe® installs soil probes utilizing direct-push technology. Soil samples were collected utilizing a four (4)-foot long Macro Core sampler fitted with dedicated acetate liners. The Macro Core sampler allows for the collection of continuous soil samples. Each sampler was installed with 1½-inch diameter drill rods. A total of 10 soil probes were installed during the soil portion of the sampling program. Soil probes SP-1 and SP-2 were installed in the vicinity of GPR anomaly #1. Soil probe SP-3 was installed in the vicinity of GPR anomaly #4. Soil probes SP-4 through SP-8 were installed in the vicinity of GPR anomalies #3 and #5. Soil probes SP-9 and SP-10 were installed in the vicinity of GPR anomaly #2.

Figure 4 provides a Sampling Plan.

Soil samples were obtained in each probe at consecutive 2-foot intervals from the ground surface to the water table, which was encountered at 10 feet below ground surface throughout the Site.

3.3.2 Field Characterization

The HTE geologist characterized each soil sample in the field. The soil characterization consisted of determining the soil classification utilizing the Unified Soil Classification System and screening each sample for organic vapors utilizing a Photoionization Detector (PID).

A PID makes use of the principle of photoionization for the detection and qualitative measurement of organic vapors. A PID does not respond to all compounds similarly, rather, each compound has its own response factor relative to its calibration. For this investigation, the PID was calibrated to the compound isobutylene, which is published by the manufacturer. The PID has a minimum detection limit of 0.1 parts per million (ppm). This meter measures the hydrocarbon concentrations in isolated portions of the secured samples.

Headspace analyses were conducted on each soil sample by partially filling the zip lock bag and sealing it, thereby creating a void. This void is referred to as the sample headspace. To facilitate the detection of any hydrocarbons contained within the headspace, the container was agitated for a period of 30 seconds. The probe of the PID was then placed within the headspace to measure the organic vapors present.

Soil probe logs were then generated based upon the soil characterization, along with the PID field screening. The general soil type identified throughout the Site consists of fill material and brown silty sand. Organic levels exceeding 50 ppm were detected in the soil samples from probe SP-6. Trace levels of organic vapors (<5 ppm) were detected in the soil samples from the remaining probes (SP-1 to SP-5 and SP-7 to SP-10).

Appendix D provides copies of the soil probe logs.

3.4 Monitoring Wells

Monitoring wells will be installed at four locations throughout the Site (see **Figure 4**). Monitoring well MW-1 was installed at 245 Tenth Avenue, in the vicinity of GPR anomaly #4 and immediately north of a gasoline station situated to the south of the Site. Monitoring well MW-2 was installed in the southern portion of 507 - 511 West 24th Street, in the vicinity of GPR anomaly #3 and to the west of the gasoline station situated to the south of the Site. Monitoring well MW-3 was installed in the northern portion of 507 - 511 West 24th Street, in the vicinity of GPR anomaly #2. Monitoring well MW-4 was installed in the northern portion of 510 West 25th Street, in the vicinity of GPR anomaly #1..

The monitoring wells were constructed of 1-inch diameter PVC and were finished at grade with limited-access manhole covers. Immediately following their completion, each monitoring well was developed. Forty-eight hours following their installation, the monitoring wells were monitored, surveyed, purged and sampled. The wells were monitored and surveyed to the nearest 0.01 foot utilizing our Solinst Oil/Water Interface Probe and a David White LT8-300 Transit, respectively. The wells were purged of 3-well volumes and sampled utilizing applicable USEPA low flow sampling protocols.

3.5 Laboratory Analyticals

Separate aliquots of each soil and groundwater sample were containerized into pre-cleaned sampling containers and appropriately labeled. They were then placed in a cooler filled with ice and maintained at 4 degrees Celsius. All samples were transmitted under proper chain of custody procedures to a State-certified (ELAP) laboratory for confirmatory laboratory analyses.

The soil and groundwater samples were analyzed for Volatile Organic Compounds (VOCs) via EPA Method 8260, Semi-Volatile Organic Compounds (SVOCs) via EPA Method 8270, Pesticides and Polychlorinated Biphenyls via EPA Method 8081/8082 and Target Analyte List (TAL) Metals.

Appendix E provides copies of the laboratory reports.

3.6 Decontamination Procedures

In order to ensure that cross-contamination between sampling locations did not occur, each piece of sampling equipment was decontaminated prior to each use. The following procedure was utilized in the decontamination process:

- Wipe clean and wash with Alconox®.
- Potable water rinse.
- Methanol rinse.
- Deionized water rinse.
- Air dry.

All decontamination procedures were performed in an area segregated from any sampling areas. Any rinsate from the decontamination area was contained and removed from the site.

3.7 Quality Assurance/Quality Control

All samples were properly handled and placed into the appropriate labeled containers. The containers were placed in a cooler filled with ice and maintained at a maximum 5 degrees Celsius. All samples were transmitted under proper chain of custody procedures to a State-certified (ELAP) laboratory for confirmatory laboratory analyses. All holding times were met. The laboratory did not report any irregularities with respect to their internal Quality Assurance/Quality Control.

To assure that cross contamination did not occur during the soil and groundwater sampling phases of the project, representative field blanks were prepared. In addition, a trip blank was prepared to verify the integrity of the samples during transmittal to the laboratory. Both the field blanks and trip blank were analyzed for similar parameters to the environmental samples.

4.0 ANALYTICAL RESULTS

4.1 Soil Quality

Table 2 provides the VOC results for each shallow soil sample and **Table 3** provides the VOC results for each deep soil sample. **Tables 2** and **3** also provide comparisons to each compound's respective Recommended Soil Cleanup Objective (RSCO) from NYSDEC Technical Administrative Guidance Memorandum (TAGM) #4046. The concentrations reported in **Tables 2** and **3** are in micrograms per kilogram (µg/kg).

As **Table 2** indicates, no VOCs were detected in the shallow soil samples at concentrations exceeding TAGM #4046 Standards. As **Table 3** indicates, no VOCs were detected in the deep soil samples at concentrations exceeding TAGM #4046 Standards.

Table 4 provides the SVOC results for each shallow soil sample and **Table 5** provides the SVOC results for each deep soil sample. **Tables 4** and **5** also provide comparisons to each compound's respective RSCO from NYSDEC TAGM #4046. The concentrations reported in **Tables 4** and **5** are in µg/kg.

As **Table 4** indicates, no SVOCs were detected in the shallow samples from SP-1 to SP-3 and SP-5 at concentrations exceeding their respective TAGM #4046 Standards. The remaining shallow soil samples (SP-4, SP-6 to SP-10) contain the SVOCs Benzo (a) Anthracene and Chrysene at concentrations exceeding their respective TAGM #4046 Standards. The SVOC Benzo (a) Pyrene was detected in SP-4, SP-6, SP-7 and SP-9 at a concentration exceeding its TAGM #4046 Standard. The total SVOC concentrations in these samples range from a low of 10,969 µg/kg in SP-7 to a high of 73,690 µg/kg in SP-4.

As **Table 5** indicates, no SVOCs were detected in the deep samples from SP-1 to SP-6 and SP-8 to SP-10 at concentrations exceeding their respective TAGM #4046 Standards. The SVOCs Pyrene, Benzo (a) Anthracene, Chrysene, Benzo (b) Fluoranthene, Benzo (k) Fluoranthene and Benzo (a) Pyrene were detected in the deep sample from SP-7 at concentrations exceeding their respective TAGM #4046 Standards. The total SVOC concentration in this sample is 218,843 µg/kg.

Table 6 provides the TAL Metals results for each shallow soil sample and **Table 7** provides the TAL Metals results for each deep soil sample. **Tables 6 and 7** also provide comparisons to each analyte's respective RSCO and Eastern USA Background from NYSDEC TAGM #4046. The concentrations reported in **Tables 6** and 7 are in µg/kg.

As **Table 6** indicates, the Mercury was detected in every shallow soil sample at a concentration exceeding its TAGM #4046 Standard and Eastern USA Background. Other metals, including Barium (2 of 10 samples), Arsenic (1 of 10 samples), Copper (2 of 10 samples), Magnesium (1 of 10 samples), Beryllium (1 of 10 samples) and Nickel (1 of 10 samples) were detected in several samples at concentrations both their respective TAGM #4046 Standard and Eastern USA Background.

As **Table 7** indicates, the Mercury was detected in 4 of the 10 deep samples at a concentration exceeding its TAGM #4046 Standard and Eastern USA Background. Barium and Cadmium were each detected in 1 of the 10 deep samples at concentrations exceeding their respective TAGM #4046 Standard and Eastern USA Background.

Table 8 provides the PCB & Pesticides results for each shallow soil sample and **Table 9** provides the PCB & Pesticides results for each deep soil sample. **Tables 8** and 9 also provide comparisons to each compound's respective RSCO from NYSDEC TAGM #4046. The concentrations reported in **Tables 8** and 9 are in µg/kg.

As **Table 8** indicates, no PCBs or Pesticides were detected in the shallow soil samples at concentrations exceeding TAGM #4046 Standards. As **Table 9** indicates, no PCBs or Pesticides were detected in the deep soil samples at concentrations exceeding TAGM #4046 Standards.

4.2 Groundwater Quality

Table 10 provides the monitoring results for each well. As **Table 10** indicates the depth to groundwater beneath the Site ranges from 8.33 feet in MW-2 to 9.69 feet in MW-4. No separate phase product was identified in any monitoring well. The calculated groundwater elevations range from 33.94 in monitoring well MW-4 to 35.42 in monitoring well MW-1.

The groundwater elevations were then imported into a computer-contouring program to determine the site-specific groundwater flow direction. The site-specific groundwater flow direction was determined to be toward the northwest. **Figure 5** provides the groundwater flow diagram for May 2004. This flow direction is generally consistent with the regional groundwater flow direction for this area of Manhattan.

Table 11 provides the VOC results for the monitoring wells. **Table 11** also provides a comparison of the results to each compound's Groundwater Quality Standard (GQS) from NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 entitled Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. The concentrations reported in **Table 11** are in micrograms per liter (µg/L).

As **Table 11** indicates, Ethylbenzene, Isopropylbenzene, n-Propylbenzene, 1,3,5-Trimethylbenzene, 1,2,4-Trimethylbenzene, sec-Butylbenzene and n-Butylbenzene, 4-Isopropylbenzene, Naphthalene and cis-1,2-Dichloroethene were each detected in the groundwater sample from MW-1 at concentrations exceeding their respective TOGS 1.1.1 Standard. The total VOC concentration detected in MW-1 is 725.6 µg/L.

No VOCs were detected in the remaining groundwater samples (MW-2 to MW-4) at concentrations exceeding their respective TOGS 1.1.1 Standard.

Table 12 provides the SVOC results for the monitoring wells. **Table 12** also provides a comparison of the results to each compound's GQS from NYSDEC TOGS 1.1.1. The concentrations reported in **Table 12** are in µg/L.

As **Table 12** indicates, no SVOCs were detected in any of the groundwater samples at concentrations exceeding TOGS 1.1.1 Standards.

Table 13 provides the TAL Metals results for the monitoring wells. **Table 13** also provides a comparison of the results to each analyte's GQS from NYSDEC TOGS 1.1.1. The concentrations reported in **Table 13** are in µg/L.

As Table 13 indicates, no individual TAL Metals were detected in any of the groundwater samples at concentrations exceeding their respective TOGS 1.1.1 Standard.

Table 14 provides the PCB & Pesticides results for the monitoring wells. Table 14 also provides a comparison of the results to each compound's GQS from NYSDEC TOGS 1.1.1. The concentrations reported in Table 14 are in µg/L.

As Table 14 indicates, no PCBs or Pesticides were detected in any of the groundwater samples at concentrations exceeding TOGS 1.1.1 Standards.

4.3 Quality Assurance/Quality Control

No detectable levels of VOCs, SVOCs, TAL Metals or PCBs were identified in either of the field blanks or the trip blank. Based upon these results, no evidence of cross contamination was identified during the sampling phase and no contamination was introduced during sample transmittal.

5.0 DISCUSSION OF RESULTS

No shallow or deep soil beneath the Site contains VOCs at levels exceeding TAGM #4046 Standards. No shallow or deep soil beneath the Site contains PCBs or Pesticides at levels exceeding TAGM #4046 Standards.

Shallow (zero to 6 feet) soil beneath the majority of 507-511 West 24th Street contains SVOCs at concentrations exceeding their respective TAGM #4046 Standards. These SVOCs generally consist of Benzo (a) Anthracene and Chrysene, which can be more specifically classified as Polycyclic Aromatic Hydrocarbons, or PAHs. Deeper soil (>6 feet) beneath the southeastern portion of 507-511 West 24th Street also contain similar levels of PAHs. No other soil identified throughout the Site contains levels of SVOCs exceeding TAGM #4046 Standards. These PAHs are ubiquitous in fill material historically utilized throughout the Tri-State Area, specifically in Manhattan.

Concentrations of individual TAL Metals exceeding TAGM #4046 Standards were identified in both shallow and deep soil samples from each boring. These results are consistent with the presence and use of fill material at the Site and also are typically prevalent in soils throughout Manhattan. No individual TAL Metals concentrations are indicative of current or historical releases of metals at the Site.

The groundwater flow direction beneath the Site is toward the northwest. VOCs were detected in groundwater beneath 245 Tenth Avenue at concentrations exceeding TOGS 1.1.1 Standards. These VOCs primarily consist of petroleum constituents, as evidenced by the detectable levels of Ethylbenzene and Trimethylbenzene. Additionally, VOCs indicative of chlorinated solvents were also detected at this location. The groundwater plume does not appear to extend off-site, as evidenced by no detectable levels of VOCs in downgradient monitoring well MW-4.

No other VOCs were identified in groundwater beneath the Site. No SVOCs, TAL Metals, PCBs or Pesticides were detected in groundwater beneath the Site. The lack of TAL Metals in the groundwater beneath the Site indicates that any of the metals detected in the soil have not migrated vertically and impacted the groundwater.

6.0 CONCLUSIONS

Based upon the results of the assessment, the following conclusions have been provided:

- The GPR survey identified anomalies at 5 locations throughout the Site. Anomalies indicative of underground tanks were identified at 4 of the 5 locations and correspond to the presence of two (2) 2,000-gallon, three (3) 550-gallon underground tanks have been abandoned in-place and one (1) 550-gallon underground tank that is currently active. The remaining anomaly is likely a remote fill pipe for the underground tanks.

- The results of the soil sampling portion of the assessment indicate that no shallow or deep soil beneath the Site contains VOCs, PCBs or Pesticides at levels exceeding TAGM #4046 Standards. Shallow (zero to 6 feet) soil beneath the majority of 507-511 West 24th Street contains PAHs at concentrations exceeding their respective TAGM #4046 Standards. Deeper soil (>6 feet) beneath the southeastern portion of 507-511 West 24th Street also contain similar levels of PAHs. These PAHs are ubiquitous in fill material historically utilized throughout the Tri-State Area, specifically in Manhattan. No individual TAL Metals, present in the shallow or deep concentrations, are indicative of current or historical releases of metals at the Site.

- The groundwater flow direction beneath the Site has been determined to be toward the northwest. This is consistent with the regional groundwater flow direction.

- The results of the groundwater sampling portion of the assessment indicate that no SVOCs, TAL Metals, PCBs or Pesticides are present in groundwater beneath the Site at concentrations exceeding TOGS 1.1.1 Standards. Individual VOCs were detected in groundwater beneath 245 Tenth Avenue at concentrations exceeding TOGS 1.1.1 Standards. Additionally, VOCs indicative of chlorinated solvents were also detected at this location.

7.0 RECOMMENDATIONS

Based upon the findings of this investigation, combined with the prior environmental activities conducted, it is recommended that the waste oil tank beneath 245 Tenth Avenue should be removed or abandoned in-place once it is no longer in service and the dissolved petroleum constituents in groundwater be remediated to the satisfaction of the NYSDEC. The removal of the waste oil tank would commence with the excavation of all concrete on top of the tanks utilizing a backhoe fitted with a pneumatic hammer. Next, the tank would be removed and disposed and a detailed SPOTS #14 investigation conducted. If any soil that is excavated contains either visual, olfactory or field screening evidence of petroleum, the NYSDEC Spill Hotline should be contacted and this soil should be segregated for later disposal.

Once all end point sampling results are obtained, all excavation would be backfilled to grade. Tank Closure Reports would be prepared and submitted to the NYSDEC.

In addition, if any construction activities are conducted in the locations of the previously abandoned underground tanks, the tanks should be properly removed in a similar manner described above.

The dissolved petroleum constituents in groundwater beneath the eastern portion of the Site would likely be addressed through the *in-situ* bioremediation of the plume. First of all, the presence of the plume should be made known to the NYSDEC via the Spill Hotline. Additional monitoring wells would be required to provide additional access points to the plume and to also delineate its extent. Next, a Remedial Action Plan (RAP) would prepared that would spell out the protocols to be implemented for the remediation. Upon its approval, the RAP would be implemented.

8.0 REFERENCES

1. Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, ASTM E 1903-00, American Society for Testing and Materials, West Conshohocken, PA.

2. Principals of Groundwater Engineering, William C. Walton, Lewis Publishers, Inc., 1991.

3. Soil Survey of Nassau County, New York, Soil Conservation Service, United States Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station, February 1987.

4. The Long Island Ground Water Pollution Study, New York State Department of Environmental Conservation, 1972.

5. *Geochemical traverse across Cameron's Line, Boro Hall Park, Bronx, New York*, Cadmus, D., Hodgson, R., Gatto, L.M., and Puffer, J.H., Geology Department, Rutgers University, Newark, NJ.

6. *Drainage History of the New York City Region*, Sanders, John E., Geology Department, Hofstra University.

7. Draft DER-10 Technical Guidance for Site Investigation and Remediation, December 2002.

9.0 EXCLUSIONS & DISCLAIMER

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this report, **Hydro Tech Environmental, Corp.** may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to **Hydro Tech Environmental, Corp.** at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, **Hydro Tech Environmental, Corp.** did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to a non hazardous or hazardous materials, in that portion of the subject property or structure. In addition, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floors, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Hydro Tech Environmental, Corp. did not perform testing or analyses to determine the presence or concentration of asbestos at the subject property or in the environment of the subject property under the scope of the services performed.

The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Any water level reading made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where such analyses have been conducted by an outside laboratory, **Hydro Tech Environmental, Corp.** has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

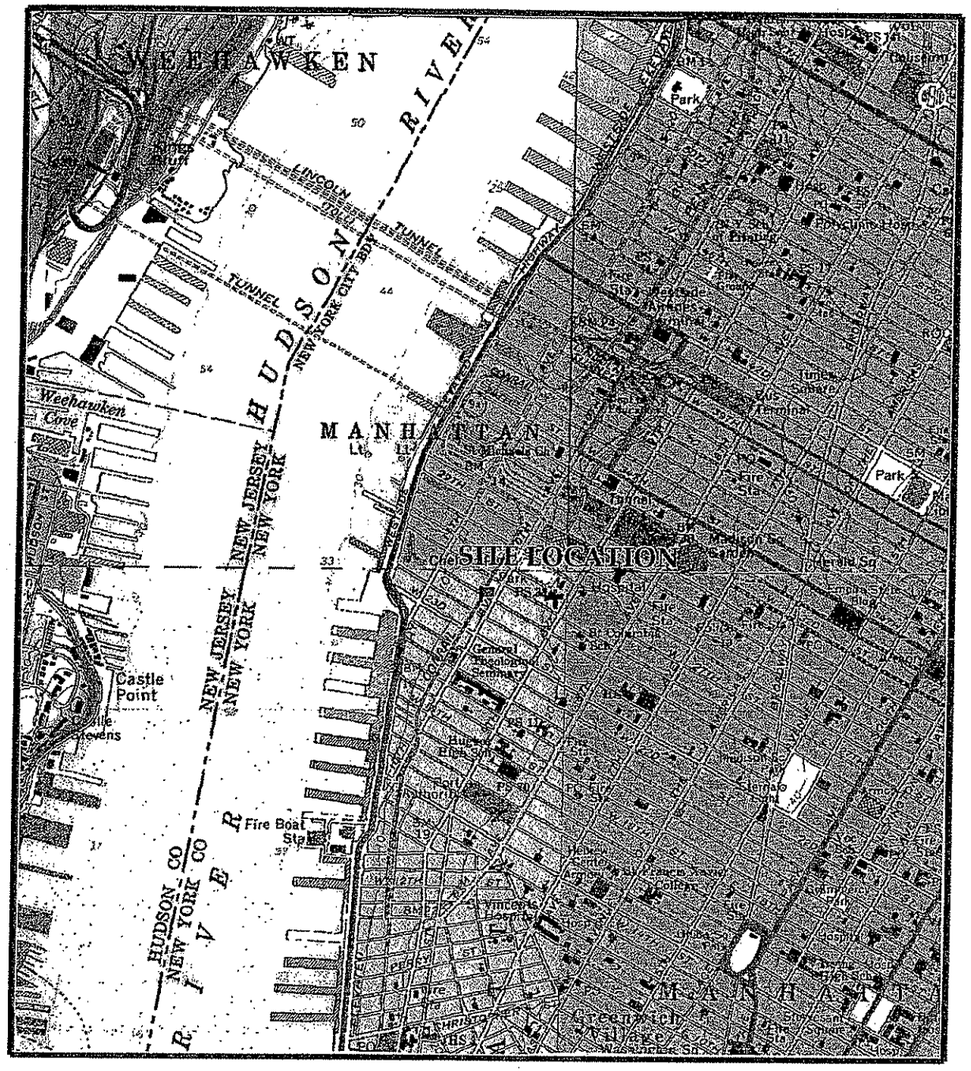
The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the

data may be preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific constituents during the course of this subject property assessment, as descried in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the subject property.

Any GPR survey described above was performed in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry. **Hydro Tech Environmental, Corp.** does not accept responsibility for survey limitations due to inherent technological limitations or site specific conditions, however, made appropriate effort to identify and notify the client of such limitations and conditions. In particular, please note that the survey described above does not represent a full utility clearance survey, and does not relieve any party of applicable legal obligations to notify a utility one-call service prior to excavating or drilling.

FIGURES



Hydro Tech Environmental, Corp

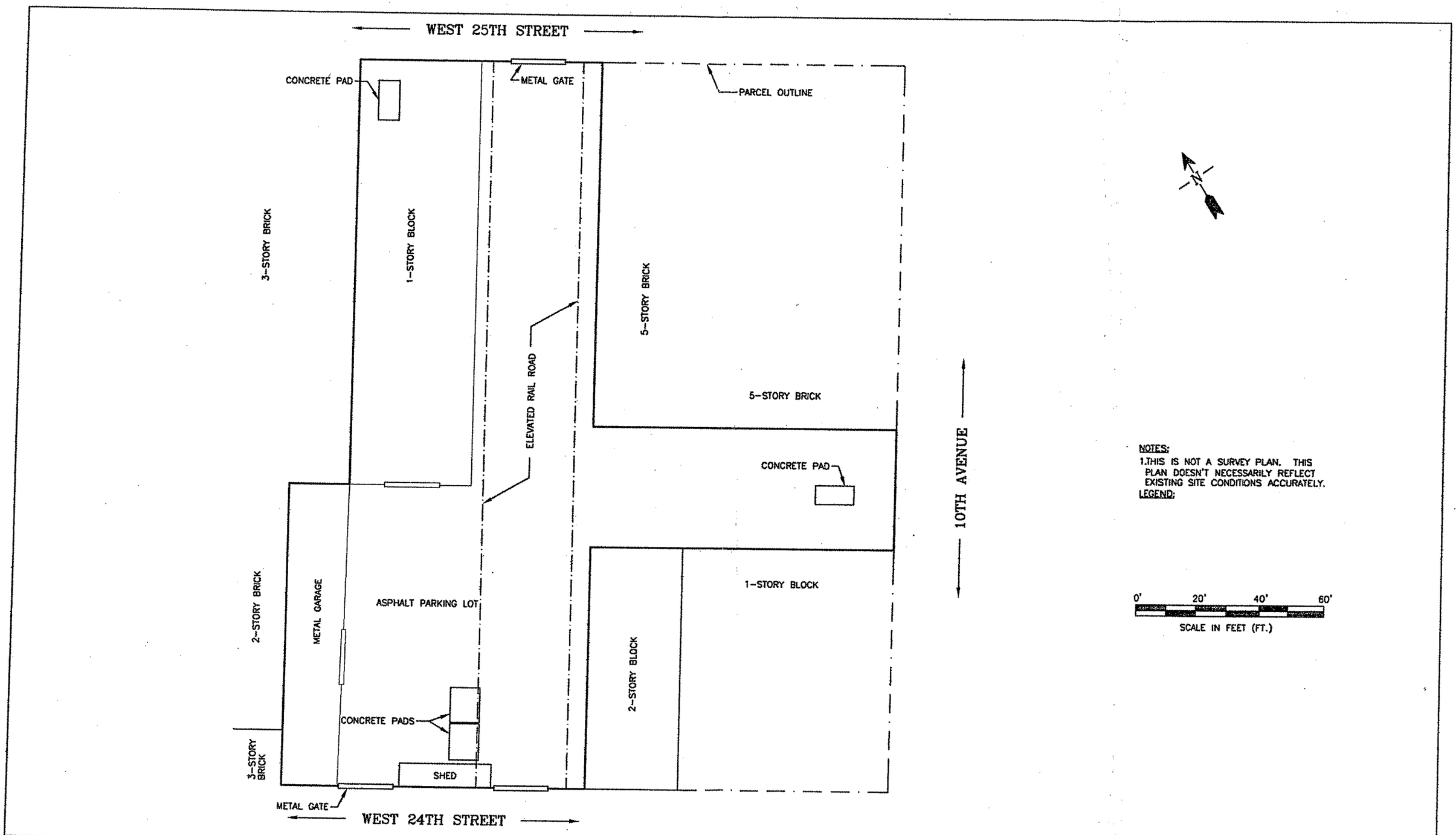
Main Office:
2171 Jericho Turnpike, Suite 240
Commack, New York 11725

NYC Office:
15 Ocean Avenue, Second Floor
Brooklyn, New York 11225

Phone: (631) 462-5866 Fax: (631)462-5877 Toll Free: (866) HYDRO-TK
www.hydrotechenvironmental.com

Figure 1: Site Location Map

West Chelsea Assemblage
New York, New York



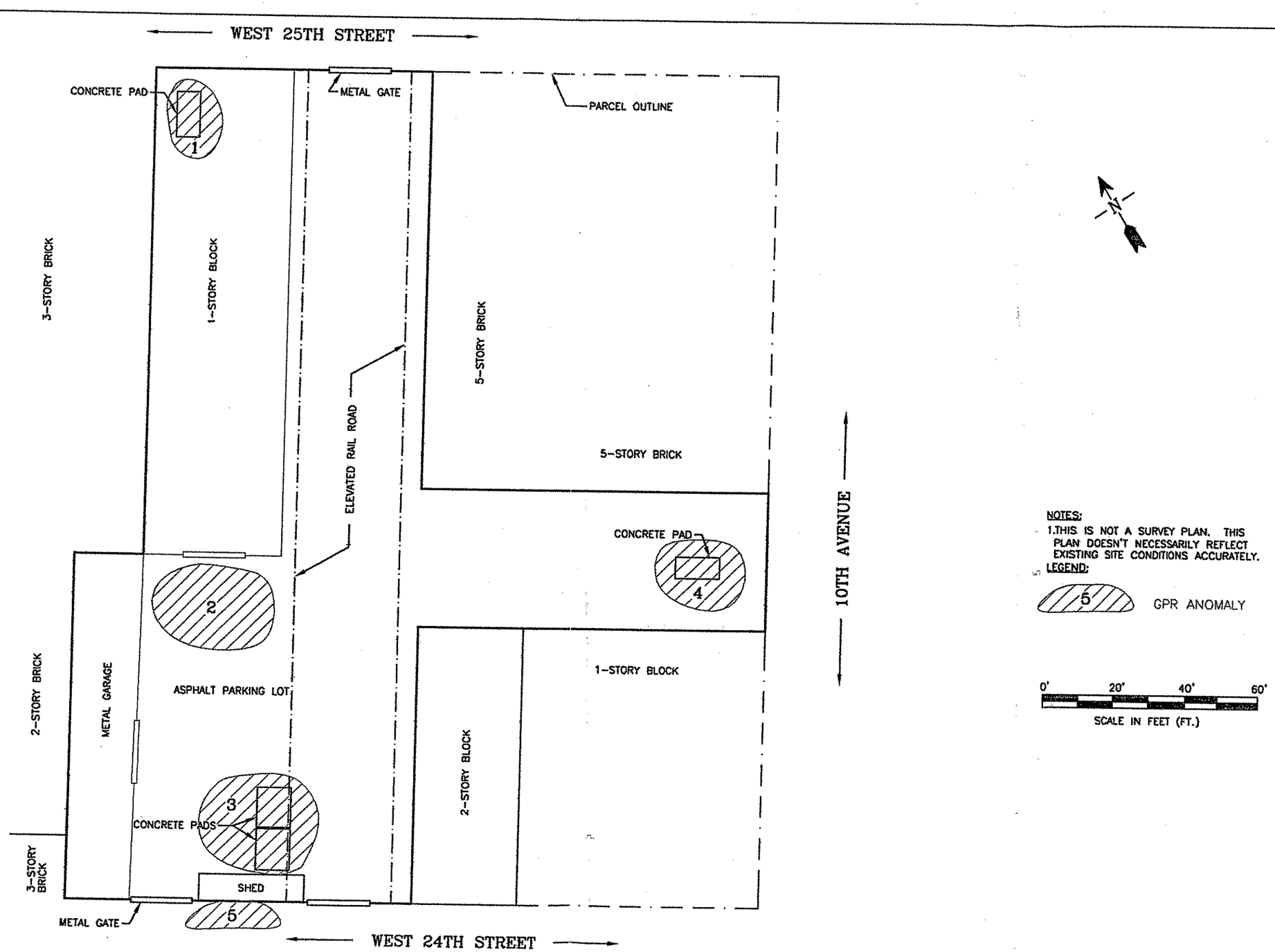
HYDRO TECH ENVIRONMENTAL CORP.
MAIN OFFICE:
2171 JERICHO TURNPIKE, SUITE 240
COMMACK, NEW YORK 11725
NYC OFFICE:
15 OCEAN AVENUE, SECOND FLOOR
BROOKLYN, NEW YORK 11225
PHONE: (631) 462-5866 FAX: (631) 462-5877
www.hydrotechenvironmental.com
TOLL FREE: (866) HYDRO-TK

West Chelsea Assemblage
New York, New York

Drawn By:	K.P
Reviewed By:	M.R
Approved By:	M.S
Date:	05-21-04
Scale:	1"=30'

TITLE:

FIGURE 2: SITE PLAN



NOTES:
1.THIS IS NOT A SURVEY PLAN. THIS PLAN DOESN'T NECESSARILY REFLECT EXISTING SITE CONDITIONS ACCURATELY.

