243 SHERIDAN STREET

NEW CASSEL, NEW YORK

SECTION 11, BLOCK 44, LOT 74

Analysis of Brownfield Cleanup Alternatives

USEPA Community-Wide Assessment Grant

AKRF Project Number: 240014

Prepared for:

United States Environmental Protection Agency, Region 2
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New York, NY 10007

On Behalf Of:

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JUNE 2024

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1.0 INTRODUCTION AND BACKGROUND

AKRF, Inc. (AKRF) was retained by The Town of North Hempstead (TONH) Community Development Agency (CDA) to prepare this Analysis of Brownfield Cleanup Alternatives (ABCA) for the property located at 243 Sheridan Street in New Cassel, NY 11590 (the "Site"). The approximately 6,000-square foot Site, which is defined on the Nassau County Tax Map Section 11, Block 44, Lot 74, is developed with a vacant one-story single-family residence with a cellar, a detached garage, and exterior paved and landscaped areas. Historically, the Site was undeveloped until construction of the current residence circa 1965. A map showing the location of the Site is provided as Figure 1.

This ABCA was prepared to provide a summary of alternatives that were considered for the remediation of contamination identified at the Site. Previous environmental investigations conducted at the Site under the United States Environmental Protection Agency (USEPA) Community-Wide Assessment Grant Cooperative Agreement No. BF-9649919 (Petroleum) included a Phase I Environmental Site Assessment (ESA) and a Phase II Environmental Site Investigation (ESI). The purpose of completing the alternatives analysis was to identify, evaluate, and select an appropriate remedial approach to address the contamination that was identified.

1.1 Site Location

The Site is located at 243 Sheridan Street in New Cassel, NY 11590. The approximately 6,000-square foot Site, which is defined on the Nassau County Tax Map as Section 11, Block 44, Lot 74, is developed with a vacant one-story single-family residence with a cellar, a detached garage, and exterior paved and landscaped areas. The Site is bounded to the north, south, and west by single-family residences, and to the east by Sheridan Street, followed by single-family residences. The area surrounding the Site was primarily residential and commercial, with some educational, industrial, and recreational uses.

Based on the United States Geological Survey (USGS) 7.5-Minute Quadrangle Map for Hicksville, NY (2019) and Freeport, NY (2019), the Site is approximately 120 feet above the North American Vertical Datum of 1988 (NAVD 88), an approximation of mean sea level. Topography at the Site is generally flat, with surface topography in the surrounding area sloping gently down to the south.

Based on regional topography and the USGS Long Island Depth to Water Viewer, depth to groundwater in the vicinity of the Site is estimated to be approximately 45 to 55 feet below surface grade and is expected to flow in a southerly direction. Based on its topography, anticipated depth to groundwater, and distance from tidally influenced water bodies, there are currently no concerns associated with flooding due to climate change and/or sea level rising. Future redevelopment/rehabilitation of the Site will include appropriate engineering to address the management of stormwater and other concerns related to potential localized flooding of low-lying areas.

1.2 Previous Site Use(s)

Historical documentation indicated that the Site was undeveloped until construction of the current residence circa 1929; an addition was constructed in the southwestern portion of the residence prior to 1941.

As documented in AKRF's June 2022 Phase I ESA, the Site was approximately 6,000-square feet (sf) and developed with a one-story, single-family residence with a cellar, a detached garage, and exterior paved and landscaped areas.

1.3 Previous Cleanups/Remediations

No information/records indicating previous environmental cleanups or remediation activities conducted at the Site were identified.

1.4 Site Assessment Findings

AKRF prepared a Phase I ESA for the Site in conformance with American Society for Testing and Materials (ASTM) Practice E1527-13 in June 2022. At the time of the Phase I ESA, the Site was observed to be developed with a vacant one-story single-family residence with a basement, a detached garage, and exterior paved and landscaped areas. The Phase I ESA identified recognized environmental concerns (RECs), including suspected fill and vent piping associated with a current or former petroleum storage tank, and a 1953 certificate of compliance associated with the installation of an oil burner; the potential presence of a cesspool at the Site; and a spill incident related to petroleum-contaminated soil was identified following the removal of a 550-gallon underground storage tank at the north-adjoining property with no details regarding cleanup actions.

Business environmental risks (BERs) included a mound of potential fill material from an unknown source observed in the southwestern portion of the Site; the potential for the presence of asbestos-containing material (ACM), lead-based paint (LBP), lead-containing paint (LCP), polychlorinated biphenyl (PCB)-containing material, and/or mercury-containing material in the Site buildings, historic fill material, buried structures, and/or buried demolition debris at the Site; and the potential for the presence of water damage and mold within the Site building. The presence of general refuse and building materials across exterior portions of the Site was identified as a *De Minimi*s Condition.

