



LAUREL ENVIRONMENTAL ASSOCIATES, LTD.

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September 2, 2011

New York City Office of Environmental Remediation
City Brownfield Cleanup Program
c/o Shaminder Chawla
100 Gold Street, 2nd Floor
New York, NY 10038

Re: 12CBCP018K
67 Brighton 1st Lane, Brooklyn
Remedial Action Work Plan (RAWP) Stipulation List

Dear Mr. Chawla:

Laurel Environmental Associates, Ltd. hereby submits a Remedial Action Work Plan (RAWP) Stipulation List for the subject site to the New York City Office of Environmental Remediation (NYCOER) on behalf of Scarano Realty, LLC. This letter serves as an addendum to the RAWP to stipulate additional content, requirements and procedures that will be followed during the site remediation. The contents of this list are added to the RAWP and will supersede the content in the RAWP where there is a conflict in purpose or intent. The additional requirements/procedures include the following:

Stipulation List

1. The criterion attached in **Addendum 1** will be utilized if petroleum containing tank or vessel is identified during the remedial action or subsequent redevelopment excavation activities. All petroleum spills will be reported to the NYSDEC hotline as required by applicable laws and regulations. This contingency plan is designed for heating oil tanks and other small or moderately sized storage vessels. If larger tanks, such as gasoline storage tanks are identified, OER will be notified before this criterion is utilized.
2. The remedial action will apply Track 1 SCOs. Site Management Plan is not required for Track 1 clean-up. If Track 1 cleanup is not achieved, a Site Management Plan (SMP) will be required for long-term management of residual contamination and Track 4 SCO's will be established.
3. Extensive sampling, which included in-situ endpoint sampling at all locations with the exception of SB-3A, was conducted during Remedial Investigation phase. Collection and analysis of endpoint samples will be conducted at SB-3 and SB-3A to evaluate the performance of the remedy with respect to attainment of Track 1 SCOs. A map indicating post-remedial End Point Sampling Locations will be prepared and attached as **Addendum 2**.
4. The quality assurance/quality control program (QA/QC) for collection of end point samples for this remedial action will include the following provisions:
 - New York State ELAP certified labs will be utilized for chemical analysis

- Data summary tables will be prepared that include all data entries (including non-detect results) and will be presented in the Remedial Action Report (RAR)
 - Full chain of custody for analytical samples will be maintained and forms will be reported in the RAR
 - Collection of QA/QC samples including duplicates will be incorporated.
5. All soil/fill removed from Site will be managed as regulated material and will be disposed at permitted disposal facilities. OER will be notified of the facilities to be used for disposal prior to start of the remedial construction. If there is a change to this plan that will render the use of excavated material in a non-regulated manner, OER will be notified prior to implementation.
 6. Excavated soil/fill will be screened during intrusive work for indications of contamination by visual means, odor, and monitoring.
 7. Prior to importation of any backfilling and/or clean fill cover material onto the site, OER will be provided the sampling results, source of the material, and estimated quantity.
 8. Signage for the project will include a sturdy placard mounted in a publically accessible right of way to building and other permits signage will consist of the NYC BCP Information Sheet (attached **Addendum 3**) announcing the remedial action. The Information sheet will be laminated and permanently affixed to the placard.
 9. The Truck route to New Jersey is:
 - a. Head north on Brighton 1st St toward Brighton 1st Terrace 0.1 mi
 - b. Take the 1st left onto Ocean View Ave 387 ft
 - c. Take the 2nd right onto Ocean Pkwy 0.1 mi
 - d. Turn left onto Neptune Ave 0.5 mi
 - e. Turn right onto Shell Rd 0.2 mi
 - f. Turn left to stay on Shell Rd 0.5 mi
 - g. Turn left onto 86th St/Avenue X Continue to follow 86th St 3.3 mi
 - h. Turn left onto Gatling Pl 0.3 mi
 - i. Take the ramp to I-278 W Toll road 171 ft
 - j. Keep left at the fork and merge onto I-278 W Partial toll road Entering New Jersey 10.8 mi
 10. **The RAWP** provided design specifications on the type, thickness and installation process for the vapor barriers. The vapor barriers planned for this project include a Grace PrePrufe 46-mil to be installed beneath the building slab and along the below grade foundation sidewalls.
 11. A CD containing the final RAWP including this approved Stipulation List will be placed in the library that constitutes the primary public repository for project documents.
 12. This NYC BCP project involving the removal and transportation of hazardous waste may be subject to the New York state Department of Environmental Conservation's Special Assessment Tax (ECL 27-0923) and Hazardous Waste Regulatory Fees (ECL 72-00402). See DEC's website for more information: <http://www.dec.ny.gov/chemical/9099.html>.
 13. Appendix G, Soil Vapor Logs, from the July 2011 RIR are removed from that report.

