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November 13, 2013

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Re: **Decision Document**
NYC VCP Remedial Action Work Plan Approval
490-504 Myrtle Ave Site A
Block 1905, Lot 30
VCP Project #13CVCP109K

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated January 15, 2013 and Stipulation List dated June 6, 2013 for 504 Myrtle Ave, VCP Project #13CVCP109K. 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 March 7, 2013. There were no public comments.

Statement of Purpose and Basis

This document presents the remedy for a Voluntary Cleanup Program site known as “490-504 Myrtle Ave Site A” 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.

The decision is based on the Administrative Record of the New York City Office of Environmental Remediation (the Office or OER) for the “490-504 Myrtle Ave Site A” site and the public's input to the proposed remedy presented by OER.

Description of Selected Remedy

The remedy selected for this “490-504 Myrtle Ave Site A” site includes soil excavation, an engineered composite cover system, and installation of waterproofing/ vapor barrier.

The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and implementation of a Citizen Participation Plan.
2. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establish Track 1 Soil Cleanup Objectives (SCOs) for entire property including Site A and Site B.
4. Excavation and removal of soil/fill exceeding Track 4 SCOs. Removal of approximately 11 feet of soil in the western and eastern portions of Site B and approximately 3 to 4 feet beneath the existing cellar slabs at Site A and Site B as part of development.
5. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
6. Removal of underground storage tanks and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations.
7. Construction and maintenance of an engineered composite cover consisting of 6-inch thick concrete slab beneath both the 2 new buildings at Site A and Site B buildings to prevent human exposure to residual soil/fill remaining under the Site;
8. Installation of a vapor barrier system beneath the building slabs and behind foundation walls at Site A and Site B.
9. Installation and operation of an active sub-slab depressurization system beneath Site A and a ventilated sub-grade parking garage at Building B that will also prevent the buildup of any vapors within both structures.
10. Demarcation of residual soil/fill.
11. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
12. 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. Appropriate segregation of excavated media onsite.
13. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.
14. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
15. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

16. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
17. 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.
18. In areas where 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.
19. In areas where 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.

November 13, 2013



Date

Shaminder Chawla
Deputy Director

SITE BACKGROUND

Site Location and Current Usage:

The Site is located at 490 Myrtle Avenue (aka 484-502A Myrtle Avenue) and 504 Myrtle Avenue (aka 504-524 Myrtle Avenue) in the Clinton Hill section in Brooklyn, New York and is identified as Block 1905, Lots 19 (Site A) and 30 (Site B) on the New York City Tax Map, respectively. Figure 1 shows the Site location. The Site is 44,000-square feet in size and consists of two developments separated by New York City sewer easement. The Site is bounded by Myrtle Avenue to the north, Hall Street to the west, multi-story residential coop to the south and a multi-story mixed commercial and residential building to the east

Site A or 490 Myrtle Avenue (Lot 19) is a rectangular shaped parcel approximately 19,500 square feet in size that is currently developed with a 1-story commercial building with a full cellar. Six commercial units are located at Site A, five of which are vacant and a supermarket currently occupies the remaining unit. Site B or 405 Myrtle Avenue (Lot 30) is also a rectangular shaped parcel approximately 24,500 square feet in size that is currently developed with a 1-story commercial building with localized partial cellars. Six commercial units are located at Site B, three of which are currently vacant and the remaining three units are occupied by a dry cleaner, retail store and a United States Post Office (“USPO”). The dry cleaner and retail stores at the property will be vacated prior to Site redevelopment and the USPO, which is located in the eastern portion of 504 Myrtle Avenue or Site B will be vacated by May 31, 2014.

Past Uses and Areas of Concern:

Based upon the review of the Fire Insurance Maps and Regulatory Agency documents from the Phase I Environmental Site Assessment (ESA) Reports prepared by Singer Environmental Group, LTD and Hydro Tech Environmental, Corp. in April 2010, July 2012 and November 2012, a Site history was established. The Site was historically developed with 3-story residential buildings prior to 1887 and two 1-story commercial buildings since 1950. Commercial uses of environmental concern consisted a drycleaners at 500 Myrtle Avenue (eastern portion of Site A) from 1969 to 1992, at 486 Myrtle Avenue (western portion of Site A) in 1934, and at 504-510 Myrtle Avenue (western portion of Site B) from approximately 1992 to 2012.

