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December 17, 2012

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Re: **Decision Document**
NYC VCP Remedial Action Work Plan Approval
78-80 Throop Avenue
Block 2266, Lots 32 & 33
VCP Project #13CVCP095K

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated October 2012 and Stipulation List dated December 7, 2012 for 78-80 Throop Avenue, VCP Project #13CVCP095K. The Plan was submitted to OER under the NYC Voluntary Cleanup Program (VCP). The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on December 15, 2012. There were no public comments.

Statement of Purpose and Basis

This document presents the remedy for a Voluntary Cleanup Program site known as "78-80 Throop 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.

The New York City Office of Environmental Remediation (the Office or OER) 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 "78-80 Throop Avenue" site and the public's input to the proposed remedy presented by OER.

Description of Selected Remedy

The remedy selected for this "78-80 Throop Avenue" site includes soil excavation, an engineered composite cover system, and installation of a vapor barrier and passive sub-slab depressurization system.

The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and implementation of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan;
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
3. Establishment of Track 1 Unrestricted Use Soil Cleanup Objectives (SCOs);
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas;
5. Excavation and removal of soil/fill exceeding Track 1 Unrestricted Use SCOs, including excavation of soil/fill to a depth of approximately 8 feet below grade for development purposes and excavation of the area with VOC concentrations above Track 1 Unrestricted Use SCOs to an anticipated depth of approximately 10 feet below grade;
6. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site;
7. Removal of underground storage tanks (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with applicable local, State and Federal laws and regulations;
8. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities;
9. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs;
10. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations;
11. Installation of a vapor barrier below the concrete slab and behind the foundation walls of the two proposed buildings;
12. Installation and operation of a passive sub-slab depressurization system below the vapor barrier;

13. Capping of the entire Site with a 1.5ft thick engineered concrete slab including a basement concrete slab beneath the two proposed buildings and a concrete slab over the rear cellar level courtyard;
14. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations;
15. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
16. Submission of a RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAWP;
17. If Track 1 is not achieved, 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; and
18. If Track 1 is not achieved, 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.

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.

12/17/12
Date

Shaminder Chawla
Shaminder Chawla
Assistant Director

SITE BACKGROUND

Location:

The 78-80 Throop Avenue Site (hereafter referred to as the "Site") is located at 78-80 Throop Avenue in the Williamsburg section of Brooklyn, New York, and is identified as Block 2266 and Lots 32 and 33 on the New York City Tax Map. Figure 1 shows the Site location.

Site Features:

The Site is approximately 4,952 square feet and is bounded by a one-story commercial building to the north (Block 2266, Lots 30 and 31), a vacant lot to the south (Block 2266, Lot 36), Throop Avenue to the east, and a vacant lot to the west (Block 2266, Lot 36). Currently, the Site is a vacant lot surrounded by an 8 foot high chain link fence. The vacant lot is uncapped, and overgrown with weeds. A site map is attached as Figure 1. A Site location map is attached as Figure 2.

Current Zoning/uses:

The current zoning designation is R7A. The proposed use is consistent with existing zoning for the property.

Historical Use:

Prior to 1887, the property was developed with a bakery, livery and wagon house. The operation was closed by 1904. Sometime between 1904 and 1905 the Site was redeveloped with a 5-story mixed use commercial/residential building. The first floor was divided into two commercial spaces and the upper floors were residential. The 5-story mixed use building remained until the entire lot was demolished in 1980. The Site has remained undeveloped since, but the land was used for lumber storage until 2003. Since 2003 the Site has remained vacant.

Summary of Environmental Findings:

1. Elevation of the property is approximately 14 feet.
2. Depth to groundwater is approximately 10 feet at the Site.
3. Groundwater flow is generally from south to north beneath the Site.
4. Depth to bedrock is at the Site is greater than 100 feet.
5. The stratigraphy of the Site, from the surface down, consists of approximately 7 feet of historic fill underlain by a native brown sand.