LEGEND:

5 GPR ANOMALY

0' 20' 40' 60'

SCALE IN FEET (FT.)

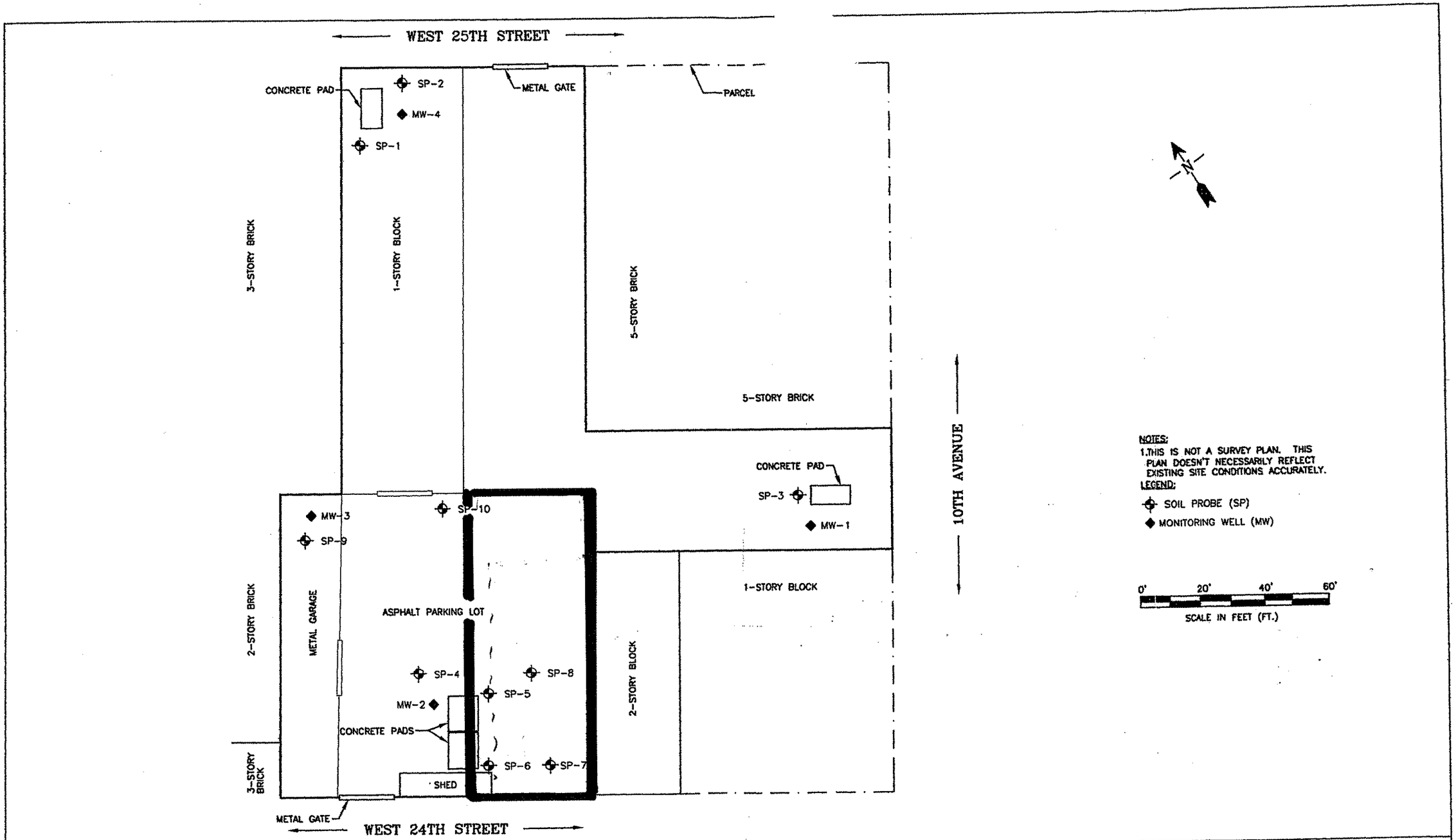
HYDRO TECH ENVIRONMENTAL CORP.
MAIN OFFICE:
2171 JERICHO TURNPIKE, SUITE 240
COMMACK, NEW YORK 11725
NYC OFFICE:
15 OCEAN AVENUE, SECOND FLOOR
BROOKLYN, NEW YORK 11225
PHONE: (631) 462-5866 FAX: (631) 462-5877
www.hydrotechenvironmental.com
TOLL FREE: (866) HYDRO-TK

West Chelsea Assemblage
New York, New York

Drawn By: K.P
Reviewed By: M.R
Approved By: M.S
Date: 05-21-04
Scale: 1"=30'

TITLE:

FIGURE 3: GPR RESULTS



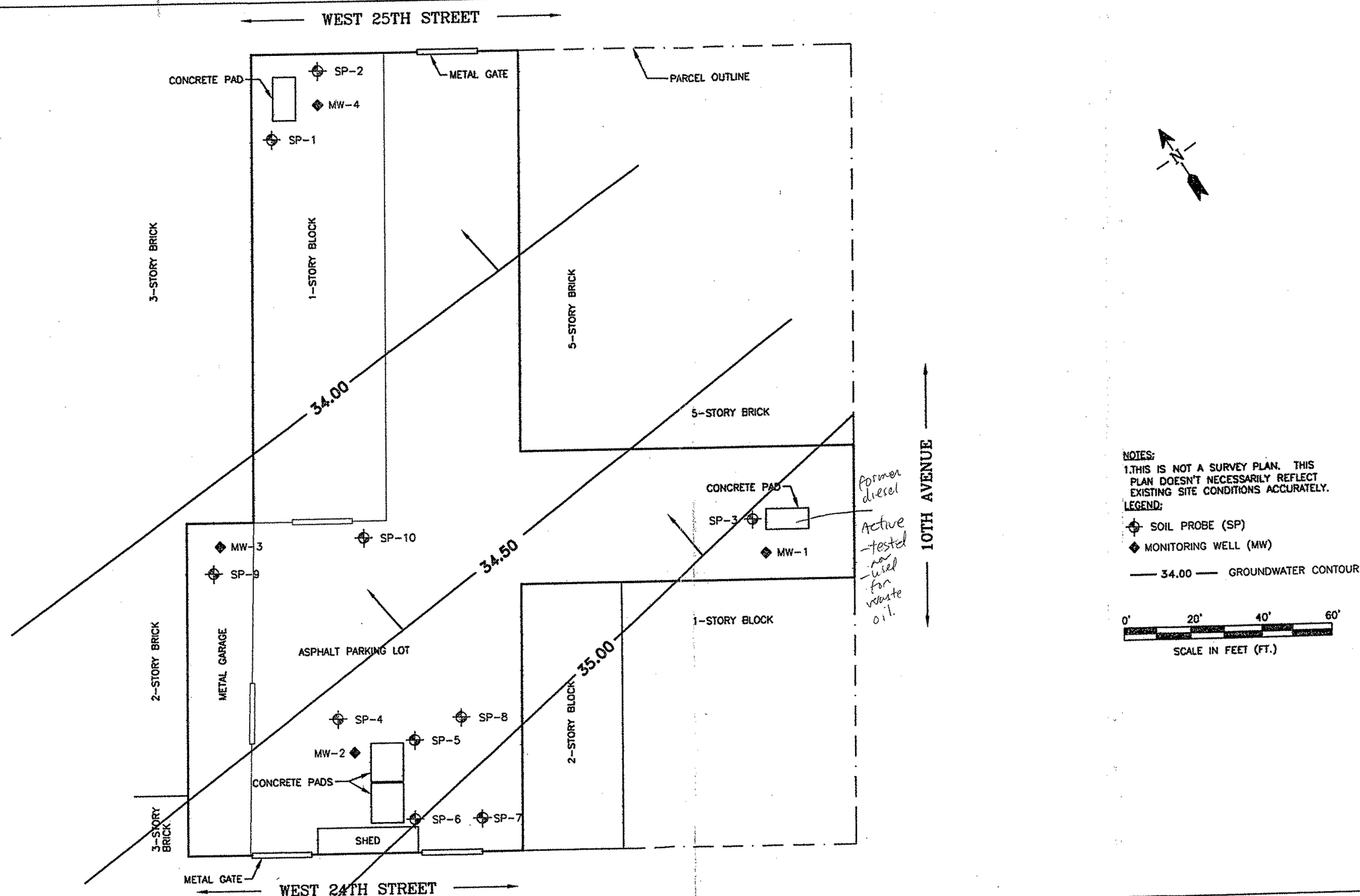
HYDRO TECH ENVIRONMENTAL CORP.
MAIN OFFICE:
2171 JERICHO TURNPIKE, SUITE 240
COMMACK, NEW YORK 11725
NYC OFFICE:
15 OCEAN AVENUE, SECOND FLOOR
BROOKLYN, NEW YORK 11225
PHONE: (631) 462-5866 FAX: (631) 462-5877

West Chelsea Assemblage
New York, New York

Drawn By: K.P
Reviewed By: M.R
Approved By: M.S
Date: 05-21-04
Scale: 1"=30'

TITLE:

FIGURE 4: SAMPLING PLAN



HYDRO TECH ENVIRONMENTAL CORP.
MAIN OFFICE:
2171 JERICHO TURNPIKE, SUITE 240
COMMACK, NEW YORK 11725
NYC OFFICE:
15 OCEAN AVENUE, SECOND FLOOR
BROOKLYN, NEW YORK 11225
PHONE: (631) 462-5866 FAX: (631) 462-5877
www.hydrotechenvironmental.com

West Chelsea Assemblage
New York, New York

Drawn By: K.P
Reviewed By: M.R
Approved By: M.S
Date: 05-21-04
Scale: 1"=30'

TITLE:

FIGURE 5: GROUNDWATER FLOW DIAGRAM–MAY 2004

TABLES

Table 2
Volatile Organic Compounds Soil Results SP-1 through SP-10 - Shallow (µg/kg)
West Chelsea Assemblage, New York, NY

Compound	SP-01 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO
Dichlorodifluoromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chloromethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Vinyl chloride	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	200.0
Bromomethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Chloroethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	1,900
Trichlorofluoromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
1,1-Dichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	400.0
Methylene chloride	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	100.0
trans-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,1-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	200.0
2,2-Dichloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
cis-1,2-Dichloroethene	<5.00	<5.00	5.19	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Bromochloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chloroform	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	300.0
1,1,1-Trichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	800.0
Carbon tetrachloride	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	600.0
1,1-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Benzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1.39	<1.00	60
1,2-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	100.0
Trichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	700.0
1,2-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Dibromomethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Bromodichloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
cis-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Toluene	1.34	<1.00	<1.00	<1.00	3.88	2.21	<1.00	<1.00	2.47	82.6	1,500
trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
1,1,2-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS
Tetrachloroethene	5.86	<1.00	15.8	<1.00	<1.00	<1.00	2.74	<1.00	<1.00	<1.00	1,400
1,3-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	300.0
Dibromochloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NA

Compound	SP-01 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO
1,2-Dibromoethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,700
1,1,1,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Ethylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10.9	5,500
o-Xylene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10.9	1,200
m + p-Xylene	<1.00	<1.00	<1.00	<1.00	2.68	<1.00	<1.00	<1.00	<1.00	28.2	1,200
Styrene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Bromoform	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Isopropylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2,300
Bromobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
1,1,2,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	600.0
1,2,3-Trichloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	400.0
n-Propylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	3,700
2-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
4-Chlorotoluene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,3,5-Trimethylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	26.1	8,300
tert-Butylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	10,000
1,2,4-Trimethylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	18.2	10,000
sec-Butylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10,000
1,3-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2,600
4-Isopropyltoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10,000
1,4-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	8,500
1,2-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	7,900
n-Butylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10,000
1,2-Dibromo-3-chloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,2,4-Trichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Hexachlorobutadiene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Naphthalene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	11	<5.00	13,000
1,2,3-Trichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	10,000
Methyl-Tert-Butyl-Ether (MTB	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,200
Total VOCs	7.20	<5.00	20.99	<5.00	6.56	2.21	2.74	<5.00	14.86	176.9	10,000

NS . . . No Standard
NA . . . Not Available
** . . . NYSDEC TAGM #4046, 1/24/94.*

µg/kg...micrograms/kilogram
RSCO...recommended soil cleanup objective

Table 3

Volatile Organic Compounds Soil Results SP-1 through SP-10 - Deep (µg/kg)

West Chelsea Assemblage, New York, NY

Compound	SP-01 8'-10'	SP-02 8'-10	SP-03 8'-10'	SP-04 8'-10'	SP-05 8'-10'	SP-06 8'-10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10	SP-10 8'-10'	RSCO
Dichlorodifluoromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chloromethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Vinyl chloride	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	200.0
Bromomethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Chloroethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	1,900
Trichlorofluoromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
1,1-Dichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	400.0
Methylene chloride	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	<5.00	100.0
trans-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,1-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	200.0
2,2-Dichloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
cis-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Bromochloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chloroform	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	300.0
1,1,1-Trichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	800.0
Carbon tetrachloride	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	600.0
1,1-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Benzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	60
1,2-Dichloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	100.0
Trichloroethene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	700.0
1,2-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Dibromomethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Bromodichloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
cis-1,3-Dichloropropene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Toluene	<1.00	<1.00	4.50	<1.00	<1.00	<1.00	1.71	<1.00	1.40	<1.00	1,500
trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
1,1,2-Trichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Tetrachloroethene	<1.00	<1.00	4.8	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,400
1,3-Dichloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	300.0
Dibromochloromethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NA

Compound	SP-01 8'-10'	SP-02 8'-10	SP-03 8'-10'	SP-04 8'-10'	SP-05 8'-10'	SP-06 8'-10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10'	SP-10 8'-10'	RSCO
1,2-Dibromoethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Chlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,700
1,1,1,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Ethylbenzene	<1.00	<1.00	1.84	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	5,500
o-Xylene	<1.00	<1.00	1.64	<1.00	<1.00	<1.00	5.07	<1.00	<1.00	<1.00	1,200
m + p-Xylene	<1.00	<1.00	1.39	<1.00	<1.00	<1.00	1.84	<1.00	<1.00	<1.00	1,200
Styrene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Bromoform	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Isopropylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2,300
Bromobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
1,1,2,2-Tetrachloroethane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	600.0
1,2,3-Trichloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	400.0
n-Propylbenzene	<1.00	1.61	<1.00	<1.00	<1.00	1.33	<1.00	<1.00	<1.00	<1.00	3,700
2-Chlorotoluene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
4-Chlorotoluene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,3,5-Trimethylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	3,300
tert-Butylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	10,000
1,2,4-Trimethylbenzene	<1.00	38.4	<1.00	<1.00	<1.00	2.39	3.38	<1.00	<1.00	<1.00	10,000
sec-Butylbenzene	<1.00	<1.00	<1.00	<1.00	<1.00	1.45	<1.00	<1.00	<1.00	<1.00	10,000
1,3-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,600
4-Isopropyltoluene	<1.00	<1.00	<1.00	<1.00	<1.00	1.97	<1.00	<1.00	<1.00	<1.00	10,000
1,4-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	8,500
1,2-Dichlorobenzene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	7,900
n-Butylbenzene	<1.00	1.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	10,000
1,2-Dibromo-3-chloropropane	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
1,2,4-Trichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	NS
Hexachlorobutadiene	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	NS
Naphthalene	<5.00	<5.00	<5.00	<5.00	<5.00	6.33	153	12.3	<5.00	<5.00	13,000
1,2,3-Trichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	10,000
Methyl-Tert-Butyl-Ether	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1,200
Total VOCs	<5.00	41.11	14.17	<5.00	<5.00	13.47	165	12.3	1.40	<5.00	10,000

NS . . . No Standard

NA . . . Not Available

µg/kg...micrograms/kilogram

RSCO...recommended soil cleanup objective

Table 4

Semi-Volatile Organic Compounds Soil Results SP-1 through SP-10 - Shallow (µg/kg)

West Chelsea Assemblage, New York, NY

Compound	SP-01 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO*	Compound	SP-01 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO*
Phenol	<33.3	<33.3	<33.3	<267	<33.3	<33.3	<33.3	<200	<33.3	<33.3	30 or MDL	Dibenzofuran	<33..3	<33..3	<33..3	<267	<33..3	<33..3	<33..3	<200	250	<33..3	6,200
bis(2-Chloroethyl)ether	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	2,4-Dinitrotoluene	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS
2-Chlorophenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	800	Diethyl phthalate	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS
2-Methylphenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	100 or MDL	4-Chlorophenol phenyl ether	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	50,000
bis(2-Chloroisopropyl)ether	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	Fluorene	<66.6	<66.6	<66.6	1,290	<66.6	198	115	<400	555	<66.6	50,000
3,4-Methylphenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	900	4-Nitroaniline	<66.6	<66.6	<66.6	<533	<33..3	<33..3	<33..3	<400	<66.6	<33..3	NS
N-Nitrosodi-n-propylamine	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	2-Methyl-4,6-dinitrophenol	<167	<167	<167	<1340	<66.6	<66.6	<66.6	<1,000	<167	<66.6	NS
Hexachloroethane	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	N-Nitrosodiphenylamine	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS
Nitrobenzene	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	200 or MDL	4-Bromophenyl phenyl ether	<33.3	<33.3	<33.3	<267	<66.6	<66.6	<66.6	<200	<33.3	<66.6	NS
Isophorone	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	4,400	Hexachlorobenzene	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	410
2-Nitrophenol	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	330 or MDL	Pentachlorophenol	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	1,000 or MDL
2,4-Dimethylphenol	<333	<333	<333	<2660	<333	<333	<333	<2,000	<333	<333	NS	Phenanthrene	<66.6	153	74.3	16,800	173	2,490	1,460	2,010	4,000	455	50,000
bis (2-Chloroethoxy) methane	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	Anthracene	<66.6	<66.6	<66.6	3,170	<66.6	460	302	508	782	89.9	50,000
2,4-Dichlorophenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	400	Di-n-butylphthalate	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	8,100
4-Chloroaniline	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	220 or MDL	Fluoranthene	<33.3	162	136	1,990	332	1,690	1,180	1,650	2,040	335	50,000
4-Chloro-3-methylphenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	240 or MDL	Pyrene	<66.6	170	149	28,900	501	9,060	4,710	8,990	11,100	1,440	50,000
2-Methylnaphthalene	<33.3	<33.3	<33.3	<267	<33.3	<33.3	<33.3	<200	221	<33.3	36,400	Butyl benzyl phthalate	<167	<167	<167	<1340	<167	<167	<167	<1000	<167	<167	50,000
Hexachlorocyclopentadiene	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	NS	3,3'-Dichlorobenzidene	<167	<167	<167	<1340	<167	<167	<167	<1000	<167	<167	NA
2,4,6-Trichlorophenol	<33.3	<33.3	<33.3	<267	<33.3	<33.3	<33.3	<2300	<33.3	<33.3	100	Benzo(a)anthracene	<33.3	78.6	87.2	6,610	186	1,110	633	840	1,430	313	224 or MDL
2,4,5-Trichlorophenol	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	NS	Chrysene	<66.6	94.6	93.9	6,570	206	1350	763	1180	1,900	426	400
2-Chloronaphthalene	<33.3	<33.3	<33.3	<267	<33.3	<33.3	<33.3	<200	<33.3	<33.3	NS	bis(2-Ethylhexyl)phthalate	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	50,000
2-Nitroaniline	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	430 or MDL	Di-n-octylphthalate	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	50,000
Dimethyl phthalate	<33.3	<33.3	<33.3	<267	<33.3	48.3	<33.3	<200	<33.3	<33.3	NS	Benzo(b)fluoranthene	<167	<167	<167	<1340	<167	673	<167	<1,000	815	<167	1,100
Acenaphthylene	<33.3	<33.3	<33.3	<267	<33.3	<33.3	<33.3	<200	92.9	58.6	41,000	Benzo(k)fluoranthene	<66.6	<66.6	<66.6	<533	<66.6	592	<66.6	<400	898	<66.6	1,100
2,6-Dinitrotoluene	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	1,000	Benzo(a)pyrene	<33.3	<33.3	<33.3	6,860	<33.3	1,060	652	<200	1,450	396	610 or MDL
3-Nitroaniline	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	500 or MDL	Indeno(1,2,3-cd)pyrene	<66.6	<66.6	<66.6	<533	<66.6	910	467	<400	1,090	<66.6	3,200
Acenaphthene	<33.3	<33.3	<33.3	1500	<33.3	196	122	<200	333	<33.3	50,000	Dibenzo(a,h)anthracene	<66.6	<66.6	<66.6	<533	<66.6	<66.6	<66.6	<400	<66.6	<66.6	140 or MDL
2,4-Dinitrophenol	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	200 or MDL	Benzo(g,h,i)perylene	<33.3	<33.3	<33.3	<267	<33.3	1,140	565	<200	1,240	<33.3	50,000
4-Nitrophenol	<167	<167	<167	<1340	<167	<167	<167	<1,000	<167	<167	100 or MDL	Total SVOCs	<167	658.2	540.4	73,690	1,398	20,977	10,969	15,178	28,196.9	3513.5	500,000

NS . . . No Standard

NA . . . Not Available

** . . . NYSDEC TAGM #4046, 1/24/94.*

shaded values represent concentrations greater than RSCO

RSCO…recommended soil cleanup objective

Table 5

Semi-Volatile Organic Compounds Soil Results SP-1 through SP-10 - Deep(µg/kg)

West Chelsea Assemblage, New York, NY

Compound	SP-01 8'-10'	SP-02 8'-10'	SP-03 8'-10'	SP-04 8' - 10'	SP-05 8' - 10'	SP-06 8' - 10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10'	SP-10 8'-10'	RSCO*
Phenol	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	<200	<33.3	<33.3	<33.3	30 or MDL
bis(2-Chloroethyl)ether	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
2-Chlorophenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	800
2-Methylphenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<200	<66.6	<66.6	<66.6	100 or MDL
bis(2-Chloroisopropyl)ether	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
3,4-Methylphenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	900
N-Nitrosodi-n-propylamine	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
Hexachloroethane	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
Nitrobenzene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	200 or MDL
Isophorone	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	4,400
2-Nitrophenol	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	330 or MDL
2,4-Dimethylphenol	<333	<333	<333	<333	<333	<333	<2,000	<333	<333	<333	NS
bis (2-Chloroethoxy) methane	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
2,4-Dichlorophenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	400
4-Chloroaniline	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	220 or MDL
4-Chloro-3-methylphenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	240 or MDL
2-Methylnaphthalene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	207	<33.3	<33.3	<33.3	36,400
Hexachlorocyclopentadiene	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	NS
2,4,6-Trichlorophenol	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	<200	<33.3	<33.3	<33.3	100
2,4,5-Trichlorophenol	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
2-Chloronaphthalene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	<200	<33.3	<33.3	<33.3	NS
2-Nitroaniline	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	430 or MDL
Dimethyl phthalate	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	<200	<33.3	<33.3	<33.3	NS
Acenaphthylene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	368	<33.3	<33.3	<33.3	41,000
2,6-Dinitrotoluene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	1,000
3-Nitroaniline	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	500 or MDL
Acenaphthene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	508	74.9	<33.3	<33.3	50,000
2,4-Dinitrophenol	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	200 or MDL
4-Nitrophenol	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	100 or MDL

Compound	SP-01 8'-10'	SP-02 8'-10'	SP-03 8'-10'	SP-04 8'-10'	SP-05 8'-10'	SP-06 8'-10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10'	SP-10 8'-10'	RSCO*
Dibenzofuran	<33..3	<33..3	<33..3	<33..3	<33..3	<33..3	<200	<33..3	<33..3	<33..3	6,200
2,4-Dinitrotoluene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
Diethyl phthalate	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
4-Chlorophenol phenyl ether	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	50,000
Fluorene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	100	<66.6	<66.6	50,000
4-Nitroaniline	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
2-Methyl-4,6-dinitrophenol	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	NS
N-Nitrosodiphenylamine	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	NS
4-Bromophenyl phenyl ether	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	<200	<33.3	<33.3	<33.3	NS
Hexachlorobenzene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	410
Pentachlorophenol	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	1,000 or MDL
Phenanthrene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	36,000	600	233	<66.6	50,000
Anthracene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	1,630	162	<66.6	<66.6	50,000
Di-n-butylphthalate	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	8,100
Fluoranthene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	5,290	366	173	<33.3	50,000
Pyrene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	157,000	2,170	1,250	<66.6	50,000
Butyl benzyl phthalate	<167	<167	796	<167	<167	<167	<1,000	<167	<167	<167	50,000
3,3'-Dichlorobenzidene	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	NA
Benzo(a)anthracene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	3,380	191	<33.3	<33.3	224 or MDL
Chrysene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	3,320	262	<66.6	<66.6	400
bis(2-Ethylhexyl)phthalate	<66.6	<66.6	291	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	50,000
Di-n-octylphthalate	<167	<167	<167	<167	<167	<167	<1,000	<167	<167	<167	50,000
Benzo(b)fluoranthene	<167	<167	<167	<167	<167	<167	1,420	<167	<167	<167	1,100
Benzo(k)fluoranthene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	1,900	<66.6	<66.6	<66.6	1,100
Benzo(a)pyrene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	2,370	<33.3	<33.3	<33.3	610 or MDL
Indeno(1,2,3-cd)pyrene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	2,650	<66.6	<66.6	<66.6	3,200
Dibenzo(a,h)anthracene	<66.6	<66.6	<66.6	<66.6	<66.6	<66.6	<400	<66.6	<66.6	<66.6	140 or MDL
Benzo(g,h,i)perylene	<33.3	<33.3	<33.3	<33.3	<33.3	<33.3	2,800	<33.3	<33.3	<33.3	50,000
Total SVOCs	<167	<167	1,087	<167	<167	<167	218,843	3,925.9	1,656	<167	500,000

