

Phase II Environmental Site Assessment Work Plan

Good Counsel Site:
Open Space Fill Area

52 North Broadway
White Plains, New York

PREPARED FOR

City of White Plains

70 Church Street
White Plains, NY 10601

Attention: *Damon A. Amadio, PE*
Commissioner of Building

July 25, 2018

PREPARED BY



50 Main Street - Suite 360
White Plains, NY 10606-1900
(914) 467-6600



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1.0

Introduction

VHB has prepared this Phase II Environmental Site Investigation (ESA) Work Plan for the City of White Plains in connection with a backfilled former athletic field located at 52 North Broadway in White Plains, New York (hereinafter referred to as the “subject property”). This Phase II ESA Work Plan is intended to be provided to the property owner and the New York State Department of Environmental Conservation (NYSDEC) for approval.

The subject property is located to the north of Ross Street and to the west of the Cross Westchester Expressway (aka Interstate 287) in the City of White Plains, Westchester County, New York. The former athletic field was constructed between circa 2004 and 2006 utilizing imported backfill containing construction and demolition (C&D) debris. Following involvement by the NYSDEC, the backfilled area was covered with a geotextile membrane, soil cap and vegetated cover. The subject property is also referred to as the “Good Counsel Site: Open Space Fill Area.”

The subject property, along with adjacent areas, is proposed to be redeveloped with residential buildings. Based upon the known presence of backfilled materials, a Phase II ESA is proposed, which will include a geophysical survey, geotechnical borings, soil sampling and soil vapor sampling activities. A summary of proposed activities is provided below.



2.0

Site Background

Site history for the subject property is outlined in a memorandum prepared by AKRF, Inc. (AKRF), dated October 21, 2016. AKRF reviewed the following documents during the preparation of the aforementioned memorandum:

- *Site Investigation Plan*, dated August 18, 2004, prepared on behalf of The Sisters of the Divine Compassion and WJL Equities Corporation.
- *Site Investigation Report & Remediation Plan*, dated January 10, 2005, prepared by EnviroClean Services, LLC, prepared on behalf of The Sisters of the Divine Compassion and WJL Equities Corporation.
- Property Deed, dated August 24, 2006 for 52 North Broadway, White Plains. This deed was recorded September 28, 2006 with the Westchester County Clerk.
- Notice of Violation correspondence from the NYSDEC to WJL Equities re: NYSDEC Case No. R3-20040511-68, dated February 28, 2007.
- *Final Engineer's Report*, dated March 28, 2007, prepared by EnviroClean Services, LLC on behalf of The Sisters of the Divine Compassion and WJL Equities Corporation.
- Correspondence from the NYSDEC to The Sisters of the Divine Compassion re: NYSDEC Case No. R3-20040511, dated October 22, 2014.
- Correspondence from EnviroClean Services, LLC with attached Soil & Soil Vapor Analysis Report to the NYSDEC, dated August 12, 2012.

According to the information provided in AKRF's October 21, 2016 memorandum, the former athletic field (the subject property) was constructed between 2004 and 2006 with imported C&D debris. The Sisters of Divine Compassion received a Special Permit from the City of White Plains for the construction of the athletic field, and WJL Equities Corporation imported more than 30,000 cubic yards (c.y.) of fill material to the subject property. On April 23, 2004, the NYSDEC inspected the site and determined that the fill material contained C&D debris which included asphalt and crushed concrete. The use of the imported backfill material was determined to be in



violation of the NYSDEC's solid waste regulations, as use of fill containing C&D requires approval from the NYSDEC.

In September 2004, an Order on Consent was issued, indicating that an investigation of the backfilled area was required. The Order on Consent further stipulated that all investigation and remediation reports be reviewed and approved by the NYSDEC with a final report certified by a professional engineer. Site investigation activities conducted in November 2004, which included the excavation of test pits and the collection and analysis of samples of the fill material, determined that semi-volatile organic compounds (SVOCs) were present in the fill materials at concentrations which exceed the NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs).

In July 2005, the NYSDEC approved a plan to import an additional 30,000 c.y. of recognizable, uncontaminated concrete, asphalt, rock, brick and soil (RUCARBS) to complete the athletic field. The additional backfill activities occurred from August 2005 through October 2005. Soil samples obtained from the additional imported material reported concentrations of SVOCs in contravention of NYSDEC Part 375 UUSCOs, consistent with the previously imported fill.

The NYSDEC required that a geotextile liner be installed above the imported materials, followed by a soil cap and vegetated cover to prevent direct contact with the fill material and to prevent the infiltration of groundwater. These activities were completed in July 2005. A deed restriction was placed on the property to identify the boundaries of the backfilled area, prevent disturbance of the geotextile liner, maintain the site cap and restrict use of the area to open space. The NYSDEC further stipulated that they be notified of any disturbance of the backfilled area and that any proposed change of use of the backfilled area be reviewed and approved by the NYSDEC.

A Final Engineer's Report was submitted to the NYSDEC in March 2007 and in October 2014, the NYSDEC issued correspondence indicating that there were no continuing obligations under the Order on Consent.