Based on the findings of the Phase I ESA, AKRF prepared a Phase II ESI Work Plan to outline the scope of work to sample and analyze environmental media, with a focus on collecting soil data, and depending on field observations, groundwater data. The USEPA-approved June 2023 Phase II ESI Work Plan included a Health and Safety Plan (HASP) and a Quality Assurance Project Plan (QAPP). The field work associated with the Phase II ESI was completed on April 22 and 26, 2024, and included: completion of a geophysical survey across readily accessible areas of the Site; and the advancement of six soil borings to a maximum depth of 15 feet below surface grade with continuous sample collection and laboratory analysis of six soil samples from the soil borings. Groundwater was not encountered, and therefore, groundwater samples were not collected. Soil encountered consisted of fill materials extending from surface grade to depths down to approximately 2 feet below surface grade with apparent native material below. The soil sample IDs and depths are summarized in Table II.

Table II – Soil Sample Depths

Sample Location	Boring Depth (feet bsg)	Sample Depth (feet bsg)
243-SB-01	15	3 – 5
243-SB-02	15	5 – 7
243-SB-03	15	4 – 6
243-SB-04	15	6 – 8
243-SB-05	15	4 – 6
243-SB-06	15	11 – 13

Notes:
bsg = below surface grade
NA = not applicable

Samples were placed in laboratory-supplied containers within an ice-filled cooler in accordance with USEPA protocols and transported via courier with chain-of-custody (COC) documentation to Eurofins TestAmerica Inc. (TestAmerica) of Edison, New Jersey, a New York State Department of

Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory. Samples were analyzed for Part 375 List and Target Compound List (TCL) volatile organic compounds (VOCs) by USEPA Method 8260D, semivolatile organic compounds (SVOCs) by USEPA Method 8270E, polychlorinated biphenyls (PCBs) by USEPA Method 8082A, pesticides by USEPA Method 8081B, herbicides by USEPA Method 8151A, metals by USEPA 6020B and 7471A, and hexavalent chromium by USEPA Method 7196A.

Analytical results from the soil samples were compared to the New York State Department of Environmental Conservation (NYSDEC) Soil Cleanup Objectives (SCOs) presented in Section 6.8 of 6 New York State Codes, Rules, and Regulations (NYCRR) Part 375. Specifically, based on the potential future use of the Site (single-family residential or mixed-use commercial/residential), the Residential Soil Cleanup Objectives (RSCOs; applicable to single-family residential) and Restricted Residential Soil Cleanup Objectives (RRSCOs; applicable to mixed-use commercial/residential), developed for the protection of public health, were used for comparison. A comparison to Unrestricted Use Soil Cleanup Objectives (UUSCOs) was also included in relation to potential soil handling/disposal requirements and to assess potential remediation scenarios. No VOCs, SVOCs, PCBs, or metals were detected at concentrations above RSCOs, RRSCOs, or UUSCOs in any of the soil samples that were analyzed.

1.5 Project Goals/Site Reuse Plan

To support the revitalization of community assets, the TONH CDA intends to demolish the existing structure and redevelop the Site for single-family residential. The overall project goal is to redevelop an underutilized property for the benefit of the community in an effort to improve their future and quality of life.

2.0 APPLICABILITY AND CLEANUP STANDARDS

2.1 Cleanup Oversight Responsibility

As no contamination was detected at concentrations above the applicable NYSDEC SCOs for the anticipated future use of the Site (single-family residential), the cleanup and redevelopment/rehabilitation activities will not be overseen by a state regulatory agency. If evidence of tanks, petroleum contamination, or other unknown contamination is identified during redevelopment/rehabilitation activities, the appropriate state regulatory agency would be notified, and the CDA will retain a qualified environmental professional (QEP) to oversee the work to ensure that all activities are conducted in accordance with applicable federal, state, and local regulations accordingly (including applicable sampling and reporting). ACM, LBP, and other pre-demolition surveys and/or abatement will be conducted by qualified licensed professionals for the respective disciplines.

2.2 Cleanup Standards for Major Contaminants

The applicable cleanup standards for the Site include the NYSDEC SCOs presented in Section 6.8 of 6 NYCRR Part 375. Specifically, based on the anticipated future use of the Site (single-family residential), the RSCOs (applicable to single-family residential), developed for the protection of public health, would be applicable to the redevelopment/rehabilitation project.