The AOCs identified for this Site include:

- Presence of historic fill material
- Current and historic dry cleaning operations
- Presence of aboveground and suspect underground storage tanks
- Presence of chlorinated solvents in groundwater

Presence of potential vapor encroachment conditions

Summary of Environmental Findings:

1. Elevation of the property ranges is approximately 56 feet.
2. Depth to groundwater ranges from 46.9 to 49.9 feet at the Site.
3. Groundwater flow is generally from northeast to southwest beneath the Site.
4. Depth to bedrock is in excess of 70 feet at the Site. Cobbles and boulders were encountered between 20 and 35 feet bgs.

PROPOSED DEVELOPMENT PLAN

The proposed future use of the Site will consist of two new mixed commercial residential use buildings with full cellars; 490 Myrtle Residential Owner, LLC, the owner of Site A, is

developing this property into a 7-story mixed use commercial/residential building with cellar, 504 Myrtle Residential Owner, LLC, the owner of Site B, is developing this property into an 8-story mixed use commercial/residential building with cellar. The construction at the Site will be completed over two phases; it is anticipated that Building A at 490 Myrtle Avenue and the western portion of Building B (to be referred to as Building B1) at the vacated half of 504 Myrtle Avenue will be developed during the first phase of construction. After the USPO vacates, phase two will begin with the construction of the remaining portion of Building B at 504 Myrtle Avenue (referred to as Building B2). Building B1 and Building B2 will be connected upon completion of phase two (collectively referred to as Building B); they will share a lobby and all building systems. The cellar at Building B1 will provide the required parking for Building A and the cellar at Building B2 will provide the required parking for Building B.

The development at Building A will include limited excavation of soils in the existing cellar for the layout of building footings. Excavation at Building B1 and B2 will extend to approximately 11 feet below grade for the layout of cellar foundations. The cellar slab in both buildings will be installed at 10 feet 6 inches below the sidewalk elevation and the cellar slab will be approximately 6 inches in thickness. The cellar slab will be poured on top of a 6 inch layer of gravel fill installed at the bottom of excavation. An elevator shaft will be located in the central portion of each building. The bottom of the proposed elevator shaft slabs will be approximately 5 feet 6 inches below cellar slab elevation. No landscaped or open areas will exist on the Site. The building will occupy the entire footprint of the lots.

The two developments will be separated into two VCP projects for administrative purposes, and will be identified as 490 Myrtle Avenue (Building A) and 504 Myrtle Avenue (Building B), Brooklyn, New York, respectively. Site A has been previously given an OER Project Number 11EH-N012K.

SUMMARY OF REMEDIAL INVESTIGATION

The Remedial Investigation was conducted in April and May 2013. 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 PCBs contamination in both shallow and deep soil samples at Site A and Site B. VOCs were detected in shallow and deep soil samples collected at Site A and Site B at concentrations that fell below Track 1 Unrestricted Use SCOs. PCE was detected in 3 of 9 shallow soil samples collected at Site A (maximum 28.7 µg/kg) and in 4 of 6 shallow samples at Site B (maximum 58 µg/kg). PCE was also detected in 3 of 9 deep soil samples at Site A (maximum 1,360 µg/kg) and did not occur in any of the six deep samples at Site B. Total xylenes were only detected in 1 shallow soil sample at Site A (1.87 µg/kg) and Acetone was detected in 1 shallow soil samples at Site B (39 µg/kg). SVOCs were detected in 4 of 9 shallow samples at Site A and in 5 of 6 shallow samples at Site B. In the deeper soil samples, SVOC's were not detected at Site B with few detections at Site A. SVOC's including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene were detected 2 of 6 shallow soil sample at Site B and also in 1 of 9 deep soil samples at Site A at concentrations that exceeded the Restricted Use (Track 2) Residential SCOs. Total SVOCs in shallow soils at Site B ranged from none detected to 19,758 µg/kg. Total SVOCs in deep soils at Site A ranged from none detected to 98,570 µg/kg. The SVOC's are

