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U.S. ARMY BASE

REALIGNMENT AND

CLOSURE 95 PROGRAM

**Environmental Baseline
Survey Report**

**Bellmore Maintenance
Facility, New York**

Prepared for
U.S. Army Corps of Engineers
New York District
Seattle District

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Woodward-Clyde 

Woodward-Clyde Federal Services
4582 S. Ulster Street
Stanford Place 3, Suite 1200
Denver, Colorado 80237

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LIST OF ACRONYMS

<u>ACRONYM</u>	<u>DEFINITION</u>
°F	degrees Fahrenheit
ACM	asbestos-containing material
AST	aboveground storage tank
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BEC	BRAC Environmental Coordinator
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act, as amended
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
CNR	Cultural and Natural Resources
DERA	Defense Environmental Restoration Account
DOD	Department of Defense
DSERTS	Defense Site Environmental Restoration Tracking System
DS/GS	Direct Support/General Support
EBS	Environmental Baseline Survey
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
FINDS	Facility Index System
GIS	geographic information system
gpm	gallons per minute
HR	hazardous substance release or disposal
HS	hazardous substance storage
IRP	Installation Restoration Program
LBP	lead-based paint

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LIST OF ACRONYMS

LF	linear feet
LUST	leaking underground storage tank
MSL	mean sea level
NBC	National Broadcasting Company
n.d.	no date
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
OD	outer diameter
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PL	Public Law
ppm	parts per million
PR	petroleum release or disposal
PS	petroleum storage
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RCS	Requirements Control Symbol
SF	square feet
SIP	State Implementation Plan
SVOC	semi-volatile organic compound
SWLF	solid waste landfill
TCLP	toxicity characteristic leaching procedure
TDS	total dissolved solids
TPH	total petroleum hydrocarbon
USACE	U.S. Army Corps of Engineers
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine (Provisional)
USARC	U.S. Army Reserve Center
USGS	U.S. Geological Survey
UST	underground storage tank

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UXO	unexploded ordnance
VOC	volatile organic compound

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EXECUTIVE SUMMARY

The Bellmore U.S. Army Maintenance Facility (Bellmore Maintenance Facility), located in Nassau County, Long Island, New York, has been selected for closure under the 1995 Base Realignment and Closure (BRAC) process. The purpose of this Environmental Baseline Survey (EBS) is to classify discrete areas of real property associated with the Bellmore Maintenance Facility, subject to transfer or lease, into one of the seven standard environmental condition of property area types as defined by Community Environmental Response Facilitation Act (CERFA) guidance and the Department of Defense (DOD) *BRAC Cleanup Plan (BCP) Guidebook* (DOD 1993). This is achieved by identifying, characterizing, and documenting the obviousness of the presence or likely presence of a release or threatened release of hazardous substances or petroleum products associated with the historical and current use of the Bellmore Maintenance Facility. Releases at properties adjacent to the Bellmore Maintenance Facility that could affect the environmental condition of the installation property are also identified, characterized, and documented. Additionally, areas containing or suspected of containing non-Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) contamination substances (e.g., asbestos-containing material, lead-based paint) that may limit or preclude the transfer or lease of the property for unrestricted use are delineated separately as qualified.

The seven standard environmental condition of property area types (categories) are presented in Section 1.3. Areas that are designated as Category 1, 2, 3, or 4 are suitable for transfer or lease, subject to consideration of the qualifiers. Areas that are currently designated as Category 5, 6, or 7 are not suitable for transfer.

The real property evaluated under this investigation of the Bellmore Maintenance Facility consists of approximately 16.79 acres, all of which were identified as BRAC property, subject to transfer or lease.

The Bellmore Maintenance Facility is an inactive military facility that for 30 years was strategically located at the center of an important array of U.S. Army command centers in the New York metropolitan region. Forts Totten, Hamilton, Wadsworth, and Tilden all lie within a 28-mile radius. The proximity of these U.S. Army facilities was responsible for the U.S. Army's decision to acquire the former U.S. Navy property for development and use as a central U.S. Army maintenance and support facility when it was declared excess in 1955. Historically, the

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Bellmore Maintenance Facility has been used as: (1) a radio station; (2) a radio communications listening facility; and (3) a maintenance and repair facility for highly specialized missile systems; vehicle, mechanical, and electrical equipment; armaments; generators; and radar, photographic, and construction equipment.

To prepare the EBS report, Woodward-Clyde reviewed existing installation documents; federal, state, and local government records; and aerial photographs. A site visit was conducted that included visual inspections of the property and surrounding properties, and employee interviews. Additionally, reasonably obtainable federal, state, and local government records for adjacent properties were reviewed. No sampling activities were associated with this EBS.

The information provided in this Final EBS Report is current as of April 1996; however, comments received from installation personnel and the regulatory community on the Draft and Draft Final EBS Reports have been incorporated, as appropriate.

The survey and parcelization of the Bellmore Maintenance Facility identified 23 BRAC parcels based on the environmental condition of the property. Table 5-1a and Figure 5-1 present the BRAC parcels and corresponding categorizations. Of the approximately 16.79 acres identified for transfer or lease, approximately 1.02 acres are designated as Categories 1 through 4, as shown in the BRAC Acreage Summary Table. The remaining 15.77 acres of BRAC property are designated as Categories 5 through 7. Additionally, approximately 3.11 acres of the categorized parcels were designated qualified for asbestos-containing material (ACM), lead-based paint (LBP), and/or polychlorinated biphenyls (PCBs). Table 5-1b and Figure 5-1 present the qualified parcels.

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BRAC ACREAGE SUMMARY TABLE BELLMORE MAINTENANCE FACILITY, NEW YORK

ENVIRONMENTAL CONDITION CATEGORY NUMBER	TOTAL ACREAGE	ACREAGE MINUS QUALIFIED AREAS	TOTAL QUALIFIED ACREAGE	ACM- QUALIFIED ACREAGE	LBP- QUALIFIED ACREAGE	PCB- QUALIFIED ACREAGE
1	0	0	0	0	0	0
2	0.84	0.84	0	0	0	0
3	0.16	0.16	0	0	0	0
4	0.02	0.02	0	0	0	0
5	0.02	0.02	0	0	0	0
6	3.56	3.55	0.01	0	0.01	0
7	12.19	9.09	3.10	2.82	3.10	0.10
Total	16.79	13.68	3.11	2.82	3.11	0.10

Note: Acreage figures are approximate; they have been calculated using AutoCad Release 12.

1.0 INTRODUCTION

The Environmental Baseline Survey (EBS) report for the Bellmore U.S Army Maintenance Facility (Bellmore Maintenance Facility) was prepared by Woodward-Clyde Federal Services (Woodward-Clyde) for the U.S. Army Corps of Engineers (USACE) under Contract No. DACA67-95-D-1001, Delivery Order No. 0007. This section describes the purpose and scope of the work conducted in preparing the U.S. Army Base Realignment and Closure (BRAC) 95 EBS report.

The information provided in this Final EBS Report is current as of April 1996; however, comments received from installation personnel and the regulatory community on the Draft and Draft Final EBS Reports have been incorporated, as appropriate. The comments and corresponding responses have been compiled in a Comment Response Package that is included as Appendix A.

The Bellmore Maintenance Facility, located in Nassau County, Long Island, New York, is a U.S. government property selected for closure by the BRAC 95 Commission (Figure 1-1). The Bellmore Maintenance Facility property evaluated under this EBS consists of 16.79 acres, all of which have been identified as BRAC property, subject to transfer or lease. Historically, the Bellmore Maintenance Facility has been used as: (1) a radio station; (2) a radio communications listening facility; and (3) a maintenance and repair facility for highly specialized missile systems; vehicle, mechanical, and electrical equipment; armaments; generators; and radar, photographic, and construction equipment.