Additional investigation activities were conducted in 2012 to evaluate the fill area in association with a potential redevelopment. The soil sampling activities identified exceedances of SVOCs consistent with previous investigations, and identified petroleum compounds, chlorinated solvents and methane in soil gas beneath the geotextile liner. The results were provided to the NYSDEC; however, the potential redevelopment was not further pursued at that time.



3.0

Environmental Site Investigation

3.1 Geophysical Survey

Prior to invasive work, a public utility mark-out (“Call Before You Dig”) will be completed for the subject property in accordance with local laws to locate buried electric, natural gas, telecommunication utilities, etc.

A geophysical survey (e.g., magnetometer and ground penetrating radar [GPR] surveys, radio frequency [RF] line tracers, fiber-optic cameras, etc.) will be conducted to identify subsurface utilities within or proximate to the areas of concern in anticipation of the proposed soil boring program. The geophysical survey will focus on identifying subgrade sanitary lines and subgrade electric conduits which have been reported to be present at the subject property. Each of the subgrade structures will be identified utilizing geophysical equipment and will be marked-out. VHB estimates that the geophysical survey will be completed in one day.

3.2 Geotechnical Borings

Four (4) borings will be installed at the subject property in order to facilitate a geotechnical investigation. The proposed boring locations (B-101 through B-104) are depicted on Figure 2. Each of the four (4) geotechnical borings will be precleared by hand to approximately five feet below grade surface (bgs) to expose the subgrade geotextile liner. An approximately one-foot-by-one-foot square of the geotextile liner will then be cut and removed.

A ten-wheel truck mounted hollow stem auger/mud rotary/rock coring drill rig will then be utilized to install the soil borings. Split spoon samples will be collected continuously for ten feet beneath the geotextile liner (to approximately 15 feet bgs), and then at a frequency of every five feet to refusal with blow counts recorded. Each



split spoon will be classified in accordance with the USCS classification system, and samples will be placed in ziplock bags.

Upon refusal, the four geotechnical borings will be advanced an additional ten feet into bedrock utilizing a NQ-wire-line coring technique. Bedrock cores will be placed into wooden core boxes. Bedrock is anticipated to be encountered at approximately 40 feet bgs. As such, the terminal depth of the four (4) geotechnical borings is estimated to be 50 feet bgs.

All field equipment, including augers, rods and sampling equipment will be decontaminated between boring locations using an Alconox detergent/potable water wash and potable water rinse.

Following the completion of the geotechnical borings, the soil samples and bedrock cores will be transferred to an on-site representative of the property owner for geotechnical evaluation. The geotechnical borings will then be tremi-grouted from the terminal depth to grade level with a neat cement/bentonite grout.

All liquids utilized to install the geotechnical borings and decontaminate field equipment will be placed into DOT-approved 55-gallon drums and will be temporarily staged on-site pending off-site disposal.

3.3 Soil Boring Investigation

To evaluate subsurface conditions beneath the existing geotextile membrane, eleven (11) soil borings will be advanced at the subject property, in addition to the four (4) geotechnical borings which were previously discussed. The eleven (11) proposed soil borings (SB-1 through SB-11) are depicted on Figure 2.

Each of the eleven (11) soil borings will be precleared by hand to approximately five feet bgs to expose the subgrade geotextile liner. An approximately one-foot-by-one-foot square of the geotextile liner will then be cut and removed. A ten-wheel truck mounted drill rig equipped with four-and-one-quarter inch inner diameter (ID) hollow stem augers will then be utilized to install the soil borings. Split spoon samples will be collected continuously for approximately 25 feet beneath the geotextile liner (approximately 30 feet bgs).

All soil samples will be evaluated by VHB personnel for the presence of petroleum-related releases by visual and olfactory indications and through photoionization detector (PID)¹ readings. Soil samples selected for analysis will be biased to suspected contamination (e.g., staining, odors, positive PID responses, etc.), if encountered.



¹ A PID is a field instrument capable of measuring a wide range of volatile organic compounds (VOCs).



The selected soil samples will be transferred into laboratory-supplied glassware, maintained at a temperature at or below 4° Celsius, and submitted to New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and a National Environmental Laboratory Accreditation Program (NELAP)-certified laboratory using appropriate chain-of-custody protocols. Eleven soil samples (one from each proposed boring) will be submitted for laboratory analysis of NYSDEC Part 375 List VOCs using United States Environmental Protection Agency (USEPA) Method 8260 and NYSDEC Part 375 List semi-volatile organic compounds (SVOCs) using USEPA Method 8270. Five (5) of the soil samples will also be submitted for laboratory analysis of NYSDEC Part 375 List metals using USEPA Methods 6010 and 7471, NYSDEC Part 375 List pesticides using USEPA Method 8081 and NYSDEC Part 375 List polychlorinated biphenyls (PCBs) using USEPA Method 8082.

No evidence of asbestos-containing materials (ACM) in subsurface fill has previously been identified. However, should suspected ACM be encountered during the soil sampling activities, additional samples will be submitted for laboratory analysis for asbestos.

