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October 17, 2012

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Re: **NYC VCP Remedial Action Work Plan Approval**
172-184 Nassau Street
Block 108, Lots 12
VCP Project # 13CVCP076K / OER Project # 12EH-N528K

Dear Mr. Rieder:

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 172-184 Nassau Street, VCP Project # 13CVCP076K, dated September 06, 2012. 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 September 10, 2012. 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 Voluntary Cleanup site known as “172-184 Nassau Street” 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: <http://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 172-184 Nassau Street Site and the public's input to the proposed remedy presented by the Office.

Description of Selected Remedy

The remedy selected for this 172-184 Nassau Street Site is Track 4 remedy and includes soil excavation, cover system, vapor barrier installation and partial sub-slab ventilated parking garage.

The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP citizen participation activities according to an approved Citizen Participation Plan (CPP);
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
3. Establishment of Track 4 Site-Specific SCOs. Additional testing may be performed to determine attainment of Track 1 Unrestricted Use 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 4 Site-Specific SCOs;
6. Installation of a 20 mil HDPE vapor barrier as manufactured by GSE Lining Technologies, inc, (or equivalent) beneath the building slab.
7. Removal of underground storage tanks and closure of petroleum spills (if encountered) in compliance with applicable local, State and Federal laws and regulations.
8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of any contaminated media on-Site;
9. 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;
10. Collection and analysis of end-point samples to determine whether Track 1 Unrestricted Use SCOs or Track 4 Site-Specific SCOs are achieved;
11. Demarcation of residual soil/fill;

12. Construction and maintenance of an engineered composite cover across the entire Site to prevent human exposure to residual soil/fill remaining under the Site;
13. Operation of high volume air exchange required by NYC Building Code to provide ventilation for indoor parking garage;
14. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations;
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, and lists any changes from this RAWP.
18. If Track 1 Unrestricted Use SCOs are not achieved, submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual historic fill, including plans for inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency; and
19. If Track 1 Unrestricted SCOs are 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) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (3) 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 is relevant and appropriate and takes into consideration OER guidance, as appropriate. The remedy is protective of public health and the environment.

10/17/12
Date

Shaminder Chawla
Shaminder Chawla
Assistant Director

SITE BACKGROUND

Location:

The Site is located at 172-184 Nassau Street in Brooklyn, New York and is identified as Block 108, Lots 12 on the New York City Tax Map. Figure 1 shows the Site location.

Site Features:

The Site is 13,161-square feet and is bounded by Nassau Street and Trinity Park (Public Park and Playground) to the north, Duffield Street and D.R. White Catholic Community Center to the east, Lot 5 to the west, which is developed with a 20-story apartment building with first floor commercial space, and a parking lot to the south. Currently, the Site is vacant, but an abandoned 5-story residential building is located on the eastern portion of the Site. The topography of the Site and its vicinity is generally level. The surrounding property uses are predominantly residential and commercial.

Current Zoning/uses:

The current zoning designation is C6-2, Commercial District. The proposed use is consistent with existing zoning for the property.

Historical Use:

A review of historic records revealed that The Site was historically developed as

- 172 Nassau Street – Residential and Mayfair Ship Supplies
- 174-178 Nassau Street – Residential and a ribbon ink and carbon paper manufacturing plant
- 180 Nassau Street / 2 Duffield Street – Residential only

Summary of Environmental Findings:

1. Elevation of the property ranges from 56 feet.
2. Depth to groundwater ranges from 50 to 52 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 up to 12 feet of historic fill underlain by a coarse brown native sand.

A site location map is attached as Figure 1.

PROPOSED DEVELOPMENT PLAN

The proposed future use of the Site will consist of a new 12-story apartment building. The current zoning designation is C6-2. The proposed use is consistent with existing zoning for the property.

The proposed redevelopment plans for the Site include the construction of a new 12-story apartment building with a full cellar level below grade. The apartment building will have 124 dwelling units,

accessory recreation areas at the cellar and first floor levels, and an outdoor accessory recreation area at the roof level. The proposed project gross area will be approximately 125,000 ft², including the cellar level.

