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November 4, 2015

Mr. Matthew Hubicki  
Project Manager, Remedial Bureau C  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, New York 12233-7014

**RE: Supplemental Groundwater and Soil Vapor Investigation Work Plan  
Hudson Park Phase III  
Yonkers, New York 10701  
NYSDEC BCP No. C360071  
TRC Project No. 237984.0000.0000**

Dear Mr. Hubicki:

On behalf of Strategic Capital LLC, TRC Engineers, Inc. (TRC) has prepared this Supplemental Investigation Work Plan to present the New York State Department of Environmental Conservation (NYSDEC), for review and approval, the proposed plan for further investigation of soil vapor and groundwater at the Hudson Park Phase III project located in Yonkers, New York (the "Site"). The Site consists of an undeveloped grass covered lot occupying an approximately 12,000-square foot footprint on the west portion of Parcel B. A Site Plan is presented as Figure 1.

### **Site Background**

The Site and the associated development are assigned NYSDEC Brownfields Cleanup Program (BCP) Site No. C360071. Previous investigations of the Site and surrounding area identified soil impacts (metals and semi-volatile organic compounds) consistent with urban fill and concentrations of metals and semi-volatile organic compounds in groundwater. Remedial activities were completed at the Site including removal and closure of five underground storage tanks (USTs), covering native soil with a demarcation layer (orange snow fence) and two feet clean fill or hardscape (roadways, sidewalks, building foundation). Engineering controls implemented included installation of a passive sub-slab depressurization system beneath the buildings to prevent vapor intrusion. An environmental easement was also assigned to the Site to which restricted the use of the Site to restricted residential use as long as the long-term institutional and engineering controls were employed, barrier layer remained in place, all future soil disturbance activities were performed in accordance with the Site Management Plan (SMP), the use of groundwater at the Site is prohibited, and the sub-slab depressurization system be

operated and maintained as required by the SMP. The remedial activities were documented in a Final Engineering Report (FER) and the Site Management Plan (SMP) dated December 2008. A certificate of completion was issued by the NYSDEC dated December 31, 2009. The FER documents the remedial actions that have been implemented and the SMP provides guidance on the performance of future activities on the Site to ensure that the remedial actions and engineering controls remain effective.

The two existing buildings at Hudson Park North were constructed with a sub-slab depressurization system (SSDS) and vapor barrier to ensure that volatile organic compounds (VOCs) in the subsurface do not impact the indoor air of the structures. The results of previous investigations indicate that VOCs were not detected at concentrations exceeding regulatory limits, and as a result, there does not appear to be any source of VOCs that would pose a risk to indoor air.

Accordingly, a request to construct the third building on vacant west portion of Parcel B without a passive SSDS and associated vapor barrier was made to the NYSDEC. The NYSDEC indicated that a petition to construct the building without a passive SSDS and vapor barrier would be considered following review of current groundwater and soil vapor sampling results. The following scope of work was prepared to provide the proposed groundwater and soil vapor investigation to support the petition to remove the requirement to install the SSDS and vapor barrier.

### **Scope of Work**

The activities described herein will be performed in accordance with the Site Management Plan (SMP), DER-10 Technical Guidance for Site Investigation and Remediation, and the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

#### **Task 1 – Soil Vapor Sampling**

This task includes the collection of subsurface soil vapor samples to determine the concentrations of VOCs in soil vapor. A total of three (3) subsurface soil vapor samples will be collected at the locations shown on the attached Figure 1. Soil vapor sampling will be conducted in accordance with the New York State Department of Health (NYSDOH) “Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006)” and ASTM Standard E 2600-10. Specifically, soil vapor sampling will include the following:

- At each soil vapor sampling location, the boring will be cleared with a hand auger to a depth of approximately five feet, as a precaution to identify and avoid disturbance of possible subsurface utilities.
- The temporary subsurface soil vapor probes will be generally installed a depth of approximately five (5) feet below ground surface (bgs) or approximately two feet above the water table (which is shallower). The temporary soil vapor probe will then be purged

using a photoionization detector (PID) to evacuate one to three volumes of soil vapor. The PID will also be used to screen the soil vapor for the presence of VOC concentrations. Each probe will be connected via Teflon tubing to a laboratory-supplied SUMMA canister. Using an individually certified clean 6-liter capacity SUMMA canister the sample collection time will be 60 minutes.