NS . . . No Standard

NA . . . Not Available

** . . . NYSDEC TAGM #4046, 1/24/94.*

µg/kg…micrograms/kilogram

shaded values represent concentrations greater than RSCO

RSCO…recommended soil cleanup objective

Table 6

Target Analyte List Metals Soil Results SP-01 through SP-10 - Shallow (mg/kg)

West Chelsea Assemblage, New York, NY

Analyte	SP-1 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO	Eastern USA Background
Aluminum	5,680	7,120	6,550	7,330	9,180	5,040	5,250	4,640	7,690	4,790	SB	33,000
Antimony	0.318	<.192	<.250	0.208	<0.227	4.85	0.458	0.850	<0.227	0.781	SB	N/A
Arsenic	3.50	1.04	1.75	5.71	12.8	5.08	5.42	1.80	1.58	3.27	7.5	3 to 12
Barium	287	77.3	680	147	1533	119	39.6	125	1.08	131	300 or SB	15 to 600
Beryllium	0.272	0.231	0.150	0.292	0.500	0.154	0.167	0.150	1.86	0.169	0.16 (HEAST) or SB	0 to 1.75
Cadmium	5.32	3.38	3.10	4.08	4.32	14.5	3.12	2.25	2.87	8.35	0.1 to 1	1 or SB
Calcium	5,730	4,920	6,500	4,790	3,750	4,350	5,120	6,300	2,930	3,620	30 to 35,000	SB
Chromium	18.1	14.3	16.9	16.2	16.0	12.2	17.0	10.4	12.6	10.1	1 to 40**	10 or SB
Cobalt	5.22	4.88	4.40	5.38	6.50	3.27	3.54	3.10	4.78	4.64	30 or SB	2.5 to 60
Copper	81.8	50.8	41.2	16.2	3,060	473	90.0	21.6	27.0	974	25 or SB	1 to 50
Iron	14,300	9,770	9,000	10,800	10,700	10,800	8,540	7,150	9,040	12,200	2,000 or SB	2,000 to 550,000
Lead	454	32.6	1,160	525	434	823	942	352	153	738	SB	200 to 500 ppm
Magnesium	2,320	3,740	2,850	3,590	3,250	2,020	2,620	2,610	2,780	2,370	SB	100 to 5,000
Manganese	1,710	274	236	245	253	205	225	198	202	155	SB	50 to 50,000
Mercury	1.90	3.32	0.959	18.3	8.74	2.76	12.3	25.7	0.544	0.995	0.1	0.001 to 0.2
Nickel	10.5	12.7	21.9	18.2	21.1	13.6	17.0	9.60	13.5	26.0	13 or SB	0.5 to 25
Potassium	198	175	240	170	144	188	123	250	241	161	SB	8,500 to 43,000
Selenium	0.136	<0.115	<0.150	<0.125	<0.136	<0.115	<0.125	<0.150	<0.136	<0.115	2 or SB	0.1 to 3.9
Silver	2.00	0.385	0.250	0.375	0.591	0.231	<0.083	<0.100	<0.091	0.100	SB	N/A
Sodium	50.0	67.7	128	24.2	41.8	66.5	33.0	104	19.2	51.8	SB	6,000 to 8,000
Thallium	<0.091	<0.077	<0.100	<0.083	<0.091	<0.077	<0.083	<0.100	<0.091	<0.077	SB	N/A
Vanadium	14.8	15.9	19.9	29.2	21.1	16.2	30.1	17.5	15.2	19.1	150 or SB	1 to 300
Zinc	217	129	630	567	1,440	431	283	135	81.5	2,080	20 or SB	9 to 50

SB....site backround

**.....NYSDEC TAGM #4046, 1/24/94*

mg/kg...milligrams per kilogram

RSCO...recommended soil cleanup objective

shaded values are greater than RSCO and Eastern USA Site Background

Table 7

Target Analyte List Metals Soil Results SP-01 through SP-10 - Deep (mg/kg)

West Chelsea Assemblage, New York, NY

Analyte	SP-1 8'-10'	SP-02 8'-10'	SP-03 8'-10'	SP-04 8'-10'	SP-05 8'-10'	SP-06 8'-10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10'	SP-10 8'-10'	RSCO	Eastern USA Background
Aluminum	11,900	8,580	8,850	7,270	4,650	5,920	2,650	7,830	7,320	8,620	SB	33,000
Antimony	<0.227	<0.208	<0.250	1.18	<0.250	0.083	2.04	<0.208	<.227	<0.250	SB	N/A
Arsenic	4.55	<0.125	1.40	23.5	8.15	<0.125	1.09	1.08	<.140	0.170	7.5	3 to 12
Barium	1,140	71.2	354	55.0	63.0	26.7	62.3	111	42.4	46.9	300 or SB	15 to 600
Beryllium	1.00	0.292	0.300	0.182	0.050	0.125	0.136	0.208	0.259	0.280	0.16 (HEAST) or SB	0 to 1.75
Cadmium	29.4	2.62	7.65	345	9.8	2.42	3.04	33.29	3.22	3.84	0.1 to 1	1 or SB
Calcium	4,420	1,650	6,250	1,340	1,090	662	3,500	3,630	1,130	2,390	30 to 35,000	SB
Chromium	23.6	12.2	17.9	31.4	17.8	8.58	11.9	13.9	14.6	17.5	1 to 40**	10 or SB
Cobalt	28.5	4.46	8.15	5.68	3.00	3.50	3.64	4.96	5.72	6.22	30 or SB	2.5 to 60
Copper	19.2	41.7	21.1	800	47.4	299	298	39.9	15.9	78.4	25 or SB	1 to 50
Iron	30,600	9,000	19,500	10,500	22,300	8,210	8,910	5,280	10,200	11,200	2,000 or SB	2,000 to 550,000
Lead	94.5	18.6	186	103	16.0	10.5	189	235	17.6	77.7	SB	200 to 500 ppm
Magnesium	2,670	1,620	3,340	2,800	1,720	1,970	2,650	2,150	2,330	2,810	SB	100 to 5,000
Manganese	6,090	442	1,750	217	58.5	95.0	173	271	346	382	SB	50 to 50,000
Mercury	0.123	0.023	0.221	10.6	0.037	0.028	6.29	7.18	0.016	0.117	0.1	0.001 to 0.2
Nickel	16.5	10.2	17.5	31.5	8.50	14.0	13.5	14.7	13.4	16.5	13 or SB	0.5 to 25
Potassium	138	189	245	273	700	194	234	185	346	190	SB	8,500 to 43,000
Selenium	<0.136	<0.125	<0.150	<0.036	<0.150	<0.125	<0.136	<0.125	<0.136	<0.150	2 or SB	0.1 to 3.9
Silver	1.95	0.083	0.150	0.773	<0.100	<0.083	<0.091	<0.083	<0.136	<0.100	SB	N/A
Sodium	28.6	53.3	51.5	30.8	416	12.4	22.3	36.0	16.5	12.8	SB	6,000 to 8,000
Thallium	<0.091	<0.083	<0.100	<0.091	<0.100	<0.083	<0.091	<0.083	<0.091	<0.100	SB	N/A
Vanadium	39.5	15.3	23.2	23.6	27.6	12.2	15.4	20.1	18.2	21.3	150 or SB	1 to 300
Zinc	342	26.2	256	375	34.2	91.7	240	126	33.8	334	20 or SB	9 to 50

SB….site backround

**……NYSDEC TAGM #4046, 1/24/94*

mg/kg...milligrams per kilogram

RSCO…recommended soil cleanup objective

shaded values are greater than RSCO and Eastern USA Site Background

Table 8

Pesticides and Polychlorinated Biphynls Soil Results - SP-1 to SP-10 - Shallow (ug/kg)

West Chelsea Assemblage, New York, NY

Parameter	SP-01 0'-2'	SP-02 0'-2'	SP-03 0'-2'	SP-04 0'-2'	SP-05 0'-2'	SP-06 2'-4'	SP-07 2'-4'	SP-08 4'-6'	SP-09 0'-2'	SP-10 0'-2'	RSCO*
Pesticides											
a BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	110
d BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	300
Heptachlor	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	100
Endosulfan I	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	900
Dieldrin	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	44
Endrin	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	100
p,p-DDD	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2900
p,p-DDT	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2,100
Methoxychlor	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	**
b BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	200
g-BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	60
Aldrin	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	41
Heptachlor Epoxide	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	20
p,p-DDE	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2,100
Endosulfan II	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	900
Endrin aldehyde	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	NA
Endosulfan Sulfate	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	,000
Endrin Ketone	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	NA
Toxaphene	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	NA
Chlordane	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	540
PCBs											
Aroclor 1016	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1221	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1232	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1242	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1248	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1254	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000
Aroclor 1260	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	,000

**...NYSDEC TAGM #4046*

NS...No Standard

ug/kg...micrograms per kilogram

Note: RSCO for PCBs represents Surface Standard.

PCBs...Polychlorinated Biphynls

...As per TAGM #4046, Total VOCs <10,000 ppb

Table 9

Pesticides and Polychlorinated Biphynls Soil Results - SP-1 to SP-10 - Deep (ug/kg)

West Chelsea Assemblage, New York, NY

Parameter	SP-1 8'-10'	SP-02 8'-10'	SP-03 8'-10'	SP-04 8'-10'	SP-05 8'-10'	SP-06 8'-10'	SP-07 8'-10'	SP-08 8'-10'	SP-09 8'-10'	SP-10 8'-10'	RSCO*
Pesticides											
a BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	110
d BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	300
Heptachlor	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	100
Endosulfan I	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	900
Dieldrin	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	44
Endrin	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	100
p,p-DDD	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2900
p,p-DDT	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2,100
Methoxychlor	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	**
b BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	200
g-BHC	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	60
Aldrin	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	41
Heptachlor Epoxide	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	20
p,p-DDE	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	2,100
Endosulfan II	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	900
Endrin aldehyde	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	NA
Endosulfan Sulfate	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	1,000
Endrin Ketone	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	<1.67	NA
Toxaphene	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	NA
Chlordane	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	540
PCBs											
Aroclor 1016	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1221	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1232	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1242	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1248	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1254	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000
Aroclor 1260	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	<3.33	1,000

**...NYSDEC TAGM #4046*

...As per TAGM #4046, Total VOCs <10,000 ppb

NS...No Standard

ug/kg...micrograms per kilogram

Note: RSCO for PCBs represents Surface Standard.

PCBs...Polychlorinated Biphynls

Table 10
Groundwater Monitoring Results - May 2004
West Chelsea Assemblage, New York, NY

Monitoring Well	Total Depth (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Casing Elevation (ft)	Groundwater Elevation (ft)
MW-1	20	9.19	ND	ND	44.61	35.42
MW-2	20	8.33	ND	ND	42.64	34.51
MW-3	20	9.27	ND	ND	43.38	34.11
MW-4	20	9.69	ND	ND	43.63	33.94

ft...feet

ND...None detected

Table 11
Volatile Organic Compounds Groundwater Results MW-1 to MW-4
West Chelsea Assemblage, New York, New York

Compound	MW-1	MW-2	MW-3	MW-4	GQS*	Compound	MW-1	MW-2	MW-3	MW-4	GQS*
Dichlorodifluoromethane	<5.00	<1.00	<1.00	<1.00	5	1,2-Dibromoethane	<5.00	<1.00	<1.00	<1.00	5
Chloromethane	<25.0	<5.00	<5.00	<5.00	NS	Chlorobenzene	<5.00	<1.00	<1.00	<1.00	5
Vinyl chloride	<25.0	<5.00	<5.00	<5.00	2	1,1,1,2-Tetrachloroethane	<5.00	<1.00	<1.00	<1.00	5
Bromomethane	<25.0	<5.00	<5.00	<5.00	5	Ethylbenzene	115	<1.00	<1.00	<1.00	5
Chloroethane	<25.0	<5.00	<5.00	<5.00	5	o-Xylene	<5.00	<1.00	<1.00	<1.00	5
Trichlorofluoromethane	<5.00	<1.00	<1.00	<1.00	5	m,p-Xylene	<5.00	<1.00	<1.00	<1.00	5
1,1-Dichloroethene	<5.00	<1.00	<1.00	<1.00	5	Styrene	<5.00	<1.00	<1.00	<1.00	5
Methylene chloride	<5.00	<1.00	<1.00	<1.00	5	Bromoform	<5.00	<1.00	<1.00	<1.00	NS
trans-1,2-Dichloroethene	<25.0	<5.00	<5.00	<5.00	5	Isopropylbenzene	59.8	<1.00	<1.00	<1.00	5
1,1-Dichloroethane	<5.00	<1.00	<1.00	<1.00	5	Bromobenzene	<5.00	<1.00	<1.00	<1.00	5
2,2-Dichloropropane	<25.0	<5.00	<5.00	<5.00	5	1,1,2,2-Tetrachloroethane	<5.00	<1.00	<1.00	<1.00	5
cis-1,2-Dichloroethene	51.7	<5.00	<5.00	<5.00	5	1,2,3-Trichloropropane	<25.0	<5.00	<5.00	<5.00	0.04
Bromochloromethane	<5.00	<1.00	<1.00	<1.00	5	n-Propylbenzene	206	<1.00	<1.00	<1.00	5
Chloroform	<5.00	<1.00	<1.00	<1.00	7	2-Chlorotoluene	<5.00	<1.00	<1.00	<1.00	5
1,1,1-Trichloroethane	<5.00	<1.00	<1.00	<1.00	5	4-Chlorotoluene	<25.0	<5.00	<5.00	<5.00	5
Carbon tetrachloride	<25.0	<5.00	<5.00	<5.00	5	1,3,5-Trimethylbenzene	49.9	<5.00	<5.00	<5.00	5
1,1-Dichloropropene	<5.00	<1.00	<1.00	<1.00	5	tert-Butylbenzene	<25.0	<5.00	<5.00	<5.00	5
Benzene	<5.00	<1.00	<1.00	<1.00	1	1,2,4-Trimethylbenzene	15.0	3.83	<1.00	<1.00	5
1,2-Dichloroethane	<5.00	<1.00	<1.00	<1.00	5	sec-Butylbenzene	33.8	<1.00	<1.00	<1.00	5
Trichloroethene	<5.00	<1.00	1.11	<1.00	5	1,3-Dichlorobenzene	<5.00	<1.00	<1.00	<1.00	3
1,2-Dichloropropane	<5.00	<1.00	<1.00	<1.00	1	4-Isopropyltoluene	14.7	<1.00	<1.00	<1.00	5
Dibromomethane	<5.00	<1.00	<1.00	<1.00	5	1,4-Dichlorobenzene	<5.00	<1.00	<1.00	<1.00	3
Bromodichloromethane	<5.00	<1.00	<1.00	<1.00	NS	1,2-Dichlorobenzene	<5.00	<1.00	<1.00	<1.00	3
cis-1,3-Dichloropropene	<5.00	<1.00	<1.00	<1.00	0.4	n-Butylbenzene	113	<1.00	<1.00	<1.00	5
Toluene	<5.00	<1.00	<1.00	<1.00	5	1,2-Dibromo-3-chloropropane	<25.0	<5.00	<5.00	<5.00	5
trans-1,3-Dichloropropene	<5.00	<1.00	<1.00	<1.00	0	1,2,4-Trichlorobenzene	<25.0	<5.00	<5.00	<5.00	5
1,1,2-Trichloroethane	<25.0	<5.00	<5.00	<5.00	5	Hexachlorobutadiene	<5.00	<1.00	<1.00	<1.00	5
Tetrachloroethene	<5.00	<1.00	<1.00	<1.00	5	Naphthalene	66.7	<5.00	<5.00	<5.00	10
1,3-Dichloropropane	<5.00	<1.00	<1.00	<1.00	5	1,2,3-Trichlorobenzene	<25.0	<5.00	<5.00	<5.00	5
Dibromochloromethane	<5.00	<1.00	<1.00	<1.00	NS	Methyl-t-butyl ether	<5.00	<1.00	<1.00	<1.00	5

*...NYSDEC TOGS 1.1.1 GQS...groundwater quality standard
NS...No Standard
ug/L...micrograms per liter

Table 12

Semi-Volatile Organic Compounds Groundwater Results MW-1 to MW-4

West Chelsea Assemblage, New York, New York

Compound	MW-1	MW-2	MW-3	MW-4	GQS	Compound	MW-1	MW-2	MW-3	MW-4	GQS
Phenol	<1.00	<1.00	<1.00	<1.00	1	4-Nitrophenol	<5.00	<5.00	<5.00	<5.00	NS
bis(2-Chloroethyl)ether	<2.00	<2.00	<2.00	<2.00	1	Dibenzofuran	<1.00	<1.00	<1.00	<1.00	NS
2-Chlorophenol	<2.00	<2.00	<2.00	<2.00	NS	2,4-Dinitrotoluene	<2.00	<2.00	<2.00	<2.00	5
2-Methylphenol	<2.00	<2.00	<2.00	<2.00	NS	Diethyl phthalate	<2.00	<2.00	<2.00	<2.00	NS
bis(2-Chloroisopropyl)ether	<2.00	<2.00	<2.00	<2.00	NS	4-Chlorophenol phenyl ether	<2.00	<2.00	<2.00	<2.00	NS
3,4-Methylphenol	<2.00	<2.00	<2.00	<2.00	NS	Fluorene	<2.00	10.4	<2.00	<2.00	50
N-Nitrosodi-n-propylamine	<2.00	<2.00	<2.00	<2.00	NS	4-Nitroaniline	<2.00	<2.00	<2.00	<2.00	5
Hexachloroethane	<2.00	<2.00	<2.00	<2.00	5	2-Methyl-4,6-dinitrophenol	<5.00	<5.00	<5.00	<5.00	NS
Nitrobenzene	<2.00	<2.00	<2.00	<2.00	0	N-Nitrosodiphenylamine	<2.00	<2.00	<2.00	<2.00	50
Isophorone	<2.00	<2.00	<2.00	<2.00	50	4-Bromophenyl phenyl ether	<1.00	<1.00	<1.00	<1.00	NS
2-Nitrophenol	<5.00	<5.00	<5.00	<5.00	NS	Hexachlorobenzene	<2.00	<2.00	<2.00	<2.00	0
2,4-Dimethylphenol	<10.0	<10.0	<10.0	<10.0	50	Pentachlorophenol	<5.00	<5.00	<5.00	<5.00	1
bis(2-Chloroethoxy)methane	<2.00	<2.00	<2.00	<2.00	NS	Phenanthrene	<2.00	601	<2.00	<2.00	50
2,4-Dichlorophenol	<2.00	<2.00	<2.00	<2.00	NS	Anthracene	<2.00	<2.00	<2.00	<2.00	50
4-Chloroaniline	<5.00	<5.00	<5.00	<5.00	5	Di-n-butylphthalate	<2.00	<2.00	<2.00	<2.00	50
4-Chloro-3-methylphenol	<2.00	<2.00	<2.00	<2.00	NS	Fluoranthene	<1.00	<1.00	<1.00	<1.00	50
2-Methylnaphthalene	42.2	<1.00	<2.00	<2.00	NS	Pyrene	<2.00	4.89	<2.00	<2.00	50
Hexachlorocyclopentadiene	<5.00	<5.00	<5.00	<1.00	5	Butyl benzyl phthalate	<5.00	<5.00	<5.00	<5.00	50
2,4,6-Trichlorophenol	<1.00	<1.00	<1.00	<1.00	NS	3,3'-Dichlorobenzidene	<5.00	<5.00	<5.00	<5.00	5
2,4,5-Trichlorophenol	<2.00	<2.00	<2.00	<2.00	NS	Benzo(a)anthracene	<1.00	<1.00	<1.00	<1.00	NS
2-Chloronaphthalene	<1.00	<1.00	<1.00	<1.00	10	Chrysene	<2.00	<2.00	<2.00	<2.00	0.002
2-Nitroaniline	<2.00	<2.00	<2.00	<2.00	5	bis(2-Ethylhexyl)phthalate	<2.00	<2.00	<2.00	<2.00	5
Dimethyl phthalate	<1.00	<1.00	<1.00	<1.00	NS	Di-n-octylphthalate	<5.00	<5.00	<5.00	<5.00	NS
Acenaphthylene	<1.00	<1.00	<1.00	<1.00	NS	Benzo(b)fluoranthene	<5.00	<5.00	<5.00	<5.00	0.002
2,6-Dinitrotoluene	<2.00	<2.00	<2.00	<2.00	5	Benzo(k)fluoranthene	<2.00	<2.00	<2.00	<2.00	0.002
3-Nitroaniline	<5.00	<5.00	<5.00	<5.00	5	Benzo(a)pyrene	<1.00	<1.00	<1.00	<1.00	NS
Acenaphthene	<1.00	<1.00	<1.00	<1.00	20	Indeno(1,2,3-cd)pyrene	<2.00	<2.00	<2.00	<2.00	0.002
2,4-Dinitrophenol	<5.00	<5.00	<5.00	<5.00	10	Dibenzo(a,h)anthracene	<2.00	<2.00	<2.00	<2.00	NS
						Benzo(g,h,i)perylene	<1.00	<1.00	<1.00	<1.00	NS

...NYSDEC TOGS 1.1.1

NS...No Standard

ug/L...micrograms per liter

GQS...groundwater quality standard

Table 13
Target Analyte List Metals Groundwater- MW-1 to MW-4 (mg/L)
West Chelsea Assemblage, New York, New York

Parameter	MW-1	MW-2	MW-3	MW-4	GQS
Aluminum	256	525	188	158	2,000
Antimony	<0.005	<0.005	<0.005	<0.005	~~6~~ 0.003
Arsenic	0.024	0.849	<0.003	<0.003	~~50~~ 0.025
Barium	1.89	1.55	1.18	1.41	~~2,000~~ 1
Beryllium	0.013	0.025	0.010	0.009	~~3~~ 0.003
Cadmium	0.035	0.102	0.022	0.02	~~10~~ 0.005
Calcium	60.8	40.4	42.4	63.0	NS
Chromium	0.463	1.30	0.301	0.287	~~100~~ 0.050
Cobalt	0.131	0.203	0.104	0.110	NS
Copper	0.803	53.6	0.286	0.312	NS
Iron	223	1,140	177	146	600
Lead	3.32	1.05	0.247	0.238	~~25,000~~ 0.025
Magnesium	60.7	129	57.4	55.5	~~35,000~~ 35
Manganese	6.76	5.91	7.61	11.2	NS
Mercury	<0.001	<0.001	<0.001	<0.001	~~1.4~~ .0007
Nickel	0.350	0.715	0.261	0.264	~~200~~ 0.1
Potassium	5.45	5.32	13.6	11.2	NS
Selenium	<0.003	<0.003	<0.003	<0.003	20
Silver	<0.002	<0.002	<0.002	<0.002	100
Sodium	3.74	1.12	29.9	207	SB
Thallium	<0.002	<0.002	<0.002	<0.002	0.5
Vanadium	0.448	1.36	0.353	0.264	NS
Zinc	2.41	14.0	0.489	0.478	~~5,000~~ 2

**...NYSDEC TOGS 1.1.1*
mg/L...milligrams per liter
NS...No Standard
Shaded value represents concentration exceeding GQS
GQS...groundwater quality standard

Table 14
Pesticides and Polychlorinated Biphynls Groundwater Results - MW-1 to MW-4 (ug/L)
West Chelsea Assemblage, New York, New York

Parameter	MW-1	MW-2	MW-3	MW-4	GQS
a BHC	<0.01	<0.01	<0.01	<0.01	NS
Lindane	<0.01	<0.01	<0.01	<0.01	NS
Heptachlor	<0.01	<0.01	<0.01	<0.01	0.04
Endosulfan I	<0.01	<0.01	<0.01	<0.01	NS
Dieldrin	<0.05	<0.05	<0.05	<0.05	0.004
Endrin	<0.05	<0.05	<0.05	<0.05	NS
4,4- DDD	<0.05	<0.05	<0.05	<0.05	0.3
p,p-DDT	<0.05	<0.05	<0.05	<0.05	0.2
Methoxychlor	<0.10	<0.10	<0.10	<0.10	0.3
b BHC	<0.01	<0.01	<0.01	<0.01	NS
d BHC	<0.01	<0.01	<0.01	<0.01	NS
Aldrin	<0.01	<0.01	<0.01	<0.01	NS
Heptachlor Epoxide	<0.01	<0.01	<0.01	<0.01	0.03
p,p-DDE	<0.05	<0.05	<0.05	<0.05	0.2
Endosulfan II	<0.05	<0.05	<0.05	<0.05	NA
Endrin aldehyde	<0.05	<0.05	<0.05	<0.05	5
Endosulfan Sulfate	<0.05	<0.05	<0.05	<0.05	NS
Edrin Ketone	<0.05	<0.05	<0.05	<0.05	5
Toxaphene	<0.10	<0.10	<0.10	<0.10	0.06
Chlordane	<0.10	<0.10	<0.10	<0.10	0.05
PCBs					
Aroclor 1016	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1221	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1232	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1242	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1248	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1254	<0.10	<0.10	<0.10	<0.10	0.09
Aroclor 1260	<0.10	<0.10	<0.10	<0.10	0.09

**...NYSDEC TOGS 1.1.1*
NS...No Standard
NA... Not Available
ug/L...micrograms per Liter
PCBs... Pesticides and Polychlorinated Biphynls
GQS...groundwater quality standard

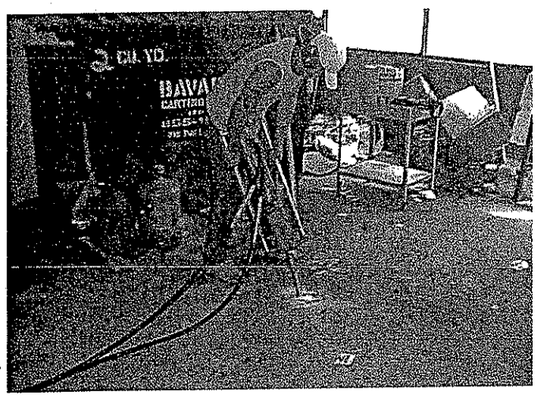
APPENDICES

APPENDIX A

PHOTOGRAPHS

Installation of Soil Probe

Installation of Soil Probe

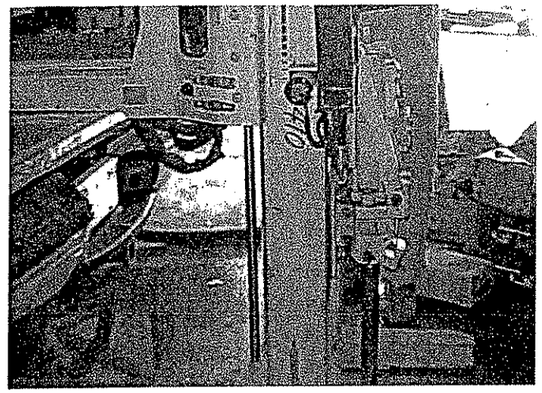


Installation of Soil Probe

Installation of Soil Probe

Installation of Soil Probe

Removing Macro Core



Installation of Groundwater Probe

APPENDIX B

GPR REPORTS

TENTHAVE031.DZT

Created 00:00:00 Modified 00:00:00
Channel(s) 1 Samples/Scan 1024 Bits/Sample 16
Scans/Second 64 Scans/Meter 98.4252 Meters/Mark 1.2192
Diel Constant 8

CHANNEL 1 400MHz
Position 0 nS Range 50 nS
Position Correction -0.65 nS
Vert IIR LP N =1 F =800 MHz
Vert IIR HP N =1 F =100 MHz
Range Gain (dB) -8.0 -8.0 37.0
41.0 44.0

GEOTECHNICAL ENGINEERING REPORT

507 W 24th Street
New York, NY

Prepared For:

Alf Naman Real Estate
460 Park Avenue, Fl 22
New York, NY 10022

Prepared By:

Langan Engineering and Environmental Services, P.C.
360 West 31st Street, 8th Floor
New York, NY 10001-2727

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

04 April 2008
005821101

GEOTECHNICAL ENGINEERING REPORT

507 W 24th Street
New York, NY

Prepared For:

Alf Naman Real Estate
460 Park Avenue, Fl 22
New York, NY 10022

Prepared By:

Langan Engineering and Environmental Services, P.C.
360 West 31st Street, 8th Floor
New York, NY 10001-2727

Raha Nasseri
Staff Engineer

Alan R. Poeppel, P.E.
Senior Associate

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

04 April 2008
005821101

TABLE OF CONTENTS

LIST OF DRAWINGS

APPENDIX A

APPENDIX B

INTRODUCTION

This report presents the results of our geotechnical engineering study for the proposed development at 507 W 24th Street in Manhattan, New York. All services were performed in accordance with the Langan Engineering & Environmental Services, P.C. (Langan) proposal to Alf Naman Real Estate dated 4 December 2007.

