



**OFFICE OF ENVIRONMENTAL REMEDIATION**

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**Director**

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**DECISION DOCUMENT**

**NYC VCP Remedial Action Work Plan Approval**

February 5, 2016

Re: **112 West 25th Street (Lot 49) and 113 West 24th Street (Lot 50)**  
**Manhattan, Block 800, Lot 49 and 50**  
**VCP Project Number: 16CVCP019M**

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated January 8<sup>th</sup> 2016 with Stipulation Letter dated January 28, 2016 for the above-referenced project.

The Plan was submitted to OER under the NYC Voluntary Cleanup Program.

The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on December 6, 2015. There were no public comments.

**Project Description**

The Site is located in the Flatiron section of Manhattan, New York City and is identified as Block 800 and Lots 49 and 50 on the New York City Tax Map. The Site is 17,000-square feet (SF) and is bounded by West 25th Street to the north, West 24th Street to the south, a building to the east, and a building to the west. Currently, the Site is vacant and contains no buildings. The proposed redevelopment plan includes the construction of two buildings; one on each Lot. It is anticipated that the building on Lot 49 will be constructed first.

**Statement of Purpose and Basis**

This document presents the remedial action for the NYC Voluntary Cleanup Program project known as 112 West 25th Street (Lot 49) and 113 West 24th Street (Lot 50) pursuant to Title 43 of the Rules of the City of New York Chapter 14, Subchapter 1.

**Description of Selected Remedy for Hazardous Materials**

The remedial action selected for the Lam Gen Redevelopment site is protective of public health and the environment. 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.
2. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Selection of NYSDEC Part 375 Section 6.8(b) Track 2 Commercial Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

5. Completion of a Waste Characterization sampling at a frequency dictated by disposal facility.
6. Excavation and removal of soil/fill exceeding Track 2 Commercial SCOs down to native bedrock (approximately 14 to 28 feet below grade), or deeper on both Lots, as needed for development purposes. Approximately, 9,500 tons of soils will be excavated and removed from this Site on Lot 49 only. This remedial plan will be amended prior to start of construction on Lot 50.
7. Following soil excavation, a chemical oxidant (e.g., RegenOx®) will be applied to groundwater in the open excavation of the Site. The In-situ chemical oxidation plan will be approved by NYSDEC prior to implementation.
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 excavated media on-Site.
9. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
10. Removal of all known UST's and any unknown USTs that are encountered during soil/fill removal actions. Registration of tanks and reporting of any petroleum spills associated with UST's and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
11. Performance of a remedial action for the petroleum spill #15-01663 (open) and 15- 01725 (closed) under New York State Department of Environmental Conservation (NYSDEC) Spill program. This remedial action will consist of installation and monitoring of off-site groundwater wells as required and approved by NYSDEC, will include the removal and proper closure of USTs, removal of LNAPL present beneath the site, treatment of groundwater plume via injections of chemical oxidation solutions if required by NYSDEC, excavation and removal of petroleum impacted soil, where feasible, and the implementation of a groundwater monitoring program. A separate RAWP Addendum may be required by NYSDEC.
12. Request for closure of onsite petroleum spill number #15-01663 (open) and 15-01725 (closed) under the authority of NYSDEC pending the results of the investigation and remediation and in accordance with CP-51 soil cleanup objectives. This RAWP does not alter or interfere with the remedial action for the petroleum spill. A separate Spill closure report will be prepared and submitted to NYSDEC, if warranted based on the results of the investigation.
13. Transportation and off-Site disposal of all soil/fill material at licensed or 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 on-Site.
14. Collection and analysis of end-point samples if native fill not present following excavation to determine the performance of the remedy with respect to attainment of SCOs.
15. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
16. Construction of an engineered composite cover consisting of an 8 to 12 inch thick concrete building slab with an 8-inch clean granular sub-base beneath all building areas, 4-inch poured concrete on a 6-inch sub-base in sidewalk areas, and two feet of clean soil in all open space and landscaped areas.

17. Installation of a vapor barrier system consisting of a vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building. The vapor barrier system will consist of a 46-mil Preprufe 300R below the slab throughout the full building area and a 32-mil Preprufe 160R outside all sub-grade foundation sidewalls. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. The vapor barrier system is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building.
18. Installation of an active sub-slab depressurization system (SSDS). The SSDS will consist of three (3) separate piping loops installed within porous granular material consisting of 2-inch stone beneath the basement foundation. The loops will consist of a network of horizontal pipes set in the middle of a gas permeable layer immediately beneath the building slab and vapor barrier system. The horizontal piping will consist of fabric wrapped, perforated schedule 40 4-inch PVC pipe connected to a 6-inch steel pipe that penetrates the foundation and vented to the roof. The gas permeable layer will consist of a 6-inch thick layer of 2-inch trap rock stone. The pipe will be finished at the roof line with a 6-inch goose neck pipe to prevent rain infiltration. The active SSDS will be hardwired and will include a blower installed on the roof line and a pressure gauge and alarm located in an accessible area in the basement. The active SSDS is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the active SSDS was designed and properly installed to establish a vacuum in the gas permeable layer and a negative (decreasing outward) pressure gradient across the building slab to prevent vapor migration into the building.
19. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.
20. Excavations will extend into the water table and dewatering will be conducted, as required. Dewatering will be conducted in compliance with city, state, and federal laws and regulations. If off-site disposal of extracted groundwater is required, the groundwater will either be containerized for off-site licensed or permitted disposal, or will be treated under a permit from New York City Department of Environmental Protection (NYCDEP) to meet pretreatment requirements prior to discharge to the sewer system.
21. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
22. 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.
23. Submission of a Remedial Action Report (RAR) that describes the remedial activities certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site. A separate RAWP Addendum will be prepared for NYSDEC detailing spill remediation including injections, off-site treatment or monitoring.
24. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and Institutional Controls and a requirement that management of these controls must be

in compliance with an approved SMP. Institutional Controls will include 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.

25. Performance of post excavation groundwater monitoring from three (3) shallow zone and one (1) deep groundwater monitoring wells for a minimum of eight (8) quarters. Samples will be collected in accordance with NYSDEC DER-10, and analyzed for Site related VOCs via EPA Method 8260. Groundwater well numbers and sampling plan will be approved by NYSDEC prior to implementation. Quarterly monitoring results will be submitted to NYSDEC and OER.
26. In-situ chemical oxidation to address residual groundwater contamination followed by monitored natural attenuation, as required and approved by NYSDEC.

The remedy for Hazardous Materials described above conform to the promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration OER guidance, as appropriate.

February 5, 2016



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Date

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William Wong  
Project Manager

February 5, 2016



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Date

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Shaminder Chawla  
Deputy Director

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