PAH compounds and are attributed to the presence of historic fill material at the property. Pesticides including Endrin (maximum of 1,800 µg/kg), DDD (maximum 5.64 µg/kg), DDE (maximum of 340 µg/kg) and DDT (maximum of 2,900 µg/kg) were detected in 4 of 6 shallow soil samples at Site B and in 2 shallow and 1 deep soil samples at Site A at concentrations above the Track 1 SCOs, with DDT also exceeded the Track 2 Residential SCO in 1 shallow soil sample at Site B. Metals were detected in both shallow and deep soils at both Site A and Site B. At Site A, nickel (maximum of 257 mg/kg), mercury (maximum of 0.227 mg/kg) and manganese (maximum of 5,340 mg/kg) were detected in 3 of 9 shallow samples at concentrations above Track 1 SCOs, and of these, nickel, and manganese also exceeded the Track 2 Residential SCOs. At Site B metals including lead (maximum of 1,960 mg/kg), barium (maximum of 1,270 mg/kg), chromium trivalent (maximum of 48.6 mg/kg), copper (maximum of 132 mg/kg), mercury (maximum of 1.1 mg/kg), nickel (maximum of 38.2 mg/kg) and zinc (maximum of 725 mg/kg) were detected in 5 of 6 shallow soil samples at concentrations above Track 1 SCOs, and of these, barium, chromium, lead and mercury also exceeded the Track 2 Residential SCOs. In deeper soils, nickel (maximum of 39 mg/kg), mercury (maximum of 0.187 mg/kg), chromium trivalent (maximum of 30.6 mg/kg) and manganese (maximum of 5,680 mg/kg) were detected in 2 deep samples at concentrations above Track 1 SCOs, and of these, only manganese exceeded the Track 2 Residential SCOs. Manganese was also detected in 1 deep sample at Site B at concentration above the Track 2 Residential SCOs.

Groundwater:

Groundwater samples collected during the RI showed 2 chlorinated VOCs including PCE (maximum of 18 ug/l) and chloroform (maximum of 10.7 ug/l) in 2 of the 3 monitoring wells installed at the Site. PCE was detected in 2 wells and Chloroform was detected in 1 well at concentrations exceeding 6NYCRR Part 703.5 Class GA Groundwater Quality Standards (GQS). PCE was detected in soil samples on the property and therefore the presence of chlorinated VOCs in groundwater beneath the Site is likely to be attributed to the historic dry cleaning operations at the property. No SVOCs, pesticides or PCBs were detected in groundwater samples. Two dissolved metals including iron and Sodium were detected in groundwater beneath the Site above GQS, which are likely to reflect a regional impact.

Soil vapor:

Sub slab and soil vapor samples collected during the RI showed a wide range of compounds throughout the property including BTEX and associated derivative compounds and chlorinated hydrocarbons. BTEX and associated derivatives were found in all soil vapor samples and included a wide number of compounds. Concentrations of these compounds generally fell below 260 ug/m³. These compounds were not identified in soil or groundwater on the property and are not believed to be associated with an onsite source area. Chlorinated hydrocarbons are also commonly observed in soil vapor samples at high concentrations across Site A and Site B. PCE was found in all samples and occurred in high concentrations ranging from 69.8 ug/m³ to a maximum of 12,800 ug/m³. TCE was found in 10 of the 11 vapor samples collected and ranged from 0.59 ug/m³ to a maximum of 180 ug/m³. A variety of other chlorinated hydrocarbon compounds are identified in many soil vapor samples. The most significant concentrations for these compounds occurred for chloroform (maximum 190 ug/m³), and acetone (maximum 4,300 ug/m³).

Figure 1 – Site Map



Figure 2 – Site Location Map