1.1 BRAC PROGRAM OVERVIEW

Prior to the late 1980s, base closure was a time-consuming and inconsistent process. The Secretary of Defense, in cooperation with Congress, proposed a base closure law to create a process to close bases and bring base infrastructure in line with force structure. Public Law (PL) 100-526, enacted in 1988, created the Commission on Base Realignment and Closure. The law charged the Commission with recommending installations for closure or realignment based on an independent study of the domestic military base structure.

The closure process was refined in PL 101-510, in which Congress created the Defense Base Closure and Realignment Commission. The process identified installations based on eight criteria, including four related to military value; savings and return-on-investment; and the economic and

environmental impacts of closure. The Commission met in 1991, 1993, and 1995, and its recommendations are currently being implemented by the Department of Defense (DOD).

The BRAC environmental restoration program is similar to DOD's Installation Restoration Program (IRP), but has been expanded to include non-Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) contamination substances that are not normally addressed under the IRP, including asbestos-containing material (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCBs), radon, unexploded ordnance (UXO) and/or ordnance fragments, radionuclides, and pesticides.

The Community Environmental Response Facilitation Act (CERFA) (PL 102-426) was enacted in 1992 and amends Section 120 of CERCLA. CERFA directs federal agencies to evaluate all base closure and realignment property to identify uncontaminated parcels and allows the transfer or lease of remediated parcels when the successful operation of an approved remedy has been demonstrated. The CERFA identification process considers hazardous substances and petroleum products.

1.2 PURPOSE AND SCOPE OF ENVIRONMENTAL BASELINE SURVEY

The BRAC 95 environmental restoration program for the Bellmore Maintenance Facility was initiated by conducting an EBS. The EBS included the review of existing installation environmental documents; federal, state, and local government records; and aerial photographs. A site visit, which included visual inspections and employee interviews, was also conducted. Additionally, reasonably obtainable federal, state, and/or local government records for adjacent properties were reviewed. The EBS report describes the environmental condition of the property and will be used to support determination of the suitability to transfer or lease.

The purpose of the EBS is to classify discrete areas at the Bellmore Maintenance Facility into one of seven standard environmental condition of property area types as defined by CERFA guidance and the DOD *BRAC Cleanup Plan (BCP) Guidebook* (DOD 1993). This is achieved by:

- Identifying, characterizing, and documenting the obviousness of the presence or likely presence of a release or threatened release of a hazardous substance or petroleum product associated with the historical and current use of the Bellmore Maintenance Facility.
- Identifying, characterizing, and documenting the obviousness of the presence or likely presence of a release or threatened release of a hazardous substance or petroleum product from an adjacent property that is likely to cause or contribute to contamination at the Bellmore Maintenance Facility.

No sampling or analysis activities were conducted during this survey.

1.3 DEFINITIONS

The following definitions are used in this report:

- **BRAC property:** The installation real property that is subject to transfer or lease. Real property includes land and rights in land, ground improvements, utility distribution systems, pipes or pipelines, buildings, and other structures located on the property and affixed to the land.
- **Adjacent properties:** Those properties, on or off the installation, contiguous to or nearby the property boundaries being surveyed that are likely to cause or contribute to contamination and affect the results of the EBS or the classification of the BRAC property into standard environmental condition of property area types.
- **BRAC parcel:** An area of BRAC property that can be segregated from its surrounding areas based on the environmental condition of the area.
- **Hazardous substances:** Substances listed in 40 Code of Federal Regulations (CFR) 302.4, CERCLA Hazardous Substance Table.

- **Petroleum:** Any petroleum product or its derivatives, including aviation fuel and motor oil.
- **Environmental condition of property area type:** Any of the seven standard environmental condition of property area types (categories) as defined in the CERFA guidance and the DOD *BCP Guidebook* (DOD 1993) and presented in Table 1-1:

**Table 1-1
ENVIRONMENTAL CONDITION OF PROPERTY DEFINITIONS**

CATEGORY 1
Areas where no storage for one year or longer, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent properties). Additionally, includes areas where no evidence exists for the release, disposal, or migration of hazardous substances or petroleum products; however, the area has been used to store less than reportable quantities of hazardous substances (40 CFR 302.4) or 600 or fewer gallons of petroleum products.
CATEGORY 2
Areas where only storage of hazardous substances in amounts exceeding their reportable quantity or petroleum products exceeding 600 gallons has occurred, but no release, disposal, or migration has occurred.
CATEGORY 3
Areas where storage, release, disposal, or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.
CATEGORY 4
Areas where storage, release, disposal, or migration of hazardous substances or petroleum products has occurred, and all removal or remedial actions to protect human health and the environment have been taken.
CATEGORY 5
Areas where storage, release, disposal, or migration of hazardous substances or petroleum products has occurred, and removal or remedial actions are underway, but all required actions have not yet been implemented.
CATEGORY 6
Areas where storage, release, disposal, or migration of hazardous substances or petroleum products has occurred, but required removal or remedial actions have not yet been initiated.
CATEGORY 7
Areas that are not evaluated or require additional evaluation.

- **Suitable for transfer:** BRAC parcels that are designated as Category 1, 2, 3, or 4 are suitable for transfer or lease, subject to consideration of the non-CERCLA qualifiers.
- **Not suitable for transfer:** BRAC parcels that are currently designated as Category 5, 6, or 7 are not suitable for transfer.

- **Reserve enclave:** An area of the installation real property that will be retained by DOD and, therefore, is not categorized into standard environmental condition of property area types under the EBS.
- **Parcel labels:** Each BRAC parcel has been given a number to which appropriate descriptive labels are attached. The numbers consist of a unique parcel identification number and an environmental condition of the property category number. The labels consist of a designation describing the type of contamination or storage, if applicable. The following designations are used to indicate the type of contamination or storage present in a parcel.

PS = Petroleum storage

PR = Petroleum release or disposal

HS = Hazardous substance storage

HR = Hazardous substance release or disposal

Examples of this identification system follow:

- 2(1) indicates that the second BRAC parcel is designated as a Category 1 parcel.
- 12(3)HR indicates that the twelfth BRAC parcel is designated as Category 3 because of a documented hazardous substance release, but the concentrations do not warrant remediation.
- **Qualified parcels:** Areas containing or suspected of containing non-CERCLA contamination substances that may limit or preclude the transfer or lease of the property for unrestricted use. These parcels will be delineated separately and labeled with the letter “Q” for “qualified.” Qualified parcels overlay all environmental condition of the property categories (i.e., Categories 1 through 7). The qualified parcel labels are identified with the following designator, as applicable:

A	=	Asbestos-containing material (ACM)
L	=	Lead-based paint (LBP)
P	=	Polychlorinated biphenyls (PCBs)
R	=	Radon
X	=	Unexploded ordnance (UXO) and/or ordnance fragments
RD	=	Radionuclides

For all parcels, “(P)” is used to indicate that the presence of a contaminant is possible, but that data are unavailable for verification.

For example, the fifth BRAC parcel with the presence of ACM and the possible presence of LBP will be labeled 5Q-A/L(P).

1.4 LIMITATIONS

Although this investigation was performed professionally, no investigation may be considered so comprehensive as to guarantee complete information regarding the possible presence of materials on the installation that currently or in the future may be considered hazardous. The conclusions presented in this EBS report are based on information that was reasonably available from the designated installation contacts and other public sources at the time the EBS was conducted. In addition, information obtained from the records review and interviews has been assumed to be correct and complete, unless contradictory information was obtained through other sources.

1.5 GENERAL GEOGRAPHIC AND ENVIRONMENTAL SETTINGS

The Bellmore Maintenance Facility property consists of 16.6 acres situated in a highly developed suburban residential area on Long Island, in east-central Nassau County, New York (Figure 1-1). The Bellmore Maintenance Facility lies at an elevation of approximately 40 feet above mean sea level (MSL).

