BROWNFIELD CLEANUP PROGRAM
DECISION DOCUMENT

Mid-Block #57 Project Site
Manhattan, New York
Site No. C231062
March 2010

Statement of Purpose and Basis

This Brownfield Cleanup Program (BCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the Mid-Block #57 Project site. The remedial program was chosen in accordance with Article 27 Title 14 of the New York State Environmental Conservation Law and the 6 NYCRR375 regulations relative to the BCP.

Description of the Site

The Mid Block #57 Project site is located in Manhattan between West 57th and West 58th St., and between 11th and 12th Ave. The site is bordered by 601 and 631 West 57th St. properties to the west; by 847-853 11th Ave. property to the east; by 58th St. to the north; and by 57th St. to the south. This site is approximately 1.36 acres in size. The site's former addresses were 615-649 West 57th Street and 614-650 West 58th Street. The site consists of Tax Block 1105, part of Lot 5, Lot 14, Lot 19, and Lot 43 in the Borough of Manhattan. The surrounding neighborhood is mixed residential and commercial.

The topography of the site slopes gently to the west toward the Hudson River, which is situated approximately 250 feet west of the site. The site geology is characterized by fill material overlying sand and till, weathered rock, and bedrock.

The site was operated as auto repair shops and garages, along with other commercial uses. Currently the site is vacant and partially paved with asphalt and concrete. The proposed site redevelopment consists of a private school for grades K-12.

A Brownfield Cleanup Agreement (BCA) was executed in December 2008, and on February 17, 2009 an amendment to the BCA was signed by new volunteers.

Nature and Extent of Contamination

Contamination was identified by the Remedial Investigation of this site, which represents a significant threat to public health and the environment, requiring a remedial program for the site to address the contamination identified below. The off- site exposure assessment identified the potential for soil vapor migration to adjacent properties. An off-site soil vapor intrusion investigation will be required, however since the remedial party is a Volunteer, the off-site investigation will be implemented by either the responsible party (if identified) or by the Department.

The Remedial Investigation (RI) found contamination in soil, groundwater, and soil vapor. Twenty three

(23) soil samples were analyzed. Analytical results revealed volatile organic compounds (VOCs) in soil exceeding Part 375 Unrestricted Soil Cleanup Objectives (UUSCOs). Ethylbenzene was detected at 275 ppm, 1,2,4-trimethylbenzene at 317 ppm and total xylenes at 1,380 ppm. Semi-volatile organic compounds (SVOCs) were identified in soil in multiple samples at concentration above the UUSCOs. Chrysene was detected at 5.5 ppm and naphthalene was detected at 38 ppm. Metals identified in soil samples at concentration above the UUSCOs include mercury at 46 ppm, chromium at 65.8 ppm, lead at 4,420 ppm, and zinc at 1,250 ppm.

Eleven (11) groundwater samples were analyzed. The analytical data revealed VOCs concentrations exceeding NYS groundwater standards. Benzene was detected at 1,500 ppb, 1,2,4-trimethylebenzene at 2,400 ppb, and total xylenes at 4,900 ppb. SVOCs (including naphthalene, benzo(a)pyrene and chrysene) and metals (including lead, mercury, chromium, arsenic, manganese and sodium in unfiltered samples and only manganese and sodium in filtered samples) were also detected in groundwater in multiple samples at concentration above applicable standards.

Twelve (12) soil vapor samples were analyzed. Analytical data revealed the presence of VOCs in these soil vapor samples, including benzene at a maximum concentration of 831 ug/m^3, 1,2,4-trimethylbenzene at 37,600 ug/m^3, tetrachloroethane (PCE) at 240 ug/m^3, and total xylenes at 21,400 ug/m^3.

The remedy will address surface and subsurface soil contamination due to petroleum releases as well as the resulting groundwater impacts.

Description of the Remedy

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, the NYSDEC has selected a Track 1 for this BCP site. The components of the remedy set forth in the Remedial Work Plan and shown on the attached Figure 10 are as follows:

The elements of the proposed unrestricted use remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.
2. Petroleum contaminated soils to a depth of 25 feet across the site will be excavated and disposed off-site at an approved facility.
3. Groundwater remediation during construction activities consisting of excavation dewatering, treatment and off-site disposal, and in situ treatment.
4. Installation of a vapor barrier below the proposed building bottom slab and outside foundation walls to mitigate the potential for soil vapor intrusion.
5. Installation, operation and maintenance of an active ventilation system in the building basement designed to meet NYCDOB requirements and to further mitigate the potential for soil vapor intrusion.
6. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

a. requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
b. land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for

☒ residential use ☒ restricted residential use ☒ commercial use ☒ industrial use

c. prohibits agriculture or vegetable gardens on the controlled property(if Track 1 is not achieved); and

d. requires compliance with the Department approved Site Management Plan.

7. If the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan would be required, which includes the following:

a. a Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to assure the following institutional and/or engineering controls remain in place and effective:

i. Institutional Controls: The Environmental Easement discussed in Paragraph 6 above.

ii. Engineering Controls: The soil vapor mitigation systems discussed in Paragraph 4 above.