Our geotechnical engineering study included a field investigation, an evaluation of the subsurface conditions, and development of recommendations for foundation support and other geotechnical related issues. An overview of the project, the results of our investigation, and a summary of our geotechnical recommendations are presented herein.

Architectural information was provided by Studio MDA Architects. Survey information is obtained from a topographic survey completed by Langan Engineering & Environmental Service, dated 2 February 2008. Hi-line information is obtained from the original construction drawings dated 15 October 1930. Adjacent building information is obtained from original foundation drawings and our communication with the architect.

All elevations presented herein are referenced to the Borough President of Manhattan Datum (BPMD), which is 2.75 ft above the U.S. Geological Survey National Geodetic Vertical Datum (Mean Sea Level at Sandy Hook, New Jersey, NGVD 1929).

SITE DESCRIPTION

The referenced site is in the Chelsea section of Manhattan, in a city block bordered by West 24th Street to the south, West 25th Street to the north, Tenth Avenue to the east and Eleventh Avenue to the west. A site location plan is presented in Drawing No. 1. The site has about a 40-ft frontage along West 24th Street. The footprint area of the site is about 3,950 square feet.

The site is currently occupied by construction equipment for the on-going development to the east (245-247 Tenth Avenue). Surface grades range from about el 7.3 along 24th Street to about el 10.6 along the northern property line. The project site is within the 500-year flood zone of the Hudson River and the sidewalk fronting the site is within the 100-year flood zone. The 100-year flood level is el 7.25. The Flood Insurance Map is provided as Drawing No. 2.

Historic maps indicate that the site is located outboard of the 17th century Manhattan shoreline. This portion of Manhattan was filled in during a period of land reclamation in the first half of the 1800's.

The entire site is beneath the Hi-Line structure; the 1.5-mile-long elevated structure extends from 34th Street to Gansevoort Street on the west side of Manhattan. The Hi-Line was built in the 1930s for freight lines, but has not been used since 1980. Six columns (three rows) of the Hi-line structure are within the subject property limits. The columns are supported on 18-in diameter concrete-filled open-end steel pipe piles bearing on the bedrock. The dimension of the pile caps in plan view are about 24 ft by 10 ft for the southernmost row of the columns and about 10 ft by 10 ft for the remaining columns; the thickness of the columns are about 3.5 ft.

The site is bordered to the east by an active construction site; the on-going development is a 10-story mixed-use building with one cellar level supported on a mat foundation. The bottom of the mat foundation is at about el -7.03 for the southern 20-ft portion of the building and at about el -5.5 for the remaining of the building, based on foundation drawings and our communication with the architect. The southern 45 ft of this building has a 5-ft setback from the east property line. The site is bordered to the west by a 2 to 3-story brick and aluminum gallery building with no cellar level. The building is supported on steel H-piles; elevations of top of pile caps vary from el 5.5 to 6.2 based on the foundation drawings. The north side of the property is bordered by a vacant lot.

SITE GEOLOGY

The "Geologic Map of New York City and Adjacent Part of New Jersey" by U.S. Geological Survey indicates the bedrock underlying the site is part of the Hartland Formation. The Hartland Formation, is comprised of a dark gray, medium to coarse-grained muscovite-biotite-garnet (mica) schist and gray fine-grained quartz-feldspar granulite with biotite and garnet, with localized concentrations of granite and intrusions of coarse-grained granitic pegmatite. Granulite and schist are metamorphic rocks formed under the effects of heat and pressure during deep burial within the earth's crust.

The predominant feature of the Hartland Formation is the parallel alignment of the mineral grains, referred to as schistosity of foliation. The foliation in the Hartland Formation generally dips steeply to the west or the east depending on local conditions of folding, although foliation dipping to other directions or nearly horizontal foliation has been observed. The quality of the mica schist and granulite is generally good to fair, and tends to improve with depth. However, localized shear zones and zones of decomposed rock are known to exist, sometimes to significant depths.

PROPOSED CONSTRUCTION

The proposed construction consists of a single-story gallery space with a single cellar level. The first floor finished level will be about el 7.3 and the cellar finished level is at about el -3.5.

SUBSURFACE INVESTIGATION

The subsurface investigation program consisted of two borings; one of the borings was converted to a monitoring well upon completion. All work was performed by Aquifer Drilling and Testing Inc., under the full-time controlled inspection of Langan.

Borings and Observation Well

Two borings, identified as B-1(OW) and B-2, were drilled with a track-mounted rig. Steel casing and mud rotary drilling techniques were used for soil support. Borings were drilled to the depths of 34 and 48 ft, respectively, where the bedrock was encountered. A boring location plan is presented in Drawing No. 3.

Soil samples were obtained typically continuously in the upper 12 ft of the borehole and at 5-ft intervals thereafter, using a standard two-inch outside diameter split spoon sampler driven by a safety or donut 140-lbs-hammer in accordance with ASTM-1586 (Standard Penetration Test, SPT[1]).

Recovered soil samples were visually examined and classified in the field and assigned classification numbers in accordance with the New York City Building Code (Building Code). Soil classification, standard penetration resistances and other field observations were recorded on field logs. Copies of the field boring logs are presented in Appendix A.

An observation well was installed in the completed boring LB-1, to a depth of about 20 ft below existing grade. The groundwater observation well consisted of a 10-ft section of 2-inch diameter PVC screen and a solid PVC riser pipe. The annulus around the screen was backfilled with filter sand; bentonite pellets were used at about 2 ft below grade to limit surface water runoff. Observation well location is shown on Drawing No. 3; a copy of well installation log is presented in Appendix A.

[1] The Standard Penetration Test (SPT) is a measure of soil density and consistency. The SPT N-value is defined as the number of blows required to drive one foot of 2-inch-diameter split-barrel sampler after an initial penetration of 6 inches, using a 140 lbs hammer falling freely from 30 inches.

Laboratory Testing

Geotechnical laboratory testing was conducted on two of the soil samples obtained from the borings. Laboratory testing of selected soil samples included natural water content determinations [ASTM D2216], liquid and plastic (Atterberg) limits determination [ASTM D4318] and organic content [ASTM D2974]. Laboratory test results are presented in Appendix B.

SUBSURFACE CONDITIONS

Subsurface soil consisted generally of fill overlaying a layer of fine sand, followed by a thin layer of clay and clayey silt with trace organics. The clay and clayey silt was in turn followed by a layer of sand overlaying silty sand followed by the bedrock. A detailed description of each layer is given below in order of increasing depth. A subsurface profile is presented in Drawing No. 4. The location of the section is provided in Drawing No. 3.

Fill

Below the 6-in-thick asphalt pavement, a layer of fill, generally consisting of brown sand with varying amounts of gravel, brick and concrete was encountered. The thickness of the fill was about 12 to 13 ft; the bottom of the fill ranged from about el -3 to -4. Standard penetration resistance N-values ranged from 3 blows per ft (bpf) to refusal (over 100 bpf) and averaged about 12 bpf. The higher N-values are likely the result of obstructions in the fill that impeded the advance of the split spoon. The fill layer is classified as Building Code Class 11-65.

Fine Sand

A 3-ft layer of brown sand with trace silt was encountered below the fill in boring B-1. The depth to the top of the sand layer was at about el -4. The single N-value recorded was 27 bpf. The sand layer is designated as SP in accordance with the Unified Soil Classification System (USCS) and is classified as Building Code Class 8-65.

Clay and Clayey Silt

A layer of grey clay and clayey silt with trace organics was encountered in both borings. The depth to top of the clayey silt layer ranged from about 13 to 15 ft below the ground surface and the corresponding elevation of top of the layer was at about el -3. The N-values in this layer ranged from about 8 to 11 bpf and averaged about 10 bpf.

Atterberg Limits test performed on two samples from this layer resulted in a liquid limit of 27 and 36 and a plasticity index of 1 and 14. The natural water content determined for two samples were 24% and 35%. The organic content of the samples were 1.5% and 2%.

The clay and clayey silt are designated as CL and ML in accordance with the USCS and is classified as Building Code Class 9-65 and 10-65, respectively.

Sand

Brown coarse to fine sand with some silt and gravel was encountered below the clay and clayey silt. The thickness of the layer was about 10 ft; the depth to the top of layer was about 18 ft below the surface grade corresponding to el -8 to -10. The N-values in this layer ranged from about 17 to 41 bpf and averaged about 27 bpf. The layer is designated as SP in accordance with USCS and is classified as Building Code Class 7-65.

Silty Sand

Brown medium to fine silty sand with trace clay was encountered below the sand layer. The depth to the top of layer was about 28 ft below the surface grade, corresponding to el -18 to -20. The silty sand layer extended to the terminating depths of borings, where bed rock was encountered. The N-values in this layer ranged from about 10 to 29 bpf and averaged about 16 bpf. The layer is designated as SM in accordance with USCS and is classified as Building Code Class 8-65.

Groundwater

Groundwater level was measure at the observation well B-1. The stabilized water level was measured at about 11 ft below the ground surface. The corresponding elevation is el -3.

RECOMMENDATIONS

The following sections provide our recommendations for foundation system and other geotechnical-related issues including seismic evaluation, below grade walls, groundwater control, backfill and compaction, excavation considerations and monitoring of the adjacent buildings and structures.

Foundation System

The building loads can be supported on a shallow foundation system bearing on clay and clayey silt of Building Code Class 9-65 and 10-6, encountered at the proposed foundation level. We recommend a mat foundation system to prevent differential settlement. The recommended total allowable bearing pressure is 2 tons per square ft for the design of the mat foundation. The recommended modulus of subgrade reaction is 35 psi per inch. Trace organic is presented at the clay and silt layer encountered at the site. In case, silt and clay with high organic content are encountered at the foundation level, an evaluation will be done by the geotechnical engineer at the site.

Footing bearing surfaces should be level and clear of debris, standing or frozen water and other deleterious material. Machine excavation should not be allowed within 6 inches of the final bearing elevation to avoid disturbance. In accordance with the Building Code requirements for controlled inspection, a professional geotechnical engineer should inspect and approve the foundation subgrade to assure that the subgrade material is adequate to provide the recommended allowable bearing pressure.

We anticipate that total settlement at columns will be less than 1 inch and differential settlement between adjacent columns will be less than ¾ inches.

Proofrolling

All slab subgrades should be proofrolled, which consists of compacting the existing soil material in place. The purpose is to identify any potential loose or soft zones. The proofrolling should be performed using a smooth drum vibratory roller having a static drum weight of at least 2 tons. At least six overlapping passes should be made with the roller. Soft or loose zones that are identified should be excavated and replaced with controlled compacted fill.

Tension Anchors

The uplift forces can be resisted by vertical rock anchor tie-downs. We recommend the rock anchors consist of 1-3/8 inch diameter double corrosion protected thread bars having a yield strength of 150 kips per square inch. The bars should be secured into 4-inch nominal diameter drill holes using neat cement grout having a 28-day compressive strength of at least 4,000 pound per square inch. Anchor bars should be placed a minimum of 3 ft on center. The recommended maximum design capacity is 125 kips. The anchor bond length should be proportioned using a unit peripheral shear resistance between the rock and the grout of 100 psi. The free stressing length of the bar should be proportioned such that the dead weight of the engaged rock mass is greater than the anchor loads. Each rock anchor should be field tested to confirm the design capacity.

Seismic Evaluation

Site Coefficient

New York is located in Seismic Zone Z, with a seismic zone factor of 0.15g in accordance with the Building Code. Seismic site coefficients (S-factors) are based on the type and thickness of subsurface materials below the level of footings or pile caps. S-factors range from S_0 for buildings whose footings are supported directly on hard rock to S_4 for buildings underlain by thick deposits of unsuitable or soft bearing strata. The soil profile beneath the foundation level consists of a thin layer of clay and clayey silt followed by sand and silty sand over bedrock

encountered at the depth of 34 to 48 ft. Therefore, we have determined that the site soil profile below the foundation level is type S_1 and the corresponding site coefficient factor is 1.0.

Liquefaction Potential

The Building Code requires an evaluation of the liquefaction potential of sand, silt and non-cohesive unsuitable bearing materials below the groundwater table and to a depth of 50 ft below the ground surface. The uncorrected N-values versus depth are shown in Drawing No. 6. Two of the twelve average N-values (16%) fall within the Building Code Category A, "probable liquefaction"; three of the twelve average N-values (25%) fall within the Building Code Category B, "possible liquefaction". The remaining N-values (59%) fall within Building Code Category C, "liquefaction unlikely."

Site-Specific Analysis

We evaluated the potential for soil liquefaction using a site-specific procedure, the "simplified procedure" (Youd et al 2001). Our design parameters included a magnitude 5.75 earthquake event resulting in magnitude scaling factor of 2.0, peak ground acceleration of 0.15g and 15% of fine content for the soil. Drawing No. 7 presents the plot of the depth versus corrected N-values, $(N_1)_{60}$. The $(N_1)_{60}$ is the SPT blow count normalized to an overburden pressure of approximately one ton per square foot and a hammer energy ratio or hammer efficiency of 60% (Youd et al 2001). The critical $(N_1)_{60}$ is the minimum $(N_1)_{60}$ corresponding to "no liquefaction" at a given depth.

Based on the results of the empirical site-specific analysis, all N-values fall in the non-liquefiable zone. The factor of safety against soil liquefaction, defined as the average N-value divided by the critical N-value, ranged from 1. to 3.6 and averaged at 3 for all depths. Therefore the effect of soil liquefaction need not be considered in the foundation design.

Below-Grade Walls

Below grade walls should be designed to resist static and dynamic earth pressures and lateral pressures from surcharge loadings. Two loading conditions should be considered: 1) static pressures and, 2) dynamic pressures. The recommended soil pressures are described below.

Static Earth Pressures

We recommend the walls be designed using an earth pressure distribution increasing with the ratio of 55 psf per ft of depth above the design groundwater level at el 7.25 and 24 psf per ft of depth below the design groundwater level within the fill material and with a ratio of 30 psf per ft of depth within the sand layer. Lateral pressures from sidewalk and any other surcharge loads should be added as a uniform soil pressure equal to 40% the vertical pressure applied

over the full height of the wall. Our recommended lateral earth pressure diagram is presented in Drawing No. 8a.

Dynamic Earth Pressures

The dynamic lateral earth pressure component is an inverted triangle having a maximum pressure at the ground surface of 11 H psf where H is the wall height in feet. The pressure reduces to zero at the bottom of the wall. The dynamic component is added to the static earth pressure. Lateral earth pressures resulting from the surcharge loads need not be considered for the dynamic loading condition. Our recommended lateral earth pressure diagram is presented in Drawing No. 8b.

Permanent Groundwater Control

Design Groundwater Level

The stabilized water level was measured at about 11 ft below the ground surface, or at about el -3. The 100-year flood level is el 7.25, above the measured stabilized water level; therefore the recommended design water level is el 7.25. We recommend that the first floor slab be 1 ft above this level at el 8.25 to prevent flooding during the 100-year flood event. The below grade slab should be a structural pressure slab integrated with the foundation system. The slab should be designed to withstand downward dead plus live loads. Additionally, the pressure slab must be designed to resist hydrostatic uplift pressures resulting from the design groundwater level of el 7.25.

Waterproofing

We recommend that the foundation mat and below grade walls be fully waterproofed to ground surface. We recommend a membrane type waterproofing be used, such as the Prepruf and Bituthene products by Grace. The use of bentonite waterproofing or negative side crystalline waterproofing is not recommended. The foundation subgrade should be prepared with a 2-inch-thick concrete working surface or smooth compacted subgrade. The vertical waterproofing should be protected with a rigid barrier to prevent damage during backfilling operations.

Backfill and Compaction

The fill material should consist of well-graded sand and/or gravel having less than 12% by dry weight passing the No. 200 sieve, be free of organics and other deleterious materials and have a maximum particle size no greater than 4 inches. On-site or imported material satisfying this criterion may be used.

The fill should be placed in uniform lifts and compacted to at least 95% of its maximum dry density as determined by Modified Proctor Test (ASTM D1557). No fill should be placed on

areas where free water is standing, on frozen subsoil areas, or on surfaces which have not been approved by the project engineer. Care should be taken to protect the foundations, walls and waterproofing during placement and compaction of fill.

Backfill should not be placed against below grade walls until the wall concrete has reached its 28-day strength. In addition, backfilling should be performed after either the first floor slab has been completed or temporary lateral bracing has been provided to prevent rotation of the wall, or as allowed by the structural engineer.

Excavation Considerations

The proposed construction requires a general excavation to about 12 ft below the surface grades. Site excavation can be performed using conventional earth moving equipment (e.g. backhoes, excavators, etc.). All excavations should be conducted in accordance with Occupational Safety and Health Administration (OSHA) requirements including, but not limited to temporary shoring, trench boxes and/or proper benching.

Temporary Excavation Support

During excavation, lateral support of excavation sides will be required. On north, south and southern 35 ft of the east property line, we recommend an excavation support system consisting of soldier piles and timber lagging, supplemented with lateral bracing. A similar excavation support system can be used around the Hi-Line pile caps for the lateral support of the soil around the piles. The lateral bracing can consist of external tiebacks or interior raker braces and corner braces. The recommended earth pressure diagram is as shown in Drawing No. 9. Lateral pressures from transient vertical surcharge loads should be added as one-half the vertical pressure at the top of the wall and reducing linearly to zero at the bottom of the wall. Large concentrated loads, such as crane loading, should be analyzed individually on a case-by-case basis.

A detailed design of the entire lateral support system should be provided by the contractor. The design should be signed and sealed by a Professional Engineer registered in the State of New York.

Underpinning

Undermining of the adjacent buildings and structures must be avoided. The mat foundation for the adjacent building to the east is at about the same elevation of the proposed foundation and therefore underpinning is not anticipated.

The adjacent building to the west is supported on piles and therefore, underpinning is not anticipated. However, lateral support of the soil is required. We recommend use of concrete

piers, extending from the bottom of the adjacent floor slab to the bottom of excavation, with timber lagging between individual piers.

Temporary Dewatering

Excavation to reach to the level of the bottom of the mat foundation will require temporary dewatering. We recommend that the groundwater level be maintained at least 3 ft below the mat subgrade level throughout the excavation and casting of the mat. The corresponding elevation is about el -9 or a lowering of the groundwater level of about 6 ft. A system of shallow well points or deep wells operating around-the-clock will be required to control the groundwater.

The temporary dewatering system can be discontinued once the cellar floor is cast, the perimeter walls have been constructed to the first floor level, and the building dead weight plus uplift capacity is sufficient to resist hydrostatic pressures resulting from a measured groundwater level at el 3.0. We recommend that all well points, header pipe, and pump remain in-place and operable until the building has sufficient dead weight to resist hydrostatic pressures resulting from a 100-year flood level of el 7.25. In the unlikely event that the groundwater rises above el 3.0 during the first few weeks of superstructure construction, the dewatering system could be reactivated to control the hydrostatic pressures. We recommend that the groundwater level both inside and outside the excavation be monitored from the start of pumping until the dewatering system is dismantled.

Monitoring of Adjacent Buildings and Structures

During active excavation operations, a precise optical survey program will be implemented by a third party to monitor for vertical and horizontal movements of surrounding structures. Survey control points will be established to monitor lateral movement of the excavation bracing system through minimum of six points on each of the two adjacent buildings and the Hi-line structure. The survey will be performed at least twice weekly during excavation, with measurements taken to the nearest 0.005 ft. The survey will be performed by a licensed surveyor. Excavation and foundation work should be temporarily stopped if the total movement (vertical or horizontal) exceed about ¼ inches. Depending on the findings of the preconstruction conditions survey, crack gauges may be required to monitor for crack changes inside and/or outside the adjacent structures during work. Seismographs, capable of measuring to the nearest 0.02 inches per second, will be used to monitor construction induced vibrations at the foundation level of the adjacent structures.

CONSTRUCTION DOCUMENTS AND QUALITY CONTROL

Technical specifications and design drawings should incorporate our recommendations to ensure that subsurface conditions and other geotechnical issues at the site are adequately addressed in the construction documents. Langan should assist the design team in preparing specification sections related to geotechnical issues such as earthwork, and excavation support. Langan should also review foundation drawings and details, and all contractor submittals and construction procedures related to geotechnical work.

A professional engineer familiar with the site subsurface conditions and design intent should perform the engineering inspection and testing of geotechnical-related work during construction. We recommend that Langan perform this work to verify proper implementation of our recommendations and to maintain continuity of our responsibility for this project. Construction activities that require quality-control inspections include, but are not limited to subgrade preparation.

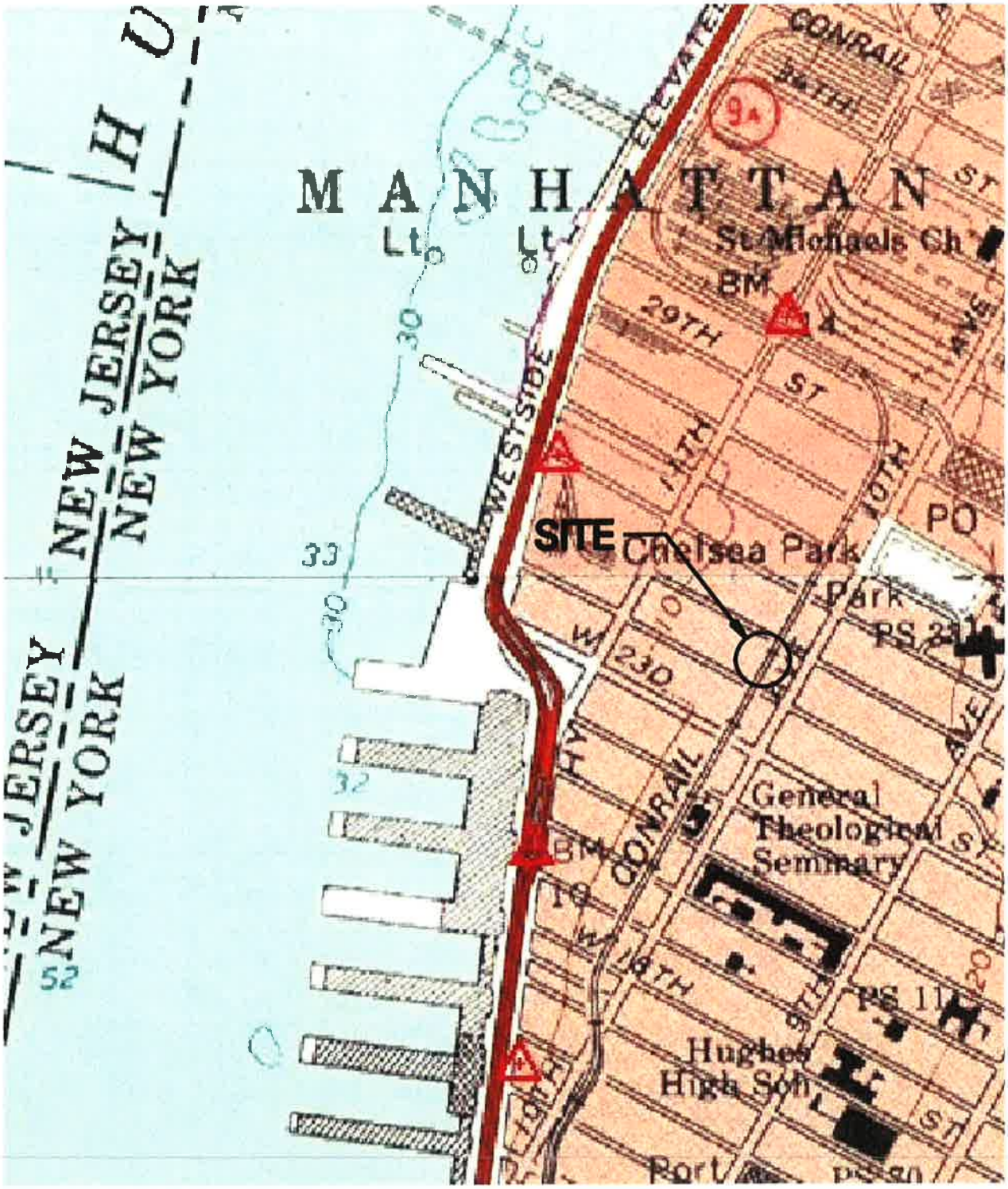
LIMITATIONS

The conclusions and recommendations provided in this report are based on subsurface conditions inferred from a limited number of borings and test pits, as well as architectural and structural information provided by Studio MDA Architects. Recommendations provided are contingent upon one another and no recommendation should be followed independent of the others.

This report has been prepared to assist the owner, architect and structural engineer in the design process and is only applicable to the envisioned project discussed herein. Any proposed changes in structures or their locations should be brought to our attention so that we can determine whether such changes affect our recommendations. Langan cannot assume responsibility for use of this report for any areas beyond the limits of this study or for any projects not specifically discussed herein.

Information on subsurface strata and groundwater levels shown on the logs represents conditions encountered only at the locations indicated and at the time of investigation. If different conditions are encountered during construction, they should immediately be brought to our attention for evaluation as they may affect our recommendations.

Environmental issues (such as potentially contaminated soil and groundwater) are outside the scope of this study and should be addressed in a separate study.



