



**OFFICE OF ENVIRONMENTAL REMEDIATION**  
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September 16, 2011

Tom Woodrum  
H & H Builders, LLC  
34 Renwick Street, 3rd Floor  
New York, NY 10013

Rachel Ataman  
Hydro Tech Environmental, CORP.  
15 Ocean Avenue  
Brooklyn, NY 11225

Re: **NYC BCP Remedial Action Work Plan Approval**  
**2166 Nostrand Avenue**  
**Block 7557, Partial Lot 124**  
**BCP Project #11CBCP015K / OER Project # 11EH-A291K**

Dear Mr. Woodrum:

The New York City Office of Environmental Remediation (OER), in consultation with the New York City Department of Health and Mental Hygiene (DOHMH), has completed its review of the Remedial Action Work Plan (RAWP) and Stipulation List for the 2166 Nostrand Avenue, BCP Project #11CBCP015K, dated September 07, 2011. The Plan was submitted to OER under the NYC Brownfield Cleanup Program (BCP). The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on August 22, 2011. There were no public comments.

The following remedial action elements will be implemented at the project site:

**Statement of Purpose and Basis**

This document presents the remedy for a Brownfield Cleanup site known as “2166 Nostrand Avenue” site. This document is a summary of the information that can be found in the site-related reports and documents in the document repository at OER’s website [www.nyc.gov/oer](http://www.nyc.gov/oer).

The New York City Office of Environmental Remediation (the Office or OER), in consultation with the

New York City Department of Health and Mental Hygiene (DOHMH), has established a remedy for the above referenced site. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous substances.

The decision is based on the Administrative Record of the New York City Office of Environmental Remediation (the Office or OER) for the 2166 Nostrand Avenue Site and the public's input to the proposed remedy presented by the Office.

### **Description of Selected Remedy**

The remedy selected for this 2166 Nostrand Avenue Site includes soil excavation, cover system, vapor barrier and sub slab depressurization system, institutional controls, and site management

The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and performance of all required NYC BCP citizen participation activities according to an approved Citizen Participation Plan (CPP).
2. Performance of Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Sampling and analysis of excavated media as required by disposal facilities.
4. Appropriate segregation of excavated media for off-site disposal.
5. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and City laws and regulations.
6. Implementation of storm-water pollution prevention measures.
7. Import of materials to be used for backfill and cover in compliance with OER approved plan and in accordance with all Federal, State and City laws and regulations.
8. Placement of backfill material in excavated areas as needed.
9. Screening for indications of contamination by visual means, odor and monitoring with a Photo Ionization Detector (PID) of excavated soil/fill during all intrusive work.
10. Transportation and off-site disposal of all soil/fill material at permitted facilities in accordance with all Federal, State and city laws and regulations for handling, transport, and disposal.
11. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
12. Establishment of Track 4 SCOs. The Track 4 SCOs will be Track 2 Restricted Commercial SCOs for all parameters except SVOCs. Site specific SCOs for SVOCs are established. Soil and fill are lightly impacted and achieve the proposed Track 4 SCOs without the need for a removal action.
13. Excavation and removal of soil/fill present to a depth of 8 feet below grade for perimeter footings and elevator pit and 2 feet below grade for the parking lot.
14. Cover of the properties with a composite cover consisting of a concrete slab and foundation sidewalls beneath the buildings and a paved asphalt surface in the parking area to eliminate exposures to any residual material;

15. Placement of a vapor barrier beneath the proposed building slabs and outside the sub-grade foundation walls to address the potential impact of soil vapors derived from offsite. The vapor barriers planned for this project include a GSE 30 mil liner to be installed beneath the building slab and a Preprufe 160 R to be installed along the foundation sidewalls. Both liners will be attached using Bithutene Liquid Membrane manufactured by Grace;
16. Installation of a passive sub-slab depressurization system beneath the proposed building slabs to address the potential impact of soil vapors;
17. Collection and analysis of endpoint samples to evaluate the performance of the remedy with respect to attainment Track 4 SCOs.
18. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and a requirement that management of these controls must be in compliance with an approved SMP; and Institutional Controls including prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.
19. Submission of a RAR which describes the remedial activities including any changes from this RAWP, certifies that the remedial requirements have or will be achieved, defines the Site boundaries, and describes any Engineering and Institutional Controls to be implemented at the Site.
20. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

Remedial activities will be performed at the Site in accordance with this OER-approved RAWP. All deviations from the RAWP will be promptly reported to OER. Changes will be documented in the RAR.

This remedy conforms to the promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration OER guidance, as appropriate. The remedy is protective of public health and the environment.

<u>9/16/11</u>	
Date	Shaminder Chawla Assistant Director

## **SITE BACKGROUND**

### **Location:**

The Site is located at 2166 Nostrand Avenue in Brooklyn, New York and is identified as Block 7557 and Partial Lot 124 on the New York City Tax Map. Figure 1 shows the Site location.