1.5.1 Demographics

In 1990, Nassau County had a population of just under 1,300,000, according to data from the U.S. Census (U.S. Census 1990). The county is divided into 3 townships, containing 2 cities and 64

villages. The Bellmore Maintenance Facility lies within an area known as the town of Bellmore. However, Bellmore is not one of the township, city, or village political divisions of Nassau County. Bellmore lies within the jurisdiction of the township of Hempstead for purposes of some municipal services, such as building permits and inspections.

Census information from 1990 provides the following demographic description of Bellmore (U.S. Census 1990). The total population is just under 16,500, of which approximately 22 percent is under the age of 18 and approximately 11 percent is over 65. Over 90 percent of the population consists of family groups living in single-family dwellings. Of those dwellings, just under 90 percent are owner-occupied.

1.5.2 Physical Setting

The Bellmore Maintenance Facility is an inactive military facility that for thirty years sat strategically at the center of an important array of U.S. Army command centers in the New York metropolitan region. Forts Totten, Hamilton, Wadsworth, and Tilden all lie within a 28-mile radius of the Bellmore Maintenance Facility. The proximity of these U.S. Army facilities was responsible for the U.S. Army's decision to acquire the former U.S. Navy property for development and use as a central U.S. Army maintenance and support facility when it was declared excess in 1955.

Immediately surrounding the installation is a densely populated suburban residential area. The residential community is bounded on the north by the Southern State Parkway, to the east by the Wantagh State Parkway, to the west by Sycamore Avenue and Cedar Swamp, and to the south by the Sunrise Highway. The site is located near the southeastern shore of Long Island, about 30 miles north of the southwestern terminus of the island. Figure 1-2 indicates the location of the facility with respect to Long Island and New York City.

1.5.3 Climatology

The climate of Nassau County is typical of the New York City metropolitan area and the Mid-Atlantic Seaboard. It is characterized by hot, humid summers and cold, snowy winters, separated by a mild spring and fall. The local climate is affected by the proximity of the Atlantic Ocean, located less than two miles south of the property. The effect of the open water moderates

temperature extremes, decreases the number of violent thunderstorms and snowstorms, and improves wind circulation at the site. The prevailing wind direction is from the southwest.

Nassau County has an average annual temperature of 50 degrees Fahrenheit (°F). The average monthly temperature ranges from 38°F in January to 85°F in July. Rainfall averages approximately 48 inches annually. The mean monthly precipitation varies from a low of 2.71 inches in June to a high of 4.83 inches in March. The average annual snowfall is 32 inches. Average temperature and precipitation rates by month are summarized in Table 1-2 (Metro Weather Service 1996).

**Table 1-2
MONTHLY CLIMATE DATA FOR NASSAU COUNTY, NEW YORK**

Month	Average Daytime Temperature (°F)	Average Nighttime Temperature (°F)	Average Rainfall (inches)	Average Snowfall (inches)
January	38	26	3.68	7.8
February	40	27	4.25	9.3
March	49	34	4.83	6.7
April	61	44	4.28	0.5
May	72	52	3.83	0
June	80	63	2.71	0
July	85	68	3.49	0
August	84	67	4.54	0
September	76	60	4.03	0
October	66	50	3.61	0
November	54	41	4.63	0.3
December	42	30	5.00	6.7

1.5.4 Geology and Soils

The Bellmore Maintenance Facility is situated within the Coastal Plain Province of the mid-Atlantic region, in an area underlain by a thick sequence of marine and continental sedimentary rocks deposited during Cretaceous time on the eroded surface of older igneous and metamorphic

rocks. The Cretaceous sedimentary rocks in the Bellmore Maintenance Facility area consist of interlayered sand and silty clay with lesser amounts of gravel. Unconformably overlying the Cretaceous rocks is a relatively thin veneer of coarse gravel and sand deposited during the Wisconsin-age, Pleistocene glaciation. Resting atop the upper Pleistocene glacial deposits is a thin veneer of organic soil. The current topography and near-surface deposits are characteristic of areas that were once the terminus of a glacier, consisting of moraines and outwash stream deposits.

The moraine deposits in the Bellmore Maintenance Facility area are composed of coarse to medium sands interspersed with gravel lenses. They notably lack the sometimes thick deposits of glacially-derived silts and clays found in many areas. The glacial deposits at the Bellmore Maintenance Facility site extend from the surface to a depth of approximately 150 feet (Staunton Chow Engineers, P.C. [SCE] 1995).

1.5.5 Hydrology

Most surface drainage on the Bellmore Maintenance Facility property is artificially controlled. Runoff from the roof drains of Buildings 100, 200, and 300 is discharged onto the paved and unpaved areas adjacent to the buildings. A large volume of stormwater runoff is created by the impermeable paved surfaces that cover nearly three-quarters of the property's area. The few unpaved open areas are grass-covered and contribute to the runoff volume. Most of the stormwater is channeled into a system of dry wells and drainage ditches, where the water is collected and allowed to infiltrate into the local groundwater system. The Bellmore Maintenance Facility does not have a stormwater management system to collect runoff and channel it to the municipal sanitary or storm sewer system.

The regional surface drainage near the Bellmore Maintenance Facility is generally towards the Atlantic Ocean, located less than two miles south of the property. There are freshwater lakes and streams dedicated to recreational use located about 0.5 miles to the east (along Wantagh State Parkway) and 1.25 miles to the west (along Meadowbrook State Parkway). Relative to the direction of flow of the local groundwater system, these surface bodies are located upgradient from the Bellmore Maintenance Facility (Perlmutter et al. 1963).

1.5.6 Hydrogeology

No detailed, site-specific description of the hydrogeologic environment at the Bellmore Maintenance Facility was provided in any of the documents reviewed during preparation of this EBS report. However, a description of the regional hydrogeological environment found in documents for nearby localities is provided in this section. The description has been supplemented with site-specific information, if available.

The unconsolidated sediments underlying the area have been divided into several hydrogeologic units based on their water-bearing properties. The glacial gravels and sands unit is generally referred to as the uppermost or Glacial Aquifer. Regionally, the total thickness of the glacial aquifer varies between 80 and 400 feet, with the average thickness approximately 150 feet. In some areas, the glacial unit can be divided into two or more aquifers based on local variations with depth in the thin, discontinuous clay lenses that make up the unit. The groundwater table at the Bellmore Maintenance Facility is found in these glacial deposits at a depth of approximately 18 feet.

Regionally, the underlying Cretaceous sedimentary rock sequence contains three main aquifers separated by clay-rich units that act as aquitards. Progressing from the surface downward these units are: the Jameco gravel aquifer (approximately 200 feet thick), the Magothy sand aquifer (approximately 1,000 feet thick), the Gardiners clay (approximately 150 feet thick), the Raritan clay (approximately 300 feet thick), and the Lloyd sand aquifer (approximately 300 feet thick). The Jameco gravel aquifer is not present at the Bellmore Maintenance Facility area, and the glacial deposits directly overlie the Magothy sand aquifer. Beneath the Bellmore Maintenance Facility site, the Cretaceous deposits have a total thickness of approximately 1,800 feet.

A generalized cross-section of Long Island showing the major aquifer and aquitard units is shown in Figure 1-3. These units comprise the hydrogeologic system for the Long Island area, including the Bellmore Maintenance Facility area (Environmental Science and Engineering, Inc. [ESE] 1994).

The Magothy unit has a lower average permeability than those of the overlying glacial units because of higher clay content and poorer sorting (Perlmutter et al. 1963). However, the thickness and lateral extent of the Magothy Aquifer make it one of the most important sources of drinking water in the northeastern United States.

