Draft
Environmental Baseline Survey of Army Property for the Residential Communities Initiative at Fort Hamilton, New York

Prepared for

Commander, Fort Hamilton, New York

by

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ENVIRONMENTAL BASELINE SURVEY ORGANIZATION

This Environmental Baseline Survey (EBS) addresses the environmental condition of property for the Residential Communities Initiative (RCI) at Fort Hamilton, New York at the time of transfer. As required by Army Regulations 200-1 and the National Environmental Policy Act, an EBS is used to determine the environmental conditions of property being considered for acquisition, outgrants, and disposals.

An ***EXECUTIVE SUMMARY*** briefly describes the proposed action, findings of the environmental survey, and the environmental condition of property for each parcel potentially included in the transfer.

SECTION 1.0: ***INTRODUCTION*** summarizes the purpose, background information, scope, and describes the property potentially included in the transfer.

SECTION 2.0 ***SURVEY METHODOLOGY*** describes the actions taken by the investigators to determine the environmental condition of property.

SECTION 3.0 ***SUMMARY OF DATA FOR PROPERTY TO BE TRANSFERRED*** describes the existing environmental setting of the property and identifies any historical environmental impacts to the property.

SECTION 4.0 ***SUMMARY OF DATA FOR ADJACENT PROPERTIES*** identifies any potential environmental impacts from adjacent properties.

SECTION 5.0 ***CONCLUSIONS*** summarizes the environmental condition of property.

SECTION 6.0 ***BIBLIOGRAPHY*** provides bibliographical information for cited sources.

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EXECUTIVE SUMMARY

This Environmental Baseline Survey (EBS) addresses that portion of the Fort Hamilton Garrison in New York that is being considered for lease/transfer to a private developer as part of the Military Housing Privatization Initiative (MHPI). This action would be conducted under the Residential Communities Initiative (RCI), and the areas potentially included in this action are referred to as the RCI footprint. The RCI footprint includes three parcels (Subject Property), consisting of Hamilton Manor, Ocean View, and Colonel's Row. The purpose of the EBS is to establish a baseline of the environmental condition of the property (ECOP) that can be used by the Army in decision-making activities associated with future real property transactions. The EBS is also intended to assist the Army in meeting its obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(h), as amended by the Community Environmental Response Facilitation Act (CERFA; Public Law 102-426). The EBS provides the Army with a basis for identifying those areas of real property that may be classified as uncontaminated under CERCLA 120(h)(3) and DoD policy.

This RCI EBS documents the physical and environmental condition of the Subject Property and associated improvements resulting from any past storage, use, release, and disposal of hazardous substances and petroleum products. The proposed ECOP for the Subject Property is based on the date of construction of the housing units, history of the property, findings of the Visual Site Inspections (VSI), previous EBS documents, the results of any environmental sampling conducted around the Subject Property, and any other environmentally related surveys, reports, and investigation results that were available at the time of preparation.

The Army prepared this RCI EBS to document the environmental condition of the Subject Property at the time of the lease/transfer agreement. Both the DoD guidance for preparing EBSs and the American Society for Testing and Materials (ASTM) 1996 provisional standard practice for conducting EBSs (ASTM D 6008) were used to prepare this EBS.

Environmental concerns identified on the Subject Property include the potential presence of petroleum hydrocarbons (fuel oil), lead and polychlorinated biphenyls (PCBs) at certain locations, the potential presence of pesticides in surface soil, and the presence of asbestos-containing material, lead-based paint, molds or fungi, and radon within, or on, some of the existing buildings.

Buildings 313, 314, 315, 316 and 201 need evaluation for potential releases of petroleum hydrocarbons to the environment based on indications that fuel oil had, or could have, been released near these buildings.

Per Army policy, the presence of buildings or structures that were constructed prior to 1978 and that have had painted surfaces presents the possibility that the use of lead-based paint could have resulted in elevated lead concentrations in surrounding soils. If no data on lead levels for the property as well as appropriate background levels for the purposes of comparison are available, the property must be categorized as requiring additional evaluation. No testing for lead in soils has been conducted within the RCI footprint. Thus, all Hamilton Manor, Ocean View and Colonel's Row buildings are identified as Category 7 (Gray)..

Three transformers that were observed in Building 409 during visual site inspections were not labeled as either PCB-free, or as PCB, transformers. Therefore, that building also requires additional evaluation for PCBs.

Radon may be present, but is unlikely to be an environmental concern within the RCI footprint based on testing that has been completed at Fort Hamilton. Mold has been reported and was observed in some Ocean View buildings. Mold is typically addressed when it occurs as a buildings maintenance issue and does not affect the ECOP of the Subject Property. Pesticide usage associated with the Subject Property appears to have been limited to general applications for pest control within and around the buildings and for landscaping purposes and is therefore, not regulated as a contaminant.

Asbestos-containing material remains in the Ocean View and Colonel's Row buildings, but is limited to minor quantities of insulation in inaccessible areas between floors and in the crawl spaces of the buildings. The presence of potential asbestos-containing material in these areas should be recognized and best management practices followed during any renovation or demolition activities, but does not affect the ECOP category of the Subject Property.

The following table summarizes the environmental condition of the Subject Property by proximate buildings within the three areas.

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Table ES-1
Summary of Proposed Environmental Condition of Property
Residential Communities Initiative Program
Fort Hamilton, New York

Area Name	*Environmental Condition of Property*[1]
Ocean View	
Bldg. 221 Multi Family Townhouses	7 Gray
Bldg. 222 Multi Family Townhouses	7 Gray
Bldg. 223 Multi Family Townhouses	7 Gray
Bldg. 224 Single Family House	7 Gray
Bldg. 225 Single Family House	7 Gray
Bldg. 304 Multi Family Townhouses	7 Gray
Bldg. 305 Multi Family Townhouses	7 Gray
Bldg. 306 Multi Family Townhouses	7 Gray
Bldg. 307 Multi Family Townhouses	7 Gray
Bldg. 310 Multi Family Townhouses	7 Gray
Bldg. 311 Multi Family Townhouses	7 Gray
Bldg. 312 Multi Family Townhouses	7 Gray
Bldg. 313 Multi Family Townhouses	7 Gray
Bldg. 314 Multi Family Townhouses	7 Gray
Bldg. 315 Multi Family Townhouses	7 Gray
Bldg. 316 Multi Family Townhouses	7 Gray
Hamilton Manor	
Bldg. 135 A, B, C, and D Multifamily High Rise Units	7 Gray
Bldg. 136 A, B, and C Multifamily High Rise Units	7 Gray
Bldg. 137 A, B, and C Multifamily High Rise Units	7 Gray
Bldg. 138 A and B Multifamily High Rise Units	7 Gray
Colonel's Row	
Bldg. 201A, B, C, D, E, and F Townhouses	7 Gray
Non-residential	
Bldg. 403 Theater	7 Gray
Bldg. 404 Library	7 Gray
Bldg. 405 Army Community Building	7 Gray
Bldg. 407 1st floor Barracks Converted to Offices, 2nd and 3rd floor Barracks	7 Gray
Bldg. 408 Barracks Converted to Offices	7 Gray
Bldg. 409 Transformer Building	7 Gray

Note:
(1) The environmental conditions of property definitions are derived from the CERFA Guidance, the DoD BRAC Cleanup Plan Guidebook, and OSWER Directive 9345.0-09, EPA 540/F-94/32, PB94-963249 (4/14/94).

Department of Defense Environmental Condition of Property Classification Codes:

Category 1. (WHITE) - areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). However, the area may have been used to store hazardous substances or petroleum products.

Category 2. (BLUE) - areas where only a release or disposal of petroleum products and/or their derivatives has occurred (including migration of petroleum products from adjacent areas).

Category 3. (LIGHT GREEN) - areas where a release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.

Category 4. (DARK GREEN) - areas where a release, disposal, and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken.

Category 5. (YELLOW) - areas where a release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway but all required remedial actions have not yet taken place.

Category 6. (RED) - areas where a release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7. (GRAY) - areas that are not evaluated or require additional evaluation.

SECTION 1.0
INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

The Army is working to provide quality integrated family housing communities by teaming with the private sector through a Residential Communities Initiative (RCI) program at the Fort Hamilton Garrison in Brooklyn, NY. Fort Hamilton's flag was raised in 1831, and it was the first coastal defense constructed for New York City. It is, thus, an installation with a long history of management as a federal property in an urban setting. The majority of the existing family housing at Fort Hamilton was constructed between 1950 and 1961. However, some of the existing housing was constructed as early as 1911.

The condition of existing family housing at the installation varies; some units, notably in the Ocean View area, are falling below acceptable standards due to potential health and safety concerns associated with the presence of termites and moisture-related problems such as mold and fungi (observations during visual inspections March 2002). Several environmental concerns such as past use of lead-based paint, asbestos-containing material, and pesticides applied for pest control are being managed appropriately, but these substances have not been completely eliminated. Any below-standard unit, of course, remains unoccupied until repaired to meet all housing standards. As the buildings age, the resources required to maintain and repair them increase, and it is not always possible to modernize the units so they are also aesthetically and functionally pleasing by today's standards. However, the environmental condition of the real property within the Fort Hamilton RCI footprint is generally acceptable and typical of other urban, mixed use properties.

Congress has enacted laws to create alternative authorities for the improvement and construction of military family housing. These laws are known as the Military Housing Privatization Initiative (MHPI). The legislative intent of Congress in enacting these additional authorities is to enable the military to leverage public funding by obtaining private sector funding to satisfy family housing requirements. The private sector funds can be used for construction, maintenance, management, renovation, replacement, rehabilitation, and development of Army family housing and ancillary supporting facilities. The Army is implementing the MHPI authorities through the Army RCI Program.

1.2 PROPERTY DESCRIPTION

Fort Hamilton occupies 116 acres of land on the western end of Long Island near the shores of Gravesend Bay and lower New York Bay in Brooklyn, New York, adjacent to the Verrazano Narrows Bridge. It is in Kings County (Figure 1-1). Initial construction began in 1825, and the fort is among the Army's oldest installations. Since its establishment, Fort Hamilton has supported diverse missions, (e.g., shipping port and personnel processing center), but has served primarily administrative functions in more recent times. Fort Hamilton has been under the administrative command of the U.S. Army Corps of Engineers Military District of Washington since 1997. The installation is home to 13 tenant organizations from the Army, Navy, Air Force, DoD, and other federal agencies. Major tenant organizations include an Army recruiting battalion, the Military Entrance Processing Station for New York City, and Headquarters, North Atlantic Division, U.S. Army Corps of Engineers.

Fort Hamilton supports approximately 1,100 civilian employees and military personnel, many of whom live on the installation, as well as retirees and reservists in the New York City area. The Subject Property potentially involved in RCI activities totals approximately 41 acres (Figure 1-2). Currently, there are a total of 438 family housing units at Fort Hamilton. Almost all are located within the three main housing areas that comprise the RCI footprint: Ocean View, Hamilton Manor, and Colonel's Row.

Ocean View

The largest area, Ocean View, is located south of Marshall Drive, just east of the Community Club (Building 207). This area contains 106 two, three, or four bedroom two-story townhouses (Buildings 221-223, 304-307, and 310-316). The units were constructed between 1950 and 1961 and are in generally poor condition; considered beyond economic repair and renovation. In addition to the townhouses, two single-family housing units (Buildings 224-225) are located in Ocean View. These units appear to be in good condition. All Ocean View units have brick exteriors with wooden casements around the windows and doors and shingled roofs. A common furnace and laundry room, plus storage areas are located in the basement of each townhouse building.

The Ocean View area covers approximately 34.5 acres, and includes some non-residential buildings that are within the RCI footprint. The Ocean View area is situated above the Belt (Shore) Parkway and overlooks Gravesend Bay and the Verrazano Narrows Bridge. It is this area that has been designated as most appropriate for new construction by the Development Partner

under the RCI Program. It is anticipated that the existing buildings would eventually be demolished.

Hamilton Manor

Hamilton Manor (Buildings 135-138) was constructed in 1953 and has stucco covered, cement block exteriors with asphalt built-up roofing. It is located near Battery Avenue, west of the 7th Avenue Gate among other non-housing facilities. Hamilton Manor comprises four, six-story apartment buildings, containing a total of 324 residential units. The units include two, three, and four bedroom apartments. The Hamilton Manor units were gutted and renovated in 1983 and are in generally good condition.

The Hamilton Manor area covers approximately 6 acres. This area has not been designated for new construction by the Development Partner under the RCI Program. It is anticipated that the existing housing would be used by the Development Partner as housing during implementation of the RCI and then eventually demolished. The area would then be used by the installation for non-housing purposes.

Colonel's Row

Some senior officer family housing is located south of General Lee Avenue, near the 101st Street Gate (Building 201, Colonel's Row). This single, rowhouse style building with full, columned and raised front porches was constructed in 1911. The building was constructed with three, above-ground stories (including finished attics) and full basements. The Colonel's Row has an unpainted, brick exterior, wooden dormers on the top story, wooden casements around the windows and doors, and tiled roofs. The rear entry to each unit is a shingled porch. A furnace, laundry area, additional living space, and storage areas are located in the basement of each unit. The walk-up attics have also been plumbed and finished. The building has been determined eligible for listing on the National Historic Register. It has been updated and maintained in good condition.

The Colonel's Row is situated on approximately 0.5 acre. It is anticipated that Colonel's Row will continue to be used as family housing by the Development Partner and will be maintained and protected as appropriate for its historic status.

Other Facilities

In addition to family housing, non-residential buildings are located within the Ocean View area of the RCI footprint. These buildings have brick exteriors, shingled or asphalt built-up roofing, and are mostly on slab foundations. Buildings 407 and 408 are used primarily for administrative

purposes, although some barracks housing is still located in Building 407. The buildings are located on Pershing Loop South on the east end of the installation. Both Buildings 407 and 408 were constructed before 1961. Currently only 48 dorm style rooms are in use as housing for enlisted personnel in Building 407. The former barracks in Building 408 were converted to offices and training rooms in 1962. The building currently contains offices, however most of the second and third floor are not utilized. Building 409 houses six electrical transformers and is situated between Buildings 407 and 408. The other non-residential buildings within the Ocean View area are; Building 403 (the Post theater), Building 404 (the Post library), and Building 405 (the Army Community Building). These buildings have been maintained and updated and are in generally good condition.

1.3 LIMITATIONS

To develop this RCI Environmental Baseline Survey (EBS) for selected areas at Fort Hamilton, New York, relevant information was obtained and reviewed concerning the installation and the Subject Property. The RCI EBS relies upon information collected from record searches, interviews, and visual inspections performed within a reasonable and practical time frame. It is possible that unavailable or undisclosed information may indicate environmental concerns on the Subject Property that were not apparent to the preparers of the RCI EBS. While every effort has been made to collect and analyze accessible information, additional information may become available over time that may affect the conclusions presented in the RCI EBS.