- In accordance with the NYSDOH vapor intrusion guidance, tracer gas (i.e., helium) will be used at every soil vapor sampling location to ensure that an adequate surface seal has been created.
- After sample collection, the soil vapor samples will be shipped overnight to a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis for VOCs by Method TO-15 with selective ion monitoring (SIM). Method TO-15 with SIM will provide detection limits of 0.25 micrograms per cubic meter for vinyl chloride, trichloroethene (TCE), and carbon tetrachloride, allowing for comparison with the lowest action levels for these compounds in the New York State Department of Health (NYSDOH) “Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York”, dated October 2006. All other compounds will have a detection limit of one microgram per cubic meter.
- Upon completion of each boring, each borehole will be backfilled with drill cuttings, well sand and hydrated bentonite and then the ground surface will be restored to original conditions.

## Task 2 – Groundwater Sampling

As part of this investigation, three (3) groundwater samples will be collected from Geoprobe samplers as described below. All non-dedicated equipment related to groundwater sampling including the probe rods and sampling tools will be properly decontaminated prior to collection of each groundwater sample. Proper decontamination procedures will include an Alconox or equivalent water wash, and a fresh water rinse. Groundwater sampling locations are shown in Figure 1.

The groundwater sampling protocol is described in detail below:

- At each groundwater sampling location, the boring will be cleared with a hand auger to a depth of approximately five feet, as a precaution to identify and avoid disturbance of possible subsurface utilities.
- Groundwater samples will be collected using a Geoprobe hydraulic sampling system, or equivalent, by advancing hollow steel probe rods fitted with a stainless steel discrete interval groundwater sampling tool. This sampling tool, consisting of a stainless steel outer sleeve fitted with an inner stainless steel wire mesh screen, is advanced to the desired sampling depth. The outer sleeve is then opened, exposing the wire screen that

allows groundwater to infiltrate into the sample collection chamber. The groundwater table surface is expected to be encountered between 12 and 14 feet bgs.

- Before sampling, groundwater will be purged, to minimize turbidity and to stabilize the other field-measured parameters (pH, conductivity, temperature, and dissolved oxygen).
- Turbidity and other field-measured parameters will be recorded during and after purging, and before sampling. During purging, the on-Site environmental scientist will actively monitor and track the volume of water purged and the field parameter readings. Data will be recorded in the field logbook.
- Groundwater samples collected will be analyzed for Target Compound List (TCL) and NYSDEC Commissioner Policy-51 Table 3 listed VOCs via USEPA Method 8260B. A laboratory supplied trip blank will be analyzed for VOCs.
- Groundwater samples will be containerized in laboratory prepared jars, labeled, sealed, and placed in a chilled cooler for shipment to the laboratory. An ELAP certified laboratory, approved by the New York State Department of Health (NYSDOH), will analyze the groundwater samples.
- Upon completion of each boring, each borehole will be backfilled with drill cuttings, well sand and hydrated bentonite and then the ground surface will be restored to original conditions.

### **Investigation Summary Report**

Upon completion the soil vapor and groundwater sampling program and receipt of laboratory results, an investigation summary report will be prepared and submitted to the NYSDEC for review. The investigation summary report will contain a description of field activities and present sampling results. The data deliverables package will be submitted to NYSDEC in the approved electronic data deliverable (EDD) format. The investigation summary report will be signed and sealed by a Qualified Environmental Professional.

### **Schedule**

Upon approval of this Work Plan by the NYSDEC, TRC will initiate the field work. It is anticipated that the Work Plan will be implemented and the summary report issued within six to eight weeks' of NYSDEC approval.

Please contact me at (212) 221-7822, ext. 109 with any questions or comments.

Sincerely,  
**TRC Engineers, Inc.**



Steven Meersma, P.E.  
Principal

Figure 1 – Proposed Sampling Location Map

cc: F. Hungs, Strategic Capital  
A. Collins, Collins Enterprises, LLC  
W. Torrens, Plaza Construction, LLC