Until the U.S. Army acquired the land in 1956, the occupants of the Bellmore Maintenance Facility property had obtained their water from an on-site well. The location and depth of the well could not be ascertained in the documents reviewed for this EBS report. However, the municipal water system operated by Nassau County extended to the area immediately surrounding the Bellmore Maintenance Facility property by the mid-1950s. Based on the projected water needs for the planned expansion of facilities and operations at the site, the U.S. Army opted to have the Bellmore

Maintenance Facility connected to the municipal water supply in 1957 (U.S. Army Environmental Hygiene Agency 1989).

On Long Island, municipal water supplies are drawn from the Magothy Aquifer. At present, the Glacial Aquifer is used only as a source of water for industrial use or lawn sprinkling. This is due to declining water quality as a result of historic domestic and industrial waste practices, including septic systems, cesspools, dry wells, and other infiltration ponds. No groundwater monitoring wells are located on the Bellmore Maintenance Facility property. Consequently, no systematic sampling program has been conducted to collect groundwater chemical data. The state of New York has designated the groundwater beneath the Bellmore Maintenance Facility as a potable water supply source. However, because of the historical uses of the installation, as well as potential increases in total dissolved solids (TDS) and chloride concentrations from regional saltwater intrusion, groundwater in the vicinity of the Bellmore Maintenance Facility is not a principal source of public water supply.

No groundwater wells are located at or near the Bellmore Maintenance Facility from which to assess groundwater flow direction and velocity. However, based on the flow direction of nearby surface water bodies, such as the lakes and streams of the Wantagh and Meadowbrook State Parkways, the primary groundwater flow direction is from north to south, toward the Atlantic Ocean (SCE 1995).

2.0 SOURCES OF INFORMATION

The EBS investigation meets the requirements of CERCLA (1980) Section 120(h), as amended by CERFA and implemented by DOD. This section describes the sources of information that were used to support the determination of the environmental condition of the Bellmore Maintenance Facility BRAC property.

2.1 INSTALLATION/BRAC PROPERTY

Relevant information and documents that were used to conduct the Bellmore Maintenance Facility EBS are identified in the following sections. This information includes environmental studies; federal, state, and local regulatory records; and interviews of installation personnel. Visual inspections of the installation property and adjacent properties were also conducted.

2.1.1 Existing Documents

Existing documents were reviewed to evaluate the environmental conditions at the Bellmore Maintenance Facility. The 14 documents presented in Table 2-1 are the primary documents used in the preparation of this EBS report. Each document has a document identification number, which is referenced in the CERFA map tables (Table 5-1a and 5-1b) in Section Five. These documents are the primary source of evidence for the resulting environmental condition of property area categorization. A complete list of references is included in Section Six.

**Table 2-1
PRIMARY DOCUMENTS**

DOCUMENT TITLE	AUTHOR	DATE	EBS DOCUMENT IDENTIFICATION NUMBER
<i>Draft Environmental Assessment for Potential and Actual Sites of Contamination</i>	Karen Tate, Directorate of Public Works	June 1, 1994	1
<i>Preliminary Environmental Site Investigation at Bellmore USARC Maintenance Facility</i>	Staunton Chow Engineers, P.C.	March 6, 1995	2
<i>Underground Storage Tank Removal, Bellmore USARC</i>	TONE Tank and Pump, Inc.	January 1, 1994	3

**Table 2-1
(Continued)**

DOCUMENT TITLE	AUTHOR	DATE	EBS DOCUMENT IDENTIFICATION NUMBER
<i>UST Closure Report, Bellmore USARC</i>	D&K Construction Co., Inc.	July 24, 1995	4
List of Registered USTs and ASTs	Nassau County Department of Health	No Date	5
<i>Base Realignment and Closure (BRAC 95) Implementation Plan</i>	U.S Army Forces Command	July 25, 1995	6
<i>Asbestos Survey Report, Bellmore USARC</i>	Kaselaan and D'Angelo	April 29, 1994	7
<i>Asbestos Materials Assessment</i>	Galson Technical Services, Inc.	June 1, 1989	8
<i>Spill Prevention, Control, and Countermeasures Plan</i>	CH2M Hill, Inc.	June 15, 1994	9
<i>Movement of Waterborne Cadmium and Hexavalent Chromium Wastes in South Farmingdale, Nassau County, Long Island, New York</i>	N.M. Perlmutter, M. Lieber, and H.L. Fraventhal	1963	10
<i>Installation Assessment of New York Area Command and Fort Hamilton, Brooklyn, New York, and its Sub-Installations: Fort Wadsworth, Staten Island, New York, and Fort Totten, Flushing, New York</i>	Environmental Science and Engineering, Inc.	February 1984	11
<i>Bellmore Army Reserve Analytical Results</i>	Remac USA, Inc.	December 21, 1994	12
Memorandum for the Record Regarding PCB-Contaminated Concrete	Bruce Noble	March 1, 1986	13
<i>Sample Analysis Report of Bellmore Maintenance Facility</i>	Bellmore Maintenance Facility	January 22, 1992	14

2.1.2 Federal, State, and Local Government Regulatory Records

A search of federal, state, and local records pertaining to the Bellmore Maintenance Facility and a search of reasonably obtainable records of adjacent (within a 1.5-mile radius) properties was performed. In addition, a search of the environmental databases listed in Table 2-2 was conducted.

**Table 2-2
ENVIRONMENTAL DATABASES**

DATABASE	CONTENTS
National Priorities List (NPL)	The NPL lists Superfund sites, which are sites that are determined by the U.S. Environmental Protection Agency (EPA) to pose an immediate public health hazard requiring immediate cleanup response.
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	The EPA CERCLIS database tracks CERCLA sites.
Emergency Response Notification System (ERNS)	EPA maintains ERNS, which is a repository for information on hazardous spills nationwide. This information is based on reports filed by local agencies (e.g., municipal fire, police, or environmental departments), county agencies, state entities, and federal agencies (e.g., U.S. Coast Guard, National Response Center, and EPA).
Resource Conservation and Recovery Act (RCRA) Facilities Database	Facilities listed in this EPA database are RCRA facilities for which a Corrective Action has been issued to address waste handling problems.
Resource Conservation and Recovery Information System (RCRIS)	This database contains all RCRA facilities. The facility types include: large quantity generators; small quantity generators; conditionally exempt facilities; transporter facilities; and treatment, storage, and disposal (TSD) facilities. Large quantity generators generate over 1,000 kilograms (kg) hazardous waste/month, or greater than 1 kg acutely hazardous waste as defined by RCRA. Small quantity generators generate more than 100 and less than 1,000 kg of hazardous waste during any calendar month.
Facility Index System (FINDS)	EPA references any facility or event that has been issued an EPA identification number; the EPA program office that issued the identification number is also listed. These listings do not necessarily reflect releases.
Solid Waste Landfills (SWLF) Database	This database was searched to identify solid waste landfills, incinerators, and transfer stations.
New York State Registered Underground Storage Tanks (USTs) Database	This is a database of registered USTs maintained by state or local agencies.
Leaking Underground Storage Tanks (LUSTs) Database	This database on known or suspected leaking USTs is maintained by state or local agencies.

The complete database search report, including a map indicating locations of sites, is provided in Appendix B. Table 2-3 presents the information identified from the database search.