In order to prepare this RCI EBS, the preparers also reviewed the following information sources: stormwater runoff data; storage tank data; oil-water separator (OWS) data; drinking water quality data; asbestos survey reports; air emissions data; lead-based paint reports; ordnance and explosives archives search reports, polychlorinated biphenyl (PCB) surveys; and radon survey reports. Specific environmental management issues are discussed in Section 3.2. The following representative documents were reviewed for information specific to the Subject Property:

- Fort Hamilton Environmental Baseline Report, (1998 Parsons Harland Bartholomew & Associates, Inc.)
- Prioritization Asbestos Assessment Study - Fort Hamilton Housing Facility, (1991 Professional Service Industries, Inc.)
- Site Investigations at Gasoline USTs - Building 200, (1997 Staunton Chow Engineers, P.C.)
- Site Investigation at Battery Room - Building 106, (1997 Staunton Chow Engineers, P.C.)

- Site Investigation at Storage Building - Building 128, (1997 Staunton Chow Engineers, P.C.)
- Ordnance and Explosives Archives Search Report - Conclusions and Recommendations, Fort Hamilton, (1998 U.S. Army Corps of Engineers, Saint Louis District)
- Installation Assessment of New York Area Command and Fort Hamilton, Brooklyn N.Y., and its Subinstallations: Fort Wadsworth, Staten Island N.Y., and Fort Totten, Flushing N.Y. (1984 Environmental Science and Engineering, Inc.)
- Analysis of Existing Facilities, Fort Hamilton, New York, (1968 U.S. Army Corps of Engineers, New York District)
- Installation Action Plan for Fort Hamilton and New York Command Area, (1996 Environmental Division, Fort Hamilton and New York Area Command)
- BRAC 95 Installation Environmental Baseline Survey Fort Hamilton
- Analytical Environmental Assessment Report Fort Hamilton New York, (1982 Facility Engineer)
- PCB Analysis Fort Hamilton, New York, (1992 U.S. Army Corps of Engineers, New York District)

Tabulation of Existing and Required Facilities for Long Range Planning (1982 New York Area Command, Fort Hamilton Brooklyn, New York)

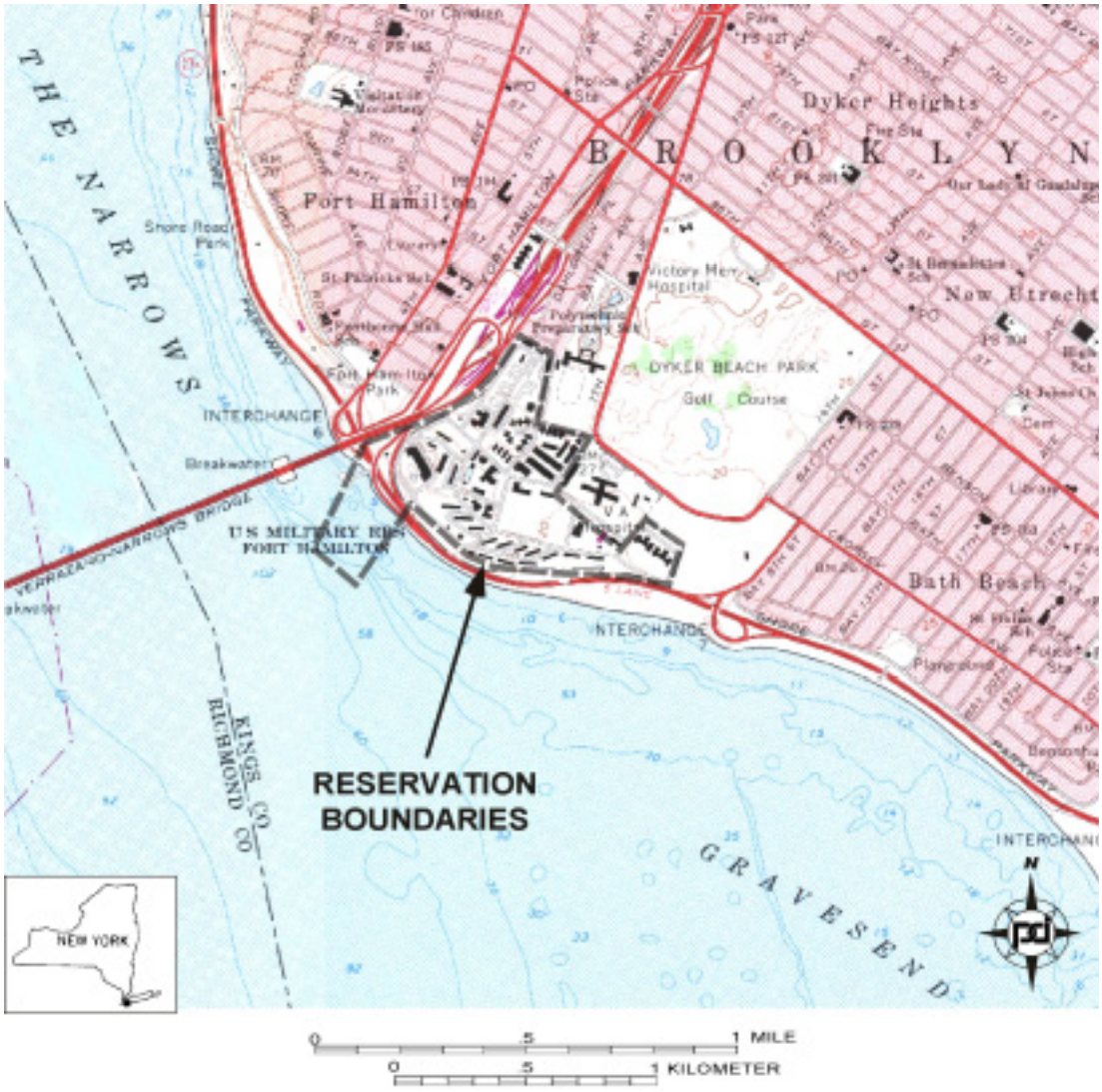

Figure 1.1. Location of U.S. Military Reservation - Fort Hamilton, New York *(USGS 7.5' Quadrangle, The Narrows, NY-NJ 1981 [1966]).*

Figure 1-2. Proposed Residential Communities Initiative Footprint, Fort Hamilton, New York

SECTION 2.0
SURVEY METHODOLOGY

2.1 APPROACH AND RATIONALE

This RCI EBS documents the environmental condition of selected areas at Fort Hamilton, New York. These areas have been identified for potential lease/transfer to a privately owned operations and maintenance company in compliance with current Department of Army policy as enacted in the MHPI (Public Law 104-106). As previously described, these selected areas have improvements that include 21 family residential buildings and 6 other non-residential buildings.

The RCI EBS was prepared using technical standards from the American Society for Testing and Materials (ASTM) [E 1527-00 *Standard Practice for Environmental Assessments: Phase I Environmental Site Assessments Process* (ASTM, 1994), ASTM D-6008 *Standard Practice for Conducting Environmental Baseline Surveys* (ASTM, 1996)], and DoD guidance on the environmental review process to reach a Finding of Suitability to Lease (FOSL) or a Finding of Suitability to Transfer (FOST) as presented on the DoD Environmental Cleanup web page (DoD, 2000). These standards and guidance provide a systematic framework for the identification of recognized environmental concerns for real property based on an environmental records review process, visual site inspections, and interviews with present and past occupants.

This EBS considered information concerning environmentally significant current and past uses of the Subject Property and consisted of the following:

- Detailed search and review of readily available information and records in the possession of the Army or records made available by the regulatory agencies or other involved Federal agencies. Relevant information and records included additional study information (e.g., planning and design surveys, surveys for radioactive materials, ordnance and explosive reports, asbestos, radon, lead-based paint, transformers containing PCB) necessary to determine the environmental condition of the property.
- Review of reasonably obtainable Federal, State, and local government records for each adjacent facility where there has been a release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the Subject Property.
- Interviews with current and/or former employees involved in operations on the Subject Property.

- Visual inspections of the Subject Property including buildings, structures, equipment, utilities, pipeline, or other improvements on the Subject Property; and of properties immediately adjacent to the Subject Property, noting sewer lines, runoff patterns, evidence of environmental impacts (e.g., stained soil, stressed vegetation, dead or ill wildlife) and other observations which indicate actual or potential release of hazardous substances or petroleum products.
- Identification of sources of contamination on the installation and on adjacent properties which could migrate to the Subject Property.
- A physical inspection of property adjacent to the Subject Property, as appropriate, and to the extent permitted by owners or operators of such property.

Intrusive investigations (e.g., collection and testing of soil or groundwater samples) were not conducted during this investigation.

Existing data on contaminants in the following media are considered in the evaluation: air, soil, groundwater, surface water, soil gas and vapor, leachate, sludge, and sediment. Common sources of contaminants in these media are typically: hazardous material/waste, lead (including lead-based paint and lead in drinking water), solid waste, PCBs, leakage from aboveground and underground storage tanks, asbestos, petroleum spills, wastewater treatment and discharge, pesticides, radon, explosive ordnance disposal waste, biomedical waste, stationary air sources, radioactive waste, photochemical waste, oil, paints, solvents, and lubricants.

2.2 RECORDS REVIEW

Tetra Tech, Inc. (Tetra Tech) reviewed previous reports prepared for Fort Hamilton as outlined in Section 1.3 while preparing this EBS. In addition, Tetra Tech obtained an updated, computerized search of standard Federal and State environmental databases prepared by Environmental Data Resources, Inc. (EDR). Evaluation of this report was conducted only for the property identified in Section 1, and not for the Fort Hamilton installation as a whole.

The review of records for the RCI EBS focused on activities conducted on the Subject Property. Specific types of records reviewed for this RCI EBS included (but were not limited to):

- Internal memoranda concerning environmental conditions of the installation with regard to long range planning and design;
- Real Property Master Plan Environmental Baseline Report in 1998;

- Asbestos, radon, lead-based paint, and other specific environmental surveys completed since the mid 1980's; and
- Documentation on asbestos or lead-based paint removal and other environmental cleanup actions.

2.3 VISUAL SITE INSPECTION

The property inspected covered in the visual site inspections (VSI) component of this RCI EBS included several housing units within each residential area. The VSI of the housing units was limited to approximately 10% review of the internal and external structures within each of the three residential areas. The housing units were chosen at random based on Post occupancy housing records as identified by Meridian Management Corporation personnel. All of the non-residential buildings within the Ocean View footprint were inspected. The VSI included observations related to storage, handling, and disposal practices for materials and waste within all three areas of the RCI footprint.

The purpose of a site visit is to validate previous reports and records, as practicable, and to determine if any environmental concerns exist at the site. Tetra Tech representatives visited the site, interviewed site officials, viewed the property, and noted any areas of concern. Representative signs of potential concerns that are searched for during the VSI include: evidence of past dumping and landfilling on the site, any unusual, readily apparent and visible discoloration of surface soils, odors, distressed vegetation, surficial depressions, or other characteristics that could indicate a previous spill, accident, or release involving potentially hazardous materials or petroleum products. Photographs taken during the VSI document site conditions and are presented in Appendix A.

2.4 INTERVIEWS

During the RCI EBS, inspectors interviewed several personnel within the Directorate of Public Works (DPW) with knowledge of the historical environmental conditions of the property and the locations and nature of environmental activities on adjacent properties. The Garrison was fully active at the time of the site inspections, and the preparers had the opportunity to formally and informally interview knowledgeable employees about current and past environmental conditions at each location.

2.5 RECONNAISSANCE OF ADJACENT PROPERTIES

An automobile tour was conducted to observe adjacent properties, and determine if any adjacent property activities pose environmental concerns to the subject site based on data obtained from personnel interviews and the federal/state database search results. The database search met the ASTM D6008 requirements for site assessments and included research of the available governmental databases (e.g., CERCLIS, CORRACTS, ERNS, etc). Items subject to observation included types of businesses in the area, indications of above and below ground storage of chemical products, stressed vegetation, and practices that may directly affect the Subject Property. Observations were made from the right-of-way and did not include access to buildings.

2.6 SUBJECT PROPERTY CLASSIFICATION

The following environmental categories were developed jointly by representatives from the Office of the Secretary of Defense, the Military Services, the U.S. Environmental Protection Agency (USEPA), and the California Environmental Protection Agency to describe the environmental condition of DoD property. These classifications are required by CERFA and DoD during property transfer activities, and mandate the use of specific color maps for each of seven environmental condition categories. After an analysis of the available data, areas can be classified into one of the following seven categories.

Category 1. (WHITE) - areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). However, the area may have been used to store hazardous substances or petroleum products.

Category 2. (BLUE) - areas where only a release or disposal of petroleum products and/or their derivatives has occurred (including migration of petroleum products from adjacent areas).

Category 3. (LIGHT GREEN) - areas where a release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.

Category 4. (DARK GREEN) - areas where a release, disposal, and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken.

Category 5. (YELLOW) - areas where a release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet taken place.

Category 6. (RED) - areas where a release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7. (GRAY) - areas that are not evaluated or require additional evaluation.

SECTION 3.0
SUMMARY OF DATA FOR PROPERTY TO BE TRANSFERRED

This section discusses the conditions of the specific property involved in potential RCI transfer activities and includes environmental setting, hazardous material review, records review, and results of the VSI. Figure 3-1, a 1998 aerial photograph of the installation shows current land uses within the RCI footprint and surrounding areas. Figures 3-2, 3-3, and 3-4 show past aerial views of the installation from 1945, 1954 and 1961.

3.1 ENVIRONMENTAL SETTING

This section describes the installation, its underlying geology, hydrology, biological and cultural resources, and ownership specifically with respect to the Subject Property.

3.1.1 Location, Description, and Setting

Fort Hamilton is located in the Borough of Brooklyn, Kings County, City of New York. Geographically, it is at the western end of Long Island and is situated on the northern shores of Gravesend Bay, approximately 6.5 miles south of the Battery, the southerly tip of Manhattan, New York (Figure 1-1).

The installation occupies approximately 116.07 acres and includes 70 government-owned buildings. The installation is bounded by the Verrazano Narrows Bridge approach to the west, the Belt (Shore) Parkway to the south, Dyker Beach Park to the east, and Poly Place and Polytechnic Preparatory School to the north.

The Ocean View housing area, theater, library, community center, and office and barracks complex are located adjacent to the Belt (Shore) Parkway and are on the south side of the installation overlooking Gravesend Bay. The Colonel's Row is located on the east side of the installation near General Lee Avenue and the 101st Street Gate. The Hamilton Manor area is located on the north side of the installation near Poly Place and the 7th Ave. Gate. The Hamilton Manor complex covers 6 acres of land, the Ocean View area covers 34.5 acres of land, and Colonel's Row occupies 0.5 acres. (Figure 1-2).

3.1.2 Topography

Topographic elevations at Fort Hamilton range from sea level to 50 feet (15.3 meters) above sea level, with an average elevation of about 30 feet (9.2 meters) above sea level. The installation is located within the coastal plain on the main morainal ridge, which extends to the east across Long Island (Facility Engineers Office 1991, Historic Preservation Office 1996, Cressey 1977). The variable topography of hillocks and hollows that characterize the terminal moraine has been altered in, and around, the Fort Hamilton area by historic cut-and-fill operations. In general, land surfaces within the fort and the surrounding area have been modified by extensive civilian and military excavations and construction activities during the last 170+ years, including construction of housing units and other structures at the installation, the construction of the adjacent transportation routes, including the Shore Parkway and the approaches to the Verrazano Narrows Bridge (Facility Engineers Office 1991).