2.3 Laws & Regulations Applicable to the Cleanup

Laws and regulations that are applicable to this cleanup include the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, NYSDEC environmental laws, Occupation and Health Administration (OSHA) regulations, and local North Hempstead by-laws and ordinances. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed. The TONH CDA will competitively bid and retain a QEP, in accordance with the competitive procurement provisions of 40 CFR Part 31.36. In addition, all appropriate permits and approvals (e.g., notify before you dig, state notifications/permits, soil transport/disposal approvals, etc.) will be obtained prior to the work commencing.

3.0 EVALUATION OF CLEANUP ALTERNATIVES

3.1 Cleanup Alternatives Considered

To address contamination identified at the Site, three different cleanup alternatives were considered as outlined below.

- Alternative 1: No Action
- Alternative 2: ACM Abatement and Demolition of the Existing Building With Retention of Foundation
- Alternative 3: ACM Abatement and Demolition of the Existing Building and Foundation

3.2 Criteria for Evaluation of Cleanup Alternatives

3.2.1 Effectiveness

- Alternative 1: No action would not be effective in that it would not allow for the renovation or redevelopment of an underutilized property for the benefit of the community.
- Alternative 2: ACM abatement and demolition of the existing building would be effective as it would remove all building contaminants and allow for future redevelopment of the Site in accordance with the CDA's goals.
- Alternative 3: ACM abatement and demolition of the existing building would be effective as it would remove all building contaminants and allow for future redevelopment of the Site in accordance with the CDA's goals.

3.2.2 Implementation

- Alternative 1: No action could be readily implemented by leaving the Site in its current blighted state and maintaining security (e.g., site fencing, security cameras, etc.) to prevent future vandalism and/or dumping of debris/refuse in perpetuity.
- Alternative 2: ACM abatement and demolition of the existing building could be implemented as abatement and demolition contractors are readily available to do the work. Under this alternative, the aboveground portions of the existing building would be demolished following abatement and off-site disposal of the known ACM (and any suspect ACM identified in the future) in accordance with applicable federal, state, and local regulations. This alternative would also include reinforcement of the existing building foundation to support construction of a new building using the existing building's foundation.
- Alternative 3: ACM abatement and demolition of the existing building could be readily implemented as abatement and demolition contractors are readily available to do the work; however, it would be more complicated than Alternatives 1 and 2 as the existing foundation would also be demolished. Under this alternative, the existing building would be demolished following the abatement and off-site disposal of the known ACM (and any suspect ACM identified in the future) in accordance with applicable federal, state, and local regulations. This alternative would also include characterization of soil requiring excavation and off-site disposal in accordance with the requirements of the intended destination facility(ies) to support redevelopment activities; excavation of soil to support construction of the proposed new building; demolition/removal of debris, former foundations; and fencing; and off-site disposal of soil and demolition debris in accordance with applicable federal, state, and local regulations.