All field equipment, including augers, rods and sampling equipment will be decontaminated between boring locations using an Alconox detergent/potable water wash and potable water rinse.

The soil borings will be backfilled with drill cuttings from the terminal depth to approximately five feet bgs, or just below the geotextile liner. The borings will then be backfilled with a neat cement/bentonite grout to grade level. All excess drill cuttings, and liquids utilized to decontaminate field equipment will be placed into DOT-approved 55-gallon drums and will be temporarily staged on-site pending off-site disposal.

3.4 Soil Vapor Investigation

A soil vapor investigation will be conducted at the subject property in order to determine if a Vapor Encroachment Condition (VEC) is present. In order to perform a soil vapor study at the subject property, four (4) soil vapor sample points will be installed (samples SV-1, SV-2, SV-3, and SV-4 as depicted on Figure 3).

Each of the four (4) soil vapor sample point locations will be precleared by hand to approximately five feet bgs to expose the subgrade geotextile liner. An approximately one-foot-by-one-foot square of the geotextile liner will then be cut and removed. A hollow stem auger drill rig equipped with two-and-a-half inch ID augers will be utilized to install the soil vapor implants below the geotextile liner.



The vapor implants will consist of a six inch decontaminated stainless steel soil vapor screen attached to factory new polyethylene tubing which will extend to grade. A washed #1 crushed stone or washed gravel will be utilized to fill the annular space to just above the soil vapor screen, followed by a two inch fine sand seal and a high solids bentonite slurry seal. Clean sand will be utilized to fill the remaining annular space to grade level. The sample points will be sealed into the ground using non-toxic modeling clay or clay bentonite to prevent ambient air from being drawn into the boreholes and mixing with the potential soil vapors to be sampled. The areas immediately above each sample point will be sealed with bentonite clay and a canister; thus creating an annular space. Helium will be introduced into each annular space as a tracer gas for quality assurance/quality control (QA/QC) analysis. Prior to sampling, each soil vapor sampling point will be purged of three (3) tube volumes of soil vapor. A 2.7-liter, laboratory supplied vacuum Summa canister will then be connected to the polyethylene tubing, and the sample will be collected over a two-hour period at a pre-determined flow rate calibrated by the laboratory and consistent with NYSDOH Guidance.

Each of the four (4) Summa vacuum canisters will be submitted to an ELAP and NELAP-certified laboratory under appropriate chain-of-custody protocols for analysis of VOCs using USEPA Method TO-15 and methane. In addition, the four (4) soil vapor samples will also be analyzed for helium for QA/QC purposes.

Following the completion of the soil vapor sampling activities, the soil vapor sample points will be over-drilled with the aforementioned hollow stem auger drill rig and will be removed. The borings will be backfilled to grade with a neat cement/bentonite grout. All excess soils generated during the installation and removal of the soil vapor sample points will be placed into 55-gallon drums.

3.5 Waste Management

VHB estimates that approximately 30 55-gallon DOT-approved drums of surplus drill spoils and liquids will be generated during the proposed Phase II ESA activities. Based upon the presence of fill materials beneath the geotextile liner, it is assumed that additional waste characterization sampling will be necessary to facilitate off-site disposal facility acceptance of the drummed materials. The transportation of the drummed materials will be performed by licensed transporters with valid NYSDEC 6 NYCRR 364 Waste Transporter Permits, materials will be appropriately manifested, and drums will be transported to an off-site disposal facility meeting the requirements of 6 NYCRR Part 360 or an equivalent out-of-state facility approved by the appropriate regulatory agency of that State.



3.6 Reporting

At the conclusion of field work, VHB will provide a Phase II ESA report. This report will include detailed summaries of the investigative findings and soil analytical results compared to the NYSDEC Part 375 Soil Cleanup Objectives. Soil vapor results will be compared to the NYSDOH 75th Percentiles for Indoor Air concentrations, as outlined in Table C1: NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006. In addition to the Guidance, the following VOCs are subject to, and will be evaluated in accordance with the NYSDOH Soil Vapor/Indoor Air Matrices A, B and C:

- Carbon tetrachloride
- 1,1-dichloroethene
- Cis-1,2-dichloroethene
- Trichloroethene (TCE)
- Methylene chloride
- Tetrachloroethene (PCE)
- 1,1,1-trichloroethane (1,1,1-TCA)
- Vinyl chloride

4.0

Quality Assurance/Quality Control

4.1 Quality Assurance/Quality Control Procedures

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used (1) to document that samples are representative of actual conditions at the Site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. A summary of the field and laboratory QA/QC procedures is provided below.

4.2 Field QA/QC

Field QA/QC will include the following procedures:

- Calibration of field equipment, including PID, on a daily basis.
- Use of field decontaminated and/or disposable field sampling equipment.
- Proper sample handling and preservation.
- Proper sample chain of custody documentation.
- Completion of report logs.