With the exception of two areas, the entire Site will require excavation to a depth of approximately 13 feet below grade to allow for installation of the cellars concrete slab at 12 feet below grade. The two areas that require excavation to a lesser extent include the two vehicular ramps to the cellar and first floor parking garages, and the entrance to the residential lobby located on the corner of Duffield Street and Nassau Street.

The cellar level will be utilized as accessory off-street parking, utilities, storage, superintendent's office and a 1,325 ft² gym/recreation area. Access to the cellar is provided by a vehicle ramp from Duffield Street, two elevators and two stairwells. The first floor of the building will be utilized for accessory off-street parking and residential lobby. Each of the 124 dwelling units will be located on the 2nd through 12th floors.

The total volume of soil required to be excavated from the Site for construction of the proposed building is estimated at approximately 6,000 cubic yards (9,000 tons).

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

SUMMARY OF REMEDIAL INVESTIGATION

The Remedial Investigation was conducted on July 6, 2012. A full Remedial Investigation Report is available online in the document repository and the results are summarized below.

Nature and Extent of Contamination:

Soil: Shallow soil samples collected during the RI showed no PCBs at detectable concentrations. No VOCs were detected above UUSCOs within any of the soil samples except for two very low concentrations of m&p-Xylenes (10 ppb) and o-Xylene (5.7 ppb) detected in one of the shallow soil samples. No chlorinated VOCs including PCE and TCE were detected in any soil sample. Four SVOCs (benzo(a)anthracene, benzo(a)-pyrene, benzo(b)fluoranthene and chrysene were detected within the one of the six shallow samples at concentrations above their RRSCOs, and one SVOC was detected at a concentration above RRSCO in a second shallow soil sample. Four metals including lead (maximum of 322 ppm), mercury (maximum of 0.51 ppm), Nickel (maximum of 339 ppm) and zinc (maximum of 324 ppm) were detected at a concentration above UUSCOs within the shallow soil samples. No metals in shallow or deeper soils were detected at a concentration exceeding their RRSCOs. One pesticide, chlordane was detected above UUSCOs at 56 ppb within the shallow soil samples collected from the historic fill layer. The type, distribution and concentration of each of SVOCs and metals indicate that they

are associated with historic fill material observed in shallow samples. Deep soil samples collected during the RI showed no pesticides, PCBs, or VOCs at detectable concentrations. Two SVOCs were detected within one of the six deep soil samples at a concentration above their RRSCO. Metals including lead, mercury nickel and zinc were above UUSCO. Overall, the findings for soil were unremarkable and did not show a source area for contamination on the property. Soil results were consistent with observations for other historical fill sites in Brooklyn.

Groundwater: No pesticides or PCBs were detected in either groundwater sample collected at the Site. Groundwater samples collected during the RI showed one chlorinated VOC (chloroform) in both groundwater samples. Chloroform was detected above Groundwater Quality Standards (GQS) in the range from 1.0 ppb to 7.5 ppb. No TCE or PCE was detected in groundwater. No SVOCs were detected above their corresponding GQSs in groundwater, but two SVOCs were reported at low concentrations below their corresponding GQS. The dissolved metals including iron, magnesium, manganese, and sodium were detected above their respective GQS and are suggestive of regional saline influence in groundwater. The RI indicates that groundwater is not impacted by Site conditions and did not reveal any sources of contaminants on the Site.

Soil vapor: Soil vapor samples collected during the RI showed low trace levels of petroleum and chlorinated VOCs except for acetone (detected from 752 to 2,070 $\mu\text{g}/\text{m}^3$) and ethanol (detected from 172 to 855 $\mu\text{g}/\text{m}^3$). Both compounds are common laboratory introduced contaminants. PCE was identified in all samples at a maximum concentration of 1.91 $\mu\text{g}/\text{m}^3$. TCE was identified in five of the six soil vapor samples at a maximum concentration of 1.02 $\mu\text{g}/\text{m}^3$. These results were well below the monitoring levels for PCE and TCE in the State DOH soil vapor guidance matrix and in the range of ambient air quality. Neither PCE nor TCE were detected within any of the soil samples collected at the Site and these low levels suggest a possible off-Site origin.

Figure 1: Site Map