**Table 2-3
SUMMARY OF FINDINGS FROM DATABASE SEARCH**

DATABASE INFORMATION	LOCATION	COMMENTS
2 RCRA small quantity generators, permit numbers NY1210090022 and NY9210021839	Installation Property	Permit number NY121009002 covers wastes generated by the Bellmore Maintenance Facility operations. As of 1987, these operations were managed by Fort Dix and Fort Hamilton, respectively. Permit number NY9210021839 covered wastes generated (PCB-contaminated soils) as a result of the 1986 PCB-containing oil spill described in Section 4.1.2.1.
RCRA large quantity generators	Adjacent to the Bellmore Maintenance Facility	Two facilities permitted by the state of New York are located within a 0.25-mile to 0.5-mile radius. Twenty-two facilities permitted by the state of New York are located within a 0.5-mile to 1.5-mile radius.
RCRA small quantity generators	Adjacent to the Bellmore Maintenance Facility	Five facilities permitted by the state of New York are located within a 0.25-mile to 0.5-mile radius.
RCRA transporters	Adjacent to the Bellmore Maintenance Facility	Two facilities permitted by the state of New York as RCRA transporters are located within a 1.5-mile radius.
RCRA TSD sites	Adjacent to the Bellmore Maintenance Facility	No RCRA TSD facilities exist within a 1.5-mile radius of the Bellmore Maintenance Facility
ERNS Incidents	Installation Property	The Bellmore Maintenance Facility had two reported ERNS incidents. One incident is related to the 1986 PCB-oil spill. The second was a waste oil spill that occurred in November 1993. Both cases are closed, with cleanup completed.
County toxic and hazardous materials storage sites	Adjacent to the Bellmore Maintenance Facility	Three facilities permitted by Nassau County for Toxic and Hazardous Materials Storage (including tank registration for petroleum bulk storage) exist within a 0.5-mile to 1.5-mile radius.

**Table 2-3
(Continued)**

DATABASE INFORMATION	LOCATION	COMMENTS
LUSTs	Adjacent to the Bellmore Maintenance Facility	Two LUSTs have been reported within 0.25-mile radius (both cases closed, cleanup complete). Five LUSTs have been reported between a 0.25-mile to 0.5-mile radius (all cases closed, cleanup complete). Fifty-five facilities tracked by the New York State Department of Environmental Conservation (NYSDEC) as LUSTs have been reported within a 0.5-mile to 1.5-mile radius (43 cases closed, cleanup complete).
NPL	Adjacent to the Bellmore Maintenance Facility	No NPL sites exist within a 1.5-mile radius of the Bellmore Maintenance Facility.
CERCLIS sites	Adjacent to the Bellmore Maintenance Facility	No CERCLIS sites exist within a 1.5-mile radius of the Bellmore Maintenance Facility.

Those adjacent properties that are potential sources of contamination have been identified in Section 4.3 of this report. The remaining properties have been determined to have no detrimental effect on the environmental condition of the Bellmore Maintenance Facility property.

2.1.2.1 Permits and Permit Applications

Information concerning permits and permit applications was identified through the records review. The installation has obtained or currently holds the following permits.

**Table 2-4
INSTALLATION PERMITS**

TYPE OF PERMIT	PERMIT NUMBER	FACILITY
RCRA Small Quantity Hazardous Waste Generator	NY1210090022	Installation
RCRA Small Quantity Hazardous Waste Generator	NY9210021839	Installation

**Table 2-4
(Continued)**

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TYPE OF PERMIT	PERMIT NUMBER	FACILITY
Application for a Toxic or Hazardous Materials Storage Facilities Permit (Tank Registration)	55929, Issued by Nassau County	Installation
Building Inspector's Permit for Radio Tower Removal	28898, Issued by the Town of Hempstead	Building 300 (Removal Completed in 1941)

2.1.2.2 Inspection Reports and Enforcement Actions

The Compliance Inspection Section of NYSDEC, Division of Hazardous Substances Regulation, conducted an installation inspection of the Bellmore Maintenance Facility on January 5, 1990. On April 9, 1990, NYSDEC issued a Notice of Violation to an official of the Fort Hamilton Environmental Division, who served as Installation Coordinator for the Bellmore Maintenance Facility. The notice cited failure to comply with Section 6, New York Code of Rules and Regulations, Part 372.2(c)(2)(i), 372.2(b)(2)(i), and 372.2(b)(2)(ii). This section of the New York Code is administrative in nature and relates to failure to comply with permit reporting requirements for RCRA small quantity generators. The Bellmore Maintenance Facility Installation Coordinator responded by submitting the appropriate documentation to NYSDEC. NYSDEC indicated that the cited violations were satisfactorily corrected in a memorandum to the Fort Hamilton Environmental Division on July 19, 1990. The violations, therefore, had no impact on the environmental condition of the Bellmore Maintenance Facility property.

On September 11, 1992, NYSDEC issued a Notice of Violation for failure to comply with Section 6, New York Code of Rules and Regulations, Part 212. The cited provisions of the New York Code are administrative in nature and relate to failure to submit a schedule for compliance with New York State Implementation Plan (SIP) source requirements to limit emissions of particulates. The records review did not reveal any documentation on the resolution of this Notice of Violation.

The Bellmore Maintenance Facility had violations under the Clear Air Act (CAA). The violations related to startup operations of the boilers in Building 100. The boilers are not in operation. The installation responded with a letter to Andrew Ruppert, Chief, Directorate of Public Works, Environmental Division, Fort Hamilton. No resolution is documented.

2.1.3 Aerial Photographs

Woodward-Clyde reviewed reasonably obtainable aerial photographs of the Bellmore Maintenance Facility and adjacent properties obtained from the Department of the Interior, U.S. Geological Survey (USGS). The photographs reviewed are identified as USGS Numbers GS-SWAX 1-68 (1966) and GS-VBV 1-104 (1953). The aerial photographs were at a scale of 1:20,500 and 1:20,000, respectively, and proved to be of insufficient detail to provide any additional information relevant to this EBS.

2.1.4 Existing Property Maps

There were no geographic information system (GIS) maps of the Bellmore Maintenance Facility available. Historical property maps were reviewed for information regarding previous facility locations and their past usage at the Bellmore Maintenance Facility that may have contributed to environmental degradation or concerns. Current and historical property maps were also utilized to prepare the inventories of buildings, locations of USTs and ASTs, transformers, utilities, and other improvements or areas of concern described in this EBS report.

The best available hard copy map was digitized using AutoCad Release 12 and was used as the base for the CERFA map presented in Section Five (Figure 5-1).

2.1.5 Interviews

Interviews with current and former employees involved in Bellmore Maintenance Facility operations or environmental oversight were conducted to document the available information about the installation's environmental history and practices. The interviews provided additional information to supplement the documents found in the Bellmore Maintenance Facility record archives or the archives of its parent facility, Fort Hamilton, and helped support the determination of the environmental condition of the property. To ensure the interview process was thorough, standardized interview forms were created and utilized. A sample interview form is presented in Appendix C.

The following table provides a list of the individuals who were interviewed.

Table 2-5
INTERVIEWS OF PERSONNEL ASSOCIATED WITH THE BELLMORE
MAINTENANCE FACILITY
CONDUCTED DECEMBER 26, 1995 AND JANUARY 3 to 5, 1996

NAME	TITLE	ORGANIZATION	TELEPHONE NUMBER	PERIOD ASSOCIATED WITH AREA OR FACILITY	SIGNIFICANT TOPICS DISCUSSED
John Rhee	Environmental Engineer	Directorate of Public Works, Environmental Division, Fort Hamilton	(718) 630-4488	1987 to present	Hazardous waste handling and storage
Andrew Ruppert	Chief, Environmental Division	Directorate of Public Works, Environmental Division, Fort Hamilton	(718) 630-4494	1992 to present	LBP, PCBs
Peter Koutroubis	Environmental Engineer	Directorate of Public Works, Environmental Division, Fort Hamilton	(718) 630-4485	1993 to present	USTs, ASTs, asbestos hazards
George McLellan	Chief of Maintenance	Directorate of Logistics, Fort Dix	(609) 562-2264	1970 to 1994	Maintenance history
Steven Silvers	Not Available	Nassau County Department of Health Hazardous Waste Division	(516) 571-3458	Not Available	Nassau County records of the 1986 PCB spill, hydrogeology of the site area

2.1.6 Visual Inspections

As required by CERCLA 120(h)(4)(A)(iv) and (v) and DOD guidance, a visual inspection of the Bellmore Maintenance Facility and properties immediately adjacent to the Bellmore Maintenance Facility are addressed in this EBS report. Visual inspections of the installation and adjacent properties were conducted by the Woodward-Clyde field team during the period of November 14 through 16, 1995. Visual inspections conducted by the field team included observations of the environmental condition of the property grounds, buildings, structures, and equipment. Inspection methods included drive-by inspections and visual surveys conducted during walking tours of building interiors, exteriors, and grounds. The purpose of the on-site visual inspections was to identify or characterize the environmental condition of the property and its specific improvements, including verification of the existence of any uncontaminated property. To ensure the visual

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inspections were thorough, standardized visual inspection forms were created and utilized. A sample visual inspection form is presented in Appendix D. Findings from the visual inspections are presented in Table 2-6.