The above procedures will be executed as follows:

- Stainless steel tools field decontaminated using an Alconox detergent/potable water wash and potable water rinse.
- Disposable factory-new sampling equipment and nitrile gloves to minimize cross-contamination between samples.
- For each of the parameters analyzed, a sufficient sample volume will be collected to adhere to the specific analytical protocol, and provide sufficient sample for reanalysis if necessary.
- Because plasticizers and other organic compounds inherent in plastic containers may contaminate samples requiring organic analysis, samples will be collected in glass containers.
- Appropriate sample preservation techniques, including cold temperature storage at 4° C, will be utilized to ensure that the analytical parameters concentrations do not change between the time of sample collection and analysis.
- Samples will be analyzed prior to the expiration of the respective holding time for each analytical parameter to ensure the integrity of the analytical results.

4.3 Sample Custody

Sample handling in the field will conform to appropriate sample custody procedures. Field custody procedures include proper sample identification, chain-of-custody forms, and packaging and shipping procedures. Sample labels will be attached to all sampling bottles before field activities begin to ensure proper sample identification. Each label will identify the site and sample location. Styrofoam or bubble wrap will be used to absorb shock and prevent breakage of sample containers. Ice or ice packs will be placed in between the plastic bags for sample preservation purposes.

After each sample is collected and appropriately identified, the following information will be entered into the chain-of-custody form:

- Site name and address.
- Sampler(s) name(s) and signature(s).
- Names and signatures of persons involved in the chain of possession of samples.
- Sample number.
- Number of containers.
- Sample location.
- Date and time of collection.
- Type of sample, sample matrix and analyses requested.
- Preservation used (if any).



- Any pertinent field data collected (e.g., pH, temperature, conductivity, Dissolved Oxygen [DO]).

The sampler will sign and date the “Relinquished” blank space prior to removing one copy of the custody form and sealing the remaining copies of the form in a Ziploc plastic bag taped to the underside of the sample cooler lid. The sample cooler will be sealed with tape prior to delivery or shipment to the laboratory.

4.4 Report Logs

Field logs and borings logs will be completed during the course of this investigation. A field log will be completed on a daily basis which will describe all field activities including:

- Project number, name, manager, and address.
- The date and time.
- The weather conditions.
- On-site personnel and associated affiliations.
- Description of field activities.
- Pertinent sample collection information including sample identification numbers, description of samples, location of sampling points, number of samples taken, method of sample collection and any factors that may affect its quality, time of sample collection, name of collector, and field screening results.

A boring log will be completed for the soil boring and will include the following information:

- Project number, name, manager, and location.
- The date and time.
- Drilling company and method used.
- Boring number.
- Total boring depth and water table depths.
- Pertinent soil sample information including sample number, interval, depth, amount recovered, color, composition, percent moisture, visual and olfactory observations of contamination, and PID readings.

4.5 Laboratory QA/QC

An ELAP and NELAP-certified laboratory will be used for all sample analyses. The laboratory will follow the following QA/QC protocols. Samples will be received by



laboratory personnel, who will inspect the sample cooler(s) to check the integrity of the custody seals. The cooler(s) will then be opened, the samples unpackaged, and the information on the chain-of-custody form examined. If the shipped samples match those described on the chain-of-custody form, the laboratory sample custodian will sign and date the form on the next "Received" blank and assume responsibility for the samples. If problems are noted with the sample shipment, the laboratory custodian will sign the form and record problems in the "Remarks" box. The custodian will then immediately notify the Project Manager so appropriate follow-up steps can be implemented on a timely basis.

A record of the information detailing the handling of a particular sample through each stage of analysis will be maintained by the laboratory. The record will include:

- Job reference, sample matrix, sample number, and date sampled.
- Date and time received by laboratory, holding conditions, and analytical parameters.
- Extraction date, time and extractor's initials (if applicable), analysis date, time, and analyst's initials.
- QA batch number, date reviewed, and reviewer's initials.



5.0

Health and Safety Plan (HASP)

5.1 Health and Safety Plan (HASP)

A site specific Health and Safety Plan (HASP) has been prepared by VHB for use by VHB and any VHB subcontractors. Investigative work performed under this Work Plan will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. The parties performing the investigation work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations. The HASP will be provided under separate cover.

All VHB field personnel involved in investigation activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. A VHB designated Site Safety Officer will be responsible for maintaining VHB workers training records.

VHB personnel entering any exclusion zone will be trained in the provisions of the HASP and will be required to sign a HASP acknowledgment. Site-specific training will be provided to VHB field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted by on-site VHB personnel with VHB and VHB subcontractors before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; personal protective equipment (PPE) levels and other relevant safety topics. Meetings will be documented in a log book or specific form. Potential on-site chemicals of concern include VOCs, SVOCs and heavy metals. Information fact sheets for each contaminant group and/or material safety data sheets (MSDS') is included in the HASP.



An emergency contact sheet with names and phone numbers for all pertinent project personnel as well as regulatory hotline information is included in the HASP, which defines the specific project contacts for use in case of emergency.