3.1.3 Geology and Stratigraphy

Fort Hamilton is situated in the Coastal Plain physiographic province of the Atlantic Coast Lowland. Fort Hamilton is on the southern part of the western portion of the Ronkonkoma and Harbor Hill ridges of the terminal moraine of the Wisconsin glaciation (between 14,000 and 16,000 years ago). In New York State, the Atlantic Coast Lowland only occurs on Long Island and Staten Island. South and beyond the terminal moraine, a broad outwash plain slopes toward the ocean (Historic Preservation Office 1996, Klein et al. 1986, Cressey 1977).

Kings County is generally underlain by a bedrock composed of Fordham Gneiss, Hudson Schist and "an array of the early Paleozoic and Pre-Cambrian metamorphic and igneous rock" at a depth ranging from 160 to 220 feet (49 to 67 meters) below mean sea level (Facility Engineers Office 1991).

These types of rock predominate at the installation. Above the bedrock, the general stratigraphy consists of levels of thick clay and thick sand formations. These sedimentary strata are intermixed with clay and a glacial outwash, which includes cobbles that tend to increase in both size and frequency closer to the surface. "In some places, modern estuarine deposits of clay, peat and sand may be found near the shoreline or buried under historic fill [sometimes as thick as 40 feet (12.2 meters)]" (Facility Engineers Office 1991). The next level in the stratigraphy tends to be deposits of buried mudflats, sand beaches and glacial debris.

To the west of the facility, the channel of the Narrows reaches depths in excess of 100-feet (30.5 meters). The submerged slope is quite steep, and fairly close to the installation. From west to east along the shore, the slope away from the installation becomes less severe entering Gravesend Bay, which reaches a depth of between 20 to 35 feet (6 to 11 meters). However, land alteration activities, including the excavation and construction of earthworks for the fort, the erection of housing and other structures, and the creation of adjacent highways have modified the general landforms underlying the reservation (Facility Engineers Office 1991).

Historically, an extensive wetlands area was situated in the eastern portion of Fort Hamilton. This wetland area was filled with hydraulic and dry fill during the nineteenth century (Beers 1873, Robinson 1889). In addition, the marshy areas along the shoreline have been filled with as much as 20 feet of hydraulic and dry fill to obtain an elevation of 10 feet (3.1 meters) or more to support the Belt (Shore) Parkway (Facility Engineers Office 1991). This Parkway is now situated between the installation, in particular the Ocean View area, and the Bay.

According to the Facility Engineers Office, "No significant mineral resources are found at Fort Hamilton" (1991). In general, surface deposits at Fort Hamilton are largely fill that cover a sequence of buried mud flats, sand beaches, and glacial debris. Also found are thick deposits of sand and clay, and bedrock composed of schists, gneisses, and granites (Klein et al. 1986). Modern estuarine deposits of clay, peat and sand may be found near the shoreline or buried under historic fill which can range in thickness from 3 to 40 feet (1 to 12 meters) (Facility Engineers Office 1991). The results of previous archaeological excavations suggest that the soils on the installation comprise a layer of dark brown sandy loam (which may be fill) over strata of reddish brown sandy silt with the size and frequency of cobbles increasing with depth or mottled brown silt and coarse sand (Klein et al. 1986, Schieppati et al. 1998).

3.1.4 Surface Water

The Narrows (mouth of the Hudson River) is located directly west of the installation, and Gravesend Bay is located directly to the south. Most surface drainage is artificially controlled to manage flow either through storm drains that discharge into Graveshead Bay via three outfalls or through combined storm and sanitary sewer systems that discharge to the City of New York combined water treatment system (Parsons 2000).

3.1.5 Hydrogeology

No supply wells currently exist at the installation (ESEI 1984), and no groundwater level data were identified in the available background information. However, background information does indicate that water levels likely range from 20 feet below ground surface (bgs) at the higher elevations of the installation to near the surface at the lower elevations. Soil borings for underground storage tank (UST) closures have reportedly encountered saturated soils in the 20-foot bgs range, consistent with the anticipated depth of groundwater.

3.1.6 Natural and Cultural Resources

Flora. Fort Hamilton's vegetation is composed of common plant species which are adapted to and are characteristic of urban areas. In most areas of the installation, lawns and well-established trees exist. There are no undisturbed tracts of native plant communities remaining at Fort Hamilton (USACOE 1997).

A tree inventory was completed for Fort Hamilton in July 1996. The inventory reports that tree species at Fort Hamilton include London planes (37%), pin oaks (9%), Japanese black pines (8%), flowering crabapples (8%), honey locust (7%), hawthorns (4%), eastern white pine (4%), and cherries (3%). Most of the shade or canopy trees are mature. Often these large trees have not been maintained or pruned over the years. Many of the large trees interfere with overhead wires (Parsons 2000).

Animals. The existing fauna at Fort Hamilton consists of animal species adapted to and characteristic of urban areas. The Subject Property and adjacent areas are characterized by a variety of urban fauna including cats, dogs, squirrels, rats, pigeons, sea gulls, and a variety of birds (ESEI 1984). Some more valuable habitat is present as the rocky intertidal zone along the shoreline, but this is not proximate to the Subject Property.

Endangered Species. There are no known sensitive wildlife species or habitats at Fort Hamilton. The Hudson River, which is near Fort Hamilton, has been determined to be habitat for the shortnose sturgeon; however, ongoing installation activities have no adverse effects on this endangered species (ESEI 1984).

Wetlands. Portions of Fort Hamilton are on land that may have been coastal wetland before being filled in the mid-eighteenth century. The area has been continually occupied and further constructed on since that time. There are now no areas that would be considered wetlands as the

property has been completely altered by decades of construction and reconstruction (Parsons 1998).

Cultural Resources. Three historic period archaeological sites have been identified within Fort Hamilton: (1) in the parade ground south of Building 302, (2) a cistern or well found during construction between Buildings 230 and 207, and (3) a possible filled-in cellar hole south of Building 312. The third of these sites appears to be within the RCI footprint. The area surrounding Building 117 and in the lawn west of Building 117 was also considered a historic period archaeological site (New York State Historic Preservation Office [NYSHPO] Site A047-01-0423). Recent archaeological investigations and architectural evaluations have determined that this location is not a significant historic period archaeological site (Schieppati et al. 1998).

The presence of prehistoric sites within the fort has not been verified. The contact-period Native American village of Nayack is reported to have been within the fort in addition to other undocumented prehistoric or contact-period sites. These include: (1) a cache of stone or flint blades, (2) a shell bed or midden, and (3) "traces of occupation". These sites have not been encountered by previous archaeological inventories, possibly due to the amount and depth of fill at the fort.

Three of the installation's structures are listed on the National Register of Historic Places (NRHP): (1) Building 207; (2) Building 220; and (3) Building 230. The Denyse Wharf and two other structures have been determined eligible for listing on the NRHP: (1) Building 113 and (2) Building 201 or the Colonel’s Row that is within the RCI footprint. No additional structures are considered eligible as individual entities at this time.

3.1.7 Title Search

All of the land included in the RCI footprint has been in continuous use by the Army from the time Fort Hamilton was first established in 1825 (USAEC, 1968). Because the property has been managed by the U.S. Government since 1825, a title search was not performed.

Over the years, various land transactions have occurred at Fort Hamilton. One outgrant that could be of potential interest to the RCI Program is an easement granted to the City of New York to replace sanitary sewer lines. The fifty-year easement began in 1970 (ESEI 1984).

3.2 SUMMARY OF ENVIRONMENTAL MANAGEMENT ISSUES

This section presents an overview of environmental management issues as they are related to the Subject Property at Fort Hamilton. Specific environmental statutes and regulations govern hazardous materials and hazardous waste management activities at Fort Hamilton. For the purpose of this analysis, the terms hazardous waste, hazardous materials, and toxic substances include those substances defined as hazardous by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), or Toxic Substances Act (TSCA). In general, they include substances that, because of their quantity, concentration, or physical, chemical, or toxic characteristics, may present substantial danger to public health or welfare or the environment when released into the environment.

3.2.1 Stormwater Runoff

Fort Hamilton currently consists of approximately 116 acres. Most of the area has been developed and is covered by structures or paving so that stormwater flows directly into an underground drainage system as runoff without the benefit of percolation and filtration through the soil. Areas that are vegetated. such as the parade field and housing along the southern perimeter, also contribute to runoff during heavier storms due to the limited capacity of the thin soil cover and bedrock to quickly infiltrate moisture.

As Fort Hamilton and the urban areas around it developed, storm drainage and sanitary sewer systems were often constructed together as combined systems. In the 1980s, some sections of the combined systems on the installation were separated so that stormwater and sanitary effluent would be collected and discharged by different systems. At present, stormwater is collected separately from one area of approximately 52 acres and discharged through three outfalls to Gravesend Bay. Stormwater from the remaining 64 acres of the installation is collected and discharged through five connections to the combined stormwater and sanitary sewer mains of the New York City system. Plans to separate the existing combined system are currently being implemented. Upon completion, only sanitary sewage will be conveyed to the City's sanitation collector mains. Storm water will be discharged to the City's storm drainage mains or the existing outfalls to Graveshead Bay (Parsons 2002, VSI observations 2002).

3.2.2 Permits

Fort Hamilton is not RCRA- or TSCA-permitted, nor is it subject to Title V air permitting and reporting. The installation has an EPA ID number as a hazardous waste generator, but has

qualified for "Conditionally Exempt" status for most of the years that it has been registered. Small quantity generator status was triggered during two years when timely spill cleanups resulted in the generation of more than 220 pounds of hazardous waste within one month (Koutroubis, personal communication 2002). The installation has underground and aboveground storage tanks that are registered for petroleum bulk storage as well as several boilers large enough to require registration. It no longer holds a general permit for stormwater discharge points (Sect. 3.2.5). The tanks and stormwater management that are within the RCI footprint are described in other sections of this chapter. The remaining tanks at the installation are described in Chapter 4, Surrounding Areas.

3.2.3 Waste Management

Fort Hamilton disposes of solid waste through the services of private contractors who maintain and empty collection containers located throughout the installation. Individuals and janitorial personnel collect solid waste from activities within buildings and place it into the collection containers. The contractor removes the waste to transfer stations in the vicinity of Fort Hamilton. From there, the waste is carried to public and private landfills and other waste disposal sites. Certain types of both office and household solid waste are recycled at Fort Hamilton. Aluminum, glass, newspaper, office paper, and plastic bottles are accumulated in special containers, and a recycling contractor periodically collects and removes the recyclables to commercial operations off-post. Medical waste is collected at the Ainsworth Clinic and removed by a contractor for appropriate disposal off-post.

No sanitary landfills or dumpsites exist onsite (NUS, 1988). Past solid waste disposal operations included operation of an incinerator formerly at Building 9513 (constructed in 1920 and demolished in 1941). No information on where the ash materials were disposed of was available.

Solid waste generation at the Subject Property has primarily been limited to residential waste.

3.2.4 Storage Tanks

Fort Hamilton stores and uses various petroleum products, including regular and premium gasoline, No. 2 fuel oil, diesel, and minor quantities of lubricants. Quantities stored range from 275 to 25,000 gallons, with an average of 2,000 gallons per location. The gasoline and diesel products are used for fueling privately- and government-owned vehicles. The fuel oil is used for heating various buildings throughout the installation. Waste oil is collected from various vehicle maintenance activities and eventually disposed of off-post. A summary of the fuel tanks present

within the RCI footprint is presented in Table 3-1. The remaining tanks at the installation are discussed in Chapter 4, Surrounding Areas.

Secondary containment for underground storage tanks (USTs) is in the form of double-walled tanks. USTs at Fort Hamilton that are single-walled are managed in accordance with applicable New York State and federal standards, and will be upgraded as tank replacement becomes necessary and as required by regulatory requirements.

Secondary containment structures for outdoor aboveground storage tanks (ASTs) are equipped with valves that allow drainage of rainwater. These valves are kept locked when in an "off" position. If liquid accumulates in these diked areas, it is inspected before drainage to ensure that no oil or oil residue is present. The contained areas may be drained using either a pump or an ejector.

Ten USTs were identified within the RCI footprint at Buildings 137 (2 tanks), 201, 313, 314, 315, 316, 405, 407, and 408. The USTs used for fuel oil storage at Buildings 313, 314, 315, and 316 passed tightness tests in August 1999. Tanks located at Buildings 405, 407, and 408 are double wall fiberglass tanks with interstitial monitoring and do not require tightness testing (Koutroubis 2002).

A spill was reported at the Building 201 (Colonel's Row) tank in June 2001. The 2001 incident reported a spill of an unknown quantity of #2 fuel oil. The date of the spill was unknown; the report stated that "cleanup is in progress". According to Environmental Compliance personnel, the report was a result of overflow during tank fill, and soil removal has been completed (Koutroubis, personal communication 2002). Some staining was observed near USTs at Buildings 313 and 315 indicating that some releases may have occurred in the past.

3.2.5 Wastewater Treatment

As Fort Hamilton and the urban areas around it were developed, storm drainage and sanitary sewer systems were often constructed together as combined systems. In the 1980s, some sections of the combined systems on the installation were separated so that stormwater and sanitary effluent would be collected and discharged by different systems. As described in Sect. 3.2.1, part of the installation is currently served by the separate stormwater drain system with direct discharge to Gravesend Bay by way of three outfalls (Parsons 2000). The remainder of the installation is served by the original combined system that discharges to the New York City

treatment system. However, implementation of plans to separate the combined system is underway. All of the Subject Property is within this original combined system.

The installation has a Stormwater Pollution Prevention Plan in place. The plan defines the ongoing program to reduce the ways that pollution can enter stormwater on the installation. The plan is updated periodically to account for changes in the activities and uses of the facilities on-post. At the installation's request, the state regulatory authority terminated a general permit for stormwater discharges [State Pollutant Discharge Elimination System (SPDES)]. The permit was held by the installation from 1990 to 1999 and terminated because the site is not an industrial facility, and no permit is required (Koutroubis, personal communication 2002).

3.2.6 Lead in Drinking Water

The existing potable water system consists of a distribution system which serves both domestic and fire protection use. Water is supplied to Fort Hamilton by the New York City system. The water delivered by the City needs no additional treatment before use. The reliability of supply to meet current demand is also very good. The on-post distribution system serves all of the buildings in Ocean View, while Hamilton Manor is served directly from New York City mains. The Army owns the distribution system on the installation and, using contractors, maintains and expands it when necessary. The City of New York provides an annual Drinking Water Quality Testing Results report. Lead concentrations in drinking water samples were below the 15 ug/L Action Level for lead in a 2000 report (NYC, 2000). No data from sampling tapwater at Fort Hamilton was identified during the records search.

3.2.7 Oil/Water Separators

A vehicle washrack, located at Building 127, is connected to an oil/water separator. Water and drippings from the washrack drain by gravity flow to the separator where oil is retained. Periodically, the oil is removed from the separator and disposed of off-post by a contractor. The wash water is discharged to the sanitary sewer, which is subsequently treated at a New York City wastewater treatment plant. The sanitary sewers and storm drainage systems at Fort Hamilton are combined for considerable portions of the installation.