### **Site Features:**

The 2166 Nostrand Avenue Site is 12,234-square feet and is bounded by Hillel Place, 1-story commercial property to the north, Campus Road, 2-story commercial property to the south, Nostrand Avenue, 3-story commercial property to the east, and intersection between Campus Road and Hillel Place, 2-story institution property to the west. Currently, the Site is an regularly shaped lot, approximately 12,234 square feet in size, vacant and undeveloped, and was formerly utilized as a parking lot. A former ticket booth, approximately 104 square feet in area, is located in the eastern portion of the Site. The topography of the combine Site and its vicinity is generally level. The surrounding property uses are predominantly residential and commercial.

### **Current Zoning/uses:**

The current zoning designation is C4-4A, Commercial District. The proposed use is consistent with existing zoning for the property.

### **Historical Use:**

A review of historic records revealed that Partial Lot 124 has been historically developed as 2-story stores and dwellings in the eastern portion from 1906 to 1950. A trucking company occupied the Site in 1934 and other commercial establishments (Student Notes Co., Civil Air Patrol Brooklyn Cadet Training Squadron, Lake & Lake Inc Construction) occupied the Site from 1940 to 1960. From 1968 to 2006, the Site became vacant and undeveloped, and was utilized as a parking lot for approximately thirty-eight (38) years.

### **Summary of Environmental Findings:**

1. Elevation of the property ranges from 26 to 27 feet.
2. Depth to groundwater ranges from 24.12 to 25.86 feet at the Site.
3. Groundwater flow is generally from west to east beneath the Site.
4. Depth to bedrock is greater than 50 feet at the Site.
5. The stratigraphy of the site, from the surface down, consists of 6 feet of historic fill underlain by 12+ feet of brown, medium-grained sand.

A site location map is attached as Figure 1.

## **LAND USE AND PHYSICAL SETTING**

The Office may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For 2166 Nostrand Avenue, a Track 4

remedial action alternative was considered in alternative analysis. The Track 4 SCOs will be Track 2 Restricted Commercial SCOs for all parameters except SVOCs. Site specific SCOs for SVOCs are established. Soil and fill are lightly impacted and achieve the proposed Track 4 SCOs without the need for a removal action. Excavation and removal of soil/fill present to a depth of 8 feet below grade for perimeter footings and elevator pit and 2 feet below grade for the parking lot. Collection and analysis will be completed for endpoint sampling to evaluate the performance of the remedy with respect to attainment Track 4 SCOs.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

### **PROPOSED DEVELOPMENT PLAN**

The proposed future use of the Site will consist of a three story commercial building. The current zoning designation is C4-4A, Commercial District. The proposed use is consistent with existing zoning for the property.

The Site will consist of a 3-story commercial building, with no basement. The building will cover approximately 10,066 square feet. The northwest portion of Site B will be open to the sky and will be used as a parking lot. The commercial building will not have a basement. The building footing will require excavating to a depth of 12'0" below grade, stepping up to 8'0" at the rear of the property. The elevator pit low point will be 8'0"-below grade. Additionally, approximately 2 feet of soil will be removed from the parking lot area (2,168 square feet in area).

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

### **SUMMARY OF REMEDIAL INVESTIGATION**

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 5.4.

Nature and Extent of Contamination:

Soil: A variety of poly-aromatic hydrocarbons (PAHs) compounds were identified in shallow soils above Track 1 SCOs. However, only four (4) of these PAHs exceeded Track 2 Restricted Commercial SCOs. Several metals exceeded Track 1 Unrestricted SCOs. However, no metals exceeded Track 2 Restricted Commercial SCOs in any of the soil samples collected. VOCs, PCBs or pesticides were all below Track 1 SCOs.

Groundwater: No VOCs, SVOCs, PCBs or pesticides were detected in any groundwater samples at concentrations exceeding TOGS standards. Only iron and manganese were detected in dissolved metals groundwater samples above TOGS.

Soil vapor: A wide variety of VOCs were identified in soil vapor samples throughout the property. These VOCs are characterized by petroleum and chlorinated compounds. For instance, PCE and TCE were reported in 3 of 7 samples and 2 of 7 samples respectively, at concentrations less than 48 and 8, respectively. BTEX and associated derivatives are common and generally occur at individual concentrations less than 50 ug/m<sup>3</sup>. Acetone was identified in all samples ranging up to 3500 ug/m<sup>3</sup>. However, no petroleum or acetone compounds were identified in soil or groundwater samples on the property and only very low soil concentrations of PCE (less than 7 ug/kg) were identified in 3 of 16 samples and chloroform (less than 2 ug/l) was identified in one groundwater sample. Other chlorinated hydrocarbons detected in soil vapor were not identified in either soil or groundwater.

For all petroleum and chlorinated compounds detected in the soil vapor onsite, the minimal occurrence in onsite soil and groundwater and the absence of past uses that would be likely to render onsite spills or significant waste disposal suggest that these contaminants have an offsite origin.

Figure 1 – Site Location Map

