



**OFFICE OF ENVIRONMENTAL REMEDIATION**

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**DECISION DOCUMENT**  
**NYC VCP, E-Designation**  
**Remedial Action Work Plan Approval**

August 29, 2022

Re: 311 Bergen Street: 311-315 Bergen Street, 333-343 Bergen Street, 336-338 Dean Street  
Brooklyn Block 198, Lot 48 (Former Lots 48, 47, 22, 23)  
Hazardous Materials E Designation  
E-42: Park Slope North Rezoning - CEQR 90-254K - 4/1/1993  
OER Project Number 22EHAZ082K / 22CVCP027K

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated January 2022 with Stipulation Letter dated February 16, 2022 for the above-referenced project.

The Plan was submitted to OER under the NYC Voluntary Cleanup Program and E-Designation Program.

The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on 02/07/2022. There were no public comments.

**Project Description**

The proposed future use of the Site will consist of a new 7-story residential building with a full cellar and a partial sub-cellar. The northern and central portions of the cellar will consist of building amenities, back of the house areas and utilities. This area of the cellar will require an excavation to the depth of 18.5 feet bgs. The southern portion of the cellar (along Bergen Street) is located on top of partial cellar and both spaces will be used as an underground parking garage. This area of the partial subcellar will be excavated to 21 feet bgs, at which depth groundwater may be encountered. The layout of the proposed site development will occupy the entirety of Lots 48 and 47 with an accessory cellar level open residential space below grade in the western portion of Lots 22 and 23. The remaining portion of Lot 22 and 23 (along Dean Street) will consist of open landscaped and recreational areas. Approximately 45,000 tons of soil is expected to be excavated and removed from the Site during this remedial development.

**Statement of Purpose and Basis**

This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation Program project known as “311 Bergen Street” pursuant to Title 43 of the Rules of the City of New York Chapter 14, Subchapter 1 and the Zoning Resolution and §24 - 07 of the Rules of the City of New York.

**Description of Selected Remedy**

The remedial action selected for the 311 Bergen Street site is protective of public health and the environment. The elements of the selected remedy are as follows:

The proposed remedial action will consist of:

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. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.

3. Establishment of Track 4 Site-Specific Soil Cleanup Objectives (SCOs).
4. Site mobilization involving site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Performance of a remedial action for the petroleum spill #1709532 under the New York State Department of Environmental Conservation (NYSDEC) Spill program. This remedial action will involve the excavation of contaminated soil, if feasible, to 1 or 2 feet below the water table in the area of spill in order to fully remove the hotspots and maximize source removal; the in-situ bioremediation of contaminated groundwater beneath the Site through the injection of ORCA; the direct application of ORCA pellets at excavation bottom; and the performance of post-remedial groundwater sampling to assess the groundwater quality in anticipation of spill closure.
6. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s). A Waste Characterization Report documenting sample procedures, location and analytical results shall be submitted to NYCOER prior to start of Remedial Action.
7. Excavation and removal of soil/fill exceeding Track 4 Site-Specific SCOs. For development purposes, the entire footprint of the building area (about 95% of the property) will be excavated to a depth of approximately 18.5 feet bgs along Bergen Street for the layout of a full cellar and to the depth of 21 feet bgs beneath the eastern portion of the lower tier of the subcellar. Two small areas in the center the building perimeter will be excavated to within interim unsaturated zone by dewatering activities to the depths of 23.5 feet and 26.5 feet bgs for the layout of two elevator pits and to depth of 2 feet for the open landscaped and recreational area along Dean Street. As part of NYSDEC spill remedial action, the area of petroleum soil contamination in the central portion of the Site will be excavated, if feasible, to 1-2 feet below the depth of groundwater. Approximately 45,000 tons of soil/fill will be removed from the site and properly disposed at an appropriately licensed or permitted facility.
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. Removal of all seven underground hydraulic lifts and their associated hydraulic oil tanks located aboveground or underground in the eastern portion of the site, removal of all UST's that are encountered during soil/fill removal actions and registration of tanks and closure of petroleum spills (Spill #1709532) in compliance with applicable local, State, and Federal laws and regulations under NYSDEC authority.
10. 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.
11. 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 the RAWP. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-site.
12. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of Track 4 Site-Specific SCOs.
13. Import of materials to be used for backfill and cover in compliance with the RAWP and in accordance with applicable laws and regulations and demarcation of residual soil/fill.
14. Installation of an engineered composite cover consisting of a 2.5-foot-thick concrete mat foundation slab and 2 feet of clean soil in the landscaped and recreational area to prevent human exposure to residual soil/fill remaining at the Site.
15. Installation of a physical demarcation layer, consisting of orange snow fencing material or equivalent material before the placement of a clean fill cover in the landscaped and recreational area at the Site.
16. Installation of a waterproofing/vapor barrier system consisting of a 46-mil thick Grace Preprufe® 300R membrane beneath mud slab across the footprint of the building, elevator pit and a 32-mil thick Grace Preprufe® 160R/ 62-mil Grace Bituthene® 3000 membranes on the foundation sidewalls to grade at the property lines. All penetrations through the slab for utility lines will be sealed utilizing Grace Liquid Bituthene®. The vapor barrier system is an Engineering Control for the Remedial Action. The remedial engineer will certify in the Remedial Action Report (RAR) that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building.
17. Installation of an active SSDS beneath the western portion of the building consisting of a closed loop of horizontal pipe set in the middle of a gas permeable aggregate layer consisting of a 6- inch porous layer of bluestone stone placed immediately beneath the building slab and vapor barrier system. The loop will