3.2.8 Asbestos

A total of fifty-five asbestos-related reports were reviewed. In 1989, five Asbestos Materials Assessments were conducted. In the same year, eleven buildings were sampled for asbestos; these results are discussed in a report also dated 1989. The removal and disposal of the asbestos

followed all USEPA and New York City Department of Environmental Protection (NYCDEP) protocols. In 1997, forty-nine separate Asbestos Reinspection Surveys were conducted. These reports reassessed a portion of the 1989 reports. The 1997 surveys evaluated the condition of asbestos-containing material (ACMs) and recommended whether or not the ACM should be removed and disposed of. Approximately 20 percent of the ACM-tested was deemed to be present in a condition that warranted removal for safety reasons. The Hamilton Manor structures were completely gutted and renovated in 1983 (Koutroubis, personal communication 2002). These buildings are unlikely to have any asbestos-containing material. Background information and visual inspection indicate that asbestos-containing material within the Ocean View structures is limited to minor quantities of insulation in the crawl spaces and between floors.

3.2.9 Air Emissions

- The New York City Metropolitan area is in non-attainment for several criteria pollutants as defined under the National Ambient Air Quality Standards. However, Fort Hamilton is considered a minor source of air pollutant emissions that contribute to the non-attainment status of the region. The minor source designation is due to the efficiency of boiler operations on the installation. The collective potential emissions from installation boilers would trigger permitting requirements, but emission monitoring data have demonstrated that the actual emissions are less than 50% of the potential emissions. Therefore, Fort Hamilton is not required to submit an annual Emission Statements to City and State authorities or apply for a Title V permit. The most recent inventory for Fort Hamilton was completed in 1994 by Geomet Technologies, Inc. That inventory constitutes an Emission Statement, as defined in Title I of the Clean Air Act Amendments of 1990 (CAAA-90).

Federal policy and Army regulations require even minor sources to attempt to make continuous reductions in emissions. These pollution prevention efforts are underway at Fort Hamilton and should prove to be successful. Fort Hamilton is, and will continue to, replace older equipment and facilities. In the process, emissions of all Criteria Pollutants should decline as the new technology goes into use. Some of the largest generators of VOC, NOx, $S0_2$, and CO are the fuel storage and heating systems for the buildings. As new buildings are built and old systems are replaced with more efficient equipment, the total emissions from these type of sources should decline.

Gasoline dispensing facilities will likely continue to be substantial sources of VOCs. Emissions are currently controlled by Stage II Vapor Recovery Systems at gasoline fueling stations. The other large source of VOCs is miscellaneous chemical use. This category includes common and

widely used materials such as paint, thinner, lubricating oil, and cleaning agents. The volume of VOCs from these materials would decline if substitute materials are put into greater use.

The levels of HAPs that are emitted annually are very small and come from a variety of sources. The pollutants that are emitted in the greatest amounts come primarily from the use of solvents, cleaning agents, coatings, and sealants. Use of these materials is not likely to decline as renovations and construction of buildings normally involve many materials that emit HAPs.

3.2.10 Lead-Based Paint

Paint sampling. Nine different Lead Hazard Survey reports for the installation were reviewed; these reports are on file at Fort Hamilton. The reports covered 69 different buildings and facilities at Fort Hamilton. The surveys included analysis of paint chip and dust samples from building interiors for lead. Approximately 70 percent of the components tested in all buildings contained worn or chipped surfaces. It was recommended that all such damaged surfaces be abated. Of the paint chips that were sampled, approximately 15 percent of the samples collected confirmed the presence of lead. Samples were not collected from Hamilton Manor because the buildings were gutted and renovated in 1983. These buildings are unlikely to contain any lead-based paint, since lead-based paint would not have been used after 1978. No sampling data for lead-based paint in Colonel's Row were identified.

Data from paint samples collected from the interiors of 21 buildings in the Ocean View area indicated that while lead was present in the paint of some buildings, lead levels were generally below what would be considered lead-based paint (HUD level of 0.5% by weight) (Hill 1995). Paint chips were sampled only from locations with positive hits during initial screening using x-ray fluroscopy (XRF). Nineteen of the 189 paint chip samples exceeded the lead-based paint criteria. None of the dust wipe samples exceeded HUD guidelines. Ocean View building exteriors were not sampled. They are primarily unpainted brick; only wooden window and door casements and fittings have been painted. Thus, the potential for releases of lead-based paint to the environment is limited. Nevertheless, it paint on the building exteriors could contain lead, and that some of this lead could have been deposited on surface soil immediately adjacent to the buildings.

Lead-based paint was likely also used on interior and exterior surfaces for the townhouses on Colonel's Row, but as with Ocean View the building exteriors are primarily unpainted brick. The potential presence of some lead-based paint at Ocean View and Colonel's Row should be

recognized and best management practices followed during any renovation or demolition activities.

Current Army policy calls for controlling lead-based paint by using in-place management, as opposed to mandated removal procedures. In-place management is used to prevent deterioration over time for those surfaces likely to contain lead-based paint, followed by replacement as necessary. Maintenance staff and residents are given instructions on routine cleaning procedures leading to capture of lead-based paint fragments from suspected locations. Under US Army Engineering and Housing Support Center Technical Note 420-70-2 (Lead-Based Paint: Hazard Identification and Abatement), major renovation and unit demolition would require that lead-based paint be removed from the housing units. Lead-based paint materials are to be encapsulated and/or removed in accordance with Army, HUD, and OSHA guidelines including contractor training, notification requirements, use of personal protective equipment, and approved disposal methods. Additionally, the RCI Development Partner will ensure that the lead-based Paint Pamphlet is issued to housing occupants notifying them of the potential risk as individual quarters are leased.

Soil Sampling. Building exteriors were not sampled for lead-based paint. Peeling paint was observed on building exteriors in Ocean View. But, it was noted that painted surfaces on these buildings, i.e., the source of any potential release, are limited. The buildings in the Ocean View and Colonel's Row areas are constructed of brick. Only the wood trim around windows and the doors are painted. Gable dormers and front and back porches are also painted on Colonel's Row. Although it is likely that the paint on the exterior trim of the buildings contain lead, no lead samples have been taken from soil within the RCI footprint or elsewhere on the installation. Soil background levels of lead tend to be elevated in urban areas such as Brooklyn. Additionally, proximity of the areas to the Parkways would result in deposition of particulate emissions from motor vehicles on surrounding soil.

3.2.11 Polychlorinated Biphenyls (PCBs)

Fort Hamilton has completed a program of replacing all PCB and PCB-contaminated transformers with non-PCB dielectric fluids (Fanning, Phillips, and Molna, 1997). Transformers at Fort Hamilton range in size from 10 to 590 gallons. There are approximately 3,768 gallons of non-PCB oils stored in these transformers throughout the installation. The larger (42 to 590 gallons) transformers, when pad-mounted, are surrounded by concrete secondary containment structures with valves for controlling drainage. The majority of the smaller

transformers (10 to 41 gallons) are pole mounted and have no secondary containment. The Fort Hamilton Spill Prevention, Control and Countermeasure (SPCC) Plan addresses the potential for a spill occurring from electrical transformers and other equipment.

A Site Investigation (SI) dated June 1995 reported a transformer leak at Building 133, an old electrical substation, where oil containing PCBs migrated into subsurface soils in 1986. Soil samples were collected, but PCBs were not detected. However, the pesticides Aldrin (at concentrations below New York State cleanup levels), Dieldrin, and 4,4'-DDE (concentrations below Method Detection Levels), were detected. The report concluded that these compounds were located in samples collected in areas where community garden plots exist, and that the pesticides were probably introduced to the soil during the planting/harvesting operation. It was also concluded in the report that no significant contamination was found in the area of Building 133, and therefore no further action was warranted.

Out-of-service transformers were at one time stored on a concrete pad behind Building 128, near Building 137, prior to off-post disposal (NUS 1988). A minor spill of transformer oil (approximately 29 gallons) occurred at this location in December 1992. The spilled materials were reportedly cleaned up immediately. This area is near Hamilton Manor.

A transformer pad (with 5 transformers) is located along the northeast side of Building 137 (Hamilton Manor). (This area is referred to as Building 132.) No suspect staining was observed in this area at the time of the EBS site inspection.

Building 409 is within the Ocean View footprint and currently houses six transformers. Three of the transformers were labeled as non-PCB transformers at the time of the VSI. The other three transformers were unlabeled with respect to PCB status. No spills or incidents have been reported at this location, but the status of the transformers needs clarification.

3.2.12 Pesticides

Historical pesticide usage associated with the Subject Property appears to be limited to general usage for pest control within and around the site structures and for landscaping purposes. Fort Hamilton has had an aggressive program to reduce the amount of chemical pesticides and herbicides. From 1993 to 1999, the amount of insecticides used at the installation dropped from 485 pounds of active ingredient (PAI) to 14.6 PAI (Malfitano 2002). No records of onsite disposal were identified.

Fort Hamilton in support of the New York Health Department has an on going program to control Culex species of mosquito's that carry the West Nile Virus. The facility uses Mosquito Dunks® and VetoLex CG® to provide mosquito control in approximately 205 storm water catch basins and areas of standing water, which temporarily form after periods of heavy rain.

3.2.13 Medical/Bio-hazardous Waste and Silver Recovery

Available reports suggest that there are no medical/bio-hazards waste concerns or silver recovery concerns for the Subject Property.

3.2.14 Radioactive Materials

Available evidence suggests that radioactive materials were never used or stored on the Subject Property.

3.2.15 Radon

Radon gas is a naturally occurring, colorless, and odorless radioactive gas that is produced by the decay of naturally occurring radioactive material (e.g., potassium, uranium, etc.). Atmospheric radon is diluted to insignificant levels; however, when concentrated in enclosed areas, radon can present human health risks.

Radon testing has been completed at Fort Hamilton. During the initial round of tests, two buildings, Buildings 109 and 110, registered readings slightly above the 4 pCi/L threshold established by the USEPA. In these cases, the elevated readings were registered in spaces that had been closed for an extended period of time. Since those readings were taken, the spaces have had long-term monitoring conducted. The new measurements show that Building 109 is below the 4 pCi/L threshold. The basement of Building 110 long-term reading was 7.7 pCi/L. The basement is not currently an occupied space (Rhee 1998).

No radon levels exceeded EPA guidance level of 4 pCi/L on the subject parcels. Radon levels in Buildings 127 and 128 are adjacent to the Hamilton Manor area and are assumed representative of buildings in the area ranged from 0.7 pCi/L to 1.5 pCi/L. Radon levels in Buildings 222, 223, and 311, residential buildings in the Ocean View area, were representative of Ocean View and ranged from 0.7 pCi/L to 1.5 pCi/L. Radon levels in Buildings 403, 404, 405, 407, and 408, non-residential buildings in Ocean View, ranged from 1.0 pCi/L to 2.2 pCi/L.

3.2.16 Mold and Fungus

Fungi are present almost everywhere in indoor and outdoor environments. Molds or fungus typically grow on common building components (walls, ventilation systems, support beams, etc.) that are chronically moist or water damaged. Elevated human exposure to mold and fungi may result in flu-like symptoms including runny nose, eye irritation, cough, congestion, and aggravation of asthma. Inhalation of fungal spores, fragments, or metabolites (e.g., mycotoxins and volatile organic compounds) from a wide variety of fungi may lead to or exacerbate allergic reactions, cause toxic effects, or cause infections. Molds were observed covering ceiling tiles and pipe insulation in the false ceiling of the first floor hall in Building 407. Mold was also observed in several of the Ocean View unit basements. Although mold has been identified in some of the buildings, no adverse health affects have been identified to date from mold exposure in any of the Subject Property. Corrective action is initiated to address occurrences of mold and fungus as soon as possible once their presence is reported.

3.3 RECORDS REVIEW FOR RCI EBS

The ASTM D 6008 requirements include the research of available governmental databases (e.g. CERCLIS, CORRACTS, ERNS, etc.). A copy of the results from the database search is presented in Appendix B. The standard environmental databases that were searched by computerized methods did not reveal any records specific to facilities within the RCI property covered in this RCI EBS other than the report already described for a fuel release at Building 201. In addition, records maintained by the Army were reviewed in March 2002 for documented evidence of spills, leaks, or other releases of hazardous materials or petroleum products.

3.4 VISUAL SITE INSPECTION FOR RCI EBS

The VSI for the RCI EBS were conducted on March 12, 2002 through March 14, 2002. As indicated in Section 2.3, the VSI was intended to identify indications of potential releases.

The VSI included site inspections of representative housing units within each residential area as well as all of the non-residential buildings included in the Ocean View footprint. The residential units were chosen at random based on Post occupancy housing records as identified by Meridian Management Corporation personnel. A list of the units that were inspected is presented in Table 3-2 and the VSI summary forms are available in Appendix C. Interiors were inspected for materials with potential asbestos-containing material, lead-based paint, mold, and indications of

storage or use of other potentially hazardous materials. Minor environmental concerns were apparent from visual inspections of the interior or exterior of these structures.

Ocean View:

The largest area, Ocean View, is located south of Marshall Drive, just east of the Community Club (Building 207). This area contains 106 two, three, or four bedroom two-story townhouse units (Buildings 221-223, 304-307, and 310-316). These units which were constructed between 1950 and 1961 are in generally poor condition and are considered beyond economic repair and renovation. In addition to the townhouses, two single-family housing units (Buildings 224-225) are located in Ocean View. These units appear to be in good condition. Eleven percent of the unit interiors and exteriors of the residential buildings were inspected. Non-residential buildings are discussed under the "Other Facilities" header.

Roughly 50% of the residences inspected exhibited a series of 1 inch drill holes at 12 to 18-inch intervals in the concrete around the foundation. The drill holes indicate that a termite-control pesticide has been injected into the subsurface beneath these residences.

Surveys of the residential exteriors led to the following observations. There were several parking areas with minor staining. Four 1,080 gallon fuel oil USTs are located by Buildings 313, 314, 315, and 316. The tanks passed tightness testing in August 1999. Since the buildings were constructed in 1950 and there is no record of the UST's being replaced, it is possible that some leakage has occurred from the piping or tank in the past. Fuel oil staining was evident around some of the UST fill ports and vent pipes. Pole-mounted transformers were located adjacent to most of the housing areas. The condition of the buildings' exterior painted surfaces ranged from poor to fair.

The interior condition of the units ranged from bad to fair. Environmental concerns found during surveys of the residential interiors included peeling paint, potential asbestos-containing floor tile and mastic, potential asbestos-containing pipe insulation in inaccessible areas between floors and in walls, black mold in basements, termite damage, and water damage and staining to floors. Debris piles were seen in some of the basement boiler room storage rooms. Fuel oil staining was evident on the floors of boiler rooms using fuel oil. Pad-mounted transformers were located adjacent to some of the buildings.

Hamilton Manor:

Hamilton Manor (Buildings 135-138) was constructed in 1953 and is located near Battery Avenue, west of the 7th Avenue Gate. Hamilton Manor contains 324 two, three, or four bedroom

apartments located in four six-story high rise buildings. Twenty nine of the apartments and the boiler room and laundry were inspected during the VSI. The Hamilton Manor neighborhood covers approximately 6 acres. Nine percent of the unit interiors and 100% of the exteriors of the Hamilton Manor high-rise buildings were inspected.