This plan includes, but may not be limited to:

i. descriptions of the provisions of the environmental easement including any groundwater use restrictions;

ii. provisions for the management and inspection of the identified engineering controls; and

iii. the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

i. monitoring of groundwater to assess the performance and effectiveness of the remedy; and

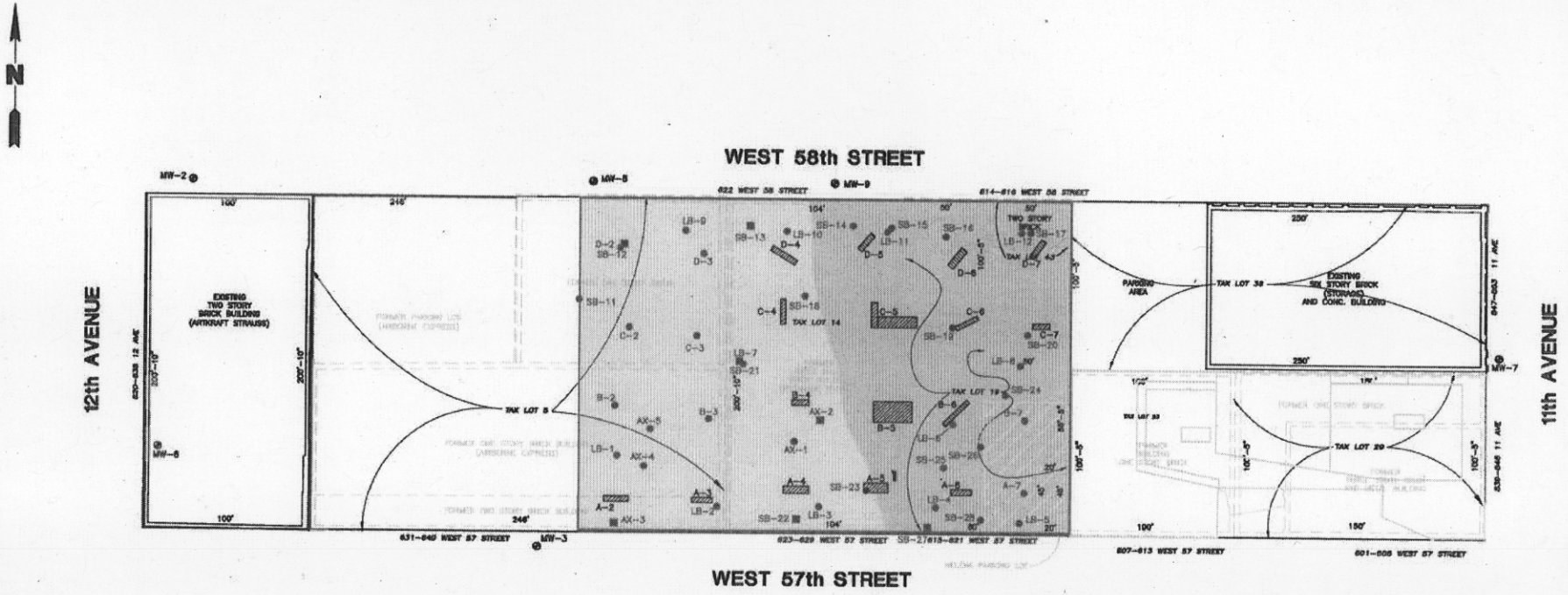
ii. a schedule of monitoring and frequency of submittals to the Department.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

March 5, 2010
Date

Director
Remedial Bureau B
Division of Environmental Remediation



LEGEND

- LIMITS OF MID BLOCK #57 PROJECT
- EXCAVATION TO 25 FEET BELOW LAND SURFACE
- EXCAVATION TO BEDROCK
- TEST PIT LOCATION
- SB-10 ■ LOCATION AND DESIGNATION OF SOIL BORING GROUNDWATER AND SOIL SAMPLE)
- AX-7 ● LOCATION AND DESIGNATION OF SOIL BORING (SOIL SAMPLE ONLY)
- MW-3 ⊕ LOCATION AND DESIGNATION OF EXISTING MONITORING WELL

NOTE

1. REMEDIAL ALTERNATIVE 1 INCLUDES EXCAVATION AND OFFSITE DISPOSAL OF ALL ON-SITE SOILS FROM LAND SURFACE TO 25 FEET BELOW LAND SURFACE OR BEDROCK AND END-POINT SOIL SAMPLING TO MEET TRACK 1-UNRESTRICTED SOIL CLEANUP OBJECTIVES (SCOs).
2. ADDITIONAL DEEPER EXCAVATION OF BEDROCK AND SOIL MAY BE NECESSARY TO MEET UNRESTRICTED SCOs OR FOR FOUNDATION CONSTRUCTION.

60' 0 60'

Title:

REMEDIAL ALTERNATIVE 1
TRACK 1 - UNRESTRICTED

REMEDIAL ACTION WORK PLAN
MID BLOCK #57 PROJECT

Prepared For:
DURST DEVELOPMENT L.L.C.

REMEDIAL ENGINEERING, P.C. ENVIRONMENTAL ENGINEERS	Compiled by: J.L.	Date: 11NOV09	FIGURE
	Prepared by: G.M.	Scale: AS SHOWN	10
	Project Mgr: J.L.	Office: NY	
	File No: DUR0313802	Project: 133603YD3	

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