consist of fabric wrapped, perforated 4" Schedule 40 PVC pipe connected above to a 4-inch cast iron riser pipe or 4-inch CPVC solid pipe that penetrates the slab and travels through the building toward an individual GAST 2 Horsepower (HP) explosive proof regenerative blower Model R5325 mounted above the finished roof of the building. Effluent sampling from the SSDS will be performed post system start-up in order to assess the need for air emissions treatment. 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. As part of the specifications of the SSDS installation and operation, a total of five pressure test points will be installed. Each pressure test point will consist of a stainless-steel screen placed within the 6-inch layer of bluestone stone and will be fitted with inert tubing (e.g., polyethylene) of ¼ inch diameter terminating above the slab with a gas tight fitting and a manhole cover.

18. Active SSDS: P.E. certified system design will be submitted in an updated Stipulation List amending the RAWP prior to the pre-construction meeting. The final design will include:
  - a. SSDS configuration, including layout, permeable layer cross section and permanent sub-slab monitoring point locations presented as an overlay on both the foundation plans and lowest level floor plans;
  - b. SSDS riser diagram;
  - c. Rooftop plan: the HVAC roof plan identifying the exhaust location(s) and labeling distances to all operable openings, air intakes and occupied spaces (i.e. rooftop recreational space).
19. Prior to OER sign-off at project close out, the SSDS drawings will be filed with DOB, as required. Documentation of filing with DOB, for example, as a post-approval amendment (PAA) to the new building filing, can be presented to OER at any time during remedial implementation. To avoid delay at closeout, drawings should be filed prior to system construction.
  - a. SSDS riser diagram: The SSDS riser diagram will be included in NYC Department of Buildings (DOB) Applicant of Record mechanical drawings and riser diagrams. The riser design must meet applicable DOB code. The drawing will be stamped by the responsible P.E./R.A.;
  - b. Rooftop plan: The HVAC roof plan identifying the exhaust location(s) and labeling distances to all operable openings, air intakes and occupied spaces (i.e. rooftop recreational space) will be included in NYC Department of Buildings (DOB) Applicant of Record mechanical drawings and riser diagrams. Discharge point must exhaust at the roof and be at least 10 feet from any operable openings, air intakes and occupied spaces and must meet DOB code. The drawing will be stamped by the responsible P.E./R.A.
20. Construction and operation of a sub-grade-level parking garage with high volume air exchange in conformance with NYC Building Code.
21. 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.
22. Dewatering in compliance with city, state, and federal laws and regulations. Extracted 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.
23. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
24. Submission of a Remedial Action Report (RAR) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the site boundaries, and lists any changes from the RAWP.
25. Submission of an approved Site Management Plan (SMP) in the Remedial Action Plan (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.
26. The property will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in the RAWP and a requirement that management of these controls must follow 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.

27. A deed restriction will be placed on the property to document the installation of, and continued operation and maintenance of the active SSDS in accordance with the approved SMP.

The remedy for Hazardous Materials E-Designation described above 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.

August 29, 2022



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Date

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Adesa Boja  
Project Manager

August 29, 2022



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Date

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Shaminder Chawla  
Deputy Director

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