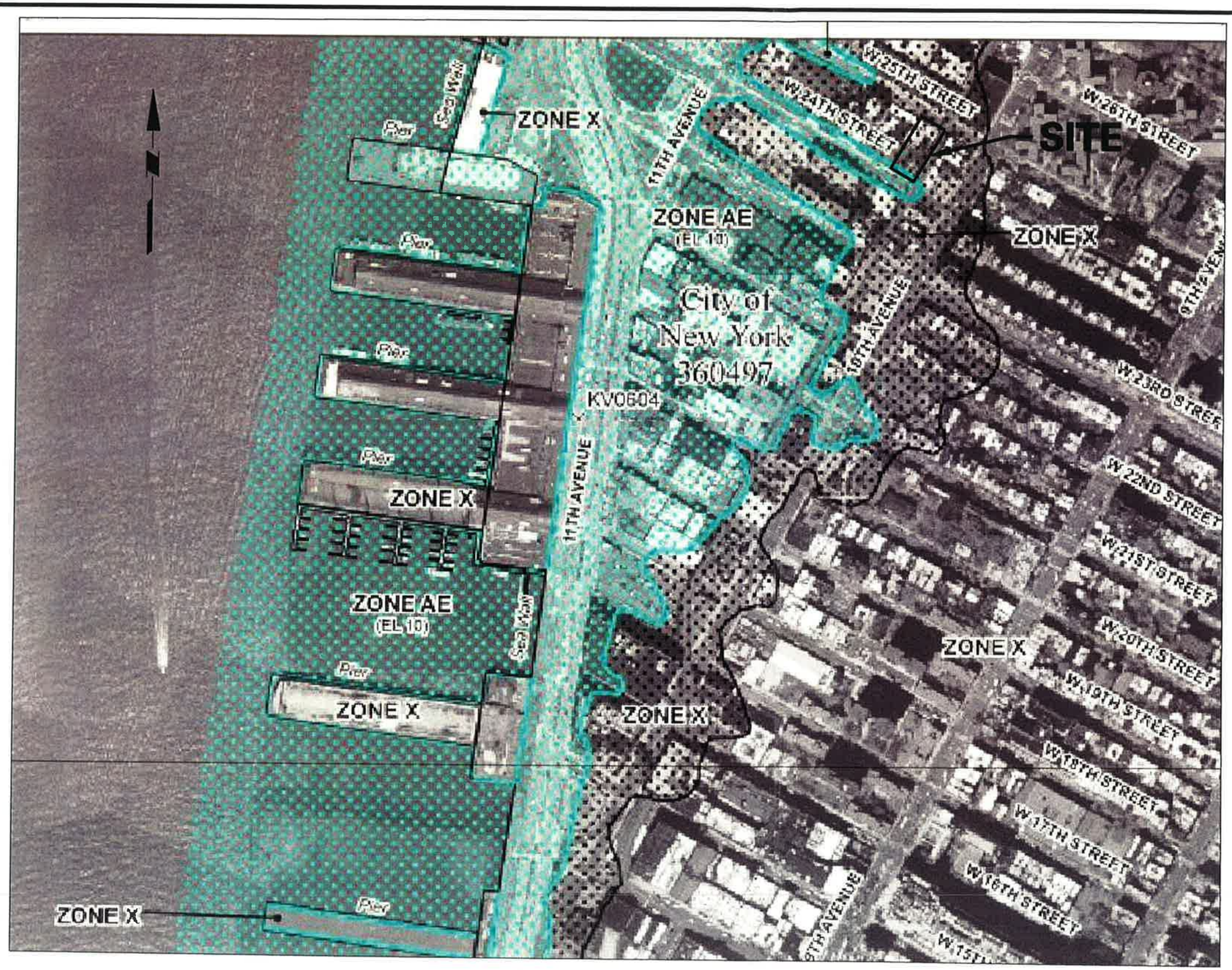
LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

507 W 24TH STREET

SITE LOCATION PLAN

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	2/26/08	NTS	1



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUN
BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood tha chance of being equaled or exceeded in any given year. The Special Flood Hazard Area subject to flooding by the 1% annual chance flood. Areas of Special Flood Haz Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the wa elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrai depths determined. For areas of alluvial fan flooding, vel determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% ann flood by a flood control system that was subsequently decertifie indicates that the former flood control system is being restored protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a fe protection system under construction; no Base Flood determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); E Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must b of encroachment so that the 1% annual chance flood can be carried without substanti in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance average depths of less than 1 foot or with drainage areas 1 square mile; and areas protected by levees from 1% annual ch

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodpl

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) ARE

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are generally located within or adjacent to Special Flood Hazard A

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area t
Boundary dividing Special Flood Hazard Areas of dif

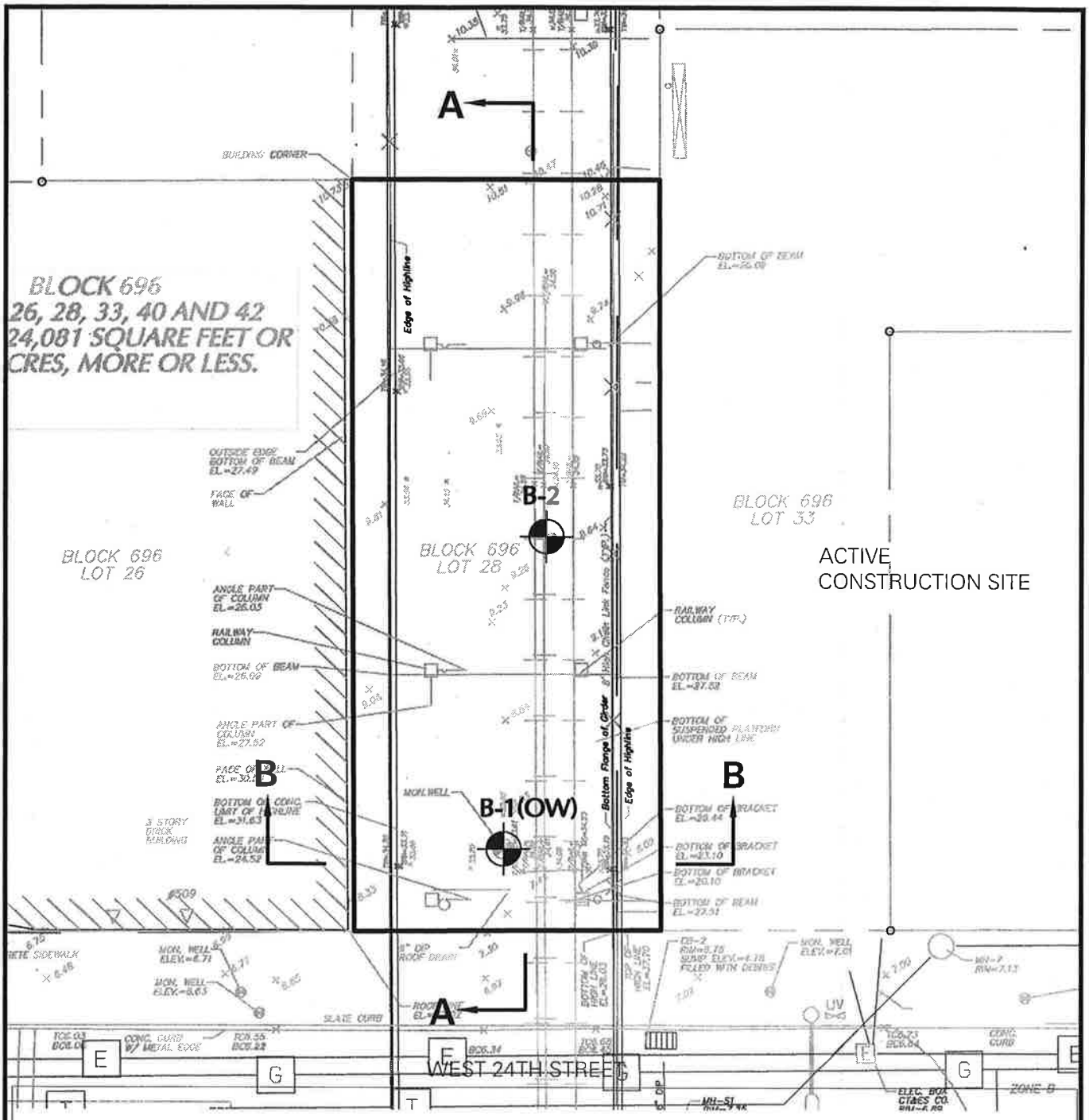
LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

507 W 24TH STREET

FLOOD INSURANCE MAP

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	2/28/08	NTS	2



NOTES

1. BASE PLAN IS TAKEN FROM THE SURVEY PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, DATED 2 FEBRUARY 2008.
2. BORINGS WERE DRILLED BY AQUIFER DRILLING AND TESTING INC. IN JANUARY AND FEBRUARY OF 2008 UNDER THE FULL-TIME INSPECTION OF LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES.
3. BORING LOCATIONS ARE APPROXIMATE.
4. ELEVATIONS ARE REFERENCED TO THE BOROUGH PRESIDENT OF MANHATTAN DATUM, WHICH IS 2.75 FT ABOVE MEAN SEA LEVEL AT SANDY HOOK, NJ(NGVD 1929).
5. REFER TO DRAWING NO. 4 FOR SUBSURFACE PROFILE.

LEGEND

B-1 — BORING LOCATION

(OW) — OBSERVATION WELL

PROPERTY LIMITS

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

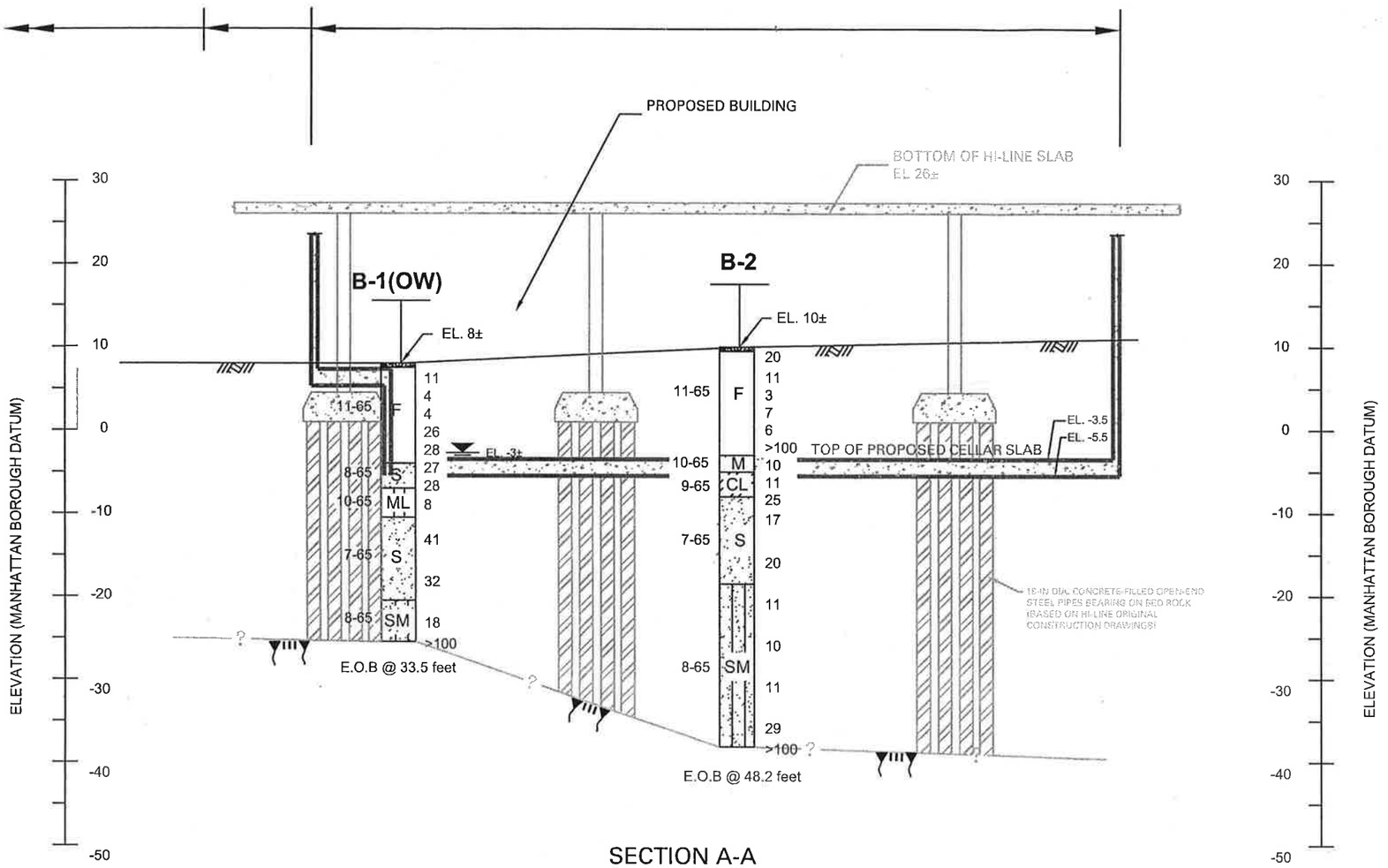
507 W 24TH STREET

BORING LOCATION PLAN

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	2/28/08	1"=20'	3

Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\FIG 3-Boring Location Plan.dwg Date: 4/3/2008 Time: 9:03 User: rnasseri Style Table: Langan.stb Layout: A Size Sheet (Bottom)



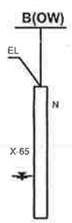
SECTION A-A

NOTES

1. ELEVATIONS ARE REFERRED TO BOROUGH PRESIDENT OF MANHATTAN DATUM (BPMD), WHICH IS 2.75 FT ABOVE MEAN SEA LEVEL MEASURED AT SANDY HOOK, NEW JERSEY, 1929 (NGVG).
2. SURFACE ELEVATIONS ARE TAKEN FROM A SURVEY DRAWING PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES P.C., DATED 22 FEBRUARY 2008.
3. HI-LINE FOUNDATION INFORMATION IS OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS, DATED 15 OCTOBER 1930.
4. ADJACENT BUILDINGS INFORMATION ARE TAKEN FROM ORIGINAL FOUNDATION DRAWINGS AND COMMUNICATIONS WITH THE ARCHITECT.
5. REFER TO FIGURE 3 FOR BORING AND SECTION LOCATIONS.

LEGEND

- F UNCONTROLLED FILL
- S SAND
- M SILT
- CL CLAY
- GROUND SURFACE



- B BORING IDENTIFICATION
- EL GROUND SURFACE ELEVATION AT THE TIME OF DRILLING
- N STANDARDS PENETRATION RESISTANCE
- X-65 NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) GROUND WATER OBSERVATION WELL
- MEASURED GROUND WATER LEVEL
- REC (LENGTH OF ROCK RETRIVED/ LENGTH OF ROCK CORED)*100%
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 IN AND GREATER/ LENGTH CORED)*100%

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

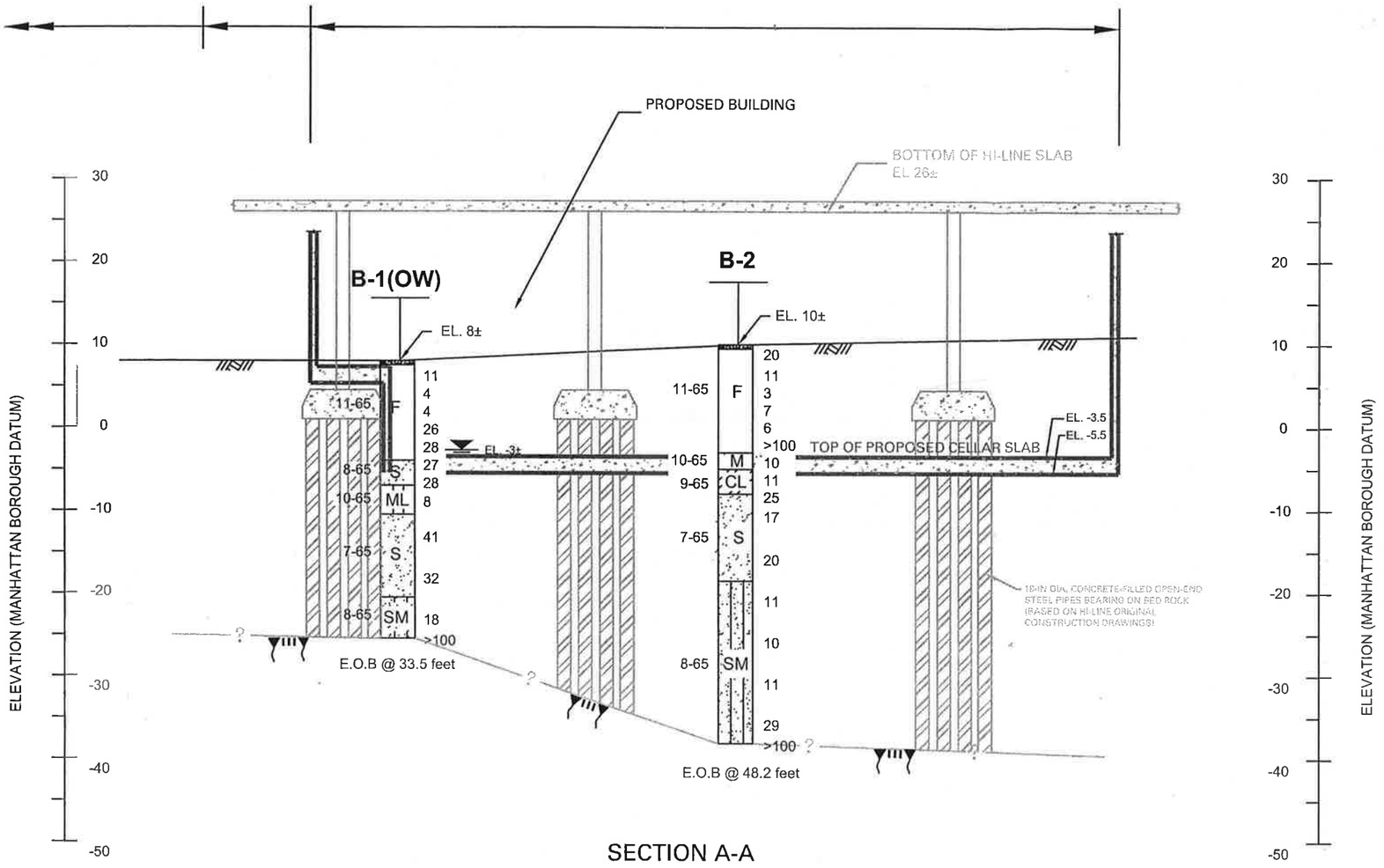
507 W 24TH STREET

SUBSURFACE PROFILE SECTION A-A

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	4/02/08	1"=16'	4

Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\FIG 4 n 5-Subsurface Profiles.dwg Date: 4/4/2008 Time: 11:41 User: rnasseri Style Table: Langan.stb Layout: B Size Sheet (Bottom)



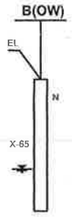
SECTION A-A

NOTES

1. ELEVATIONS ARE REFERRED TO BOROUGH PRESIDENT OF MANHATTAN DATUM (BPMD), WHICH IS 2.75 FT ABOVE MEAN SEA LEVEL MEASURED AT SANDY HOOK, NEW JERSEY, 1929 (NGVG).
2. SURFACE ELEVATIONS ARE TAKEN FROM A SURVEY DRAWING PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES P.C., DATED 22 FEBRUARY 2008.
3. HI-LINE FOUNDATION INFORMATION IS OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS, DATED 15 OCTOBER 1930.
4. ADJACENT BUILDINGS INFORMATION ARE TAKEN FROM ORIGINAL FOUNDATION DRAWINGS AND COMMUNICATIONS WITH THE ARCHITECT.
5. REFER TO FIGURE 3 FOR BORING AND SECTION LOCATIONS.

LEGEND

- F — UNCONTROLLED FILL
- S — SAND
- M — SILT
- CL — CLAY
- GROUND SURFACE



- B — BORING IDENTIFICATION
- EL — GROUND SURFACE ELEVATION AT THE TIME OF DRILLING
- N — STANDARDS PENETRATION RESISTANCE
- X-65 — NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) — GROUND WATER OBSERVATION WELL
- MEASURED GROUND WATER LEVEL
- REC — (LENGTH OF ROCK RETRIVED/ LENGTH OF ROCK CORED)*100%
- RQD — ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 IN AND GREATER/ LENGTH CORED)*100%

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

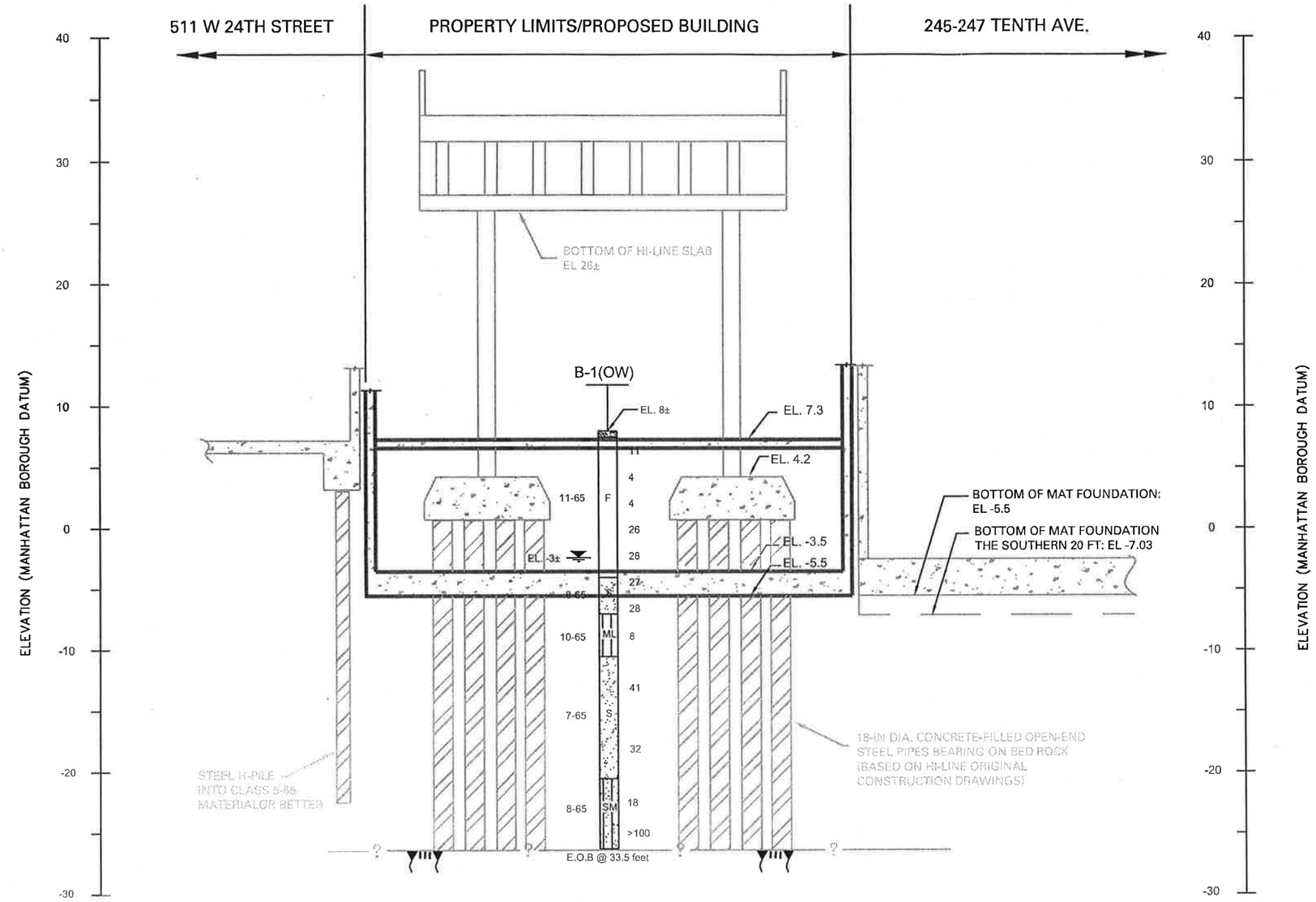
507 W 24TH STREET

SUBSURFACE PROFILE SECTION A-A

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	4/02/08	1"=16'	4

Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\FIG 4 n 5-Subsurface Profiles.dwg Date: 4/4/2008 Time: 11:41 User: rmasseri Style Table: Langan.stb Layout: B Size Sheet (Bottom)

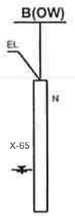


NOTES

1. ELEVATIONS ARE REFERRED TO BOROUGH PRESIDENT OF MANHATTAN DATUM (BPMD), WHICH IS 2.75 FT ABOVE MEAN SEA LEVEL MEASURED AT SANDY HOOK, NEW JERSEY, 1929 (NGVG).
2. SURFACE ELEVATIONS ARE TAKEN FROM A SURVEY DRAWING PREPARED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES P.C., DATED 22 FEBRUARY 2008.
3. HI-LINE FOUNDATION INFORMATION IS OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS, DATED 15 OCTOBER 1930.
4. ADJACENT BUILDINGS INFORMATION ARE TAKEN FROM ORIGINAL FOUNDATION DRAWINGS AND COMMUNICATIONS WITH THE ARCHITECT.
5. REFER TO FIGURE 3 FOR BORING AND SECTION LOCATIONS.