**Table 2-6
VISUAL INSPECTIONS**

FACILITY/ PROPERTY	DATE INSPECTED	FACILITY USE	VISUAL EVIDENCE OF CONTAMINATION
Grounds (facility-wide)	November 16, 1995	Many paved and unpaved areas used for parking and vehicle/equipment storage	Numerous areas of distressed vegetation; stormwater runoff and effluent from cleaning activities captured by over 15 dry wells and leaching trenches
Building 100	November 16, 1995	Army Maintenance Shop, Army Reserve Maintenance Shop (various units)	Many storage/handling areas for regulated substances have floor/sink drains that empty into outside dry wells
Building 100 grounds	November 16, 1995	Storage of old vehicles, machinery, petroleum products, and hazardous materials/wastes; includes area of the 1957 septic system tank (removed) in use until 1982	Areas of distressed vegetation throughout parking areas north of Building 100
Site NE800, open area east of Building 100 and northeast of flagpole	November 16, 1995	Abandoned septic leaching field (active from 1957 to 1982)	Areas of distressed vegetation throughout leach field area

**Table 2-6
(Continued)**

FACILITY/ PROPERTY	DATE INSPECTED	FACILITY USE	VISUAL EVIDENCE OF CONTAMINATION
Building 200	November 16, 1995	Administrative/support offices and storage	Areas of distressed vegetation on southwest side
Building 200 grounds	November 16, 1995	Mostly lawn areas and parking	Distressed vegetation from roof downspout runoff
Building 300	November 16, 1995	Administrative/support offices and storage	None observed
Building 300 grounds	November 16, 1995	Includes area of abandoned septic tank and leaching field (active from the 1920s until 1982)	None observed

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Building 400	November 16, 1995	Security station	None observed
Building 401 (800)	November 16, 1995	Security station	None observed
Building 600	November 16, 1995	Garage/vehicle and equipment storage	None observed
Building 600 grounds	November 16, 1995	Used as a gasoline distribution point prior to the 1956 U.S. Army ownership of property.	Pump and piping removed from area were connected to possible abandoned UST beneath or near stained concrete slab
Building 700	November 16, 1995	Former water tower location	None observed
Building 900	November 16, 1995	Flammable storage building	Concrete slab flooring has areas of exposed ground
Site NE200	November 16, 1995	Secured vehicle storage area	None observed

2.1.7 Title Documents

CERCLA 120(h)(4)(A)(ii) and DOD guidance require a review of the “recorded chain of title documents regarding the real property.” For the EBS, tract maps and title and transfer documents were reviewed to identify the prior property owners at the time of transfer to the U.S. Army. The purpose of this review was to collect additional information concerning the prior use and environmental condition of the property at the time of transfer to the U.S. Army. Previous ownership and the dates of transfer are presented in Appendix E.

3.0 PROPERTY CHARACTERIZATION

This section presents an overview of past and current operations at the Bellmore Maintenance Facility and a discussion of verified or potential environmental impacts associated with operations at the facility. The information was compiled from available environmental reports and other records related to the storage and use of regulated substances, waste management practices, and significant environmental incidents that have occurred on the Bellmore Maintenance Facility property.

3.1 PROPERTY OVERVIEW

The Bellmore Maintenance Facility property evaluated under this EBS consists of 16.79 acres of land and approximately 139,971 square feet of building space (Fort Hamilton Environmental Division 1995b). All of the installation property has been identified as BRAC property subject to transfer or lease. Information on the historic uses of this property was identified in coordination with the Bellmore Maintenance Facility BRAC Environmental Coordinator (BEC) and compiled during visits to the Bellmore Maintenance Facility and to the Headquarters, New York Area Command, Fort Hamilton, Brooklyn, New York. Some of the information was obtained through interviews with U.S. Army personnel associated with the Bellmore Maintenance Facility. Other information was obtained through searches of available historic records and maps.

This section provides a general description of each operational facility within the Bellmore Maintenance Facility installation. Where appropriate, sources are identified for significant information that was obtained through interviews, by visual observations during on-site visits, or extracted from published documents or other supplemental material.

3.2 DESCRIPTION OF FACILITIES

The Bellmore Maintenance Facility property has been associated with public service and national defense for nearly 75 years, first as a radio station and then as a military installation. The property was purchased as two separate parcels by the National Broadcasting Company (NBC) in transactions that occurred between 1927 and 1930. In the first transaction on February 28, 1927, NBC acquired a parcel of approximately six acres located in the southeastern corner of the current property. In the second transaction on July 28, 1930, NBC purchased the remaining acres (approximately 10) located west and north of the previously acquired property.

NBC used the property to operate radio station WEAJ. The radio station operated at the facility until the late 1930s or early 1940s. During World War II, the installation was rented by the U.S. Navy and used as a radio communications listening facility supporting the war effort.

On April 22, 1942, NBC sold the property to F.B.Q. Co., Inc. The U.S. Navy continued to occupy the property for use as a listening post throughout the war. On November 13, 1945, F.B.Q. Co., Inc. transferred the property by deed to the United States of America in Washington, D.C. The U.S. Navy assumed ownership of the property and used it as a military radio station and for reserve units. In approximately 1955, the U.S. Navy excessed the property to the Department of the Army. The U.S. Army acquired the property to establish a centralized "Direct Support/General Support" or DS/GS maintenance facility for its New York area installations. In addition, the Bellmore Maintenance Facility supported other military branches including the U.S. Navy, U.S. Air Force, U.S. Marines, and National Guard. The support facility was operated by the 1st Region, U.S. Army Air Defense Command, located at Fort Totten. The Signal Division sections from Fort Wadsworth on Staten Island, the Ordnance Divisions from Fort Totten and Fort Tilden, and the automotive shop from Fort Totten were the first groups to relocate to the Bellmore Maintenance Facility in early 1959. The facility was formally dedicated with opening day ceremonies in August 1959.

Services offered at the Bellmore Maintenance Facility expanded for several years and, between approximately 1959 and 1974, included maintenance and repair support for the Nike-Ajax and Nike-Hercules missile systems. In addition, the Bellmore Maintenance Facility provided a wide range of services, including maintenance and repair of other mechanical, electrical, and electronic equipment; armament (artillery and small arms); power generators; and radar, photographic, and construction equipment. Fort Totten operated the Bellmore Maintenance Facility until 1967 when Fort Totten was scheduled to be closed as part of BRAC 91. At that time, the U.S. Army Air Defense Command was relocated to Fort Stewart. The Bellmore Maintenance Facility and Fort Totten then became part of the New York Area Command, Fort Hamilton.

Currently, no personnel are assigned to the Bellmore Maintenance Facility. U.S. Army Logistics units were relocated to Fort Totten and U.S. Army Maintenance units were relocated to Fort Dix. All logistics and maintenance supplies and equipment were removed from the installation when the units were relocated. The Bellmore Maintenance Facility buildings were secured and winterized,

and the facility has been vacant since October 1, 1994 (U.S. Army Forces Command 1995). A security fence restricts access to the installation.