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This Phase II Environmental Site Assessment Work Plan was prepared by:

Prepared by: Heather Waldmann, CHMM
Senior Project Manager
VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

Signature: by:  _____

Supervised by: Stephen Kaplan, PG
Director, OHM Services
VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

VHB Engineering, Surveying, Landscape Architecture and Geology, P.C.

Signature: by:  _____



ATTACHMENT A

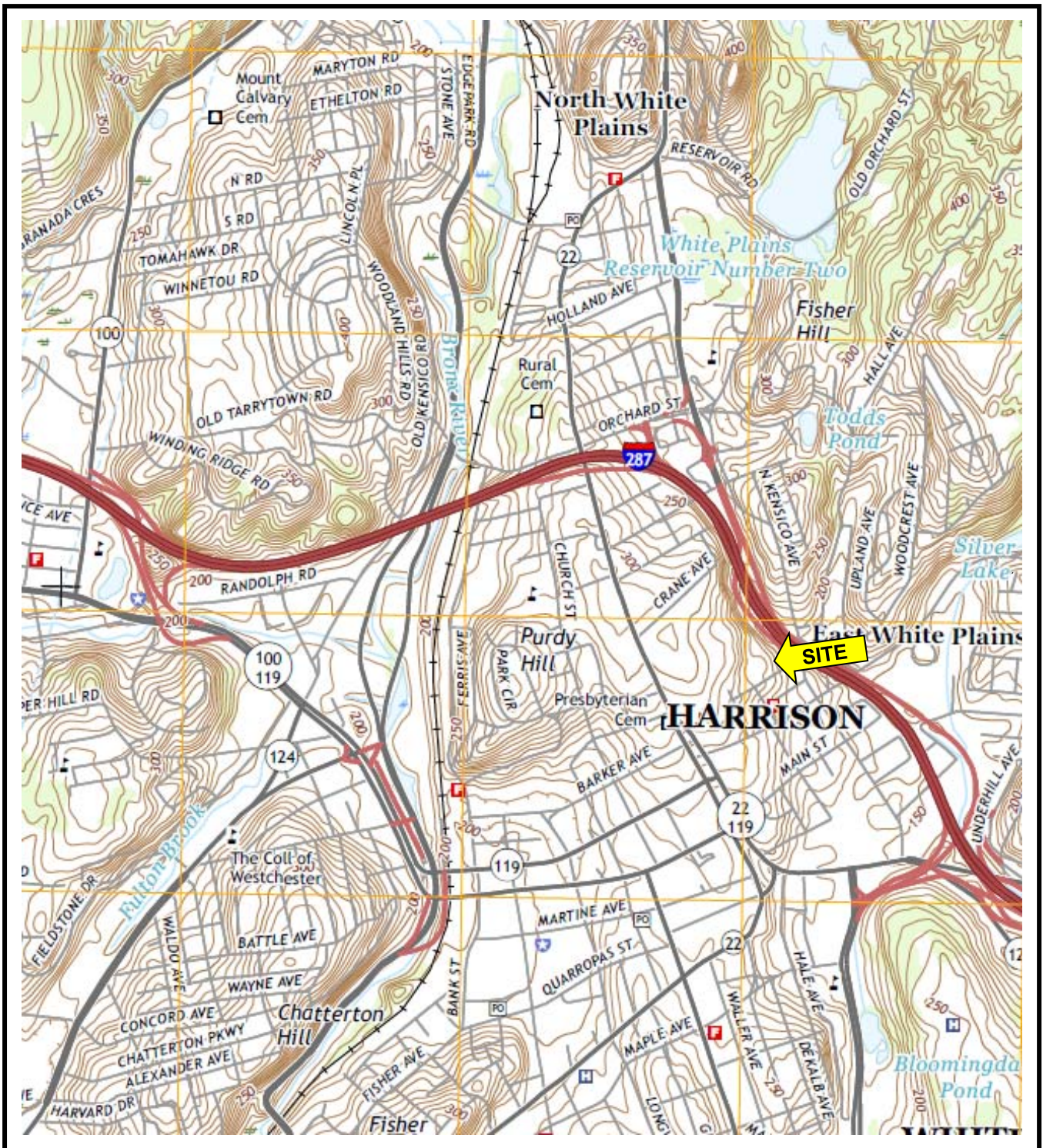
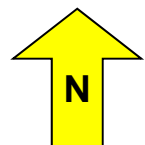


FIGURE 1 – SITE LOCATION MAP

SITE NAME: Good Counsel Site: Open Space Fill Area
STREET ADDRESS: 52 North Broadway
CITY, STATE, ZIP: White Plains, New York 10603
PROJECT NUMBER: 26736.00
SOURCE: USGS Topo Map, White Plains, NY Quadrangle