LEGEND

- F — UNCONTROLLED FILL
- S — SAND
- M — SILT
- OM — ORGANIC SILT
- GROUND SURFACE



- B — BORING IDENTIFICATION
- EL — GROUND SURFACE ELEVATION AT THE TIME OF DRILLING
- N — STANDARS PENETRATION RESISTANCE
- X-65 — NEW YORK CITY BUILDING CODE CLASSIFICATION
- (OW) — GROUND WATER OBSERVATION WELL
- MEASURED GROUND WATER LEVEL
- REC — (LENGTH OF ROCK RETRIVED/ LENGTH OF ROCK CORED)*100%
- RQD — ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 IN AND GREATER/ LENGTH CORED)*100%

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor
New York, NY 10001
P: 212.479.5400
F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

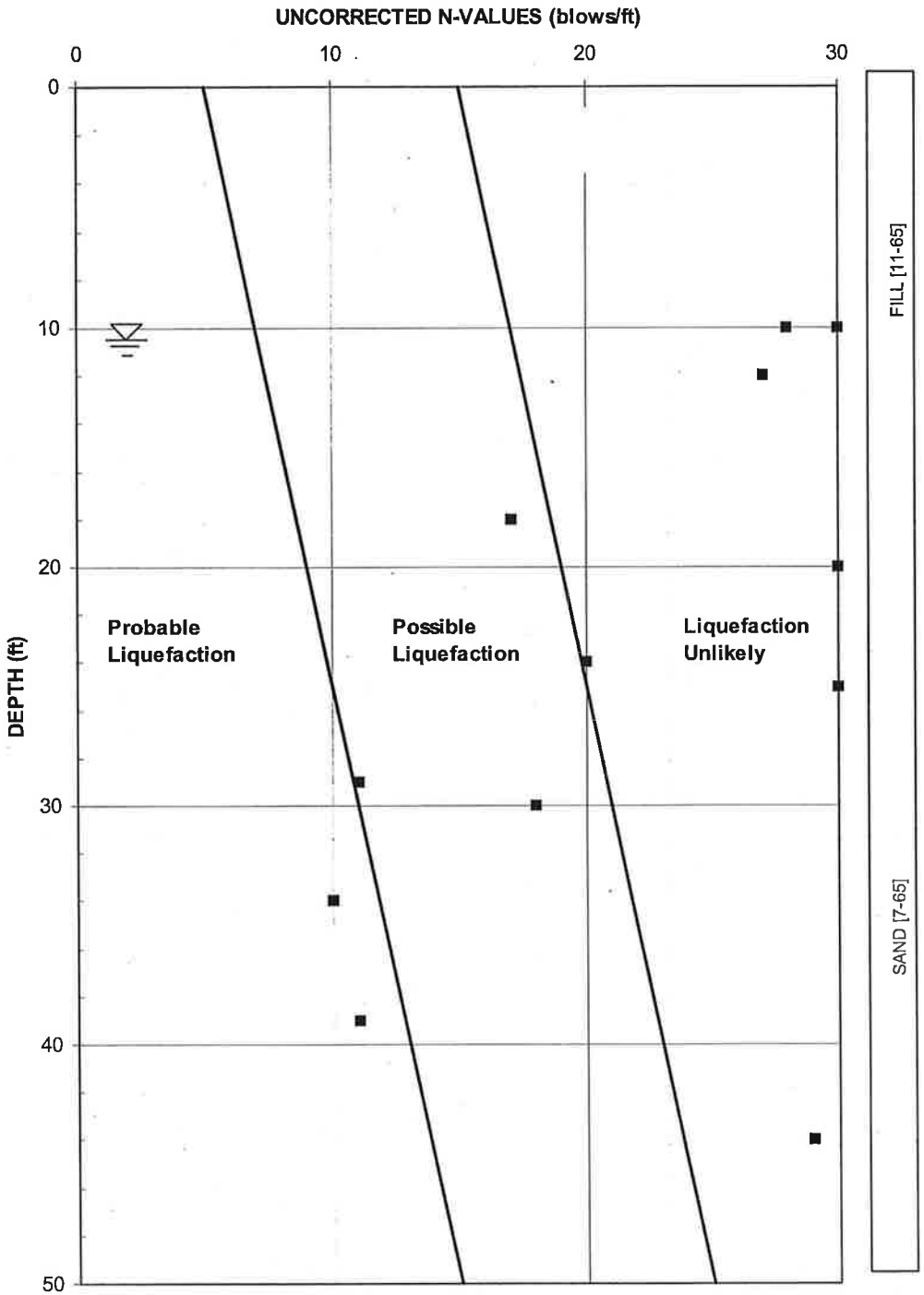
507 W 24TH STREET

SUBSURFACE PROFILE SECTION B-B

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	4/02/08	1"=10'	5

Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\FIG 4 n 5-Subsurface Profiles.dwg Date: 4/4/2008 Time: 11:41 User: rnasseri Style Table: Langan.stb Layout: B Size Sheet (Bottom) (2)



LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

507 W 24TH STREET

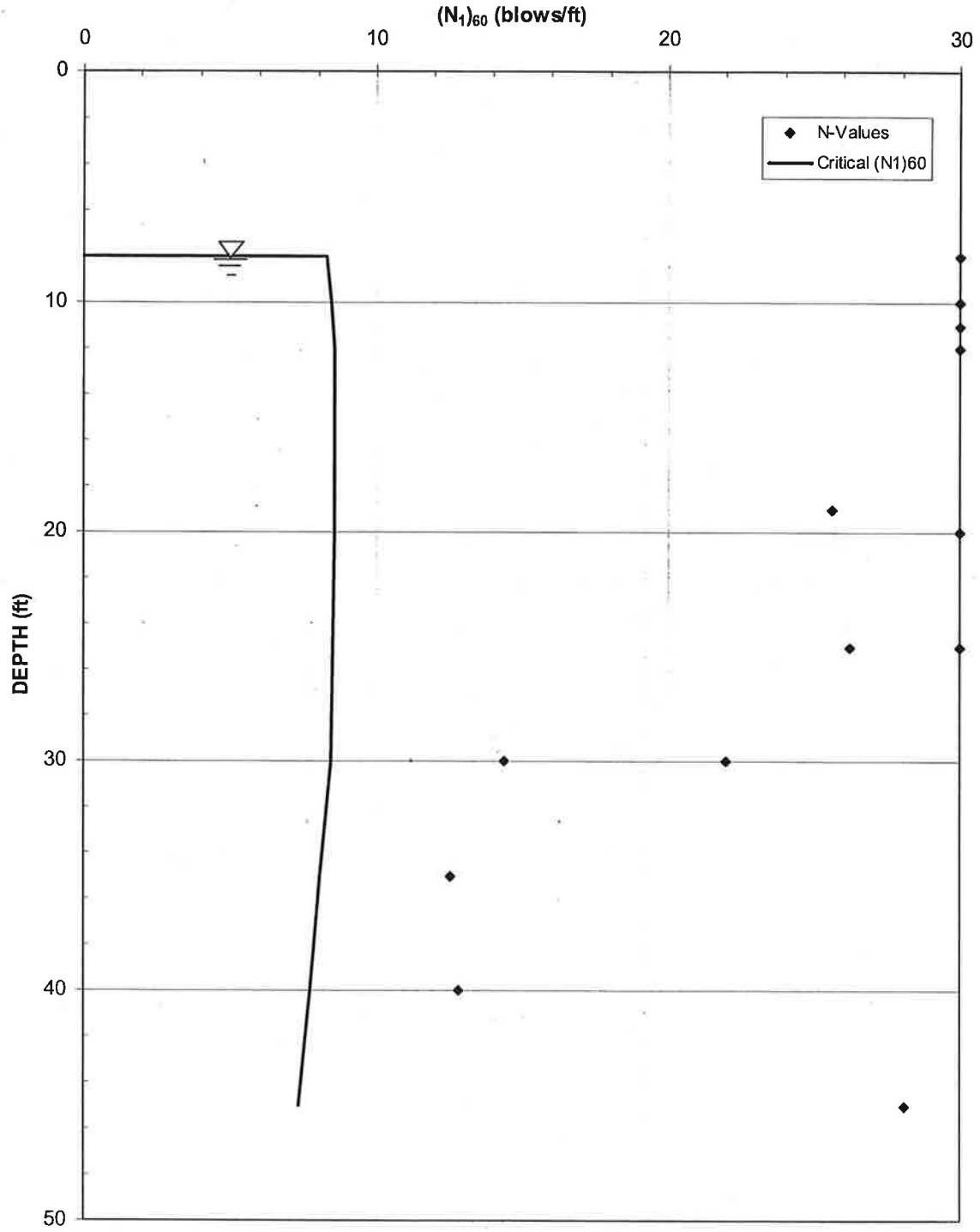
LIQUEFACTION EVALUATION (NYC BUILDING CODE)

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	2/ 28/08	NTS	6

Filename: U:\Data1\5821101\Cadd Data – 5821101\Dwg\Geotech report\FIG 6 and 7– liquefaction.dwg Date: 4/3/2008 Time: 10:25 User: rnasseri Style Table: Langan.stb Layout: Fig 6

Seed & Idriss Liquefaction Analysis



LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

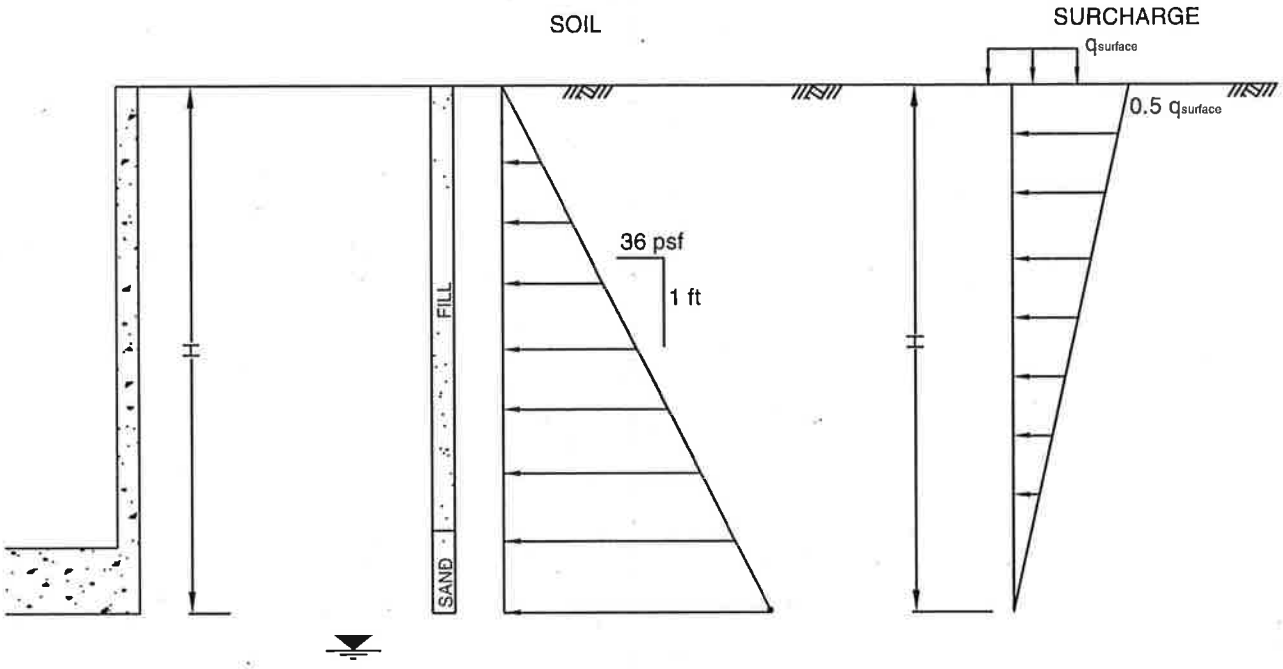
507 W 24TH STREET

SITE SPECIFIC LIQUEFACTION EVALUATION

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	2/ 28/08	NTS	7

Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\FIG 6 and 7- liquefaction.dwg Date: 4/4/2008 Time: 13:43 User: rnasseri Style Table: Langan.stb Layout: Fig 7



ACTIVE LATERAL EARTH PRESSURE

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
21 Penn Plaza, 8th Floor New York, NY 10001
P: 212.479.5400 F: 212.479.5444
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

507 W 24TH STREET

TEMPORARY LATERAL EARTH PRESSURE

NEW YORK NEW YORK

Project No.	Date	Scale	Dwg. No.
5821101	3/10/08	NTS	9

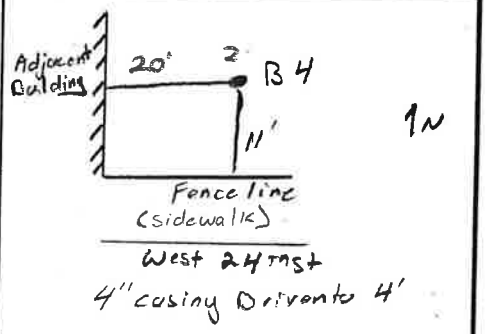
Filename: U:\Data1\5821101\Cadd Data - 5821101\Dwg\Geotech report\BG 8 and 9-lateral earth pressure.dwg Date: 4/3/2008 Time: 9:07 User: rnasseri Style Table: Langan.stb Layout: fig 9

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

LOG OF BORING B-1 SHEET 1 OF 3

PROJECT: 507 West 24th St	PROJECT NO.: 58 21101
LOCATION: Manhattan NY	ELEVATION AND DATUM: +8±
DRILLING AGENCY: ADT	DATE STARTED: 12/12/07 — DATE FINISHED: 12/13/07
DRILLING EQUIPMENT: Davey Drill DK 515	COMPLETION DEPTH: 33.5 — ROCK DEPTH: 33.5
SIZE AND TYPE OF BIT: Tricone Roller	NO. SAMPLES: DIST. 10 — UNDIST.: — — CORE 0
CASING: 4" Flush joint steel	WATER LEVEL: FIRST — COMPL. — 24 HR.
CASING HAMMER: WEIGHT 140' — DROP 30"	FOREMAN: Prem - Javier
SAMPLER: 2" OD SS	INSPECTOR: JC
SAMPLER HAMMER: WEIGHT 140' — DROP 30"	

Material	NYC B.C.	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO.LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		6" concrete						
VOID		void Below concrete To 2' Begin SS @ 2'	1					
		Medium to Fine grained Brown Sand mixed with Brick concrete Asphalt (FILL)	2	SS1	SS	6"	1 3 3	
		Medium to Fine grained Brown Sand mixed with Brick concrete Asphalt Slight Hydrocarbon odor (FILL)	3 4 5	SS2	SS	6"	2 2 1	
FILL	11-65	Medium to Fine grained Brown Sand mixed with Brick wood Rock (FILL)	6 7	SS3	SS	6"	2 2 2	
		Medium to Fine grained Brown grey Sand (Trace Silt) mixed with concrete Asphalt wood (3" pieces of wood)	8 9	SS4	SS	10"	14 9 12 11	
		Medium to Fine grained Brown Sand mixed with crushed Brick Concrete (FILL) Medium to Fine grained brown grey Sand (Trace Silt)	10 11	SS5	SS	20"	13 16 15 15	
SAND	8-65	Medium to Fine grained Brown grey Sand	12 13 14	SS6	SS	10"	14 10 13 10	← organics observed @ Approx 12 - 12.5



LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 582 1101
DATE 12/13/07

LOG OF BORING NO. B-1

SHEET 2 OF 3

Material	NYC BC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
		no Sample Roller Bit to 15'	14 15					Push 4" casing + 14'- Roller Bit 14' wood coming up in cuttings Stuck in casing will Roller bit to 15'
Organic SILT	11-65	Sandy Silt grey Dark grey with trace organic, Black stains.	16 17	SS-7	SS	24"	4 5 4 9	
		? ?	18 19				Roller bit to 20'	
SAND	7-65	Fine to medium grained Redish Brown Sand	20 21 22	SS-8	SS	15"	17 20 21 25	Used revert to Keep hole open For remainder of Boring
		Fine to medium Redish Brown Sand trace Silt	23 24 25 26 27	SS-9	SS	15"	25 19 13 14	
Silty SAND	8-65	Fine To medium Redish Brown Silty Sand	28 29 30 31 32	SS-10	SS	16"	8 8 10 10	

086100

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 58 21101

DATE 12/13/07

LOG OF BORING NO. B-1

SHEET 3 OF 3

Material	NYC BC	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
	B-65		32 33	S-11	S.S.	0"	100/0"	while Roller Bitting Refusal @ 33.5', Placed SS in hole & Driped Hamer 100 times no movement SS empty. Install observation well
		?? End of Boring 33.5'						
		Water level. 11 ft on 2/25/08						

086100

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

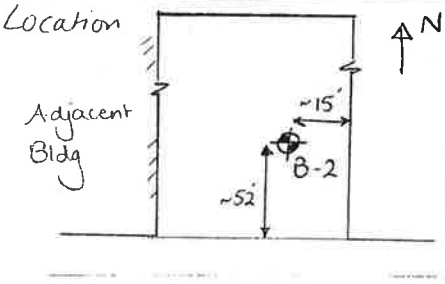
LOG OF BORING B-2 **SHEET** 1 **OF** 3

PROJECT	507 W 24th Street	PROJECT NO.	5821101
LOCATION	507 W 24th Street, NY, NY	ELEVATION AND DATUM	+10 ±
DRILLING AGENCY	ADT	DATE STARTED	2/22/08
		DATE FINISHED	2/22/08
DRILLING EQUIPMENT	CME LC 55 track-mounted rig	COMPLETION DEPTH	48.2'
		ROCK DEPTH	4 ft ?
SIZE AND TYPE OF BIT	3 7/8" - 2 7/8" tricone roller	NO. SAMPLES / DIST. / UNDIST. — / CORE —	
CASING	4" ID Steel pipe	WATER LEVEL / FIRST — / COMPL. — / 24 HR. —	
CASING HAMMER	Auto / WEIGHT 140 lbs / DROP 30"	FOREMAN	Prim
SAMPLER	2" ID Split spoon	INSPECTOR	R. Nasseri
SAMPLER HAMMER	Auto / WEIGHT 140 lbs / DROP 30"		

Material	NYC BC	SAMPLE DESCRIPTION	DEPTH SCALE	NO./LOC.	TYPE	RECOV. FT.	PENETR. RESIST BL/6 in.
		Concrete Pavement					
FILL	11-65	Dark Brown/Black cf SAND, some Silt, tr-so. cf Gravel, cr Mica, tr Brick [FILL] (11-65)	1	S-1	S.S.	9"	15 9 11 12
		Red BRICK, some cf Brown Sand, some cf Gravel [FILL] (11-65)	3	S-2	S.S.	8"	4 5 6 9
		Red BRICK [FILL] (11-65)	5	S-3	S.S.	1"	1 2 1 1
		Red BRICK [FILL] (11-65)	7	S-4	S.S.	4"	3 3 4 4
		Red Brick [FILL] (11-65) el.c.	9	S-5	S.S.	12"	3 3 3 7
SILT	10-65	Brown/Grey cf SAND, some cf Gravel, cr Brick, tr Silt (decomposed Concrete?) [FILL] (11-65)	11	S-6	S.S.	8"	57 70/4" - -
			13	S-7	S.S.		3 6

REMARKS
(DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)

Location



W 24 Street

- Start 2/22/08 - 11:20 AM
- Drill through pavement
- Take S-1 Rollerbit to 3 ft
- Obstruction (boulder?) from 2.5 ~ 3.1 ft.
- Take S-2 Rollerbit to 5 ft
- Take S-3. Rollerbit to 7 ft
- Take S-4. Rollerbit to 9 ft.
- Take S-5. Rollerbit to 11 ft.
- Take S-6. Rollerbit to 13 ft
- Take S-7 Rollerbit to 15 ft

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821101
DATE

LOG OF BORING NO. B-2

SHEET 2 OF 3

Material	N/C BC.	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO./LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BL/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
Organic SILT	11-65	Brown Clayey SILT, some mf Sand, (tr Organic Clayey SILT @ 2 in of spoon tip). [ML] (10-65)	15	S-7	S.S.		4 5	– Take S-8. Rollerbit to 17 ft
		Grey Organic Clayey SILT, tr mf Sand, tr Sea shells [OM] (10-65)	16	S-8	S.S.	22"	4 4 7 8	
		No Recovery	17					– Take S-9. Rollerbit to 19 ft
			18	S-9	S.S.	NR	5 13 12 13	
		Brown cf SAND, some Silt, tr mf Gravel [SM] (7-65)	19					– Take S-10. Rollerbit to 25 ft
SAND			20	S-10	S.S.	12"	6 7 10 12	
	7-65		21					
			22					
			23					
			24					
			25					– Take S-11. Rollerbit to 30 ft
SAND		Brown cf SAND, some Silt, tr f Gravel [SM] (7-65)	26	S-11	S.S.	15"	11 10 10 8	
			27					
			28					
			29					
			30					– Take S-12. Rollerbit to 35 ft
Silty SAND	8-65	Brown Silty cf SAND, tr Clay, tr Mica powder [SM]	31	S-12	S.S.	18"	5 5 6 6	
			32					

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

JOB NO. 5821101
DATE 2/22/08

LOG OF BORING NO. B-2

SHEET 3 OF 3

Material	NYC B.C.	SAMPLE DESCRIPTION	DEPTH SCALE	SAMPLES NO.LOC.	SAMPLES TYPE	SAMPLES RECOV. FT.	SAMPLES PENETR. RESIST BLWS/6 in.	REMARKS (DRILLING FLUID, DEPTH OF CASING, CASING BLOWS, FLUID LOSS, ETC.)
Silty SAND	8-65	Brown Silty F SAND, tr Clay [SM] (8-65)	33					
			34					
			35					- Take S-13
			36	S-13	S.S.	18"	4 5 5	
			37				4	- Rollerbit to 40ft
			38					
			39					
			40					- Take S-14
		Brown Silty cf SAND, tr Clay [SM] (8-65)	41	S-14	S.S.	18"	4 5 6	
			42				6	- Rollerbit to 45ft.
			43					
			44					
			45				11	- Take S-15
		No Recovery	46	S-15	S.S.	0"	12 17	
			47				21	- Rollerbit to 48ft Hard drilling 47 - 48ft.
		Top of rock?	48	S-16	SS	0	100/0"	- Take S-16. Refusal
		E.O.B @ 48ft						- Stop 2/22/08 - 4.30 PM
			49					
			50					

086100

Project No.: 31737920-805 File: Indx1.xls

Langan #5821101

LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS						REMARKS
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	USCS SYMB. (1)	ORGANIC CONTENT (burnoff) (%)	
B-1	S-7	15-17	23.5	27	26	1	ML	1.9	
B-2	S-8	15-17	34.5	36	22	14	CL	1.5	

Note: (1) USCS symbol based on visual observation and Atterberg limits reported.

Prepared by: JR Reviewed by: CMJ Date: 3/11/2008

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

Moretrench American Corporation
51 Smart Ave
Yorkers NY, 10704
Attention: Joe Mahon

Report Date: 02/07/2012
Client Project ID: 507 W24th St.
York Project (SDG) No.: 12B0055

Report Date: 02/07/2012
Client Project ID: 507 W24th St.
York Project (SDG) No.: 12B0055

Moretrench American Corporation
51 Smart Ave
Yorkers NY, 10704
Attention: Joe Mahon

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on February 01, 2012 and listed below. The project was identified as your project: **507 W24th St.**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
12B0055-01	Monitoring Well	Water	01/31/2012	02/01/2012

General Notes for York Project (SDG) No.: 12B0055

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By: 

Date: 02/07/2012

Robert Q. Bradley
Executive Vice President / Laboratory Director

YORK

Sample Information

Client Sample ID: **Monitoring Well** **York Sample ID:** **12B0055-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
12B0055	507 W24th St.	Water	January 31, 2012 3:00 pm	02/01/2012

Volatile Organics, NYCDEP Sewer Discharge List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.95	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.68	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
71-43-2	Benzene	ND		ug/L	0.48	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
56-23-5	Carbon tetrachloride	ND		ug/L	1.0	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
67-66-3	Chloroform	ND		ug/L	0.36	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
100-41-4	Ethyl Benzene	ND		ug/L	0.35	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.38	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
95-47-6	o-Xylene	ND		ug/L	0.50	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/L	0.55	10	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
127-18-4	Tetrachloroethylene	ND		ug/L	0.52	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
108-88-3	Toluene	ND		ug/L	0.23	5.0	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS
1330-20-7	Xylenes, Total	ND		ug/L	1.0	15	1	EPA Method 624	02/02/2012 16:49	02/03/2012 17:56	SS

Semi-Volatiles, NYCDEP Sewer Discharge List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	1.31	5.00	1	EPA Method 625	02/02/2012 09:47	02/03/2012 17:25	TD
91-20-3	Naphthalene	ND		ug/L	3.86	5.00	1	EPA Method 625	02/02/2012 09:47	02/03/2012 17:25	TD

PCB (Polychlorinated Biphenyls)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3510C Low Level

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
11104-28-2	Aroclor 1221	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
11141-16-5	Aroclor 1232	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
53469-21-9	Aroclor 1242	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
12672-29-6	Aroclor 1248	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
11097-69-1	Aroclor 1254	ND		ug/L	0.0422	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
11096-82-5	Aroclor 1260	ND		ug/L	0.0422	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
37324-23-5	Aroclor 1262	ND		ug/L	0.0422	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
11100-14-4	Aroclor 1268	ND		ug/L	0.0422	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW
1336-36-3	Total PCBs	ND		ug/L	0.0363	0.0500	1	EPA Method 608	02/06/2012 07:52	02/06/2012 10:18	JW

Sample Information

Client Sample ID: Monitoring Well **York Sample ID:** 12B0055-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
12B0055	507 W24th St.	Water	January 31, 2012 3:00 pm	02/01/2012

Cadmium by EPA 200.7

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		mg/L	0.00100	0.00300	1	EPA 200.7	02/02/2012 13:50	02/02/2012 17:52	MW

Copper by EPA 200.7

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-50-8	**Copper**	**0.163**		mg/L	0.00160	0.00500	1	EPA 200.7	02/02/2012 13:50	02/02/2012 17:52	MW

Lead by EPA 200.7

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	**Lead**	**0.112**		mg/L	0.00120	0.00300	1	EPA 200.7	02/02/2012 13:50	02/02/2012 17:52	MW

Nickel by EPA 200.7

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	**Nickel**	**0.0150**		mg/L	0.000800	0.00500	1	EPA 200.7	02/02/2012 13:50	02/02/2012 17:52	MW

Zinc by EPA 200.7

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 3010A

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-66-6	**Zinc**	**0.230**		mg/L	0.000900	0.0200	1	EPA 200.7	02/02/2012 13:50	02/02/2012 17:52	MW

Mercury by EPA 245.1

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 245.1 Mercury

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.0000390	0.0002000	1	EPA 245.1	02/03/2012 10:23	02/03/2012 10:23	AA

Flashpoint

Log-in Notes: Sample Notes:

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Flashpoint	> 200		°F	68.0	68.0	1	ASTM D93	02/06/2012 12:18	02/06/2012 12:18	JCC

Total Solids (Aq)

Log-in Notes: Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Solids	**64.0**		mg/L	0.500	0.500	1	SM 2540B	02/06/2012 15:13	02/06/2012 15:13	AMC

Chloride

Log-in Notes: Sample Notes:

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16887-00-6	**Chloride**	**9.66**		mg/L	0.0690	0.500	1	EPA Method 300.0	02/03/2012 15:23	02/03/2012 15:23	AMC

Sample Information

Client Sample ID: **Monitoring Well** **York Sample ID:** **12B0055-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
12B0055	507 W24th St.	Water	January 31, 2012 3:00 pm	02/01/2012

Nitrate (NO3-N) + Nitrite (NO2-N)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 300

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
NO2NO3-N	**Nitrate + Nitrite Nitrogen as N**	**0.272**		mg/L	0.0120	0.0500	1	EPA Method 300.0	02/02/2012 12:27	02/02/2012 12:27	AMC

Carbonaceous BOD 5-Day

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Carbonaceous BOD (5-Day)	**4.0**		mg/L	1.0	1.0	1	SM 5210 B	02/02/2012 11:08	02/07/2012 12:02	SC

Hexavalent Chromium

Log-in Notes: **Sample Notes:** **HT-02**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/L	0.00600	0.0100	1	SM3500-Cr-D	02/01/2012 16:00	02/01/2012 16:00	AMC

Non-Polar Material

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Non-Polar Material	ND		mg/L	0.500	0.500	1	EPA 1664A	02/06/2012 11:53	02/06/2012 11:53	SC

pH

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	pH	**7.29**	HT-pH	pH units		0.500	1	SM 4500 H+B	02/01/2012 16:11	02/01/2012 16:11	JCC

Phenols, total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
64743-03-9	**Phenols, total**	**0.149**		mg/L	0.0500	0.0500	1	EPA 420.1/2	02/06/2012 13:53	02/06/2012 13:53	AMC

Total Kjeldahl Nitrogen(TKN)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Kjeldahl Nitrogen	**1.26**		mg/L	0.100	0.100	1	SM 4500-N (Org)B	02/03/2012 11:31	02/06/2012 14:51	AMC

Total Nitrogen (TKN, NO2+NO3)

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Method Specific

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Nitrogen, Calculated Analyte	**1.53**		mg/L	0.112	0.150	1	CALC	02/03/2012 11:31	02/06/2012 14:51	AMC

Total Suspended Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Total Suspended Solids	**10.0**		mg/L	1.00	1.00	1	SM 2540D	02/03/2012 14:16	02/03/2012 14:16	AMC

YORK
ANALYTICAL LABORATORIES, INC.

Notes and Definitions

HT-pH HOLDING TIME EXCEEDED. Samples for pH must be measured in the field or within 15 minutes of sample collection.

HT-02 This sample was received outside the EPA recommended holding time.

F-01 > 200

ND Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.

RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.

MDL METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.

NR Not reported

RPD Relative Percent Difference

Wet The data has been reported on an as-received (wet weight) basis

Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

Non-Dir. Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two.
For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

Corrective Action:

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 12B0055

YOUR Information	**Report To:**	**Invoice To:**
Company: Montrose	Company: Same	Company: Same
Address: 51 Smart Ave Yonkers, NY 10704	Address:	Address:
Phone No. 9144231331	Phone No.	Phone No.
Contact Person: Joe Maher	Attention:	Attention:
E-Mail Address: JMaher	E-Mail Address:	E-Mail Address:

YOUR Project ID: 507 W 24th St.

Purchase Order No.