3.3 DESCRIPTION OF FACILITIES

The Bellmore Maintenance Facility property includes eight permanent structures totaling approximately 139,971 square feet of building space. The facilities are described in Table 3-1.

**Table 3-1
DESCRIPTION OF FACILITIES**

BUILDING NUMBER	CONSTRUCTION TYPE	YEAR BUILT	PAST USE	CURRENT USE
100	Concrete reinforced footings, steel and block	1959	Main automotive shop area and equipment repair and maintenance facility for Ordnance Division, Fort Totten and Fort Tilden, including repair of Nike-Ajax and Nike-Hercules missile systems; repair of other specialized mechanical, electronic, and electrical equipment, including artillery, small arms, radar, photographic, power generators, and construction equipment. Also used as vehicle and equipment maintenance and repair facility for regional U.S. Army Reserve units.	Building 100 has been vacant since October 1994.
200	Concrete reinforced footings, steel and block	1959	General administrative activities	Building 200 has been vacant since October 1994.
300	Footings, wood	1927	Originally the location of radio station WEAJ. Additional past uses include post headquarters, storage of U.S. Army Reserve medical/dental equipment, and storage of U.S. Army Reserve unit field equipment and supplies.	Building 300 has been vacant since October 1994.
400	Concrete footings, metal frame	1958-1959	Sentry Post (main gate)	Building 400 has been vacant since October 1994.

**Table 3-1
(Continued)**

BUILDING NUMBER	CONSTRUCTION TYPE	YEAR BUILT	PAST USE	CURRENT USE
401	Concrete footings, metal frame	1958-1959	Sentry Post	Building 401 has been vacant since

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				October 1994.
600	Concrete footings, concrete structure	1962	General purpose warehouse used as a garage for storage of military vehicles and equipment	Building 600 has been vacant since October 1994.
700	Not Available	1958-1959	Water Storage Tower (250,000-gallon) that supported facility water supply system. Water tower was partially by-passed when upgrades were made to the Bellmore Maintenance Facility water distribution system in 1987.	Demolished in 1991. Chipping and flaking LBP used on water tower caused lead contamination of soil. The metal tower was disposed of as a hazardous waste (Tate 1994; SCE 1995).
900	Concrete flooring, metal siding	1967	Flammable storage building provided by U.S. Army Maintenance, Fort Totten for use by Reserve units for storage of flammable chemicals and paints used in vehicle maintenance activities.	Presently empty. In 1994, the building was found to contain incompatible flammable, corrosive, and other hazardous liquids in degraded containers, partially on bare soil.

3.4 FACILITY SUPPORT ACTIVITIES

3.4.1 Hazardous Materials/Waste Management

Table 3-2 is a list of hazardous materials and wastes associated with activities conducted at the Bellmore Maintenance Facility.

**Table 3-2
HAZARDOUS MATERIALS/WASTE MANAGEMENT**

BUILDING NUMBER	HAZARDOUS MATERIALS/WASTE MANAGEMENT
100	Records indicate past operation of several paint booths, a hydraulic lift, an in-ground oil reservoir, an acid crock and drain, battery charging/storage rooms, a photographic dark room, and an arms storage area. In addition, the facility has accommodated maintenance operations for light and heavy motor vehicles; electronics equipment; ordnance, including (conventional) missile systems; and repair of small arms. Wastes generated included flammable liquids (naphtha solvents, aliphatic hydrocarbons, mineral spirits, titanium dioxide) and heavy metals in effluents from photographic dark rooms. The facility has numerous floor drains that discharge to oil/water separators and/or to dry wells located along the outside perimeter of the building.
200	This location functioned mostly as an administrative area and contained only small quantities of janitorial cleaning and offices supplies. The east wing of the building may have been used to store dental and/or medical equipment in an X-ray room and medical supply room. No records were available on the storage or handling of sealed radiological sources during X-ray equipment repair or maintenance.
300	This location functioned mostly as an administrative area and contained only small quantities of janitorial cleaning and office supplies. However, U.S. Army Reserve units used the basement storage area(s) for storage of equipment, including PCB-containing transformers and switch boxes.
600	This location was used for storage of military vehicles and miscellaneous U.S. Army equipment. No records were found to provide information on the types of materials stored here during the early use of the building as a general purpose warehouse.
900	This location was used to store incompatible materials, including flammable and corrosive liquids and other hazardous substances.

3.4.2 Solid Waste/Landfill Management

Based on currently available environmental investigation reports and other records, no solid waste disposal site or landfill exists at the Bellmore Maintenance Facility. However, one area within the installation (near UST Sites E100C and E100D) was found to contain a significant amount of construction debris. This disposal area was encountered during a subsurface soil sampling program conducted in March 1995. The apparent construction debris is buried beneath an approximately 20-inch asphalt/stone/concrete slab surface. The construction debris could not be penetrated with a jackhammer, and no soil samples were collected (SCE 1995). No documentation was found during the records search to indicate the types of material or the date of disposal in this area. It is assumed

that the materials are construction debris from the period 1957 through 1959 when Buildings 100 and 200 were built. The concrete and asphalt slab was installed over one of two large USTs (Site E100C), dating from about 1957, that supplied heating oil to the two boilers located in Building 100.

3.4.3 Underground and Aboveground Storage Tanks

A number of active and inactive USTs and ASTs have been identified at the Bellmore Maintenance Facility. Table 3-3 lists specific locations, type of tank, contents, capacity and construction, and status and registration of USTs and ASTs.

**Table 3-3
UNDERGROUND STORAGE TANKS AND
ABOVEGROUND STORAGE TANKS**

TANK LOCATION (SEE FIGURE 5-1)	NASSAU COUNTY IDENTIFICATION NUMBER	TYPE	DATE INSTALLED AND STATUS	CONTENTS	CAPACITY (GALLONS) AND CONSTRUCTION	COMMENTS
Building 200, N200W(1)	None	AST	Unknown - Active	Unknown	275 - steel/carbon steel (1-wall)	This tank currently is used as part of Building 200's natural gas heating system (CH2M Hill 1994b).
Building 200, N200W(2)	None	AST	Unknown - Inactive	No. 2 fuel oil	275 - steel/carbon steel (1-wall)	Used for fuel oil storage
Building 300, N300W	None	AST	Unknown - Removed	No. 2 fuel oil	Unknown - concrete-encased	This storage tank is reported to have been completely encased in concrete and partly recessed in the basement of Building 300. This tank has been removed.
Building 300, N300F(1)	#302	AST	1984 - Active	No. 2 fuel oil	275 - steel/carbon steel (1-wall)	Used for fuel oil storage
Building 300, N300F(2)	#303	AST	1984 - Active	No. 2 fuel oil	275 - steel/carbon steel (1-wall)	Used for fuel oil storage
Outside Building 300, NW300A	None	UST	Unknown - 1950s	Oil, type unknown	Unknown	A 1956 correspondence indicated the presence of an underground oil tank. However, no further documentation has been found.