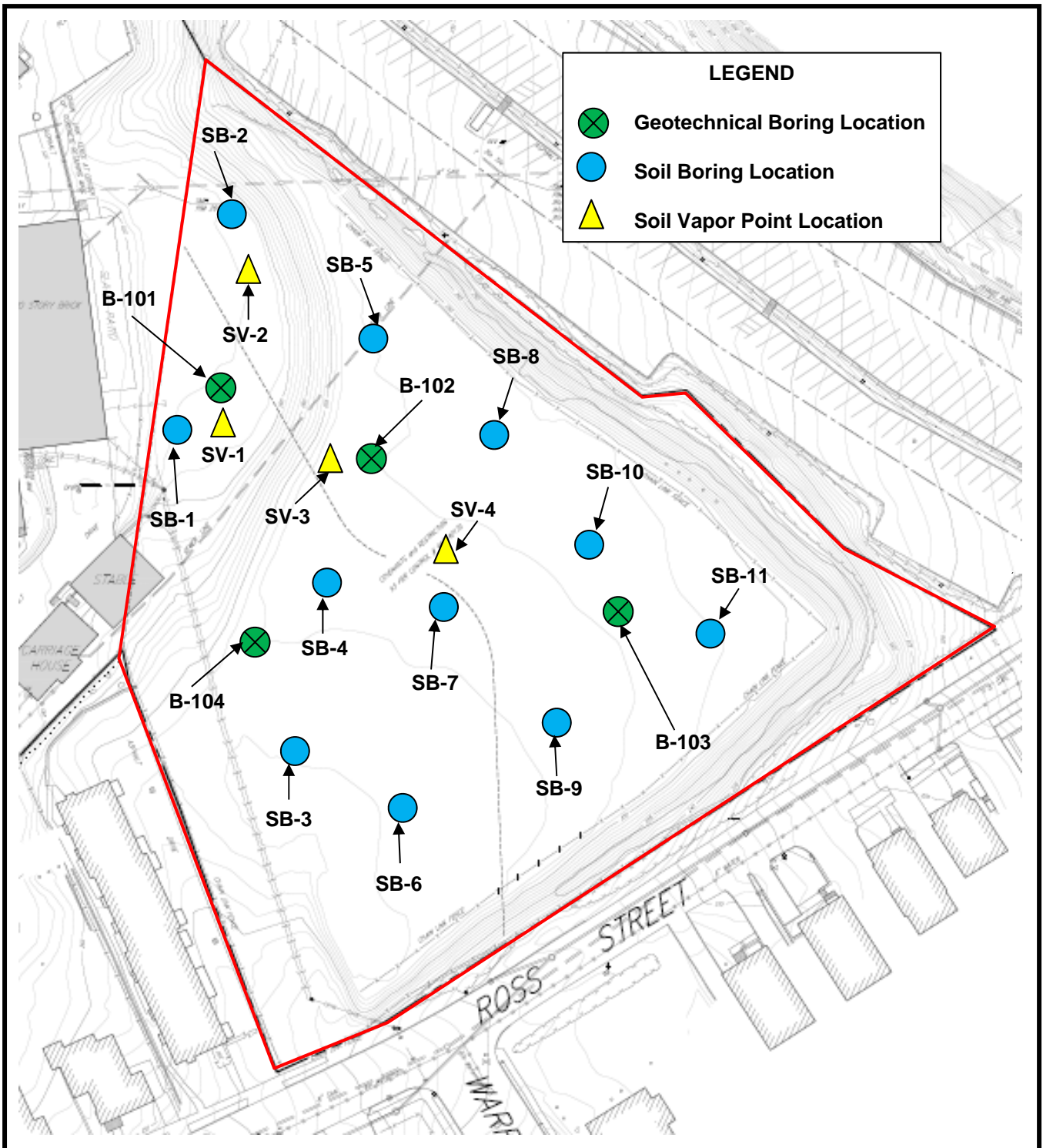
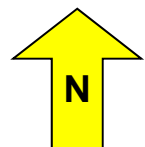


FIGURE 2 – PROPOSED BORING LOCATIONS MAP

SITE NAME: Good Counsel Site: Open Space Fill Area
STREET ADDRESS: 52 North Broadway
CITY, STATE, ZIP: White Plains, New York 10603
PROJECT NUMBER: 26736.00
SOURCE: Preliminary Existing Utilities Plan prepared by JMC





ATTACHMENT B

Heather Waldmann, CHMM

Senior Project Manager, Oil and Hazardous Materials



Heather Waldmann is a Project Manager and CHMM in VHB's Environmental Group. She specializes in Phase I and Phase II Environmental Site Assessments (ESAs), remediation projects, property transfers, underground storage tank investigations and closures, soil vapor sampling and various environmental services for private and public clients throughout the New York metropolitan area.

Education

BS, Environmental Science,
Saint Vincent College, 2006

Registrations/Certifications

Certified Hazardous Materials
Manager, 2015

OSHA 10-Hour Construction
Safety and Health Certificate,
2013

OSHA 40-Hour Hazwoper
Certificate (with annual 8
Hour Refresher), 2006

OSHA 8- Hour Hazwoper
Site Supervisor Certificate (8
Hour Training), 2008

Affiliations/Memberships

Long Island Builders Institute
(LIBI) Associate Council
Member, 2016-2017

11 years of professional experience

Verizon Wireless Phase I and Phase II Environmental Site Assessments, and Soil Management Plans, Various, NY

Heather prepares, manages and reviews Phase I and Phase II Environmental Site Assessments throughout Long Island and New York City for Verizon Wireless service expansions. She prepares site-specific Health and Safety Plans (HASPs), and performs and/or manages soil, groundwater and soil vapor sampling and investigation activities. In support of construction activities, Heather also prepares Soil Management Plans (SMPs) for sites at which soil or groundwater contamination is identified.

