Phase II Work Plan

For
101 Lincoln Avenue
Bronx, NY 10454
Block 2316, Lot 1
OER Project Number TBD

E-Designation E-145
CEQR Number 05DCP005X
Port Morris / Bruckner Blvd Rezoning

Prepared for:
NY developers
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Introduction

This Phase II Investigation Work Plan has been developed for the above referenced site. The site is located within the Port Morris section of the borough of Bronx. The following work scope has been developed as per the OER meeting.

Site Location, Current Use, and Proposed Development Plan

The Site consists of one irregular -shaped lot located on the south side of Bruckner Boulevard, the south side of 3rd Avenue and the west side of Lincoln Avenue in the Port Morris neighborhood of the Borough of the Bronx, City of New York, and Bronx County, New York. The street address of the subject site is 101 Lincoln Avenue, Brooklyn, New York 10453 and is identified as Block 2316 Lot 1 on the NYC Tax Map (Figure 2). The lot includes approximately 430 feet of street frontage on Lincoln Avenue, 333 feet of frontage on Bruckner Boulevard and 241 feet of frontage on 3rd Avenue Bridge and extends approximately 518 feet deep for a total area of 133,700 sf. The site is currently developed with one L shaped two- story structure; occupied as office space.

The lot is currently zoned manufacturing and residential, M1-3 / R8, with no commercial overlay.

The proposed new building will consist of three new 25-story and one 18-story residential tower buildings. The towers will be interconnected with a common base which will include two 7-story, one 6-story, one 3-story and one single story buildings. The project will include 74,000 sf of underground parking, 31,199 sf of retail space, 2,872 sf of community space and 833,829 sf of residential space. The entire site will be excavated to a depth of approximately 12 feet. 95% of the site will be excavated to approximately 12 feet. 5% of the site; along the western façade of the proposed building, will not be excavated. This area serves as a buffer to the bridge structure.

The water table at the Site is expected to be approximately 7 feet below grade surface (bgs). See attached redevelopment plans for layout of the proposed site development.

Phase I Screening Summary

A Phase I screening was competed by EBC in September 2015. The following Site history was established based on historic Sanborn maps:

The Site was developed prior to 1887 with three 3-story store fronts with rear yards on the south side of the Site and two 2-story and one 1-story stables on the northern side of the Site. In 1904 the two western store fronts remained and merged into one 3-story store with a small 1-story addition in the rear yard of the western most building, the eastern most store remained the same with the addition of a single story building occupying the entire footprint of the rear yard, and the northern portion of the lot was redeveloped with one 3-story stable with an elevator and office. In 1918, the northern stable was noted as an auto warehouse on the first floor and the second and third floors were utilized as storage and a warehouse. The lot remained in this configuration until 1977. In 1977, the two western buildings on the southern side of the site and the 3-story building on the northern side of the site were demolished and the areas left vacant. In 2006, the western most portion of the lot was developed with a 5-story building consisting of a commercial space on the first floor and residential apartments on the remaining 4 floors. In 2007, the western building was not noted on the Sanborn map.
The western most portions and the northern portion of the lot have remained vacant, while the eastern building on the south side of the Site was utilized as commercial space on the first floor and two residential apartments on the second and third floors.

Based upon reconnaissance of the subject site and surrounding properties, and review of historical records and regulatory agency databases, no recognized environmental conditions were identified in connection with the subject site.

**Phase II Investigation Work Scope**

**Geophysical Survey**

A geophysical survey will not be performed on site due to the excavation plan of 12 feet across 100% of the site.

**Soil, Groundwater and Soil Vapor Summary**

An investigation of soil, soil vapor and groundwater is being performed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The proposed sampling event will address historic fill, as well as to provide general horizontal/vertical characterization across the site for development purposes. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10.

Twelve test borings will be completed at the site. Please see attached site plan depicting sample point locations, where soil, groundwater, and soil vapor samples will be collected. A minimum of two soil samples will be collected from each of the test borings. Six temporary groundwater monitoring wells will be installed and a total of Six groundwater samples will be collected. Eight soil vapor samples will be collected from approximately 12-14ft bgs. The depth of groundwater is expected to be encountered at approximately 7 feet bgs and general groundwater flow direction is expected to flow southwest. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.) or by a precision GPS that is capable of coordinating a fixed point with within +/- 1 foot.

**Soil Sampling**

A geologist/engineer/QEP will screen the soil samples during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log. A Geoprobe™ utilizing direct-push technology will be used and if necessary, more advanced drilling technology will be used to complete the site investigation. Two samples from each of the twelve borings will be collected; one at 0-2 feet and one at 12-14 feet. Discrete (grab) samples will be taken from the aforementioned sampling intervals. The subsurface soil samples may also serve as in-situ post-excavation soil samples for the remedial plan. A third soil sample may be collected from each or several test boring(s) if: 1) elevated PID readings and/or visual and olfactory observations are noted during borehole advancement; and/or 2) field observations identify an upper fill layer underlain by native material the additional soil sample from the upper zone of the native layer will help delineate the vertical migration of impacts (if any), as well as determine a more detailed remedy and potentially provide a cost savings for disposal options.
Monitoring Well Installation and Groundwater Sampling

Six, one-inch-diameter temporary groundwater monitoring wells will be installed. Representative groundwater samples will be collected using low-flow sampling techniques. Properly sized screen and silica sand pack will be used for noted site conditions. A representative groundwater sample will be collected from each well with a check valve and dedicated tubing. Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of LNAPL or DNAPL. The well casings will be surveyed by a trained QEP and/or NYS licensed surveyor to facilitate preparation of a groundwater contour map and determine the direction of groundwater flow.

Soil Vapor Sampling

Samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations. Groundwater is expected to be encountered at a depth of 7 feet.

Eight soil vapor samples will be collected from approximately 12-14 ft bgs. The vapor implants will be installed with Geoprobe™ equipment. The implants will be made from stainless steel and fitted with disposable polyethylene tubing. The surface of the bore holes will be sealed with a hydrated bentonite powder. Sampling will occur for the duration of two hours. Samples will be collected in appropriate sized Summa canisters that have been certified clean by the laboratory and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. Twenty-four hours following soil vapor probe installation, one to three implant volumes shall be purged prior to the collection of any soil-gas samples. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the vapor intrusion evaluation, a tracer gas will be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals.

Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Full analysis:

- Volatile Organic Compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
• Target Analyte List metals by EPA Method 6010 and 7471;

• Soil vapor samples will be analyzed for VOCs by using USEPA Method TO-15.

All groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and “finger print analysis” and required regulatory reporting (i.e. NYSDEC spills hotline) will be performed.

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. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP-certified laboratory.

Investigation Derived Waste

Cuttings may be disposed at the site within the borehole that generated them to within 24 inches of the surface unless:

• Free product or grossly contaminated soil, are present in the cuttings;
• The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock;
• Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability;
• The soil cannot fit into the borehole.

Those soil cuttings needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as non-hazardous trash.

Reporting

A Phase II Investigation Report (template version) will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil, groundwater and soil vapor analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS), and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion...
Matrices. The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted.

Investigation HASP

An OSHA compliant Health and Safety Plan that meets all OSHA HAZWOPER requirements will be implemented during the site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a log book or specific form. Potential on-site chemicals of concern include VOCs, SVOCs, Pesticides/PCBs, and Metals (specifically arsenic, lead, and mercury at a minimum). Information fact sheets and/or summary tables for each contaminant group are included in the HASP. The attached HASP will be on-site during each sampling event.
FIGURES
APPENDIX A
ARCHITECTURAL PLANS