14. Revised text to reflect actual analytical data is attached in **Addendum 4** for soil, groundwater, and soil vapor (Sections 5.2-5.4 of the RIR).
15. Table 2 is revised and included as **Addendum 5** showing the groundwater results as compared to 6NYCRR Part 703.5 Groundwater Standards.

Very Truly Yours,



Scott A. Yanuck
Principal
LAUREL Environmental Associates, Ltd.

cc:

D. Pisani
B. Gribble

Addendum 1
Generic Procedures for Management of Underground Storage Tanks
identified under the NYC BCP

Prior to Tank removal, the following procedures should be followed:

- Remove all fluid to its lowest draw-off point.
- Drain and flush piping into the tank.
- Vacuum out the “tank bottom” consisting of water product and sludge.
- Dig down to the top of the tank and expose the upper half.
- Remove the fill tube and disconnect the fill, gauge, product, vent lines and pumps. Cap and plug open ends of lines.
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location.
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank.
- Clean tank or remove to storage yard for cleaning.
- If the tank is to be moved, it must be transported by licensed waste transporter. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport.
- After cleaning, the tank must be made acceptable for disposal at a scrap yard, cleaning the tanks interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal, the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.).
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with a calibrated photoionization detector (PID).

Impacted Soil Excavation Methods

The excavation of the impacted soil will be performed following the removal of the existing tanks. Soil excavation will be performed in accordance with the procedures described under Section 5.5 of Draft DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with calibrated photoionization detector (PID).

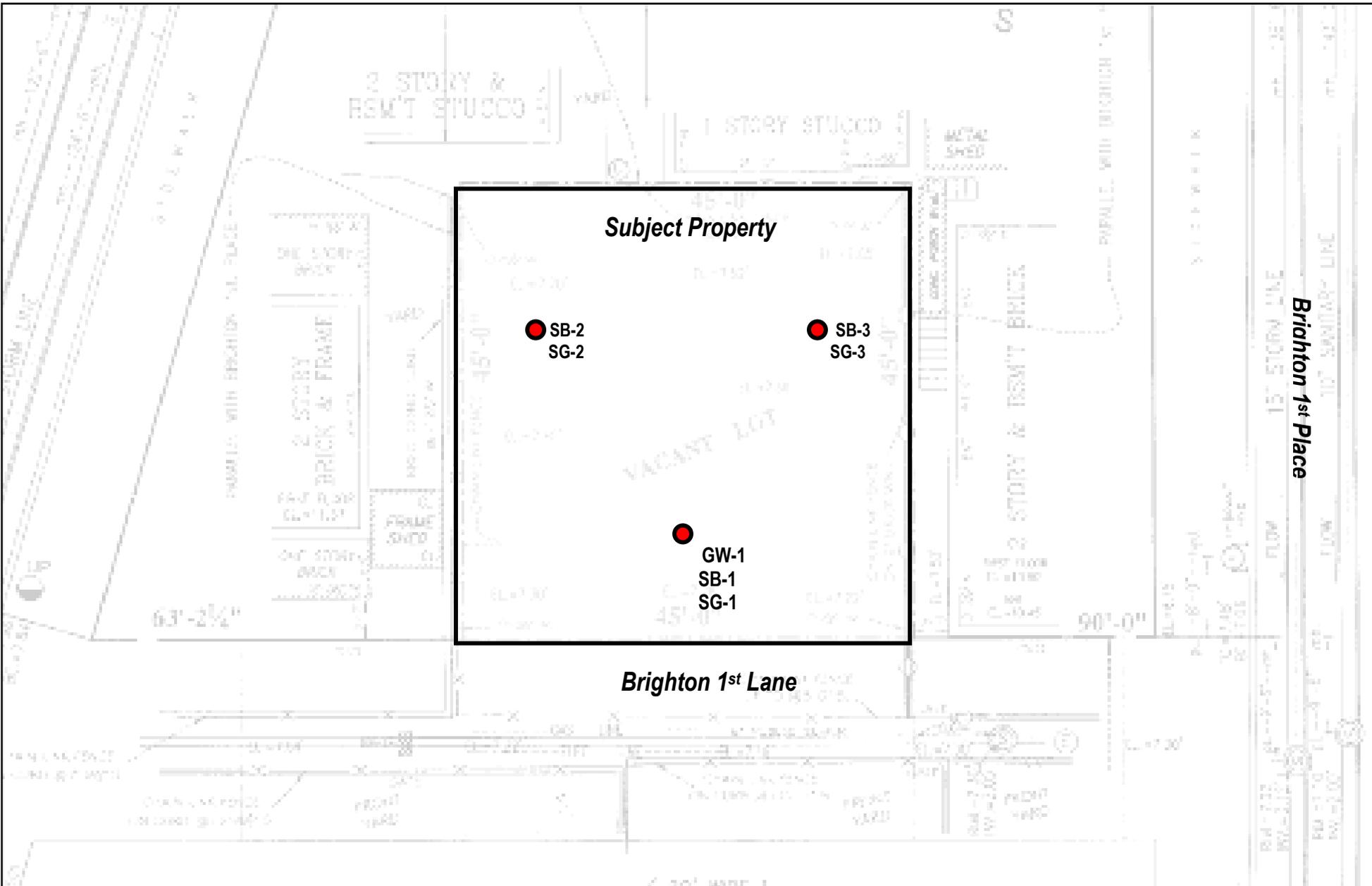
Final excavation depth, length, and width will be determined in the field, and will depend on the horizontal and vertical extent of contaminated soils as identified through physical examination (PID response, odor, staining, etc.). Collection of verification samples will be performed to evaluate the success of the removal action as specified in this document.