According to the DPW, the Hamilton Manor units were gutted and renovated in 1983. Since the buildings were totally remodeled, asbestos and lead-based paint should not be present in the buildings (Koutroubis, 2002). In general, the interior condition of the units ranged from poor to good. Most of the vacant units require some minor renovations including painting, replacing carpeting, replacing vinyl tile, replacing grout in ceramic tile etc. Very few environmental concerns were observed during surveys of the residential exteriors. Pad-mounted transformers were located adjacent to some of the buildings. Some minor oil staining was noted in parking areas around the buildings. Two 25,000 gallon fuel oil USTs are located by Buildings 137A&B. These tanks are tested ever five years. The last documented test was in September 1997; the tanks and piping tested tight.

Colonel's Row:

Family housing is also located along General Lee Avenue, near the 101st Street Gate. Six units townhouse style units constructed in 1911 are located south of General Lee Avenue in a three-story row house (Building 201, Colonel's Row). This building has been determined eligible for listing on the National Historic Register and is in good condition. One of the six townhouses and the boiler room were inspected during the VSI. The Colonel's Row footprint covers approximately 0.5 acre. According to DPW, Colonel's Row was recently renovated. Few environmental concerns were observed during surveys of the residential exteriors with the exception of some peeling paint and some potential asbestos-containing shingles on the exterior of the structures. Pole-mounted transformers were located adjacent to the housing units. Minor oil staining was noted in parking areas around the buildings.

Other Facilities:

In addition to family housing, non-residential buildings are located within the Ocean View area of the RCI footprint. These include former and current barracks and administrative offices (Buildings 407 and 408), a transformer building (Building 409), a Post theater (Building 403), Army Community Center (Building 405), and Post library (Building 404). All were inspected.

Currently, 48 dorm style rooms are in use for enlisted personnel housing in Building 407. Building 408 was converted from barracks to offices and training rooms in 1962. The building currently contains offices, however most of the second and third floor are not utilized. Both

buildings are in generally poor shape. Building 409 houses six electrical transformers and is situated between Buildings 407 and 408.

Environmental concerns were noted during surveys of Buildings 407, 408, and 409. There were several parking areas with minor staining. One 6,000-gallon fuel oil USTs with leak detection system is located behind each building. Fuel oil staining was event around the UST fill ports and vent pipes. Six slab mounted transformers were located in Building 409 adjacent to Buildings 407 and 408. As previously described, three of the transformers located on the west side of the building were labeled PCB free while three transformers located on the east side of the building were unmarked. The condition of the exterior painted surfaces were in poor condition. Environmental concerns found during surveys of the interiors included peeling paint, potential asbestos-containing floor tile and mastic, caulking, pipe insulation, black mold on ceiling tiles and on piping insulation and fuel oil staining on the floors of boiler rooms.

Buildings 404, 405, and 403 appeared well maintained and in good condition. The only environmental concern identified in Buildings 403, 404, and 405 was potential asbestos-containing material in the pipe and air handler insulation. Exterior environmental concerns were minimal and included several parking areas with minor oil staining and some peeling paint on the exterior wood trim. One 3,000 gallon UST with leak detection was observed at Building 405. No staining was evident around the fill port or vent pipe.

3.5 ADDITIONAL INTERVIEWS FOR RCI EBS

Fort Hamilton DPW personnel were interviewed for the purposes of updating environmental information during the March 2002 site visits and research. Mr. Peter Koutroubis, Ms. Kelly Cygan, Mr. Rich Malfitano, Mr. Joe Hassen, and Mr. Andrew Ruppert of the Fort Hamilton DPW environmental and maintenance staff were interviewed and provided guidance to environmental records. The interviews did not provide anecdotal evidence of any spills or other releases within the RCI footprint.

Figure 3-1. 1998 aerial photograph of Fort Hamilton, New York.

Figure 3-2. 1945 aerial photograph of Fort Hamilton, New York

Figure 3-3. 1961 aerial photograph of Fort Hamilton, New York

Figure 3-4. 1954 aerial photograph of Fort Hamilton, New York

TABLE 3-1. SUMMARY OF STORAGE TANKS WITHIN RCI FOOTPRINT

Building	No. of Tanks/Type	Size (each)	Fuel
137	2 - USTs	25,000 each	Fuel Oil
201	1	2,000	Fuel Oil
313	1 - UST	1,080	Fuel Oil
314	1 - UST	1,080	Fuel Oil
315	1 - UST	1,080	Fuel Oil
316	1 - UST	1,080	Fuel Oil
405	1-UST	3000	Fuel Oil
407	1-UST	6000	Fuel Oil
408	1-UST	6000	Fuel Oil

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
HAMILTON MANOR (apartment units grouped as indicated where no individual survey information available)						
135A	1A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135A	2A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135A	3A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135A	4A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135A	5A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135A	6A, B, C, D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	1A				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	1B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in fair condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	1C				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Treated for pests on 1-3-02. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	1D				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Treated for pests was on 11-15-01. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	1E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
135B	2A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	2B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in poor condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	2C				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	2D				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	2E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	3A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	4A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135B	6A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	1A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	2A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	2E				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Treated for pests on 10-20-00. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
135C	3A				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in poor condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	3B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	4A				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in poor condition and peeling in bedroom. Carpet stained and needs to be replaced or cleaned. Exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	4B,C					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	4D				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition except bathroom which has peeling paint. Exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	4E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135C	6A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	1A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	2A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	2B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	2C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
135D	3A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	3B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	3C					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	3D				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	4A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	4B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in poor condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	4C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	5A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	6A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	6B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in fair condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
135D	6C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	1A,B					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
136A	1C				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in poor condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	1D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	2A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	2B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	2C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	3A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	4A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	5A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	6A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	6B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint and carpet in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136A	6C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	1A,B					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
136B	1C				Tt, 2002	VSI conducted on interior and exterior of building. New carpet installed in apartment. Interior paint in poor condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	1D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	2A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	3A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	4A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136B	6A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	1A				Tt, 2002	VSI conducted on interior and exterior of building. New carpet installed in apartment. Interior paint peeling in master bedroom bath, exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	1B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	2A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	3A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	4A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
136C	5A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	6A,B					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	6C				Tt, 2002	VSI conducted on interior and exterior of building. Carpet in good condition. Needs new tile in kitchen and laundry. Interior paint in good condition. Exterior paint in good condition except wood trim and fire escape which is peeling in places. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
136C	6D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos
137A	Boiler and Laundry Room				Tt, 2002	VSI conducted on interior and exterior of building. Three large boilers provided heat for all of Hamilton Manor and are in good condition. Boilers fueled by 2-25,000 gallon fuel oil UST. Fiberglass insulation on exposed piping. Sump with water in floor. Some paint peeling on floor. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	1A					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	1B				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except trim and fire escape which is peeling. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	1C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	2A,B,C					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	2D				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except trim and fire escape which is peeling. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
137A	2E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	3A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	4A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137A	6A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	1A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	2A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	3A,B					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	3C				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which has areas of peeling. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	3D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	4A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
137B	6A				Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition, exterior paint in good condition except wood trim and fire escape which is peeling in places. Treated for pests on 2-28-02. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137B	6B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	1A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	2A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	3A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	4A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	5A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
137C	6A,B,C,D,E					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	1A				Tt, 2002	VSI conducted on interior and exterior of building. Carpet in good condition. Interior paint in poor condition. Kitchen and bath in good condition. Exterior paint in good condition except wood trim and fire escape which is peeling in places. Treated for pests on 12-10-01. Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	1B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	2A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	3A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
138A	4A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	5A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138A	6A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	1A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	2A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	3A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	4A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	5A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
138B	6A,B,C,D					Not sampled; building gutted and remodeled in 1983; unlikely to contain lead-based paint or asbestos.
201	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Boiler room in good condition. Water stains on floor. PACM shingles on side of house. Sump with water in floor. Coal chute and storage area no longer used. No ACM was detected in 2 roofing samples and one sample in the hallway (PSI, 1991).
201	A,B	PSI, 1991				No ACM was detected in 2 roofing samples and one sample in the hallway (PSI, 1991).
201	C	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Historic townhouse. Interior paint in good condition, exterior paint peeling. Building remodeled recently. PACM shingles on side of house and caulking around windows. No ACM was detected in 2 roofing samples and one sample of ceiling plaster in the hallway (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
201	D,E,F	PSI, 1991				No ACM was detected in 2 roofing samples and one sample in the hallway (PSI, 1991).
221	Boiler Room and Laundry	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Boiler room and laundry in good condition. Sump with water in floor. Pipe insulation above sheet rock in ceiling of laundry may be have PACM covering it. No ACM was detected in 2 roofing samples (PSI, 1991).
221	A	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). XRF results indicated 3 out of 37 painted locations scanned within the home potentially contained lead. AAS analysis of 6 paint samples showed a maximum lead concentrations of 0.3 %WT while 1 dust wipe sample contained 10.0 ug/sq ft lead (Hill, 1995).
221	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
221	C	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Interior paint and exterior paint peeling. Foundation treated for termites. No ACM was detected in 2 roofing samples (PSI, 1991).
221	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
221	E	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). XRF results indicated 4 out of 37 painted locations scanned within the home potentially contained lead. AAS analysis of 8 paint samples showed a maximum lead concentrations of 0.2 %WT while 1 dust wipe sample contained 10.0 ug/sq ft lead (Hill, 1995).
221	F	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
221	G	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
221	H	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
222	Boiler Room and Laundry	PSI, 1992				No ACM was detected in 2 roofing samples (PSI, 1991).
222	A	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 0.2 pCi/l.
222	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
222	C	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 1.1 pCi/l.
222	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
222	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
222	F	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 4 paint samples showed a maximum lead concentration of 0.045 %WT while 1 dust wipe sample contained 20.0 ug/sq ft lead (Hill, 1995).
222	G	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 0.7 pCi/l.
222	H	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 3 paint samples showed a maximum lead concentration of 0.13 %WT while 1 dust wipe sample contained 10.0 ug/sq ft lead (Hill, 1995).
223	Boiler Room	PSI, 1991				VSI conducted on interior and exterior of building. Fiberglass insulation on exposed piping. Room clean and well kept. Minor peeling paint on floor. Water condensate on floor. No ACM was detected in 2 roofing samples (PSI, 1991).
223	A	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
223	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
223	C	PSI, 1991	Hill, 1995	FH 2002		No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 3 paint samples showed a maximum lead concentration of 0.32%WT while 2 dust wipe samples contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995). No radon reported.
223	D	PSI, 1991		FH 2002		No ACM was detected in 2 roofing samples (PSI, 1991). No radon reported.
223	E	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 1.5 pCi/l.
223	F	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Foundation treated for termites. No ACM was detected in 2 roofing samples (PSI, 1991).
223	G	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 1.0 pCi/l.
223	H	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 3 paint samples showed a maximum lead concentration of 0.36 %WT while 1 dust wipe sample contained <10.0 ug/sq ft lead (Hill, 1995).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
224		PSI, 1991	Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on exterior of building. Exterior paint in good condition. Single family home well maintained. Great view of Narrows and bridge. No ACM was detected in 2 roofing samples (PSI, 1991). XRF results indicated 0 out of 32 painted locations scanned within the home potentially contained lead. AAS analysis of 2 dust wipe samples contained a maximum lead concentration of 10.0 ug/sq ft. No radon reported.
225		PSI, 1991	Hill, 1995	FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from home showed 1.2 pCi/l. XRF results indicated 4 out of 58 painted locations scanned within the home potentially contained lead. AAS analysis of 5 paint samples contained a maximum lead concentration of 0.073 %WT (Hill, 1995).
304	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Interior treated for pests on 1/24/02. Foundation treated for termites. Soot on walls and ceiling. Concrete floors has some cracks. Water in sump and water stains on floor. No ACM was detected in 2 roofing samples (PSI, 1991).
304	A	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
304	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
304	C	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Interior treated for pests on 1/24/02. Foundation treated for termites. Interior paint in good condition, exterior paint shows some peeling. No ACM was detected in 2 roofing samples (PSI, 1991).
304	D	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 3 paint samples showed a maximum lead concentration of 3.4%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
304	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
304	F	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 1 paint sample showed a lead concentration of 8.1%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
304	G	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
304	H	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
305	Boiler Room					VSI conducted on interior and exterior of building. Access blocked by kids toys, room not inspected.
305	A	--				
305	B	--				
305	C	--	Hill, 1995			AAS analysis of 3 paint samples showed a maximum lead concentration of 0.038%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
305	D	--				
305	E	--				
305	F	--				
305	G	--	Hill, 1995			AAS analysis of 4 paint samples showed a maximum lead concentration of 0.061%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
305	H	--			Tt, 2002	VSI conducted on interior and exterior of building. Interior treated for pests on 11/01/01. Foundation treated for termites. Interior paint shows some peeling.
306	Boiler Room					No ACM was detected in 2 roofing samples (PSI, 1991).
306	A	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). XRF results indicated 0 out of 36 painted locations scanned within the home potentially contained lead. AAS analysis of 1 dust wipe sample contained a maximum lead concentration of <10.0 ug/sq ft.
306	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	C	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	F	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	G	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
306	H	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
307	Boiler Room					
307	A	--				
307	B	--				
307	C	--				
307	D	--				
307	E	--				
307	F	--	Hill, 1995			AAS analysis of 5 paint samples showed a maximum lead concentration of 3.6%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
307	G	--	Hill, 1995			AAS analysis of 5 paint samples showed a maximum lead concentration of 4.3%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
307	H	--				
310	Boiler Room	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
310	A	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). XRF results indicated 4 out of 40 painted locations scanned within the home potentially contained lead. AAS analysis of 5 paint samples showed a maximum lead concentrations of 0.15 %WT while 1 dust wipe sample contained 20.0 ug/sq ft lead (Hill, 1995).
310	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
311	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Boiler and water heater in good condition. Fiberglass insulation on exposed piping. Sump with water in floor. Slight gas odor in room. No ACM was detected in 2 roofing samples (PSI, 1991).
311	A	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 0.8 pCi/l.
311	B	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 0.8 pCi/l.