3.2.3 Cost

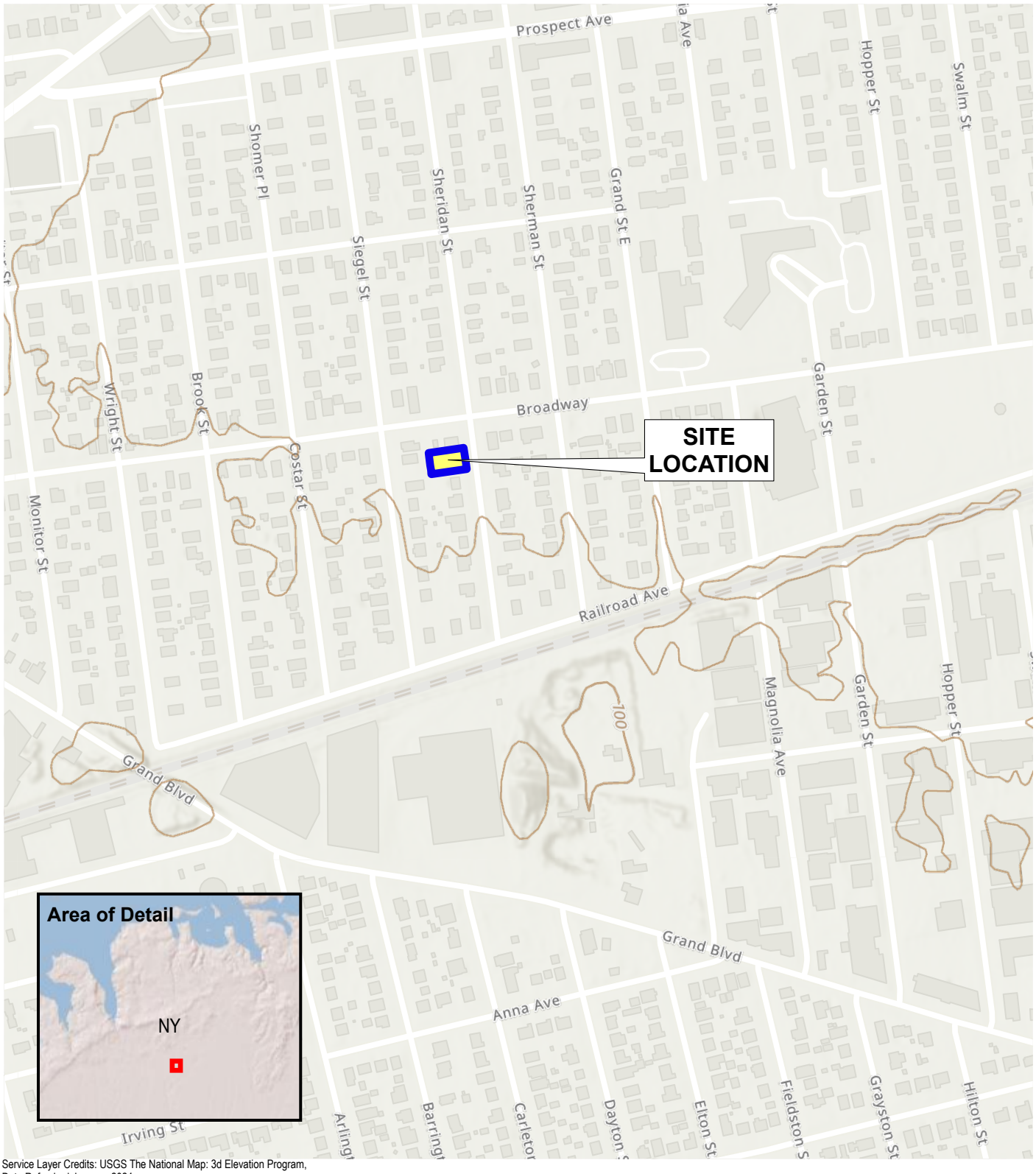
- Alternative 1: No action would require installation and maintenance of safety features at the Site (e.g., fences, security cameras, etc.) to prevent future vandalism and/or dumping of debris/refuse in perpetuity, with costs estimated to be on the order of $50,000; there are no cleanup costs associated with this alternative.
- Alternative 2: ACM abatement would require abatement of all known/suspected ACM, demolition of the structure, and transportation and off-site disposal of ACM and non-ACM building debris. The new building construction costs (on the existing building's foundation) are estimated to be approximately $2,000,000, with the associated ACM cleanup (abatement) and demolition work anticipated to be approximately $500,000. Therefore, the cleanup costs for this alternative are estimated to be approximately $500,000 (excluding new building construction costs).
- Alternative 3: ACM abatement would require abatement of all known/suspected ACM, demolition of the structure, and transportation and off-site disposal of ACM and non-ACM building debris; demolition of the current building; characterization of any soil requiring off-site disposal; and excavation/removal of building foundation and any soil. The new building construction costs are estimated to be approximately $2,000,000, with the associated ACM cleanup (abatement) and demolition work anticipated to be approximately $750,000. As the soil currently meets the unrestricted use criteria (and could be reused on-site during redevelopment), the costs associated with the disposal of soil generated during the redevelopment work are expected to be negligible (little to no excess soil for disposal is expected in this scenario). Therefore, the cleanup costs for this alternative are estimated to be approximately $750,000 (excluding new building construction costs).

3.3 Recommended Cleanup Alternatives

Based on an evaluation of the effectiveness, implementability, and costs associated with the three cleanup alternatives, the recommended approach is Alternative 3.

Alternative 2 remediates the Site and enables the Site to be redeveloped; however, use of the existing building foundation would limit the size and design for the future new residential building. Alternative 3 would be the most appropriate approach as it would satisfy the CDA's goal to redevelop an underutilized property with the maximum benefit for the community. As costs for Alternatives 2 and 3 are pretty comparable, Alternative 3 would be most in line with the CDA's goal.

FIGURE



Service Layer Credits: USGS The National Map: 3d Elevation Program, Data Refreshed January, 2024

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SCALE IN FEET

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AKRF

440 Park Avenue South, New York, NY 10016

243 Sheridan Street
New Cassel, New York

SITE LOCATION

DATE
5/13/2024

PROJECT NO.
240014

FIGURE
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AKRF O:\Projects\240014 - NEW CASSEL EPA MULTI-PURPOSE +DOS-BOA\SAR\phase II Figures 243 Sheridan St.aprx5/13/2024 5:28 PM240014 Fig 1 site locationjszalus