IS 98 Bay Academy Underground Storage Tank Removal, Brooklyn, NY

Heather prepared a HASP, Community Air Monitoring Plan (CAMP), Excavated Materials Disposal Plan (EMDP) and Tank Closure Plan in support of underground storage tank (UST) removal and site remediation activities at the IS 98 Bay Academy in Brooklyn, New York. These activities were associated with a documented New York State Department of Environmental Conservation (NYSDEC) spill attributed to a release from a No. 4 fuel oil UST. Heather also provided project management during the waste characterization, tank removal and remediation activities.

Mercury-Contaminated Venturi Meter Chamber Consulting Services, Brooklyn and Staten Island, NY

Heather provided environmental consulting activities for three New York State Department of Environmental Protection (NYSDEP) venturi meter chambers. The concrete walls and floors within these chambers had formerly been determined to be contaminated in association with releases from former mercury-containing equipment. Heather prepared a HASP for the collection of concrete chip samples from the three venturi meter chambers, which included specific precautions and procedures for work in proximity to and in contact with potentially hazardous mercury concentrations. Heather also provided oversight and mercury vapor monitoring during confined space entry activities to collect samples of the concrete walls and floors of the chambers. Following the sampling activities, she compared analytical results to applicable hazardous waste regulations and advised the client accordingly.

Gasoline Service Station Phase I and Phase II ESAs, Lawrence, NY

Heather completed Phase I and Phase II Environmental Site Assessments on a former gasoline service station that is currently utilized as an automotive service station. Phase II Environmental Site Assessment activities included sub-slab soil vapor and indoor air monitoring activities in accordance with New York State Department of Health



(NYSDOH) protocols, soil sampling, groundwater monitoring well installation activities and groundwater sampling. Heather also conducted supplemental NYSDEC spill investigation at the site in order to determine the point source of groundwater contamination.

Vacant Property Development, Staten Island, NY

Heather prepared a Construction Health and Safety Plan (CHASP) in preparation for site redevelopment activities to address potential hazards associated with the contamination of on-site soils with chromium.

The Oaks at Mill River UIC Investigation and UST Removal, Upper Brookville, NY

Heather provided oversight for a geophysical survey to identify Underground Injection Control (UIC) structures associated with several residential properties in preparation for site redevelopment activities. Heather also provided oversight for the removal of two fuel oil USTs and one gasoline UST and conducted endpoint sampling following removal of the USTs. In addition, she prepared a site-specific Health and Safety Plan prior to the start of field activities and coordinated with the local health department.

Southampton Schools Maintenance Facility, Southampton, NY

Heather provided oversight for the removal of a leaking fuel oil UST. Following removal of the UST, she conducted soil and groundwater investigation activities in order to delineate and determine the extent of subsurface impacts as the result of the fuel oil release.

Automotive Station Phase II Environmental Site Assessment, Water Mill, NY

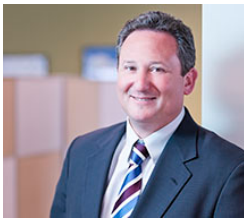
Heather completed a Phase II Environmental Site Assessment on a former gasoline service station that is currently utilized as an automotive service station. Phase II Environmental Site Assessment activities included soil and groundwater sampling.

Previous Environmental Consulting Experience, Groundwater & Environmental Services, Hauppauge, NY

Prior to joining VHB, Heather served as Case Manager/Staff Environmental Scientist managing a portfolio of over 15 environmental sites at a time. She communicated with clients, regulators and subcontractors on a daily basis, scheduled and coordinated all project work and meetings and managed subcontractors. She completed Phase I and Phase II Environmental Site Assessments, provided oversight for UST removal activities at retail gasoline stations, groundwater monitoring and injection well installation activities, waste management activities (including soil excavation and removal activities) and conducted soil and groundwater sampling. She was responsible for budget management, drafting reports and proposals, and tabulation and analysis of data. She trained junior staff with field work, report writing, and regulatory requirements.

Stephen Kaplan, PG

Principal | Project Director



Education

BA, Economics, State University of New York at Geneseo, 1992

Registrations/Certifications

Asbestos Inspector (Asbestos Inspection), 2001

OSHA 10-Hour Construction Safety and Health Certificate, 2012

OSHA 40-Hour Hazwoper Certificate (40 hour), 2004

Professional Geologist NY, 2017

Stephen is Director of Oil & Hazardous Materials and manages Phase I and Phase II Environmental Site Assessments, and remediation projects. He consults with private clients, lending institutions, legal counsel, and municipalities. As necessary he coordinates approvals, permitting, and remediation efforts with regulatory agencies. Stephen has performed Phase I/II investigations for communications facilities; residential, commercial, and industrial properties; and healthcare facilities.