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
311	C	PSI, 1991		FH, 2002		No ACM was detected in 2 roofing samples (PSI, 1991). Radon samples collected from 1st floor showed 1.0 pCi/l.
311	D	PSI, 1991	Hill 1995		Tt 2002	VSI conducted on interior and exterior of building. Observed 3 layers of floor tile in kitchen, broken banister, broken caulking, and peeling paint in living area. Basement had water stains on wall with musty odor. No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 5 paint samples showed a maximum lead concentration of 2.5%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
311	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
311	F	PSI, 1991	Hill 1995	FH 2002		No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 5 paint samples showed a maximum lead concentration of 0.3%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995). No radon reported.
312	Boiler Room	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	A	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	C	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 4 paint samples showed a maximum lead concentration of 4.0%WT while 2 dust wipe samples contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
312	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	F	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 2 dust wipe samples showed a maximum lead concentration <10.0 ug/sq ft lead (Hill, 1995).
312	G	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
312	H	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
313	Boiler Room				Tt, 2002	VSI conducted on interior and exterior of building. Sump with water, fuel oil stains on floor and water stains on wall. Ceiling plaster falling from boiler room roof. Fiberglass insulation on exposed piping. Fuel oil staining around vent pipe. No ACM was detected in 2 roofing samples (PSI, 1991).
313	A	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 1 paint sample showed a lead concentration of 0.65%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
313	B	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991). AAS analysis of 1 paint sample showed a lead concentration of 0.66%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
313	C	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
313	D	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
313	E	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Extensive termite damage to first and 2nd floors of structure. Water damage on 2nd floor ceiling. Non-friable PACM was identified in old floor tiles, mastic, and caulking. Paint peeling from exterior wood surfaces. Basement walls were water stained, black mold cover some areas of the walls and basement had a musty odor. Stressed vegetation was noted in the rear of the townhouse. No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
313	F	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
313	G	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Termite damage to structure. Paint in poor condition. Non-friable PACM was identified in old floor tiles, mastic, and caulking. Basement walls were water stained and basement had a musty odor. Depressed area in back yard along with recent underground utility construction. No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
313	H	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
314	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Ceiling plaster falling from roof. Soot on floor at exhaust pipe joint. Water staining on walls. No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	A	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	B	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991). AAS analysis of 1 paint sample showed a lead concentration of 0.078%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
314	C	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Exterior peeling paint, interior flaking paint, non-friable PACM was identified in old floor tiles, mastic, and caulking. Basement walls were water stained and basement had a musty odor. Treated for pests on 1-25-01. No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	D	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	E	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	F	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).
314	G	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991). AAS analysis of 3 paint samples showed a maximum lead concentration of 0.59%WT while 1 dust wipe sample contained a maximum concentration of <10.0 ug/sq ft lead (Hill, 1995).
314	H	PSI, 1991				No ACM was detected in 2 roofing samples and 3 pipe insulation samples collected from the boiler room (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
315	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Fuel oil stain on floor, water stains on walls and floor, soot on piping indicating an exhaust leak. Floor in boiler storage room needs repair and debris also needs to be removed. Fuel oil staining on brick around vent pipe, stressed vegetation around fill port. No ACM was detected in 2 roofing samples (PSI, 1991).
315	A	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	C	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	E	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	F	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
315	G	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 2 paint samples showed a maximum lead concentration of 0.2%WT while 1 dust wipe sample contained a maximum concentration of 10.0 ug/sq ft lead (Hill, 1995).
315	H	PSI, 1991	Hill, 1995		Tt, 2002	VSI conducted on interior and exterior of building. Townhouse damaged by fire on 2nd floor, windows boarded up, paint peeling, water damage to flooring. Non-friable PACM was identified in old floor tiles, mastic, and caulking. No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 1 wipe sample showed a lead concentration of <10.0 ug/sq ft lead (Hill, 1995).
316	Boiler Room	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Fuel oil stain on floor and water stains on walls and floor. Debris in boiler storage room needs to be removed. Exposed piping covered with fiberglass insulation. No ACM was detected in 2 roofing samples (PSI, 1991).
316	A	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
316	B	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
316	C	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
316	D	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
316	E	PSI, 1991			Tt, 2002	VSI conducted on interior and exterior of building. Interior paint and exterior paint peeling, non-friable PACM was identified in old floor tiles, mastic, and caulking. Basement walls were slightly water stained. No ACM was detected in 2 roofing samples (PSI, 1991).
316	F	PSI, 1991				No ACM was detected in 2 roofing samples (PSI, 1991).
316	G	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 12 paint samples showed a maximum lead concentration of 0.45%WT (Hill, 1995).
316	H	PSI, 1991	Hill, 1995			No ACM was detected in 2 roofing samples (PSI, 1991). No ACM was detected in 2 roofing samples (PSI, 1991). AAS analysis of 10 paint samples showed a maximum lead concentration of 0.41%WT (Hill, 1995).
403	Theater		Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition. PACM was seen on air handler in the boiler room and on a pipe in the roof of the projection room. Boiler room piping has fiberglass insulation. Two radon samples collected from 1st floor ranged from 1.7 to 2.2 pCi/l (FH, 2002). AAS analysis of 9 paint samples showed a maximum lead concentration of 11.0%WT while 6 dust wipe samples contained a maximum concentration of 30.0 ug/sq ft lead (Hill, 1995).
404	Library		Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition and exterior paint in good condition. ACM in known to be on piping in the boiler room per DPW. Two radon samples collected from 1st floor ranged from 1.0 to 1.5 pCi/l. AAS analysis of 14 paint samples showed a maximum lead concentration of 12.0%WT while 2 dust wipe samples contained a maximum concentration of 30.0 ug/sq ft lead (Hill, 1995).
405	Army Community Building		Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on interior and exterior of building. Interior paint in good condition and newly remodeled, exterior paint in good condition except trim. A double wall fiberglass 3000 gallon fuel oil UST with leak detection monitoring is located on west end of building. PACM was seen on piping in the storage room adjacent to boiler room. Boiler room piping has fiberglass insulation. Three radon samples collected from 1st floor ranged from 1.1 to 1.8 pCi/l. XRF results indicated 3 out of 86 painted locations scanned within the building potentially contained lead. AAS analysis of 3 paint samples contained a maximum lead concentration of 1.2%WT (Hill, 1995).

TABLE 3-2
HAZARD SURVEYS AND VISUAL SITE INSPECTIONS
RESIDENTIAL COMMUNITIES INITIATIVE PROGRAM
FORT HAMILTON, NEW YORK
(Continued)

Building Number	Unit Number(s)	ACM/PACM Survey	Lead Paint Survey	Radon Survey	VSI Survey	Environmental Condition of Property, Remedial Action, and Remarks
407	Office Building and Barracks		Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on interior and exterior of building. Interior and exterior paint in poor condition. A double wall fiberglass 6000 gallon fuel oil UST with leak detection monitoring is located on north side of the building. Staining seen around vent pipe. PACM was seen on piping, roof, floor tile, and mastic. Boiler room piping has fiberglass insulation. Black mold seen on pipe insulation and on back side of ceiling tiles. Eight radon samples collected from 1st floor ranged from 1.1 to 2.1 pCi/l. XRF results indicated 21 out of 143 painted locations scanned within the building potentially contained lead. AAS analysis of 24 paint samples contained a maximum lead concentration of 0.29%WT (Hill, 1995).
408	Office Building		Hill, 1995	FH, 2002	Tt, 2002	VSI conducted on interior and exterior of building. Interior and exterior paint in fair condition, paint peeling in several locations. A double wall fiberglass 6000 gallon fuel oil UST with leak detection monitoring is located on north side of the building. Staining in soil at fill port of UST. PACM was seen on piping, roof, floor tile, and mastic. Boiler room piping has fiberglass insulation. Eight radon samples collected from 1st floor ranged from 1.1 to 2.0 pCi/l. XRF results indicated 31 out of 242 painted locations scanned within the building potentially contained lead. AAS analysis of 44 paint samples contained a maximum lead concentration of 2.40%WT (Hill, 1995).
409	Transforme r Building				Tt, 2002	VSI conducted on interior and exterior of building. Exterior paint on trim in poor condition. Building contains 6 transformers, 3 labeled PCB free and 3 unlabeled.

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SECTION 4.0
SUMMARY OF DATA FOR ADJACENT PROPERTIES

4.1 DATABASE SEARCH FINDINGS

The RCI Subject Property is located within the main section of Fort Hamilton and are surrounded by other installation buildings, a park, a beltway, and a Veteran's Administration Hospital.

In preparing this EBS, Tetra Tech reviewed a computerized search of standard Federal and state environmental databases prepared by EDR. The computerized search of environmental databases covered an area within a 1-mile radius of the RCI footprint and was completed in April 2002. This search was conducted per ASTM Standard Practice for Conducting Environmental Baseline Surveys, D6008-96. Some search distances were extended beyond that required by ASTM to ensure quality results. A summary of the database search reports is presented in Appendix C. The preparers of this RCI EBS also conducted a windshield reconnaissance of properties adjacent to the RCI footprint, by driving around the installation and on public roadways within 0.25-mile or more of the installation perimeters.

Table 4-1 lists the available environmental records that were searched by EDR. The database search identified numerous sites under several databases, largely due to the urban nature and high population density of the overall area. In most instances, the sites would be unlikely to pose a threat of environmental contamination to the RCI Subject property. Table 4-2 lists the locations of properties identified in one or more environmental databases that would be the most likely to have a potential to impact areas within the RCI footprint.

RCRIS. No small-quantity generators (SQG) or large-quantity generators (LQG) generators are located at Fort Hamilton. Twenty LQG and twenty-seven SQG within a 1.25 mile radius of the center of the installation were identified in the data base search of the Resource Conservation and Recovery Act Information System (RCRIS). No SQG generators were within 0.25 mile of the RCI footprint. Two SQGs, the New York City (NYC) Department of Parks and Recreation and the NYS Department of Transportation, are located between 0.25 and 0.50 mile of the area. Other SQG generators are more than 0.50 mile distant from the closest RCA footprint boundary and are typical of an urban area: dry cleaners, fuel stations, and public schools. The nearest LQG, the Veteran's Administration Hospital, is less than 0.25 mile from the RCI areas and borders the installation. Other LQG generators are more than 0.25 mile distant from the closest RCA footprint boundary and like the SQGs are typical of an urban area: dry cleaners, fuel stations, and

public schools. When these and the other generators that were greater than 0.5 mile from the RCI footprint are evaluated in conjunction with other database searches, none of the sites appears likely to compromise the environmental condition of the Subject Property. Details on the RCRIS sites included in the database search are in Appendix C.

FINDS. Seventy-two Facility Index System (FINDS) sites are listed in the database search. FINDS sites contain both facility information and directions to other data sources that may provide more detail on a facility. Many of the FINDS sites are the same sites listed under the RCRIS database. Unless a site is reported in one of the other database searches as well, it is not likely to compromise the environmental condition of the Subject Property.

ERNS. Nine sites are listed from a search of the Emergency Response Notification Records System (ERNS). The ERNS stores information on reported releases of oil and hazardous substances. Eight of the sites are to the north of the Subject Property and unlikely to be an environmental concern. The ninth location was the result of a traffic accident at the Army Reserve Center (Table 4-2).

LTANKS. Leaking Storage Tank Incident Reports (LTANKS) are an inventory of reported leaking tanks or tank incidents for both aboveground and underground tanks. The causes of these incidents can be tank failures, test failures, or tank overfills. Such reports may, or may not indicate an uncontrolled release of material to the environment. There are 51 LTANK sites within a 1 mile radius of the of the Subject Property. This includes five sites at the installation and three more within 0.25 mile of the RCI footprint. The most relevant incidents are described in Table 4-2.

Spills. Spills must be reported to the NY State Department of Environmental Conservation (NYSDEC). According to the NY Spills List, there are 102 sites of reported spills within a 1 mile radius of the RCI footprint. Some of these spills are also reported under other databases. Spills most relevant are described in Table 4-2.

Registered UST/AST Sites. The UST and AST databases include all USTs and ASTs that are regulated under RCRA and that are registered for petroleum bulk storage. Ninety-three sites within a 1 mile radius of RCI footprint boundaries have one, or more, registered USTs on the premises. One hundred seventy-one sites within 1 mile of the RCI footprint have one, or more, registered ASTs on the premises. Sites with USTs or ASTs that have not had a release are not likely to compromise the environmental condition of the Subject Property. Details on the UST sites are included in the database search in Appendix C.

Fort Hamilton has a total storage capacity of approximately 172,785 gallons in 11 aboveground and 29 underground storage tanks (ASTs and USTs) (NYSDEC 2001). The majority of tanks are located outside of, and next to the buildings which they serve. The normal daily throughput of oil is approximately 2,000 gallons (monthly average of 60,000 gallons). Most of the buildings at the installation are individually heated by oil-fired heating systems. Principally, No. 2 fuel oil for heating is stored in USTs that range in size from 550 to 25,000 gallons throughout the installation. There is a UST at Building 114 and ASTs at Buildings 130 and 231 that store diesel. Gasoline is stored in USTs at Building 200 (Base Exchange Gas Station). ASTs at Buildings 127 and 200 are used to store waste oil, and waste antifreeze.

The file search and records review related to USTs revealed that several UST leaks have occurred at Fort Hamilton and were typically discovered during closure and removal or replacement activities. In most cases, the discovery of separate phase product or stained soils surrounding the USTs led to soil excavation activities. Typically, all of the soil was removed, clean fill placed in the excavation pit, and a report documenting these events sent to the NYSDEC. It is NYSDEC policy to contact the installation if further environmental investigations are required.

Eleven UST closure reports were located and reviewed. All of these reports were on file at both Fort Hamilton and the NYSDEC. Nine of the eleven reports indicated that no further action was necessary. In these cases, contaminated soils had been removed offsite, and replaced with clean fill. Two reports are detailed below and describe USTs where additional action was deemed necessary by the contractor conducting the work, but no additional reports of follow-up action were located.

Building 402. Buildings 401 and 402 are located adjacent to the RCI footprint directly west of Building 403 and north of Building 315. On September 21, 1995, a 43-year-old single-walled steel UST adjacent to Building 402 was closed and removed. This 5,000 gallon UST contained No. 2 fuel oil. During removal, there was evidence of the UST fill line having been damaged, and staining was observed in soils atop a concrete pad located on the bottom of the excavation pit. Soil samples collected in and around the pit contained elevated levels of Polynuclear Aromatic Hydrocarbons (PAHs). Contaminated soils in and around the pit were removed offsite. The closure report for this location concluded that a plume of hydrocarbons exists underneath Building 401 and an adjacent concrete slab (between buildings 401 and 402). Structural integrity concerns for Building 401 have prevented removal of all of the contaminated soil. Completion of the remedial action will most likely occur when Building 401 is demolished (Koutroubis, 1999).

It is possible this contamination could migrate into soils within the RCI footprint near Building 403.

Building 216. Building 216 is located approximately 250 feet from the RCI footprint boundary and to the east of Buildings 221 and 222. On September 4, 1996, a UST was removed from a grassy area located next to Building 216. The closure report did not indicate the age or material of the tank. This 1,080-gallon UST contained No. 2 fuel oil and was replaced with a 1,000-gallon tank. Soil contamination was observed visually in and around the excavated tank pit, and petroleum vapors were logged via a photoionization detector (PID). No soil samples were collected from this excavation pit, and no soil removal was conducted. The US Army Corps of Engineers (COE) was informed of the condition of the contaminated soils on the site; the subcontractor was instructed by the COE to line the pit with polyethylene sheeting and backfill with clean fill until further soil remediation tasks could be conducted.

Further investigation revealed additional contamination from a spill in the boiler room of Building 216. Since this building is under the management of the US Army Reserve, the Reserve is also responsible for any environmental management and remediation activities on this property. The Reserve is planning to conduct confirmatory sampling in the area and Fort Hamilton is awaiting notification from the Reserve of what, if any, further action will be required (Koutroubis, 1999).

Spills. In the State of New York, all spills are required to be reported to the NYSDEC, including accidental spillage of hazardous material on the surface, and contaminated subsurface soil or groundwater encountered during UST excavation and closure activities. Five NYSDEC spill report forms pertaining to Fort Hamilton were obtained from regional NYSDEC office. All five were directly related to soil contamination observed during UST excavation and closure activities. Each spill was reported by the subcontractor conducting the work at Fort Hamilton at the time the contamination was encountered. All of the reported spills were discussed in detail in the Tank Closure Reports submitted by the subcontractor to the NYSDEC.