PROPOSED DEVELOPMENT PLAN

The 25ft wide tax lot (Lot 33) and the 24.52 ft wide tax lot (Lot 32) will be developed with identical 25 ft wide residential four-story masonry buildings. Both buildings will have a full

cellar beneath the footprint of each building. Both buildings will extend approximately 65 feet. Therefore, the gross building square footage for each building is 8,125 ft2. There will be a rear cellar level walk-out court yard behind each building, which will be approximately 35 feet deep. The concrete slab of the cellar will be approximately 6 feet 4 inches below sidewalk level. The street front portion of the cellar will consist of a boiler room, gas meter room, electric meter room and a large open cellar area. The remaining portions of the cellar for each building will consist of residential space. Each building will consist of three residential units.

Excavation for each new building and rear cellar-level court yard will likely extend to a depth of approximately 8 feet below grade for construction of the buildings' cellar levels and foundations. Assuming an excavation volume of approximately 25 feet (wide) by 100 feet long (length) and 8 feet (deep), a total of approximately 750 cubic yards (1,100 tons) of soil will require excavation per building. The total excavated volume of soil for the entire Site will be approximately 1,500 cubic yards (2,200 tons). The slab and rear cellar level court yard for each building will be capped with a 1 ft 6" layer of concrete.

SUMMARY OF REMEDIAL INVESTIGATION

The Remedial Investigation was conducted on August 23-27, 2012. A full Remedial Investigation Report is available online in the document repository and the results are summarized below.

Soil:

Soil/fill samples collected during the RI showed no detectable PCBs. Seven VOCs were detected within two of the four soil samples collected at the groundwater interface (8 to 10 ft depth), but only 1,2,4-trimethylbenzene (19,000 ppb) was detected above its Unrestricted Use Soil Cleanup Objective (SCO). No VOCs were detected within the shallow soil samples, and no chlorinated VOCs were detected in any sample. Six SVOCs were detected above their respective Unrestricted Use SCOs in three shallow soil sampling locations, and of these benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene were also detected above their respective Restricted Residential SCOs. The SVOCs detected above Restricted Residential SCOs are all PAH compounds and their concentrations and distribution indicate that they are associated with historic fill material observed during the sampling. Five metals exceeded Unrestricted Use SCOs in shallow soil samples, and of these, barium (maximum of 515 ppm), lead (maximum of 677 ppm) and mercury (maximum of 2.54 ppm) also exceeded Restricted Residential SCOs. Pesticides including 4,4,4-DDT, 4,4,4-DDE, 4,4,4-DDD, chlordane, and dieldrin were detected within the shallow soil samples at concentrations above Unrestricted Use SCOs, but below Restricted Residential SCOs. No SVOCs, PCBs or pesticides were detected above Unrestricted

Use SCOs within any of the deep soil samples collected at the Site. Overall, the findings were consistent with observations for historical fill sites in areas throughout NYC.

Groundwater:

Groundwater samples collected during the RI showed three chlorinated VOCs, including tetrachloroethene (maximum of 1.5 ppb), trichloroethene (maximum of 1.6 ppb) and cis-1,2-dichloroethene (maximum of 15 ppb) in groundwater, with only cis-1,2-dichloroethene detected above GQSs. No chlorinated VOCs were identified in any of the soil samples collected on Site and are not associated with known historical uses of the property. Four SVOCs were detected in one monitoring well at concentrations well below GQSs. The pesticide deildrin was also detected above GQS in one groundwater sample at a concentration of 0.006 ppb. The metals iron, manganese, and sodium were detected above their respective NYSDEC Groundwater Quality Standards (GQS) in all three groundwater samples, and lead (46 ppb) and chromium (99 ppb) were detected above GQSs in one of the three groundwater samples.

Soil vapor:

Soil vapor samples collected during the RI showed petroleum and chlorinated VOCs at generally low concentrations. Tetrachloroethylene (PCE) was identified in all three soil vapor samples at a maximum concentration of 3.59 µg/m3. Trichloroethylene (TCE) was reported within two of the three soil vapor samples at a maximum concentration of 1.72 µg/m3. These PCE and TCE concentrations are below the monitoring level ranges established within the State DOH soil vapor guidance matrix. Concentrations of petroleum-related VOCs were generally less than 50 µg/m3, with the exceptions of toluene (max of 146 µg/m3) and propylene (max of 87.5 µg/m3). The highest reported concentrations were for acetone (1370 µg/m3) and ethanol (250 µg/m3).

Figure 1 – Site Map

Figure 2 – Site Location Map