The following procedure will be used for the excavation of impacted soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan.
- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated.
- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile, or dispose of, separate from the impacted soil.
- If additional UST's are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued trenching around the perimeter to minimize its disturbance.
- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc.) an attempt will be made to remove it, to the extent not limited by the site boundaries or the bedrock surface. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separated dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present.
- Excavated soils which are temporarily stockpiled on-site will be covered with tarp material while disposal options are determined. Tarp will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property.

Once the site representative and regulatory personnel are satisfied with the removal effort, verification of confirmatory samples will be collected from the excavation in accordance with DER-10.

Addendum 2
End Point Sampling Plan



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Huntington Station, NY 11746

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FIGURE 1.0
SITE SKETCH & SOIL SAMPLE
LOCATION PLAN

67 BRIGHTON 1ST LANE
BROOKLYN, NY 11235

PROJECT# : 11-256

DRAWING DATE: 7-7-2011

DRAWN BY: CJC

CHECKED BY: TJ

REVISIONS: CM

SB = Soil Borings
SG = Soil Grab
GW = Groundwater Sample

 **SAMPLES LOCATIONS**



NOT TO SCALE

LEA makes no guarantees as to the accuracy of this drawing and it should only be used for informational purposes.

Addendum 3
Signage



NYC Brownfield Cleanup Program

This property is enrolled in the New York City Brownfield Cleanup Program for environmental remediation. This is a voluntary program administered by the NYC Office of Environmental Remediation.

For more information, log on to:
www.nyc.gov/oer

If you have questions or would like more information, please contact:

Shaminder Chawla at (212) 788-8841
or email us at brownfields@cityhall.nyc.gov
67 Brighton 1st Lane
Site #: 12CBCP018K

Addendum 4

Text of analytical data as seen in RIR sections 5.2-5.4

SOIL CHEMISTRY

The results of chemical testing of soil and fill materials at the site are as follows:

- Field screening of soil in all borings found urban fill materials to a depth of 6 to 6.5 feet below grade. This was evident as pieces of coal, ash and building materials. Minor petroleum odor was noted in SB-3, 6' – 8' below grade. Laboratory analysis of the selected samples indicated that five metals in shallow samples of historical fill (0-2 feet depth) exceeded Track 1 SCOs including Barium, Cadmium, Copper, Lead and Zinc. Of these, barium, lead, copper and cadmium also exceeded Track 2 Restricted Residential SCOs. All Track 2 metals exceedances were limited shallow (0-2 foot) samples. With the exception of lead in one sample, all deeper soil samples (6-10 feet) achieved Track 1. SVCOs. VOC's, SVOCs, and PCBs were all below Track 1 SCOs.
- Barium was noted at concentrations of 86.1 to 741 ppm in the 0' to 2' samples and at <3.88 to 9.16 ppm in the 6' – 8' and 8' to 10' samples
- Cadmium was noted at concentrations of <0.005 to <1.04 ppm in the 0' to 2' samples and at <1.00 to <1.19 in the 6' – 8' and 8' to 10' samples (all non-detected)
- Copper was noted at concentrations of 40.7 to 341 ppm in the 0' to 2' samples and at <1.92 to 26.6 in the 6' – 8' and 8' to 10' samples
- Lead was noted at concentrations of 143 to 2030 ppm in the 0' to 2' samples and at <1.92 to 299 in the 6' – 8' and 8' to 10' samples
- Zinc was noted at concentrations of 117 to 286 in the 0' to 2' samples and at 6.21 to 63.4 in the 6' – 8' and 8' to 10' samples;
- Comparison to Track 1 finds Barium over SCO in SB-1 0'-2' and SB-2, 0'-2'; Copper over SCO in in SB-1 0'-2' and SB-2, 0'-2'; Lead over SCO in SB-1 0'-2', SB-2, 0'-2', SB-3, 0'-2', and SB-3A, 6'-8'; Zinc over SCO in SB-1 0'-2', SB-2, 0'-2', and SB-3, 0'-2';

- Urban fill is evenly distributed across the property to a depth of 6 to 6.5 feet, just above the water table and clean sands. Minor petroleum odor was detected in SB-3 at a depth of 6-8 feet. A second exploratory boring five feet from SB-3 (SB-3A) drilled to evaluate the significance of this finding did not show petroleum odors. SVOCs were below Track 1 SCOs for corresponding deep soils from both borings;
- The observed soil contamination corresponds well with the historical fill AOC,
- Removal of soils from 0' to 6' will provide sufficient remediation to meet 6NYCRR Part 375-6.8 Track 1 Soil Cleanup Objectives. There may be some additional removal of soils necessary around SB-3 based on the field screening results.

GROUNDWATER CHEMISTRY

The results of chemical testing of groundwater at the site are as follows: Groundwater samples collected during the RI did not detect VOCs, SVOCs or PCBs. Detected metals did not exceed TOGS 1.1.1 Class GA Guidance Values in the one unfiltered sample. These findings indicate that historical fill does not adversely affect groundwater quality at this Site.

Data collected during the RI is sufficient to delineate the distribution of contaminants in groundwater at the Site. No exceedance of applicable groundwater standards was detected.

SOIL VAPOR CHEMISTRY

Soil vapor samples collected during the RI showed a wide variety of VOCs, consisting mainly of BTEX and associated compounds at concentrations generally below $75 \mu\text{g}/\text{m}^3$. These compounds are most commonly associated with a spill of automotive fuel. The presence of MTBE and ethanol in vapor suggest a relatively recent spill. Past uses of the property do not indicate automotive fueling activities or other automotive fuel sources. Soil samples do not contain any VOCs in either shallow or deep soil samples. Groundwater did not detect any VOCs. Together, these observations suggest an offsite source area. TCE is identified in one sample at $3.2 \mu\text{g}/\text{m}^3$ and PCE is identified all three samples but only one above $1 \mu\text{g}/\text{m}^3$ ($8.6 \mu\text{g}/\text{m}^3$). Concentrations of acetone range as high as $360 \mu\text{g}/\text{m}^3$. Similar to BTEX compounds, PCE and TCE were not detected onsite and past uses of the property do not suggest the potential for onsite source areas. While no standards exist for soil vapor, no compounds exceed the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Final November 2006). Based on the presence of VOCs the installation of a vapor barrier is warranted at this site.

Addendum 5
Groundwater Results

TABLE 2.0
Tabulated Analytical Results
Groundwater Samples Collected July 8, 2011
67 Brighton 1st Lane, Brooklyn, New York

Location	GW-1	6NYCRR
Depth	NA	Part 703.5
Metals		
Aluminum	460	100
Calcium	49,200	NA
Iron	2,890	300
Lead	25	8
Magnesium	6,030	35,000
Manganese	80	300
Potassium	3,990	NA
Sodium	17,300	20,000
Zinc	110	66
VOCs	All BQL	NA
SVOCs	All BQL	NA
PCBs	All BQL	NA

All concentrations are in parts per billion (ppb)

BQL = below analytical quantitation level

Bold = concentration above 6NYCRR Part 703.5

NA = Not Available or Applicable