Orphans. The database searches identified numerous spills, RCRIS-SQG, and LTANK sites potentially within the general area, but were unable to determine if they were within the ASTM search radius due to poor or inadequate address information. One of the RCRIS SQGs is listed as the U.S. Postal Service Fort Hamilton. If this is the installation post office, then there is a registered SQG within 0.25 mile of the RCI footprint. These sites are listed in the EDR reports in Appendix C as “orphan sites.” They are not considered to have an impact on the Subject Property.

4.2 WATER WELL SEARCH

A records search for water wells within a 1.25 mile radius of the RCI footprint was conducted by EDR. The results of the water well search are presented in Appendix D. According to the database search, there is a water supply well on installation land. However, no other documentation supported this information. Per Fort Hamilton Environmental personnel, no water wells are extant on the installation (Koutroubis, personal communication 2002).

4.3 HISTORICAL AERIAL PHOTOGRAPH REVIEW

A record search for publicly available historical aerial photographs was conducted as part of the EBS activities. Both EDR and the installation provided aerial photographs dating as far back as 1945. No evidence of the following activities was observed on, or near, the Subject Property in these photographs (Figures 3-1, -2, -3, and –4).

- Excavation activities of unknown type, or of industrial operations,
- Significant storage activities involving drums, tanks, or pipelines containing hazardous substances or petroleum products, or
- Staining associated with industrial activities or activities of unknown origin or type.

In a 1945 aerial photograph of Fort Hamilton, the Hamilton Manor area appears to have a redoubt or possibly a reservoir where the high-rise apartment buildings now are. Gun batteries appear to be present along the western rim of what is now the Ocean View residential area. Although the installation appeared entirely cleared of native woody vegetation, the majority of the land surface was still vegetated. The non-residential portion of the Ocean View area was largely unoccupied. Some areas near where Buildings 403, 404, and 405 now are may have been garden plots. Buildings on the installation appear to have been constructed of sheet metal or batten siding, rather than brick or stucco. Roofs were mostly metal. The Colonel's Row building overlooked open fields.

In a 1954 aerial photograph of Fort Hamilton, the high-rise apartment buildings are visible in the Hamilton Manor area, and the 11-story VA Hospital has been constructed. Gun batteries still appear along the western rim of what is now the Ocean View residential area, and Buildings 313, 314, 315, and 316 are also present. The most obvious change is that many of the temporary style buildings that were present in 1945 are gone. Newer buildings have a more permanent style of construction. Although the installation appeared entirely cleared of native woody vegetation, the majority of the land surface was still vegetated. The area now occupied by Buildings 407, 408, and 409 are an open recreational area.. The Colonel's Row building appears unchanged.

In a 1961 aerial photograph of Fort Hamilton, the high-rise apartment buildings in the Hamilton Manor area have maintenance and office buildings between them and the VA Hospital.. Gun batteries no longer appear along the western rim of what is now the Ocean View residential area. The remaining residential buildings and Buildings 407 and 408 have been constructed. Newer buildings have a more permanent style of construction. The majority of the land surface was still vegetated. The Colonel's Row building appears unchanged.

By 1998, little of the installations surface is still open and vegetated. Roads and parking areas cover most of the land. The Belt Parkway is noticably wider, and the Verazzano Narrows Bridge is the most prominent feature in the aerial photograph.

Table 4-1. Available Environmental Government Databases, Ft. Hamilton, New York

Federal	
NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRIS-TSD	Resource Conservation and Recovery Information System
RCRIS-LQG	Resource Conservation and Recovery Information System
RCRIS-SQG	Resource Conservation and Recovery Information System
ERNS	Emergency Response Notification System
BRS	Biennial Reporting System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records of Decisions
Delisted NPL	National Priority List Deletions
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS	Hazardous Materials Information Reporting System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
NPL Liens	Federal Superfund Liens
PADS	PCB Activity Database System
RAATS	RCRA Administrative Action Tracking System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA*/TSCA Tracking System
FTTS INSP	FIFRA/TSCA Tracking System - FIFRA
State	
SHWS	State Superfund Registry
SWF/LF	Permitted Solid Waste Facilities
LTANKS	Spills Information Database
UST	Petroleum Bulk Storage (PBS) Database
CBS UST	Chemical Bulk Storage Database
MOSF UST	Major Oil Storage Facilities Database
VCP	Voluntary Cleanup Agreements
SWRCY	Registered Recycling Facility List
SWTIRE	Registered Waste Tire Storage & Facility List
HSWDS	Hazardous Substance Waste Disposal Site Inventory
AST	Petroleum Bulk Storage
CBS AST	Chemical Bulk Storage
MOSF AST	Major Oil Storage Facilities Database
SPILLS	Spills Information Database
Local (County) Records	
Nassau County Registered Tank Database and Storage Tank Database	
Rockland County Petroleum Bulk Storage Database	
Suffolk County Storage Tank Database	
EDR Proprietary	
Coal Gas	Former Manufactured Gas (Coal Gas) Sites

Table 4-2. Computerized Environmental Database Review, Findings Most Relevant to Residential Communities Initiative Footprint, Fort Hamilton, New York.

Number	*Site*	*Proximity*	*Databases*	*Issue*
1	Veteran's Administration Medical Center	< 0.25 mi.	RCRIS FINDS	LQG
2	NYS Contract 9718 Ft Hamilton Pkwy	< 0.5 mi.	RCRIS FINDS	SQG, no violations
3	NYSDOT	< 0.5 mi.	RCRIS	SQG, no violations
4	Army Reserve Center Ft Hamilton	< 0.5 mi.	ERNS NY SPILLS	1994 truck jack-knifed, 40 gallons diesel fuel spilled, CA taken
5	Army Reserve Center Ft. Hamilton	< 0.5 mi.	LTANKS	1996 encountered contaminated soil during UST removal, CA taken
6	Verazzano Bridge Ft. Hamilton	< 0.5 mi.	LTANKS	1996 encountered contaminated soil during UST removal, CA taken
7	Bldg. 107	< 0.5 mi.	LTANKS	1998 encountered free product and contaminated soil during UST removal, CA taken
8	Bldg. 107	< 0.5 mi.	LTANKS	1998 encountered contaminated soil during UST removal, CA taken
9	Bldg.'s 105/200	< 0.5 mi.	LTANKS	1992 2 gallons waste oil spilled, contained and removed from pavement
10	Lee & White Ave.	< 0.5 mi.	LTANKS NY SPILLS	2,000 encountered contaminated soil during UST removal, CA taken
11	452 Marine Ave.	< 0.5 mi.	LTANKS	1994 10 gallons # 2 fuel spilled, CA and tank replaced
12	4th Ave/100th St.	< 0.5 mi.	LTANKS	1990 tank failed test, CA taken
13	427 Marine Ave.	< 0.5 mi.	LTANKS NY SPILLS	1995 # 2 fuel tank sweating
14	Bldg. 216 Ft. Hamilton	< 0.5 mi.	NY SPILLS	1996 encountered contaminated soil during UST removal
15	Bldg. 103B Bldg. 104	< 0.5 mi.	UST AST	1998 tank converted to non-regulated use
16	Bldg. 216 Ft. Hamilton	< 0.5 mi.	NY SPILLS	Sept. 1996 encountered contaminated soil during tank removal; Dec. 1996 product spilled in boiler room, sump pump discharged; 8, 55-gallon drums of contaminated soil removed
17	Veteran's Administration Medical Center	< 0.25 mi.	UST	UST registered
18	Ft. Hamilton DPW	< 0.5 mi.	UST AST	USTs registered ASTs registered
19	9901 Shore Rd.	< 0.5 mi.	UST	UST is registered
20	9820 4th Ave. Cleaners	< 0.5 mi.	FINDS RCRIS LQG	no violations
21	American Cleaners Tailors	< 0.5 mi.	FINDS RCRIS LQG	no violations
22	Con Edison 400 Poly Place	< 0.5 mi.	NY SPILLS	1996 spill of transformer oil, CA taken
23	453 100th St.	< 0.5 mi.	NY SPILLS	1998 fuel oil broke, CA taken

SECTION 5.0
CONCLUSIONS

Based upon the findings of this RCI EBS, ECOPs have been established for areas within the Subject Property described in Section 2.6. There are three reasons for designating one or more of the RCI footprint areas at Fort Hamilton as a preliminary Category 7, (Gray). The three bases of potential environmental impacts associated with current or past practices that result in a need for additional evaluations are:

- A potential presence of petroleum hydrocarbons in the soil near associated USTs when incident reports, UST age, or visual observations indicated that releases may have occurred,
- A need to clarify the PCB-status of transformers housed in Building 409, and
- A need to investigate lead concentrations in soil surrounding buildings constructed prior to 1978.

The ECOP for the areas within the RCI footprint is presented in Figure 5-1, and the bases for the ECOP designations are provided in context with the associated building numbers in Table 5-1.

Some potentially hazardous substances may be present on or within buildings and improvements on the property, but this did not affect ECOP designations because they are not regulated under CERCLA. These substances include lead-based paint within buildings, potential asbestos-containing material, mold or fungus, and residual pesticides. Information related to the potential presence of these substances is provided to assist the Army and the RCI Development Partner with safe and compliant management and disposition of the property.

It is possible that residual pesticides are present on soils within the RCI footprint. Exterior drill holes for termiticides and interior pesticide application notices were observed during visual site inspections of numerous units. As long as the pesticides were applied to the soils and buildings in accordance with applicable standards at the time of application and per their original, intended use and were not stored, disposed, or migrated onto the Subject Properties, pesticides in soil are not regulated as a contaminant. Pesticide application records and interviews with installation personnel did not indicate the any accidental releases of pesticides had occurred.

An asbestos prioritization survey of housing was conducted in 1990 (PSI 1991). No asbestos was identified in that survey. However, based on visual observations, potential asbestos-containing material is present in some of the Ocean View building crawl spaces, old mastic, and linoleum

flooring. There was no indication that the material has been released to the environment or that is friable. No potential asbestos-containing material was observed at Hamilton Manor or Colonel's Row.

Mold has been reported and observed in Building 407 and was observed in the basements of some Ocean View buildings. Mold is typically addressed when it occurs as a buildings maintenance issue. Depending upon the severity and cause of the problem, surface areas may be cleaned and wiped down, HEPA filters changed, and in some instances additional repairs or replacements conducted. In implementing the RCI, the Development Partner would be responsible for addressing any mold or fungi occurrences also in such a manner that they did not threaten or impact human health.

A lead paint survey conducted on building interiors constructed prior to 1978 included the Ocean View areas of the RCI footprint (Hill 1995). Approximately 10% of the units sampled had some paint that contained lead. The Colonel's Row is also a pre-1978 building. Building exteriors were not samples, but the wood trim has been painted. Therefore, it was concluded that lead-based paint is present in, and probably on, buildings in the Ocean View and Colonel's Row areas. Buildings in Hamilton Manor area were not sampled because it was unlikely that lead-based paint remained in these buildings after they were remodeled in 1983 (Koutroubis, personal communication 2002). However, they were constructed prior to 1978, and lead could have been released to the environment from exterior painted surfaces.

Hamilton Manor

The Hamilton Manor buildings were constructed in 1953 as previously described in Section 1. The buildings underwent significant renovations in 1983 when they were completly gutted. No sampling for lead-based paint, asbestos-containing materials, or PCBs has been conducted in Hamilton Manor because these materials were no longer in use on the installation by that time (Ruppert and Koutroubis, personal communications 2002). Therefore, these substances are not likely to be present in the Hamilton Manor buildings, although releases from lead-based paint on building exteriors could have occurred in the past. As described in Section 3.2.15, radon surveys were conducted on the installation, but not in the Hamilton Manor buildings. Based on data for other buildings on the installation, radon could be present in the buildings, but is unlikely to be present at levels of concern.

Building 135. No data from sampling Building 135 or its immediate surroundings was available. Building 135 was categorized based on observations from the VSI, interviews with

knowledgeable personnel, review of records for other buildings, and historic land usage. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 135. The building was in good repair overall, although some exterior paint around windows and fire escapes was peeling. The floor in a laundry room appeared to have some water damage, but no mold was observed or reported. A potential PCB spill, pesticide storage, and hazardous waste generation issues were investigated at Buildings 127 and 128 that are near Building 135. However, the investigations resulted in conclusions that either no response was necessary or that the response had been completed (IAP 1996 and ESEI 1984). Thus, past incidents at Buildings 127 and 128 would be unlikely to cause environmental concern at Building 135. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 136. No data from sampling Building 136 or its immediate surroundings was available. Building 136 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for other buildings, and historic land usage. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 136. The building was in good repair overall, although some exterior paint around windows and fire escapes was peeling. The heater in one unit appeared to be leaking steam, but no mold was observed or reported. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 137. No data from sampling Building 137 or its immediate surroundings was available. Building 137 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for other buildings, and historic land usage. Three large fuel oil-fired boilers that provide heat to all four Hamilton Manor buildings are housed in the boiler room of Building 137. Fuel feeds into the boiler room from two, 25,000 gallon USTs located just outside and downgradient of the building. There were no reports or indications of spills in the boiler room or around the USTs. A hazardous waste generation issue was investigated at Building 127 that is near and downgradient of Building 137. However, the investigations resulted in conclusions that either no response was necessary or that the response had been completed (IAP 1996 and ESEI 1984). Thus, past incidents at Building 127 would be unlikely to cause environmental concern at Building 137. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 138. No data from sampling Building 138 or its immediate surroundings was available. Building 138 was categorized based on observations from the VSI, interviews with

knowledgeable personnel, review of records for other buildings, and historic land usage. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 138. The building was in good repair overall, although some exterior paint around windows and fire escapes was peeling. No mold was observed or reported. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Ocean View

The residential buildings in Ocean View were constructed between 1950 and 1961 as previously described in Section 1. The non-residential buildings were constructed in between the late 1950's through the 1960's. Buildings in the Ocean View area were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records, and historic land usage.

Sampling for lead-based paint, asbestos-containing materials, and radon has been conducted in both residential and non-residential buildings in the Ocean View area. A survey for asbestos-containing material conducted in 1990 indicated that asbestos-containing materials were not present in roofing materials or insulation in boiler rooms. Other materials and locations were not sampled (PSI 1991). Visual observations noted that some potential asbestos-containing material is present as piping insulation in accessible areas of the buildings (Section 3.4).

Based on data from sampling the interiors of all buildings within the Ocean View area, except Building 409, lead-based paint is present in some of the buildings. The lead content in 10% of the total paint chip samples exceeded HUD acceptable levels (0.5% by weight) (Hill 1995). Building exteriors were not sampled, and peeling paint was observed on building exteriors. As discussed in Sections 3.2.10 and 3.4, the source of potential releases from the building exteriors is relatively small. However, no data for lead concentrations in the soil are available, and elevated levels of lead in the soil cannot be ruled out.

As described in Section 3.2.15, radon surveys were conducted on the installation, including the Ocean View area. Based on data for other buildings on the installation, radon could be present in the buildings, but is unlikely to be present at levels of concern.