Samples from: CT ✓ NY NJ

Turn-Around Time
- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☑
- RUSH - Four Day ☐
- ~~Standard (5-7 Days)~~ ☑

Report Type/Deliverbles
- Summary Report ____
- Summary w/ QA Summary ____
- CT RCP Package ____
- NY ASP A Package ____
- NY ASP B Package ____
- *Electronic Deliverables:*
- EDD (Specify Type) ____
- Excel ____

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

Joseph Maher
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Common Miscellaneous Parameters		
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity	Nitrate	Color
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity	Nitrite	Phenols
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability	TKN	Cyanide-T
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point	Tot. Nitrogen	Cyanide-A
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.	Ammonia-N	BOD5
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs	Chloride	CBOD5
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX	Phosphate	BOD28
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins/Furans	BTU/lb.	Tot. Phos.	COD
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.	Oil&Grease	TSS
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC	F.O.G.	Total Solids
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos	pH	TDS
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica	MBAS	TPH-1664

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Sample Identification	Date Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
Monitoring Well	GW	1/31/12	NYCDEP	(2) 40ml HCL
				(2) 1ng. Amber Liter
				(1) H_2SO_4 250ml Amber
				(1) H_2SO_4 Amber Liter
				(1) H_2SO_4 500ml Plastic
				(1) HNO_3 250ml Plastic
				(1) Plastic Unp. Liter

Comments

Preservation Check those Applicable: 4°C ____ Frozen ____ HCl ____ MeOH ____ HNO_3 ____ H_2SO_4 ____ NaOH ____ ZnAc/Ascorbic Acid ____ Other ____

Samples Relinquished By — Date/Time: 2/1/12

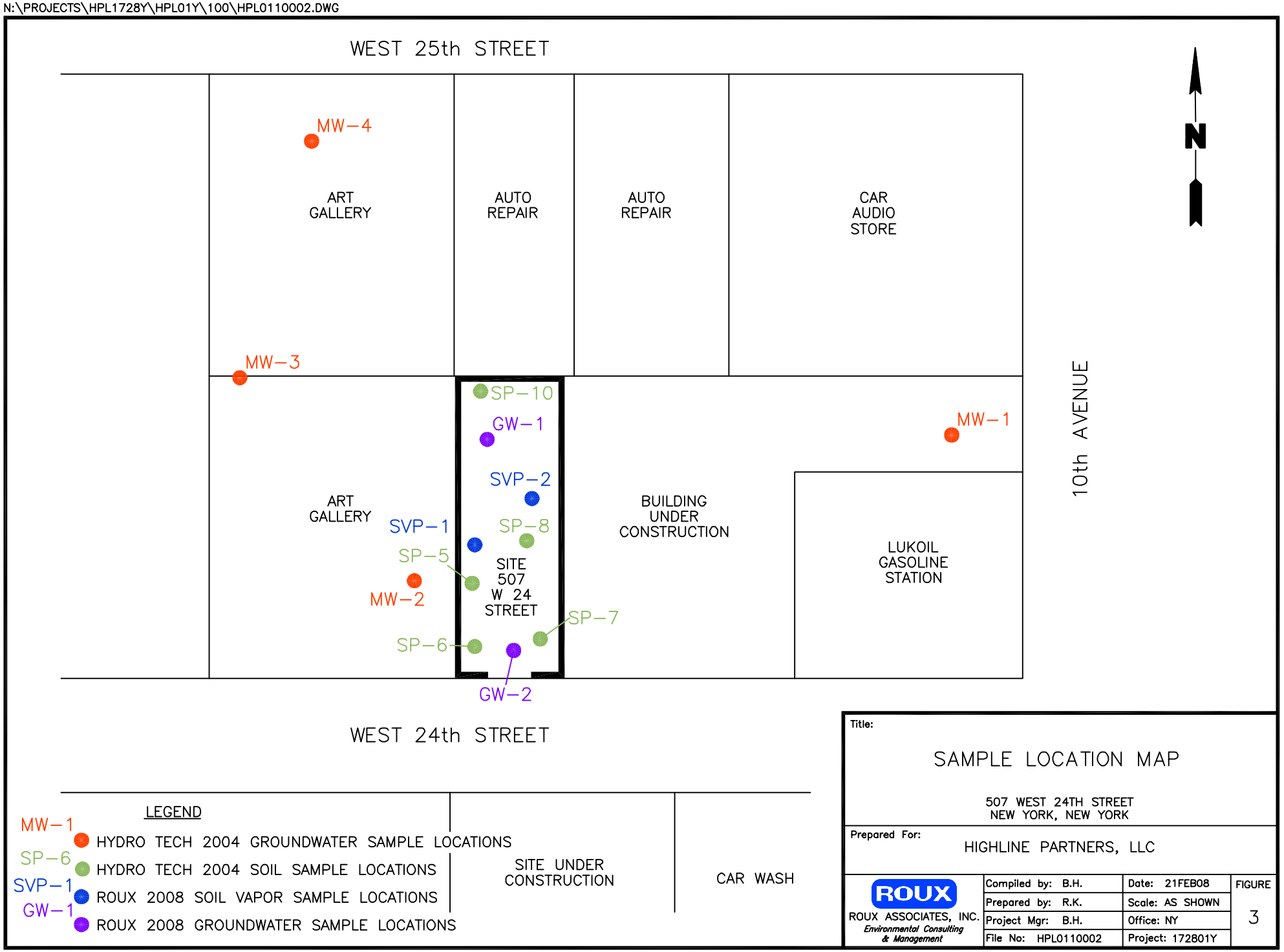
Samples Received By — Date/Time: 2-1-12 9:20

Samples Relinquished By — Date/Time:

Samples Received in LAB by — Date/Time: 2/1/12 - 1600

Temperature on Receipt 4.4 °C

N:\PROJECTS\HPL1728Y\HPL01Y\100\HPL0110002.DWG



Title:

SAMPLE LOCATION MAP

507 WEST 24TH STREET
NEW YORK, NEW YORK

Prepared For:
HIGHLINE PARTNERS, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: B.H.	Date: 21FEB08	FIGURE
Prepared by: R.K.	Scale: AS SHOWN	3
Project Mgr: B.H.	Office: NY	
File No: HPL0110002	Project: 172801Y	

Chain of Custody Record

Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Tel: 203-929-8140
Fax: 203-929-8142

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-0015 (1007)

Client: Roux Associates, Inc.	Project Manager: Bill Holubowich	Date: 2/25/08	Chain of Custody Number: 010857
Address: 209 Shafter St	Telephone Number (Area Code)/Fax Number/e-mail address: (631) 232-2600	Field Telephone Number	Page 1 of 1
City: Islandia	State: NY	Zip Code: 11749	Site Contact	Lab Contact: Jill Dubowik
Project Name and Location (State): West 24th St.	Sample Disposal: ☐ Disposal By Lab ☐ Return To Client ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)		
Contract/Purchase Order/Project No.: 172801Y			

Field Sample I.D. (Containers for each sample may be combined on one line)	Collection Date	Collection Time	Matrix: Aqueous	Solid	Other	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	Analysis (Attach list if more space is needed): VOCs 8260	SVOCs 8270	TCL 8082	Target TAL Metals	Comments
GW-1	2/25/08		X														Target TAL Metals Filtered by lab
GW-2	2/25/08		X														
																	GW-1 only one amber bottle was collected

Turn Around Time Required (business days) Report / EDD Requirements
☐ 24 Hours ☐ 48 Hours ☒ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other ____

State Regulatory QC Requirements

	Date	Time
1. Relinquished By: Bill Holubowich	2/25/08	
2. Relinquished By		
3. Received By		

	Date	Time
1. Received By		
2. Received By		
Cooler Temps		

Passed Rad. Screen (Lab Use Only): ☐ Yes ☐ No

Comments: Lab Filter Metals -

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

GW-1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-1	
Lab Sample Number	220-4238-1	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Low	
GC/MS VOA 8260B		
Acetone	10	U
Benzene	5	U
Bromodichloromethane	5	U
Bromoform	5	U
Bromomethane	5	U *
Methyl Ethyl Ketone	10	U
Carbon disulfide	5	U
Carbon tetrachloride	5	U
Chlorobenzene	5	U
Chloroethane	5	U
Chloroform	5	U
Chloromethane	5	U
Dibromochloromethane	5	U
1,1-Dichloroethane	5	U
1,2-Dichloroethane	5	U
1,1-Dichloroethene	5	U
1,2-Dichloropropane	5	U
cis-1,3-Dichloropropene	5	U
trans-1,3-Dichloropropene	5	U
Ethylbenzene	5	U
2-Hexanone	10	U
Methylene Chloride	5	U
methyl isobutyl ketone	10	U

TestAmerica

Styrene	5	U *
1,1,2,2-Tetrachloroethane	5	U
Tetrachloroethene	5	U
Toluene	5	U
1,1,1-Trichloroethane	5	U
1,1,2-Trichloroethane	5	U
Trichloroethene	5	U
Vinyl chloride	5	U
Xylenes, Total	5	U
cis-1,2-Dichloroethene	5	U
trans-1,2-Dichloroethene	5	U

TestAmerica

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-1	
Lab Sample Number	220-4238-1	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Low	
GC/MS Semi VOA - 8270C		
Acenaphthene	11	U
Acenaphthylene	11	U
Anthracene	11	U
Benzo[a]anthracene	11	U
Benzo[a]pyrene	11	U
Benzo[b]fluoranthene	11	U
Benzo[g,h,i]perylene	11	U
Benzo[k]fluoranthene	11	U
Bis(2-chloroethoxy)methane	11	U
Bis(2-chloroethyl)ether	11	U
Bis(2-ethylhexyl) phthalate	11	U
Butyl benzyl phthalate	11	U
Carbazole	11	U
Chrysene	11	U
Di-n-butyl phthalate	11	U
Di-n-octyl phthalate	11	U
4-Bromophenyl phenyl ether	11	U
4-Chloroaniline	11	U
2-Chloronaphthalene	11	U
4-Chlorophenyl phenyl ether	11	U
Dibenz(a,h)anthracene	11	U

TestAmerica

Dibenzofuran	11	U
Diethyl phthalate	11	U
Dimethyl phthalate	11	U
1,2-Dichlorobenzene	11	U
1,3-Dichlorobenzene	11	U
1,4-Dichlorobenzene	11	U
3,3'-Dichlorobenzidine	11	U
2,4-Dinitrotoluene	11	U
2,6-Dinitrotoluene	11	U
Fluoranthene	11	U
Fluorene	11	U
Hexachlorobenzene	11	U
Hexachlorobutadiene	11	U
Hexachlorocyclopentadiene	11	U
Hexachloroethane	11	U
Indeno[1,2,3-cd]pyrene	11	U
Isophorone	11	U
2-Methylnaphthalene	11	U
Naphthalene	11	U
2-Nitroaniline	55	U
3-Nitroaniline	55	U
Nitrobenzene	11	U
N-Nitrosodi-n-propylamine	11	U
N-Nitrosodiphenylamine	11	U
Phenanthrene	11	U
Pyrene	11	U
1,2,4-Trichlorobenzene	11	U
4-Chloro-3-methylphenol	11	U
2-Chlorophenol	11	U
2-Methylphenol	11	U
4-Methylphenol	11	U
2,4-Dichlorophenol	11	U
2,4-Dimethylphenol	11	U
2,4-Dinitrophenol	55	U
4,6-Dinitro-2-methylphenol	55	U

TestAmerica

2-Nitrophenol	11	U
4-Nitrophenol	55	U
Pentachlorophenol	55	U
Phenol	11	U
2,4,5-Trichlorophenol	55	U
2,4,6-Trichlorophenol	11	U
Benzyl alcohol	11	U
4-Nitroaniline	22	U
2,2'-oxybis[1-chloropropane]	11	U

TestAmerica

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-2	
Lab Sample Number	220-4238-2	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Low	
GC Semi VOA - 8082		
PCB-1016	0.5	U
PCB-1221	1	U
PCB-1232	0.5	U
PCB-1242	0.5	U
PCB-1248	0.5	U
PCB-1254	0.5	U
PCB-1260	0.5	U

TestAmerica

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-1	
Lab Sample Number	220-4238-1	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Dissolved Low	
Metals		
Silver	5	U
Aluminum	500	U
Arsenic	20	U
Barium	87	
Beryllium	3	U
Calcium	95900	
Cadmium	5	U
Cobalt	10	U
Chromium	10	U
Copper	6	J
Iron	200	U
Potassium	19400	
Magnesium	31600	
Manganese	1000	
Sodium	27400	
Nickel	10	U
Lead	10	U
Antimony	20	U
Selenium	30	U
Thallium	30	U
Vanadium	5	U

TestAmerica

Zinc	50	U
Mercury	NR	

GW-2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-2	
Lab Sample Number	220-4238-2	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Low	
GC/MS VOA - 8260B		
Acetone	10	U
Benzene	5	U
Bromodichloromethane	5	U
Bromoform	5	U
Bromomethane	5	U *
Methyl Ethyl Ketone	10	U
Carbon disulfide	5	U
Carbon tetrachloride	5	U
Chlorobenzene	5	U
Chloroethane	5	U
Chloroform	5	U
Chloromethane	5	U
Dibromochloromethane	5	U
1,1-Dichloroethane	5	U
1,2-Dichloroethane	5	U
1,1-Dichloroethene	5	U
1,2-Dichloropropane	5	U *
cis-1,3-Dichloropropene	5	U
trans-1,3-Dichloropropene	5	U
Ethylbenzene	5	U
2-Hexanone	10	U
Methylene Chloride	5	U
methyl isobutyl ketone	10	U

TestAmerica

Styrene	5	U
1,1,2,2-Tetrachloroethane	5	U
Tetrachloroethene	5	U
Toluene	0.29	J
1,1,1-Trichloroethane	5	U
1,1,2-Trichloroethane	5	U
Trichloroethene	5	U
Vinyl chloride	5	U
Xylenes, Total	5	U
cis-1,2-Dichloroethene	5	U
trans-1,2-Dichloroethene	5	U

TestAmerica

SUMMARY OF ANALYTICAL RESULTS

TestAmerica Connecticut - 220-4238-1

Sample ID	GW-2	
Lab Sample Number	220-4238-2	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Low	
GC/MS Semi VOA - 8270C		
Acenaphthene	11	U
Acenaphthylene	11	U
Anthracene	0.65	J
Benzo[a]anthracene	1.6	J
Benzo[a]pyrene	1.3	J
Benzo[b]fluoranthene	1.6	J
Benzo[g,h,i]perylene	0.85	J
Benzo[k]fluoranthene	0.51	J
Bis(2-chloroethoxy)methane	11	U
Bis(2-chloroethyl)ether	11	U
Bis(2-ethylhexyl) phthalate	16	
Butyl benzyl phthalate	11	U
Carbazole	11	U
Chrysene	1.4	J
Di-n-butyl phthalate	11	U
Di-n-octyl phthalate	11	U
4-Bromophenyl phenyl ether	11	U
4-Chloroaniline	11	U
2-Chloronaphthalene	11	U
4-Chlorophenyl phenyl ether	11	U
Dibenz(a,h)anthracene	11	U

TestAmerica

Dibenzofuran	11	U
Diethyl phthalate	11	U
Dimethyl phthalate	11	U
1,2-Dichlorobenzene	11	U
1,3-Dichlorobenzene	11	U
1,4-Dichlorobenzene	11	U
3,3'-Dichlorobenzidine	11	U
2,4-Dinitrotoluene	11	U
2,6-Dinitrotoluene	11	U
Fluoranthene	2.8	J
Fluorene	11	U
Hexachlorobenzene	11	U
Hexachlorobutadiene	11	U
Hexachlorocyclopentadiene	11	U
Hexachloroethane	11	U
Indeno[1,2,3-cd]pyrene	0.84	J
Isophorone	11	U
2-Methylnaphthalene	11	U
Naphthalene	11	U
2-Nitroaniline	56	U
3-Nitroaniline	56	U
Nitrobenzene	11	U
N-Nitrosodi-n-propylamine	11	U
N-Nitrosodiphenylamine	11	U
Phenanthrene	2.1	J
Pyrene	3.3	J
1,2,4-Trichlorobenzene	11	U
4-Chloro-3-methylphenol	11	U
2-Chlorophenol	11	U
2-Methylphenol	11	U
4-Methylphenol	11	U
2,4-Dichlorophenol	11	U
2,4-Dimethylphenol	11	U
2,4-Dinitrophenol	56	U
4,6-Dinitro-2-methylphenol	56	U

TestAmerica

2-Nitrophenol	11	U
4-Nitrophenol	56	U
Pentachlorophenol	56	U
Phenol	11	U
2,4,5-Trichlorophenol	56	U
2,4,6-Trichlorophenol	11	U
Benzyl alcohol	11	U
4-Nitroaniline	22	U
2,2'-oxybis[1-chloropropane]	11	U

TestAmerica

SUMMARY OF ANALYTICAL RESULTS

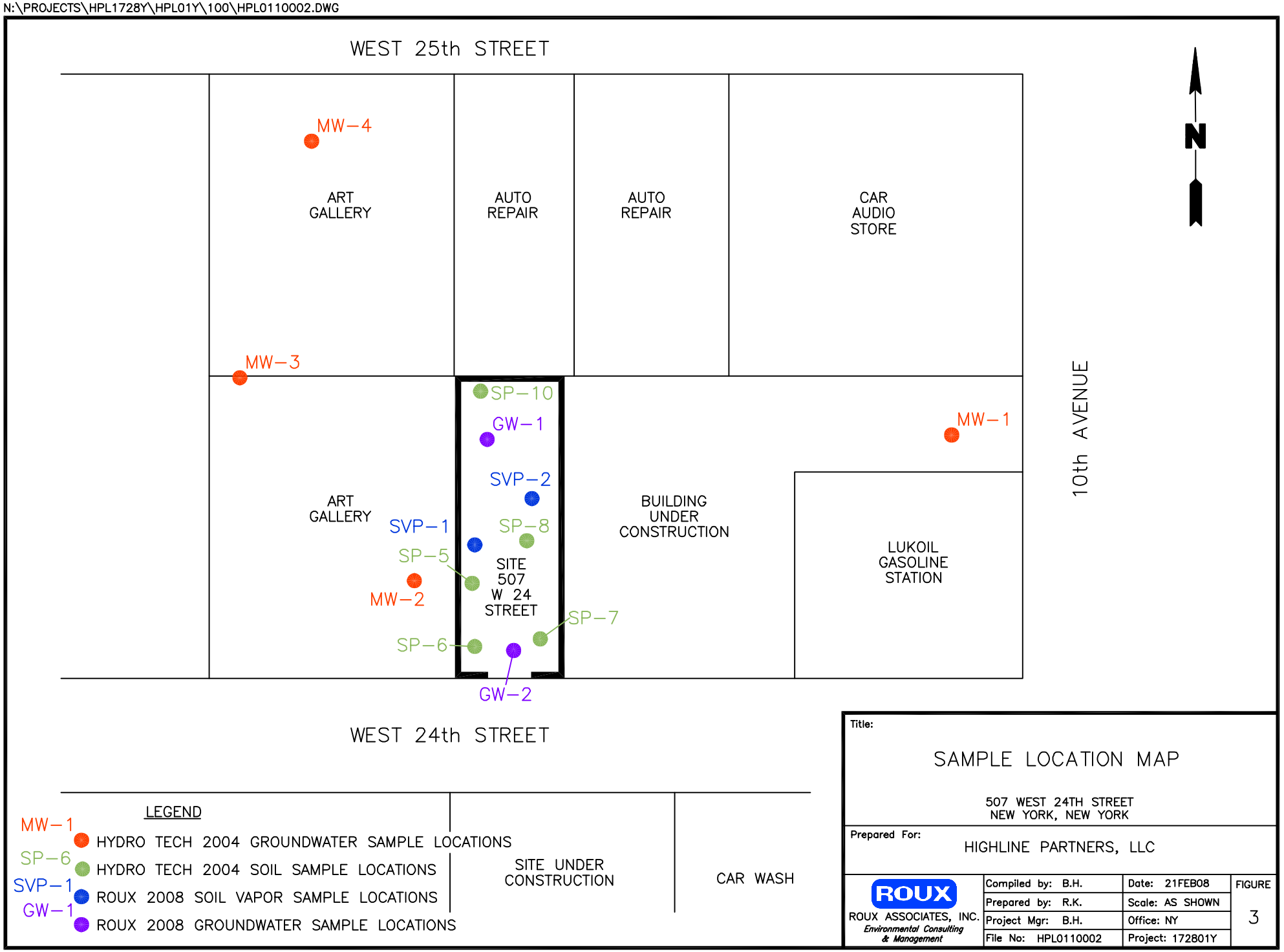
TestAmerica Connecticut - 220-4238-1

Sample ID	GW-2	
Lab Sample Number	220-4238-2	
Sampling Date	2/25/2008 0:00	
Matrix	Water	
Dilution Factor	1	
Units	ug/L	
	Dissolved Low	
Metals		
Silver	5	U
Aluminum	500	U
Arsenic	20	U
Barium	110	
Beryllium	3	U
Calcium	111000	
Cadmium	5	U
Cobalt	10	U
Chromium	10	U
Copper	9.6	J
Iron	200	U
Potassium	20900	
Magnesium	18400	
Manganese	620	
Sodium	103000	
Nickel	3.1	J
Lead	10	U
Antimony	20	U
Selenium	30	U
Thallium	30	U
Vanadium	5	U

TestAmerica

Zinc	17	J
Mercury	NR	

N:\PROJECTS\HPL1728Y\HPL01Y\100\HPL0110002.DWG



Title:

SAMPLE LOCATION MAP

507 WEST 24TH STREET
NEW YORK, NEW YORK

Prepared For:
HIGHLINE PARTNERS, LLC

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: B.H.	Date: 21FEB08	FIGURE
Prepared by: R.K.	Scale: AS SHOWN	3
Project Mgr: B.H.	Office: NY	
File No: HPL0110002	Project: 172801Y	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT
Soil Vapor

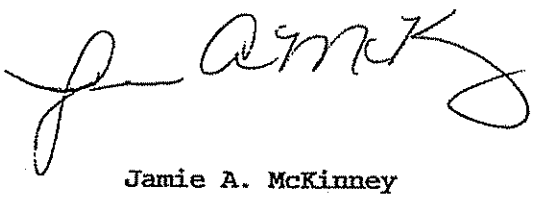
West 24

Lot #: H8B150242

William Holubowich

Roux Associates, Inc.
209 Shafter Street
Islandia, NY 11749-5074

TESTAMERICA LABORATORIES, INC.



Jamie A. McKinney
Project Manager

February 26, 2008

[redacted]

CHAIN OF CUSTODY

H88150242

FED-EX Tracking #: | Bottle Order Control #: | PAGE 1 OF 1

Lab Quote #: | Lab Job #:

Air Sampling Field Data Sheet

Client / Reporting Information

Company Name: Roux Associates

Address: 209 Shafter St.

City: Islandia State: NY Zip: 11749

Project Contact: Bill Holubowich E-mail: wholubowich@RouxInc.com

Phone #: 631.232.2600 Fax #: 631.232.9898

Sampler(s) Name(s):

Project Name: West 24

Street: 507 West 24/24 St.

City: N Y State: N Y

Project #:

Client Purchase Order #:

Weather Parameters

Temperature (Fahrenheit)
Start: 34 Maximum:
Stop 39 Minimum:

Atmoshpheric Pressure (Inches of Hg)
Start: 29.36 Maximum:
Stop: 29.36 Minimum:

Other weather comment:

Requested Analysis

Standard TO-15 Reporting List

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Standard TO-15 Reporting List
SVP-1		ASV	3396	6	3936	2/14	9am	30	/	BH	2/14	11am	0	/	BH	X
SVP-2		ASV	3314	6	2939	2/14	10:30am	30	/	BH	2/14	12:30pm	10	/	BH	X

Turnaround Time (Business days)

Standard - 15 Days	X
10 Day	
5 Day	
3 Day	
2 Day	
1 Day	
Other	

Approved By: _____

Date: _____

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

Comm A	
Comm B	
Reduced T2	
Full T1	
Other:	

Comments / Remarks

CUSTODY SEALS INTACT
RECEIVED AT AMBIENT TEMP
SHD 2-15-08
2 BOXES FEDEX 9574 9181 9124 9130
2 CANS / 2 FLOWS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory: 1	Date Time:	Received By: 1	Relinquished By: 2 Bill Holubowich	Date Time: 2/14/08	Received By: 2 [signature] 2-15-08 0930
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #		

ANALYTICAL METHODS SUMMARY

H8B150242

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO15	EPA-2 TO-15

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H8B150242

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KG6NE	001	SVP-1	02/14/08	09:00
KG6NG	002	SVP-2	02/14/08	10:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H8B150242

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

Sample Data Summary

Roux Associates, Inc.

Client Sample ID: SVP-1

GC/MS Volatiles

Lot-Sample # H8B150242 - 001 **Work Order #** KG6NE1AA **Matrix.....:** AIR

Date Sampled...: 2/14/08 **Date Received..:** 2/15/08
Prep Date.....: 2/21/08 **Analysis Date...** 2/21/08
Prep Batch #.....: 8053027
Dilution Factor.: 10 **Method.....:** TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Dichlorodifluoromethane	ND	2.0	ND	9.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ND	14
Chloromethane	ND	5.0	ND	10
Vinyl chloride	ND	2.0	ND	5.1
Bromomethane	ND	2.0	ND	7.8
Chloroethane	ND	2.0	ND	5.3
Trichlorofluoromethane	ND	2.0	ND	11
1,1-Dichloroethene	ND	2.0	ND	7.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ND	15
Methylene chloride	ND	5.0	ND	17
1,1-Dichloroethane	ND	2.0	ND	8.1
cis-1,2-Dichloroethene	ND	2.0	ND	7.9
Chloroform	ND	2.0	ND	9.8
1,1,1-Trichloroethane	ND	2.0	ND	11
Carbon tetrachloride	ND	2.0	ND	13
Benzene	ND	2.0	ND	6.4
1,2-Dichloroethane	ND	2.0	ND	8.1
Trichloroethene	ND	2.0	ND	11
1,2-Dichloropropane	ND	2.0	ND	9.2
cis-1,3-Dichloropropene	ND	2.0	ND	9.1
Toluene	ND	2.0	ND	7.5
trans-1,3-Dichloropropene	ND	2.0	ND	9.1
1,1,2-Trichloroethane	ND	2.0	ND	11
Tetrachloroethene	ND	2.0	ND	14
1,2-Dibromoethane (EDB)	ND	2.0	ND	15
Chlorobenzene	ND	2.0	ND	9.2
Ethylbenzene	ND	2.0	ND	8.7
m-Xylene & p-Xylene	ND	2.0	ND	8.7
o-Xylene	ND	2.0	ND	8.7
Styrene	ND	2.0	ND	8.5
1,1,2,2-Tetrachloroethane	ND	2.0	ND	14
1,3,5-Trimethylbenzene	ND	2.0	ND	9.8
1,2,4-Trimethylbenzene	ND	2.0	ND	9.8
1,3-Dichlorobenzene	ND	2.0	ND	12
1,4-Dichlorobenzene	ND	2.0	ND	12
1,2-Dichlorobenzene	ND	2.0	ND	12
Benzyl chloride	ND	4.0	ND	21
1,2,4-Trichlorobenzene	ND	10	ND	74

Roux Associates, Inc.

Client Sample ID: SVP-1

GC/MS Volatiles

Lot-Sample # H8B150242 - 001 **Work Order #** KG6NE1AA **Matrix.....:** AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Hexachlorobutadiene	ND	10	ND	110

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
1,2-Dichloroethane-d4	106	70 - 130
Toluene-d8	105	70 - 130
4-Bromofluorobenzene	97	70 - 130

. The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

Roux Associates, Inc.

Client Sample ID: SVP-2

GC/MS Volatiles

Lot-Sample # H8B150242 - 002 Work Order # KG6NG1AA Matrix.....: AIR

Date Sampled...: 2/14/08 Date Received..: 2/15/08
Prep Date.....: 2/21/08 Analysis Date... 2/21/08
Prep Batch #.....: 8053027
Dilution Factor.: 10 Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Dichlorodifluoromethane	ND	2.0	ND	9.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ND	14
Chloromethane	ND	5.0	ND	10
Vinyl chloride	ND	2.0	ND	5.1
Bromomethane	ND	2.0	ND	7.8
Chloroethane	ND	2.0	ND	5.3
Trichlorofluoromethane	ND	2.0	ND	11
1,1-Dichloroethene	ND	2.0	ND	7.9
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ND	15
Methylene chloride	ND	5.0	ND	17
1,1-Dichloroethane	ND	2.0	ND	8.1
cis-1,2-Dichloroethene	ND	2.0	ND	7.9
Chloroform	ND	2.0	ND	9.8
1,1,1-Trichloroethane	ND	2.0	ND	11
Carbon tetrachloride	ND	2.0	ND	13
Benzene	**3.7**	**2.0**	**12**	**6.4**
1,2-Dichloroethane	ND	2.0	ND	8.1
Trichloroethene	**7.4**	**2.0**	**40**	**11**
1,2-Dichloropropane	ND	2.0	ND	9.2
cis-1,3-Dichloropropene	ND	2.0	ND	9.1
Toluene	**18**	**2.0**	**66**	**7.5**
trans-1,3-Dichloropropene	ND	2.0	ND	9.1
1,1,2-Trichloroethane	ND	2.0	ND	11
Tetrachloroethene	ND	2.0	ND	14
1,2-Dibromoethane (EDB)	ND	2.0	ND	15
Chlorobenzene	ND	2.0	ND	9.2
Ethylbenzene	ND	2.0	ND	8.7
m-Xylene & p-Xylene	ND	2.0	ND	8.7
o-Xylene	ND	2.0	ND	8.7
Styrene	ND	2.0	ND	8.5
1,1,2,2-Tetrachloroethane	ND	2.0	ND	14
1,3,5-Trimethylbenzene	ND	2.0	ND	9.8
1,2,4-Trimethylbenzene	ND	2.0	ND	9.8
1,3-Dichlorobenzene	ND	2.0	ND	12
1,4-Dichlorobenzene	ND	2.0	ND	12
1,2-Dichlorobenzene	ND	2.0	ND	12
Benzyl chloride	ND	4.0	ND	21
1,2,4-Trichlorobenzene	ND	10	ND	74

Roux Associates, Inc.