24 years of professional experience

Huntington Towne House Site Redevelopment, Huntington Station, NY

Stephen conducted a Phase I and II ESA, inclusive of asbestos and lead surveys of multiple contiguous properties. Investigation activities determined the existence of one previously unidentified out-of-service UST in addition to three in-service USTs. Remediation budget estimates prepared prior to site acquisition by contract vendee.

South Nassau Communities Hospital, Long Beach Medical Center, Long Beach, NY

Steve managed the Phase I and Phase II Environmental Site Assessments, which focused on key environmental issues that impact the value of the parcel and any associated redevelopment costs. Issues such as asbestos, lead paint, hazardous materials management and subsurface contamination by oil were all addressed. Steve attended regular meetings with SNCH and the team to discuss VHB's findings and to consult on local regulatory procedures.

Tritec Downtown Redevelopment Project, Patchogue, NY

Stephen's investigation of multiple properties in this downtown area included soil and groundwater sampling associated with storage tanks, and heavy metals from former chromium plating facility. Stephen prepared a NYSDEC-approved Remediation Work Plan to successfully remove two undocumented gasoline USTs and petroleum-impacted soils, and install groundwater monitoring wells. Subsequent periodic sampling of monitoring wells indicated the remediation efforts were successful, and NYSDEC-spill closure status was granted. (2006 – 2015)

Due Diligence including Phase I and Phase II Investigations, Champlain, NY

Stephen provided Phase I and pre-purchase due diligence services as part of the purchase of six properties. Following the Phase I investigations, Stephen provided Phase II investigation services on two of the properties. Phase II services included groundwater and soil sampling as well as coordination with regulatory agencies. (2011 – 2012)

Verizon Wireless Phase I & Phase II Environmental Site Assessments, New York

Stephen has performed and overseen over 1,000 Phase I and/or Phase II ESAs in the five boroughs and in various locations in New York for Verizon Wireless' service expansion. The Phase I ESAs include review of site information, health department and NYSDEC documentation, and visual inspections. He supports Phase II ESAs by preparing scopes of work and budgets, associated site-specific health and safety plans



(HASPs), conducting soil and groundwater investigations. If soil or groundwater impacts are identified by these Phase II ESAs, Stephen also prepares soil and groundwater management plans (S/GWMPs) with associated budget estimates, oversees the implementation of these S/GWMPs and prepares summary closeout reports. (2000 – Present)

Long Island MacArthur Airport On-Call Environmental Services, Ronkonkoma, NY

Stephen was the Project Manager for a three-year on-call agreement with the Town of Islip providing environmental consulting services. Monthly groundwater sampling was conducted at various locations of the airport property in accordance with the Town of Islip's NYSDEC SPDES compliance. Other consulting services included Phase II investigations, permitting, underground storage tank investigations, wetlands investigations, and remediation. To accomplish the goals of each task order, Stephen responded quickly to requests and worked closely with the Town of Islip, Suffolk County, and the NYSDEC.

Smithtown Concrete Site Study and Remediation, Smithtown, NY

Stephen managed the assessment and remediation for the residential redevelopment of a 23-acre former concrete manufacturing site with municipal and private landfill. Based on the Phase I Environmental Site Assessment performed by VHB, VHB found contaminated soil related to a 10,000-gallon fuel oil tank, historic buried debris, and methane. Stephen is overseeing the UST removal plan, Health and Safety Plan, geophysical survey, groundwater, soil, soil vapor (including landfill gas survey) and air sampling. He and his team are coordinating with New York State Department of Environmental Conservation and Suffolk County Department of Health Services. (2013 – 2015)

Costco Expansion Project, Phase II ESA, Staten Island, NY

Stephen prepared a Phase II Environmental Site Assessment Work Plan and Health and Safety Plan (HASP) for submittal to the NYCDEP in conjunction with CEQR documentation. NYCDEP required the investigation due to environmental concerns related to an adjacent former gasoline station prior to receiving approval for a building addition project. The NYCDEP approved VHB's Work Plan and Construction Health and Safety Plan (CHASP) prior to the conduct of field investigation activities.

Lowe's Home Improvement Center, Bay Shore, NY

Stephen was the Project Manager for the comprehensive Phase I and II ESAs with asbestos and lead-based paint surveys of five structures for this retail redevelopment project. He coordinated with the County DOH, New York State Department of Labor, USEPA and various environmental remediation subcontractors to remediate the existing structures/infrastructure prior to construction. Phase II activities included assessment/remediation of over 250 stormwater drywells and six on-site sanitary systems, asbestos management, aboveground and underground fuel oil storage tank removals, and impacted soil disposal. Additional site remediation activities involved appropriate decommissioning of an ethylene glycol cooling plant, and consolidation of all hazardous and regulated non-hazardous materials from the structures for off-site disposal. (2001 – 2005)