Building 221, 222, and 223. Buildings 221, 222, and 223 were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint Buildings 221, 222, and 223 were available. None of these data identified any

environmental concerns in these buildings. Some potential asbestos-containing material was observed covering piping in an inaccessible area above the laundry room ceiling in Building 221. Drill holes indicating the application of pesticides for termites were observed on Buildings 221 and 223. Peeling paint was observed on the interior and exterior of Building unit 221C. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Buildings 221, 222, and 223. These buildings are categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Buildings 224 and 225. Buildings 224 and 225 were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint Buildings 224 and 225 were available. None of these data identified any environmental concerns in these buildings. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Buildings 224 and 225. These buildings are categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Buildings 304, 305, 306, 307, 310, 311, and 312. Buildings 304, 305, 306, 307, 310, 311, and 312 were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint in these buildings were available. Lead-based paint was identified in Buildings 304, 307, 311, and 312. Radon was not present at levels of concern. Some potential asbestos-containing material was observed in old layers of linoleum in the kitchen of Building 311D. Drill holes indicating the application of pesticides for termites were observed on Buildings 304 and 223. Extensive soot was observed on the walls and ceiling in the boiler room of Building 304. Water staining on the floor and water in the sump area were also observed in 304's boiler room. A slight odor of natural gas was noted in the boiler room of Building 311. Peeling paint was observed on the exterior of Building units 304C and 311D and on the interior of Building units 305H and 311D. The basement of Building 311D had water stains and a musty odor as well as considerable physical damage on the main and upper floors. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Buildings 304, 305, 306, 307, 310, 311, and 312. These buildings are categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Buildings 313, 314, 315 and 316. Buildings 313, 314, 315, and 316 were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and

lead-based paint in these buildings were available. Lead-based paint was identified in Building 314. Radon was not present at levels of concern. Some potential asbestos-containing material was observed in old layers of mastic, linoleum tiles, and caulking in the Building units 313E and G, 314C, 315H, and 316E. Extensive termite and water damage were observed in Building units 313C and G. Building unit 315H had been extensively damaged by fire; the windows were boarded, peeling paint, soot, and water damage were present. Water and oil staining on the floor and water was in the sump area as well as falling ceiling plaster were noted in Building 313's boiler room. Falling ceiling plaster, debris, soot indicating exhaust pipe leaks, and water staining were also observed in the boiler rooms of Buildings 314, 315, and 316. Peeling paint was observed on the exterior of Building units 313C and G, 314C, 316E and on the interior of Building units 313C, 314C, and 316E. The basement walls were water stained and covered with black mold; a musty odor was present and the ceiling had water damage in Building unit 313E. Vegetation was stressed and there were surficial depressions to the rear of Building 313. Fuel oil staining was noted around the vent pipe of the UST for Building 313 and the fill port of the UST for Building 315. There were indications that fuel oil had been released on or near the buildings in this group. These buildings are categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil and potential releases of petroleum hydrocarbons to the environment.

Building 403. Building 403 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint this building were available. Lead-based paint was identified in Building 403. Radon was not present at levels of concern. Some potential asbestos-containing material was observed on an air handler and on a pipe in the boiler and projection rooms. There were no indications that hazardous materials had been spilled, stored, or disposed of at Building 403. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 404. Building 404 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint this building were available. Lead-based paint was identified in Building 404. Radon was not present at levels of concern. Asbestos-containing material is present in the boiler room (Ruppert 2002). There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 404.

This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 405. Building 405 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint this building were available. Lead-based paint was identified in Building 405. Some paint trim on the building's exterior was peeling. Radon was not present at levels of concern. Potential asbestos-containing material was observed on an on piping in a storage room. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 405. This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Buildings 407 and 408. Buildings 407 and 408 were categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint this building were available. Lead-based paint was identified in Building 408, but not in 407. Peeling paint was noted on building interiors and exteriors. Radon was not present at levels of concern. Potential asbestos-containing material was observed on piping, roof materials, floor tile, and mastic at both buildings. Black mold was observed on piping insulation and ceiling tiles in Building 407. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Buildings 407 and 408. These buildings are categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil.

Building 409. Building 409 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land usage. Data from sampling for asbestos, radon, and lead-based paint this building were not available. There were no indications that hazardous materials had been spilled, stored, or disposed on or near Building 409. However, three of the transformers present in the building were unlabeled with respect to their PCB status at the time of the VSI This building is categorized as 7 (Gray) indicating a need for further evaluation of lead concentrations in surrounding soil and clarification of the status of the three unlabeled transformers.

Colonel's Row

Building 201. Building 201 was constructed in 1911 as previously described in Section 1. Building 201 was categorized based on observations from the VSI, interviews with knowledgeable personnel, review of records for these as well as other buildings, and historic land

usage. Data from sampling for asbestos and radon at this building were available. Sampling for asbestos-containing materials was conducted in 1991, and none was identified in two samples from the roof and one sample from the interior of Building 201. Potential asbestos-containing material was observed at shingles on the back entries to the rowhouses and exterior caulking around the windows. No sampling data for lead-based paint was available for Building 201. Based on data for other buildings on the installation, lead-based paint could be present on the buildings, and some peeling paint was observed on the building exterior. As previously described in Section 3.2.15, radon surveys were conducted on the installation, although not in the Building 201. Based on data for other buildings on the installation, radon could be present in the building, but is unlikely to be present at levels of concern.

Hydrocarbon releases have been reported and are being addressed at Building 200 (the installation fuel station), approximately 250 feet distant from the Colonel's Row area. However, data indicate that releases have not migrated to the vicinity of Building 201 and do not pose an environmental concern for Colonel's Row. A fuel oil-fired boiler that provides heat to all rowhouse units in the building is housed in a basement boiler room. Fuel feeds into the boiler room from a 2,000 gallon UST located just behind the building. There was one report of contaminated soil from around the USTs in June 2001. According to the NY spill report and environmental personnel, the contaminated soil was the result of over filling the UST. Removal of the contaminated soil was completed, but a closure report had not been incorporated into the NY State database at the time of the EBS records search. This building is categorized as 2 (Blue) due to this report of fuel oil contaminated soil.

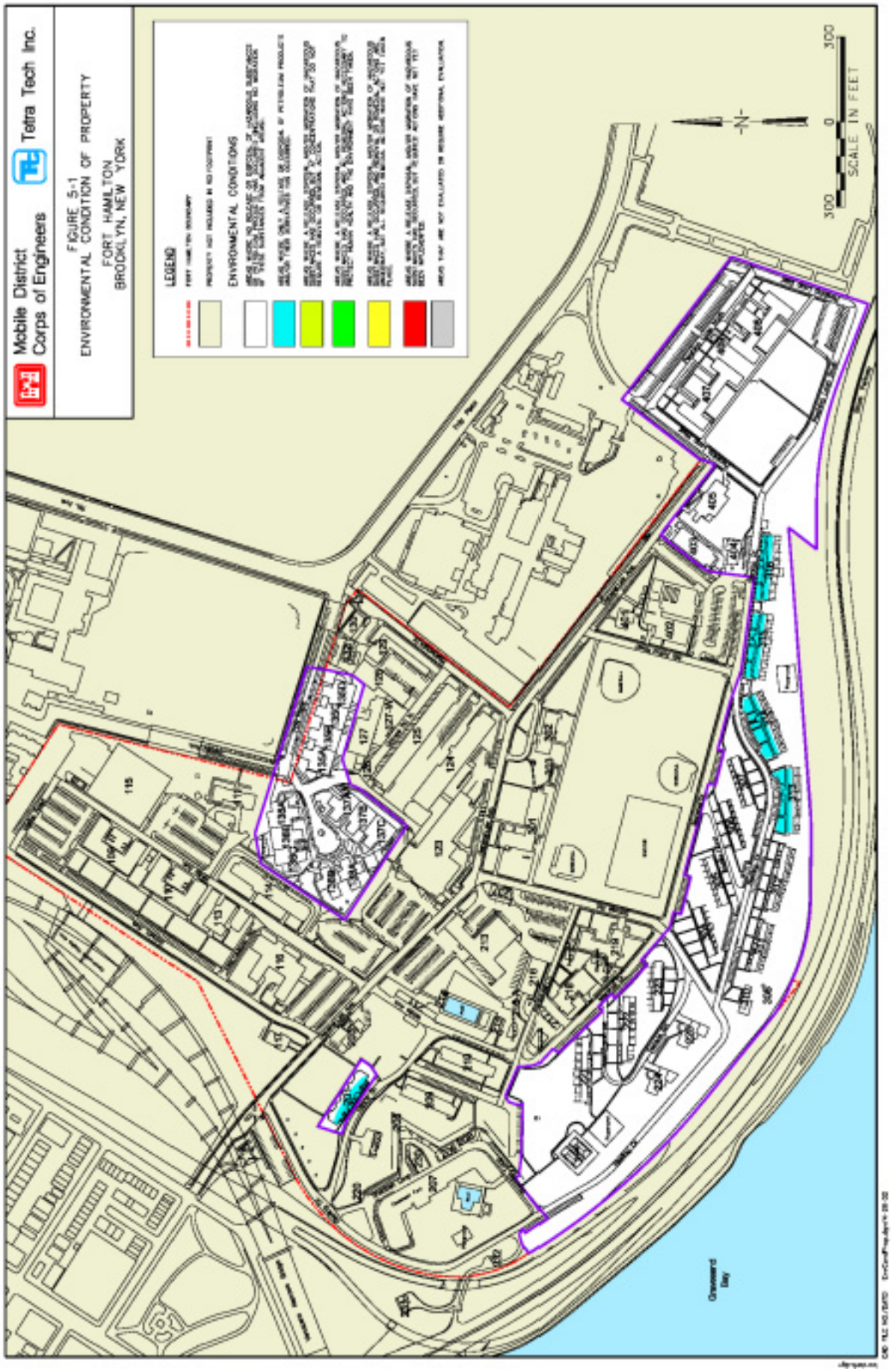

Figure 5-1. Environmental Condition of Property, Fort Hamilton, New York

1 **Table 5-1. Environmental Condition of Property Residential Communities Initiative Properties**

Building Number	Environmental Condition of Property	Environmental Condition of Property, Remedial Action, and Remarks
Hamilton Manor		
135A	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
135B	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
135C	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
135D	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
136A	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
136B	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
136C	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
137A	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
137B	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
137C	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
138A	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.

Building Number	Environmental Condition of Property	Environmental Condition of Property, Remedial Action, and Remarks
138B	7/GRAY	Building constructed prior to 1978, gutted and remodeled in 1983. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. No other environmental hazards identified during the VSI or other investigative activities.
Colonel's Row		
201	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. PACM shingles observed on side of house. No ACM was detected in 2 roofing samples and one sample in the hallway (PSI, 1991). Fuel spill reported in June 2,000; contaminated soil removed, but closure report not finalized (EDR 2002 and Koutroubis, personal communication 2002). No other environmental hazards identified during the VSI or other investigative activities.
Ocean View		
221	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Observed PCAM on pipe insulation above sheet rock in ceiling of laundry. No ACM was detected in 2 roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
222	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Observed PCAM on pipe insulation above sheet rock in ceiling of laundry. No ACM was detected in roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
223	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
224	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
225	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in 2 roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.

Building Number	Environmental Condition of Property	Environmental Condition of Property, Remedial Action, and Remarks
304	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
305	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
306	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
307	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
310	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
311	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Observed 3 layers of floor tile in kitchen (PACM), broken banister, broken caulking, and peeling paint in living area. No ACM was detected in roofing samples (PSI, 1991). Observed indications of application of pesticides for termite control, but no evidence of storage or accidental release. No other environmental hazards identified during the VSI or other investigative activities.
312	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.

Building Number	Environmental Condition of Property	Environmental Condition of Property, Remedial Action, and Remarks
313	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Non-friable PACM was observeded in old floor tiles, mastic, and caulking. No ACM was detected in roofing samples (PSI, 1991). Sump with water, fuel oil stains on floor and water stains on wall. Fuel oil staining around vent pipe. Basement walls were water stained, black mold cover some areas of the walls and basement had a musty odor. No other environmental hazards identified during the VSI or other investigative
314	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Non-friable PACM was observed in old floor tiles, mastic, and caulking. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
315	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Fuel oil stain on floor, water stains on walls and floor. Fuel oil staining on brick around vent pipe, stressed vegetation around fill port indicating potential past fuel release. Radon samples were below action level of 4 pCi/L. Non-friable PACM was observed in old floor tiles, mastic, and caulking. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
316	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Non-friable PACM was observed in old floor tiles, mastic, and caulking. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
403	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. PACM observed on air handler in the boiler room and on a pipe in the roof of the projection room. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
404	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No ACM was detected in roofing samples (PSI, 1991). ACM in known to be on piping in the boiler room per DPW. No other environmental hazards identified during the VSI or other investigative activities.
405	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. No indications or reports of releases from 3,000 gallon fuel oil UST. PACM was seen on piping in the storage room adjacent to boiler room. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.

Building Number	Environmental Condition of Property	Environmental Condition of Property, Remedial Action, and Remarks
407	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Staining was observed around the vent pipe of 6,000 gallon fuel oil UST. PACM was seen on piping, roof, floor tile, and mastic. No ACM was detected in roofing samples (PSI, 1991). Black mold seen on pipe insulation and on back side of ceiling tiles. No other environmental hazards identified during the VSI or other investigative activities.
408	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Radon samples were below action level of 4 pCi/L. Staining was observed around the vent pipe of 6,000 gallon fuel oil UST. PACM was seen on piping, roof, floor tile, and mastic. No ACM was detected in roofing samples (PSI, 1991). No other environmental hazards identified during the VSI or other investigative activities.
409	7/GRAY	Building constructed prior to 1978. Some peeling paint observed on exterior trim. Potential for lead-based paint releases from pre-1978 paint on exterior surfaces. Potential for lead-based paint on interior (Hill 1995). Building contains 6 transformers, 3 labeled PCB free and 3 unlabeled. No other environmental hazards identified during the VSI or other investigative activities.

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SECTION 8.0

ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing materials
AOC	Area of Concern
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CDMP	Community Development Management Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
DoD	Department of Defense
DPW	Department of Public Works
DRMO	Defense Reutilization Marketing Office
EA	Environmental Assessment
EBS	Environmental Baseline Survey
ESMP	Endangered Species Management Plan
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
FOSL	Finding of Suitability to Lease
GIS	Geographic Information System
HUD	Housing and Urban Development
HVAC	Heating, ventilation, and air conditioning
LBP	Lead-Based Paint
MHPI	Military Housing Privatization Initiative
NAAQS	National Ambient Air Quality Standards
NPL	National Priorities List
NRCS	Natural Resource Conservation Service
NHRP	National Register of Historic Places
NYSDEC	New York State Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
OWS	oil-water separator
PACM	Potential asbestos containing material
PCB	polychlorinated biphenyl
pCi/L	pico Curies per liter
RCI	Residential Communities Initiative
RCRA	Resource Conservation Recovery Act
RCRIS	Resource Conservation Recovery Act Information System
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SHPO	State Historic Preservation Office
SQG	Small Quantity Generator
SWMU	Solid Waste Management Unit
TSCA	Toxic Substance Control Act
TSD	Treatment, Storage and Disposal
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VQM	Vacant quarters maintenance
VSI	visual site inspection

APPENDIX A

SITE PHOTOGRAPHS

APPENDIX B

EDR REPORT AND WATER WELL REPORT

APPENDIX C

VISUAL SITE INSPECTION EXECUTIVE SUMMARY SHEETS

APPENDIX D

REGULATOR COMMENTS