Client Sample ID: SVP-2

GC/MS Volatiles

Lot-Sample # H8B150242 - 002 Work Order # KG6NG1AA Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Hexachlorobutadiene	ND	10	ND	110

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
1,2-Dichloroethane-d4	107	70 - 130
Toluene-d8	106	70 - 130
4-Bromofluorobenzene	95	70 - 130

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

Roux Associates, Inc.

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample # H8B220000 - 027B Work Order # KHGR61AA Matrix.....: AIR

Prep Date.....: 2/21/08
Prep Batch #.....: 8053027
Dilution Factor.: 1

Date Received..: 2/15/08
Analysis Date... 2/21/08

Method.....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Dichlorodifluoromethane	ND	0.20	ND	0.99
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.20	ND	1.4
Chloromethane	ND	0.50	ND	1.0
Vinyl chloride	ND	0.20	ND	0.51
Bromomethane	ND	0.20	ND	0.78
Chloroethane	ND	0.20	ND	0.53
Trichlorofluoromethane	ND	0.20	ND	1.1
1,1-Dichloroethene	ND	0.20	ND	0.79
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.20	ND	1.5
Methylene chloride	ND	0.50	ND	1.7
1,1-Dichloroethane	ND	0.20	ND	0.81
cis-1,2-Dichloroethene	ND	0.20	ND	0.79
Chloroform	ND	0.20	ND	0.98
1,1,1-Trichloroethane	ND	0.20	ND	1.1
Carbon tetrachloride	ND	0.20	ND	1.3
Benzene	ND	0.20	ND	0.64
1,2-Dichloroethane	ND	0.20	ND	0.81
Trichloroethene	ND	0.20	ND	1.1
1,2-Dichloropropane	ND	0.20	ND	0.92
cis-1,3-Dichloropropene	ND	0.20	ND	0.91
Toluene	ND	0.20	ND	0.75
trans-1,3-Dichloropropene	ND	0.20	ND	0.91
1,1,2-Trichloroethane	ND	0.20	ND	1.1
Tetrachloroethene	ND	0.20	ND	1.4
1,2-Dibromoethane (EDB)	ND	0.20	ND	1.5
Chlorobenzene	ND	0.20	ND	0.92
Ethylbenzene	ND	0.20	ND	0.87
m-Xylene & p-Xylene	ND	0.20	ND	0.87
o-Xylene	ND	0.20	ND	0.87
Styrene	ND	0.20	ND	0.85
1,1,2,2-Tetrachloroethane	ND	0.20	ND	1.4
1,3,5-Trimethylbenzene	ND	0.20	ND	0.98
1,2,4-Trimethylbenzene	ND	0.20	ND	0.98
1,3-Dichlorobenzene	ND	0.20	ND	1.2
1,4-Dichlorobenzene	ND	0.20	ND	1.2
1,2-Dichlorobenzene	ND	0.20	ND	1.2
Benzyl chloride	ND	0.40	ND	2.1
1,2,4-Trichlorobenzene	ND	1.0	ND	7.4

Roux Associates, Inc.

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample # H8B220000 - 027B Work Order # KHGR61AA Matrix.....: AIR

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)
Hexachlorobutadiene	ND	1.0	ND	11

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
1,2-Dichloroethane-d4	110	70 - 130
Toluene-d8	103	70 - 130
4-Bromofluorobenzene	101	70 - 130

The 'Result' in ug/m3 is calculated using the following equation: Amount Found(before rounding)*(Molecular Weight/24.45)

The 'Reporting Limit' in ug/m3 is calculated using the following equation: (Reporting Limit(before rounding) * Dilution Factor) * (Molecular Weight/24.45)

ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC

209 SHAFTER STREET
ISLANDIA, NEW YORK 11749-5074 TEL: 631-232-2600 FAX: 631-232-9898

March 9, 2005

Mr. Steven Sangesland
Environmental Engineer I
NYSDEC Region 2 Office
Hunters Point Plaza
47-40 21st Street
Long Island City, New York 11101

Re: Tank Removal and Post-Excavation Soil Sampling
507-511 West 24th Street
New York, New York
Spill No. 0412228

Dear Mr. Sangesland:

On behalf of High Line Partners LLC (High Line), Roux Associates, Inc. (Roux Associates) is providing this summary of analytical results from soil samples collected at the above-referenced site. On February 16, 2005, a spill was reported to the New York State Department of Environmental Conservation (NYSDEC) for the site, in response to observations of potentially impacted soil (i.e., staining and petroleum odors) during the removal of several underground storage tanks (USTs). The potentially impacted soil was stockpiled adjacent to the excavation and covered with plastic sheeting. A total of five USTs (one 2,000-gallon tank and four 550-gallon tanks) were removed from the excavation and staged onsite.

Following removal of the tanks and excavation of the potentially impacted soil, the NYSDEC was notified of the observations made at the site and Spill Number 04-12228 was issued. NYSDEC requested that post-excavation soil samples be collected. On February 18, 2005, Roux Associates mobilized to the site and collected six post-excavation soil samples. A site map showing the sample locations is provided as Figure 1. A total of six post-excavation samples were collected. One soil sample was collected from each of the four sidewalls of the excavation (Samples PX-1 through PX-4) and two samples.were collected from the bottom of the excavation (Samples PX-5 and PX-6). Three additional quality assurance/quality control (QA/QC) samples were submitted for analysis: field blank sample (FB-1), duplicate sample (PX-2DUP), and a trip blank.

The samples were stored on ice at 4°C in a cooler and transported under chain of custody procedures to Severn Trent Laboratories in Monroe, Connecticut. The samples were analyzed for volatile organic compounds (VOCs) using the United States Environmental Protection Agency (USEPA) Method 8260 and semi-volatile organic compounds (SVOCs) using USEPA Method 8270. Additionally, one sample was collected from the stockpiled soil (WC-1) and analyzed for waste disposal parameters.

Soil analytical results were compared to the NYSDEC Recommended Soil Cleanup Objectives (RSCOs). The laboratory results for the VOC and SVOC analyses are summarized in Table 1.

VOCs

Low concentrations of VOCs were detected in all of the post-excavation samples collected. The VOCs detected included acetone, benzene, toluene, ethylbenzene, and xylenes. None of the samples contained concentrations of VOCs exceeding the NYSDEC RSCOs.

SVOCs

Low concentrations of SVOCs were detected in all of the post-excavation samples collected, except for sample PX-3. Samples PX-1, PX-2 (and duplicate), PX-4, PX-5, and PX-6 contained several polyaromatic hydrocarbons (PAHs) at concentrations above their respective NYSDEC RSCOs. The PAHs detected at concentrations exceeding the NYSDEC RSCOs included benzo[a]anthracene, fluoranthene, phenanthrene, pyrene, and benzo[a]pyrene. These concentrations of SVOCs have been observed consistently in fill at other sites in the surrounding area and are attributable to the historical nature of the fill in an urban area.

Waste Characterization

The concentrations of VOCs and SVOCs in the waste characterization samples were significantly higher than the VOC and SVOC concentrations in the post-excavation samples. This indicates that the areas of impacted soil have been removed. Waste characterization results are provided in Table 2.

Conclusions

Based on the analytical results (a comparison between the post-excavation and waste characterization analyses and field observations), Roux Associates concludes that impacted soil associated with the excavation of the USTs has been removed from the excavation and no further investigation is warranted. The concentrations of SVOCs remaining at the site are consistent with regional background concentrations and attributable to historic fill. Additionally, site reconnaissance has identified no buildings immediately adjacent to the site that have basements or other subsurface structures that could potentially be impacted by the low concentrations of PAHs remaining. Roux Associates thereby requests permission from the NYSDEC to conclude investigation and remediation activities at the site.

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,

ROUX ASSOCIATES, INC.

Christopher Battista
Project Scientist

William Holubowich
Senior Scientist

Nathan Epler, Ph.D.
Principal Hydrogeologist

cc: Timothy Simmons, High Line Partners, LLC.
Alf Naman, High Line Partners, LLC.

Table 1. Summary of Post-Excavation Soil Samples, 507-511 West 24th Street, New York, New York

Parameter	NYSDEC RSCOs (µg/kg)	**Sample Designation:**	PX-1	PX-2	PX-2 DUP	PX-3	PX-4	PX-5	PX-6	TRIP BLANK	FB-1
		Sample Date:	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05 (Units in µg/L)
Semivolatile Organic Compounds (µg/kg)											
1,2,4-Trichlorobenzene	3400		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
1,2-Dichlorobenzene	7900		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
1,3-Dichlorobenzene	1600		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
1,4-Dichlorobenzene	8500		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,2'-oxybis (1-chloropropane)	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,4,5-Trichlorophenol	100		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
2,4,6-Trichlorophenol	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,4-Dichlorophenol	400		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,4-Dimethylphenol	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,4-Dinitrophenol	200		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
2,4-Dinitrotoluene	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2,6-Dinitrotoluene	100		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2-Chloronaphthalene	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2-Chlorophenol	800		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2-Methylnaphthalene	36400		390 U	58 J	370 U	350 U	350 U	92 J	410 U	NA	10 U
2-Methylphenol	100		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
2-Nitroaniline	430		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
2-Nitrophenol	330		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
3,3'-Dichlorobenzidine	--		770 U	710 U	740 U	710 U	710 U	720 U	820 U	NA	20 U
3-Nitroaniline	500		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
4,6-Dinitro-2-methylphenol	--		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
4-Bromophenyl phenyl ether	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
4-Chloro-3-methylphenol	240		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
4-Chloroaniline	220		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
4-Chlorophenyl phenyl ether	--		390 U*	360 U*	370 U*	350 U*	350 U*	360 U*	410 U*	NA	10 U
4-Methylphenol	900		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
4-Nitroaniline	--		770 U*	710 U*	740 U*	710 U*	710 U*	720 U*	820 U*	NA	20 U
4-Nitrophenol	100		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
Acenaphthene	50000		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Acenaphthylene	50000		390 U	360 U	370 U	350 U	350 U	360 U	66 J	NA	10 U
Anthracene	50000		390 U	110 J	100 J	350 U	350 U	360 U	170 J	NA	10 U
Benzo[a]anthracene	224		110 J	**590**	**590**	350 U	200 J	190 J	**670**	NA	10 U
Benzo[a]pyrene	61		**110 J**	**430**	**530**	350 U	**160 J**	**190 J**	**680**	NA	10 U
Benzo[b]fluoranthene	220		390 U	**770**	**500**	350 U	190 JM	160 J	**540**	NA	10 U
Benzo[g,h,i]perylene	50000		66 J	260 J	180 J	350 U	100 J	75 JM	230 J	NA	10 U
Benzo[k]fluoranthene	220		86 JM	360 U	**540**	350 U	210 J	190 J	**630**	NA	10 U
Benzyl Alcohol	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U

Table 1. Summary of Post-Excavation Soil Samples, 507-511 West 24th Street, New York, New York

Parameter	NYSDEC RSCOs (µg/kg)	Sample Designation: / Sample Date:	PX-1 02/18/05	PX-2 02/18/05	PX-2 DUP 02/18/05	PX-3 02/18/05	PX-4 02/18/05	PX-5 02/18/05	PX-6 02/18/05	TRIP BLANK 02/18/05	FB-1 02/18/05 (Units in µg/L)
Semivolatile Organic Compounds (µg/kg)											
Bis(2-chloroethoxy)methane	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Bis(2-chloroethyl) ether	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Bis(2-ethylhexyl) phthalate	50000		90 J	54 J	370 U	350 U	350 U	360 U	410 U	NA	10 U
Butylbenzyl phthalate	50000		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Carbazole	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Chrysene	400		110 J	**580**	**640**	350 U	240 J	230 J	**750**	NA	10 U
Dibenzo[a,h]anthracene	14.3		390 U	**100 J**	**73 JM**	350 U	350 U	360 U	**89 JM**	NA	10 U
Dibenzofuran	6200		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Diethyl phthalate	7100		390 U*	360 U*	370 U*	350 U*	350 U*	360 U*	410 U*	NA	10 U
Dimethyl phthalate	2000		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Di-n-butyl phthalate	8100		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Di-n-octyl phthalate	50000		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Fluoranthene	50000		170 J	1100	1300	350 U	260 J	400	1400	NA	10 U
Fluorene	50000		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Hexachlorobenzene	41		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Hexachlorobutadiene	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Hexachlorocyclopentadiene	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Hexachloroethane	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Indeno[1,2,3-cd]pyrene	3200		60 J	230 J	170 J	350 U	99 J	70 J	220 J	NA	10 U
Isophorone	4400		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Naphthalene	13000		390 U	360 U	370 U	350 U	350 U	88 J	73 J	NA	10 U
Nitrobenzene	200		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
n-Nitrosodi-n-propylamine	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
n-Nitrosodiphenylamine	--		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Pentachlorophenol	1000		1900 U	1700 U	1800 U	1700 U	1700 U	1800 U	2000 U	NA	50 U
Phenanthrene	50000		83 J	540	380	350 U	150 J	190 J	730	NA	10 U
Phenol	30		390 U	360 U	370 U	350 U	350 U	360 U	410 U	NA	10 U
Pyrene	50000		220 J	1300	1100	350 U	330 J	390	1300	NA	10 U
Volatile Organic Compounds (µg/kg)											
1,1,1-Trichloroethane	800		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,1,2,2-Tetrachloroethane	600		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,1,2-Trichloroethane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,1-Dichloroethane	200		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,1-Dichloroethene	400		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,2-Dichloroethane	100		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
1,2-Dichloropropane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
2-Butanone	300		12 U	11 U	11 U	11 U	11 U	5.4 J	13 U	10 U	10 U
2-Hexanone	--		12 U	11 U	11 U	11 U	11 U	11 U	13 U	10 U	10 U

Table 1. Summary of Post-Excavation Soil Samples, 507-511 West 24th Street, New York, New York

Parameter	NYSDEC RSCOs (µg/kg)	**Sample Designation:**	PX-1	PX-2	PX-2 DUP	PX-3	PX-4	PX-5	PX-6	TRIP BLANK	FB-1
		Sample Date:	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05	02/18/05 (Units in µg/L)
Volatile Organic Compounds (µg/kg)											
4-Methyl-2-pentanone	1000		12 U	11 U	11 U	11 U	11 U	11 U	13 U	10 U	10 U
Acetone	200		2.6 J	7.9 J	17	2.4 J	3.2 J	19 B	30	4.9 J	4 J
Benzene	60		6 U	5.7 U	2.5 J	5.6 U	5.6 U	5.7 U	18	5 U	5 U
Bromodichloromethane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Bromoform	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Bromomethane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Carbon disulfide	2700		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Carbon tetrachloride	600		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Chlorobenzene	1700		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Chloroethane	1900		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Chloroform	300		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Chloromethane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
cis-1,2-Dichloroethene	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
cis-1,3-Dichloropropene	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Dibromochloromethane	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Ethylbenzene	5500		6 U	15	23	5.6 U	5.6 U	2.7 J	110	5 U	5 U
Methylene chloride	100		12 U	11 U	11 U	11 U	11 U	11 UB	13 U	2.2 JB	5 UB
Styrene	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Tetrachloroethene	1400		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Toluene	1500		6 U	23	37	5.6 U	5.6 U	3.6 J	190	5 U	5 U
trans-1,2-Dichloroethene	300		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
trans-1,3-Dichloropropene	--		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Trichloroethene	700		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Vinyl chloride	200		6 U	5.7 U	5.7 U	5.6 U	5.6 U	5.7 U	6.4 U	5 U	5 U
Xylenes (total)	1200		6 U	130	200	5.6 U	5.6 U	29	740	5 U	5 U

Notes:
µg/kg - Micrograms per kilogram
µg/L - Micrograms per liter
* - Batch QC exceeds the upper or lower control limits
B - Detected in lab blank
J - Estimated value
M - Manually integrated compound
U - Not detected
NYSDEC - New York State Department of Environmental Conservation
RSCOs - Recommended Soil Cleanup Objectives
- - No NYSDEC RSCO available

Note:
Bold data indicates that parameter was detected above the NYSDEC RSCOs

Table 2. Summary of Waste Characterization Samples, 507-511 West 24th Street, New York, New York

Parameter	Sample Designation: / Sample Date:	WC-1 02/18/05	WC-1 DL 02/18/05
TCLP Metals (mg/L)			
Arsenic		0.2 U	NA
Barium		0.634	NA
Cadmium		0.0155 B	NA
Chromium		0.05 U	NA
Copper		3.72	NA
Lead		0.505	NA
Mercury		0.01 U	NA
Nickel		0.0269 B	NA
Selenium		0.15 U	NA
Silver		0.03 U	NA
Zinc		4.44	NA
Reactive Cyanide (µg/Kg)		500 U	NA
Reactive Sulfide (mg/Kg)		20 U	NA
Polychlorinated Biphenyl Compounds (µg/Kg)			
Aroclor-1016		19 U	NA
Aroclor-1221		37 U	NA
Aroclor-1232		19 U	NA
Aroclor-1242		19 U	NA
Aroclor-1248		19 U	NA
Aroclor-1254		19 U	NA
Aroclor-1260		16 JM	NA
Semivolatile Organic Compounds (µg/kg)			
Acenaphthene		190 J	190 JH
Acenaphthylene		62 J	720 U
Anthracene		520	510 J
Benzo[a]anthracene		1400	1500
Benzo[a]pyrene		1300	1200
Benzo[b]fluoranthene		1000	920
Benzo[g,h,i]perylene		350 J	650 J
Benzo[k]fluoranthene		1300	1100
Chrysene		1600	1700
Dibenzo[a,h]anthracene		120 J	210 J
Fluoranthene		3400 A	3500 H
Fluorene		200 J	720 U
Indeno[1,2,3-cd]pyrene		350 J	570 J
Naphthalene		120 J	720 U
Phenanthrene		2700	3000
Pyrene		3100 A	3300
Volatile Organic Compounds (µg/kg)			
1,1,1,2-Tetrachloroethane		5.8 U	12 U
1,1,1-Trichloroethane		5.8 U	12 U
1,1,2,2-Tetrachloroethane		5.8 U	12 U
1,1,2-Trichloroethane		5.8 U	12 U
1,1-Dichloroethane		5.8 U	12 U
1,1-Dichloroethene		5.8 U	12 U
1,1-Dichloropropene		5.8 U	12 U
1,2,3-Trichlorobenzene		5.8 U	12 U
1,2,3-Trichloropropane		5.8 U	12 U
1,2,4-Trichlorobenzene		5.8 U	12 U

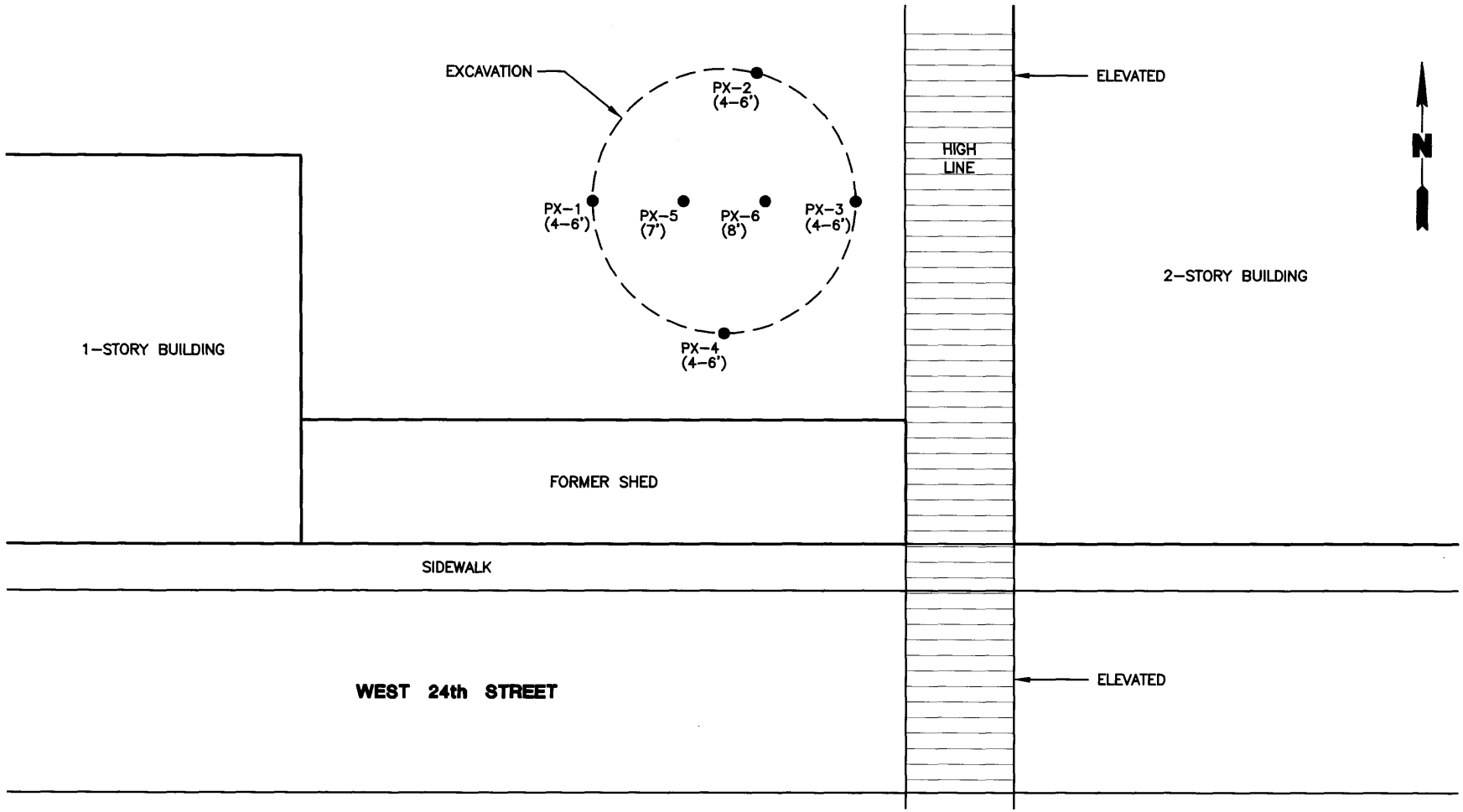
Table 2. Summary of Waste Characterization Samples, 507-511 West 24th Street, New York, New York

Volatile Organic Compounds (µg/kg)		
1,2,4-Trimethylbenzene	310 A	55
1,2-Dibromo-3-chloropropane	5.8 U	12 U
1,2-Dibromoethane	5.8 U	12 U
1,2-Dichlorobenzene	5.8 U	12 U
1,2-Dichloroethane	5.8 U	12 U
1,2-Dichloropropane	5.8 U	12 U
1,3,5-Trimethylbenzene	80	21
1,3-Dichlorobenzene	5.8 U	12 U
1,3-Dichloropropane	5.8 U	12 U
1,4-Dichlorobenzene	5.8 U	12 U
2,2-Dichloropropane	5.8 U	12 U
2-Butanone	12 U	23 U
2-Chlorotoluene	5.8 U	12 U
2-Hexanone	12 U	23 U
4-Chlorotoluene	5.8 U	12 U
Acetone	13	24 B
Benzene	3.5 J	12 U
Bromobenzene	5.8 U	12 U
Bromochloromethane	5.8 U	12 U
Bromodichloromethane	5.8 U	12 U
Bromoform	5.8 U	12 U
Bromomethane	5.8 U	12 U
Carbon disulfide	5.8 U	12 U
Carbon tetrachloride	5.8 U	12 U
Chlorobenzene	5.8 U	12 U
Chloroethane	5.8 U	12 U
Chloroform	5.8 U	12 U
Chloromethane	5.8 U	12 U
cis-1,2-Dichloroethene	5.8 U	12 U
Dibromochloromethane	5.8 U	12 U
Dibromomethane	5.8 U	12 U
Dichlorodifluoromethane	5.8 U	12 U
Ethylbenzene	24	12 U
Hexachlorobutadiene	5.8 U	12 U
Isopropylbenzene	6.2	12 U
m+p-Xylene	110	12 U
Methylene chloride	12 U	11 JB
MTBE	97	4.4 J
Naphthalene	65	33
n-Butylbenzene	26	3.6 J
n-Propylbenzene	30	5.2 J
o-Xylene	55	8.1 J
p-Isopropyltoluene	5.2 J	12 U
sec-Butylbenzene	6.5	12 U
Styrene	5.8 U	12 U
tert-Butylbenzene	5.8 U	6.6 J
Tetrachloroethene	5.8 U	12 U
Toluene	50	12 U
trans-1,2-Dichloroethene	5.8 U	12 U
Trichloroethene	5.8 U	12 U
Trichlorotrifluoroethane	5.8 U	12 U
Vinyl acetate	5.8 U	12 U
Vinyl chloride	5.8 U	12 U
Total Petroleum Hydrocarbons (µg/Kg)		
Diesel Range Organics	220000	NA
Gasoline Range Organics	7000	NA

Table 2. Summary of Waste Characterization Samples, 507-511 West 24th Street, New York, New York

Wet Chemistry		
Corrosivity (yes/no)	no	NA
Ignitability (Pos/Neg)	neg	NA
pH (pH Units)	10.02	NA

Notes:
µg/kg - Micrograms per kilogram
µg/L - Micrograms per liter
A - Concentration exceeds the instrument calibration range or below the reporting limit.
B (inorganics) - Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL
B (organics) - Detected in lab blank
H - Alternate peak selection upon analytical review
J - Estimated value
M - Manually integrated compound
U - Not detected



LEGEND

PX-1 ● SOIL BORING/SAMPLE LOCATION AND DESIGNATION

(4-6') SAMPLE DEPTH IN FEET

Title:

SOIL SAMPLE LOCATION MAP

507 WEST 24th STREET
NEW YORK, NEW YORK

Prepared For:

ROUX ASSOCIATES, INC. *Environmental Consulting & Management*	Compiled by: W.H.	Date: 01MAR05	FIGURE 1
	Prepared by: G.M.	Scale: NTS	
	Project Mgr: W.H.	Office: NY	
	File No: ALF0410201	Project: 126204Y	

NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 2
Spill Number: 0412228

Spill Date/Time

Spill Date: 02/16/2005 **Spill Time:** 11:02:00 AM
Call Received Date: 02/16/2005 **Call Received Time:** 11:02:00 AM

Location

Spill Name: VACANT LOT
Address: 511 WEST 24TH STREET
City: MANHATTAN **County:** NEW_YORK

Spill Description

Material Spilled	Amount Spilled	Resource Affected
UNKNOWN PETROLEUM	UNKNOWN	Groundwater

Cause: Tank Failure
Source: Institutional, Educational, Gov., Other
Waterbody:

Record Close

Date Spill Closed: 03/16/2005

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

If you have questions about this reported incident, please contact the Regional Office where the incident occurred.

Refine Current Search