**Table 3-3
(Continued)**

TANK LOCATION (SEE FIGURE 5-1)	NASSAU COUNTY IDENTIFICATION NUMBER	TYPE	DATE INSTALLED AND STATUS	CONTENTS	CAPACITY (GALLONS) AND CONSTRUCTION	COMMENTS
Building 100, S100B	None	UST	1957 - Inactive	Hydraulic oil	Concrete in floor	The oil reservoir for the hydraulic lift is a concrete-lined pool

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						recessed in the floor of Building 100. A drain inside the tank leads to the oil/water separator and the dry well located outside Building 100 on the west side.
Building 100, W100E	#105	AST	1990 - Removed 1995	Waste oil (hazardous materials)	400 - steel/carbon steel (1-wall)	Used to store waste oil generated from Building 100 operations
Building 100, W100F	#106	AST	1990 Removed 1995	Waste antifreeze	440 - steel/carbon steel (1-wall)	Used to store waste antifreeze generated from Building 100 operations
Building 100, E100C	None	UST	1957 - Closed in place (sand)	No. 2 fuel oil	10,000 - steel/ carbon steel (1-wall)	Used for fuel oil storage
Building 100, E100D	#103	UST	1983 - Active	No. 2 fuel oil	25,000 - fiberglass reinforced plastic	Used for fuel oil storage
Building 100, E100E	None	UST	1957 - Closed in place (sand)	No. 2 fuel oil	15,000 - steel/ carbon steel (1-wall)	Used for fuel oil storage
Building 100, E100F	#104	UST	1983 - Active	No. 2 fuel oil	25,000 - fiberglass reinforced plastic (1-wall)	Used for fuel oil storage
Building 100, N100A	#102	UST	1983-Removed 1993	Gasoline/waste oil	1,080 - steel/ carbon steel (1-wall)	This tank was reportedly used to store gasoline initially, and was later used for waste oil generated from U.S. Army Reserve unit vehicle maintenance operations in Building 100. U.S. Army application to Nassau County for a Toxic and Hazardous Materials Storage Facility Permit erroneously lists this tank as having a capacity of 1,500 gallons.
Building 100, W100C	#101	UST	1958 - Removed 1995	Gasoline	2,000 - steel/ carbon steel (1-wall)	Used for gasoline storage
Outside Building 300, S300	#301	UST	1984 - Active	No. 2 fuel oil	1,080 - steel/ carbon steel (1-wall)	Used for fuel oil storage
Building 600, NW600	None	UST	Prior to 1956 - Abandoned	Gasoline	Unknown	Used for gasoline storage

3.4.4 Injection Wells

Review of reasonably obtainable documents and other records does not indicate the present or past use of injection wells at the Bellmore Maintenance Facility.

3.4.5 Drinking Water Management

Before 1956, the U.S. Navy and previous occupants of the Bellmore Maintenance Facility property obtained potable water from at least one well that is known to have existed at the site. The actual

installation of the well may date from the period of U.S. Navy occupation of the facility (early 1940s through 1956) or it may have been installed by previous owners of the property. The well was abandoned and the location of the well site on the property could not be determined from the records review.

When the U.S. Army assumed ownership of the property in 1956, the existing water supply system was deemed inadequate for the expansion of planned facilities and operations at the site. In 1957, a municipal water line was installed by the New York Water Service Company. The original connection from Maple Avenue still exists and this line supplies water to the Bellmore Maintenance Facility.

Shortly after the municipal water connection was made, a 250,000-gallon elevated water tower was installed to provide a reserve water supply and pressure to the on-site water system. The water tower was an integral part of the Bellmore Maintenance Facility water system until 1987, when an additional water supply line was installed that bypassed the water tower and provided a flow loop around Building 100. Declining water needs of the installation led to the removal of the water tower in 1991. Because of the low use of the municipally-supplied water, it is considered non-potable.

3.4.6 Stormwater Management

The Bellmore Maintenance Facility does not have a storm sewer system on site. Roof drains from Buildings 100, 200, and 300 discharge onto the paved and unpaved areas surrounding the buildings. The paved areas are graded so that storm runoff is collected and routed to more than a dozen dry wells located around the installation, ultimately infiltrating and recharging the groundwater (SCE 1995). In addition, several drainage ditches have been constructed to collect stormwater runoff from the paved areas at the Bellmore Maintenance Facility. The facilities that serve as collection points or infiltration points for stormwater are listed in Table 3-4 (Tate 1994).

**Table 3-4
STORMWATER COLLECTION POINTS**

LOCATION ON THE BELLMORE MAINTENANCE FACILITY	DESCRIPTION OF COLLECTION POINT	SITE NUMBER
West of Building 100	Leaching trench	W100B
West of Building 100	Dry well	W100D(1)

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West of Building 100	Dry well	W100G(1)
West of Building 100	Dry well	W100H(1)
West of Building 100	Dry wells (paired)	W100I(1)
North of Building 100	Dry well	N100C
North of Building 100	Dry well	N100D
North of Building 100	Dry well	N100E
North of Building 100	Dry wells (paired)	N100F
East of Building 100	Dry well by wash rack	E100A
East of Building 100	Dry well and drainage ditch	E100B
Northeast of Building 300	Catch basin/dry well	NE300A
South of Building 800 (flagpole)	Dry wells/catch basins (2 aligned)	S800A
South of Building 800 (flagpole)	Dry wells/catch basins (3 aligned)	S800B
South of Building 800 (flagpole)	Drainage ditch	S800C
South of Building 100	Drainage ditch	S100A

3.4.7 Sewage Treatment

The only major structure on site prior to 1956 was Building 300. At that time, the building's sanitary sewage was handled by cesspools located in the open areas west of the building. In the early 1920s, a septic tank and leaching field were constructed in the area north Building 300. When Buildings 100 and 200 were constructed in 1957 and 1958, their sanitary lines were connected to a sewer line that discharged to a newly-installed septic tank with an underground pump chamber located east of Building 100. The underground pump chamber discharged sewage via a forced main to a leaching field that stretched east beneath the open area known as the Main Parade Ground. In the early 1970s, Nassau County extended the municipal sewer system lines to the vicinity of the facility. However, no connection between the Bellmore Maintenance Facility and the county sewer was made at that time. In 1982, new sewer lines were installed on the Bellmore Maintenance Facility property and most of the drainage pipes were connected to the Nassau County sewer system (Tate 1994).

Additionally, numerous dry wells were used for the disposal of operational effluents at the Bellmore Maintenance Facility. Several areas in Building 100 have floor drains that discharged to oil/water separators and ultimately to dry wells surrounding the building. One or more drains in Building 300 discharged to the old 1920s septic tank and leach field.

Facilities or activity areas that are still connected to wastewater discharge points other than the Nassau County municipal sewer system are presented in Table 3-5.

**Table 3-5
FACILITY DISCHARGE LOCATIONS**

FACILITY	TYPE OF DISCHARGE	DISCHARGE LOCATION
Building 100, Army Paint Shop (Site S100B(1), (2) and (3))	Paints, solvents, petroleum products, hydraulic fluid	Oil/water separator and dry wells (Sites W100D(2) and (1))
Building 100, Army Paint Area (Site 100C(1), (2), and (3))	Acid crock, drains, paints, solvents	Oil/water separator and dry well (Sites W100G(2) and (1))
Building 100, Army Electronics Repair Section (Site N100A)	Paints, detergents, solvents, petroleum residues	Oil/water separator and dry wells (paired) (Sites W100I(2) and (2))
Building 100, U.S. Army Reserve Battery Room (Site N100B)	Battery acid, heavy metals	Dry well (Site N100C)
Building 100, U.S. Army Reserve Paint Booth (Site N100G) and Wash Rack (Site N100A(2))	Paints, solvents, electronic battery spills, total petroleum hydrocarbon (TPH)	Dry wells (paired) (Site N100F)
Former Wash Rack/Vehicle Storage Area (Site E100A(1) and (2))	Paints, detergents, solvents, petroleum residues	Dry well (Site E100A(3))
Building 200, Kitchen and Boiler Room Floor Drains	Potential spills of petroleum products/ kitchen effluents	Grease interceptor/manhole (Site NE200); this may be connected to the municipal sewer system
Building 300, Sanitary Drain (under basement stairs) (Site N300C)	PCB-contaminated oil from spill	Catch basin/dry well (Site NE300A)

3.4.8 Electrical Power Generation

Electrical power for the Bellmore Maintenance Facility has been supplied by Nassau County and the Long Island Lighting Company. The Fort Dix Director of Public Works owns and is responsible for maintaining installation fixtures associated with each system. These include water, electrical, gas, sanitary sewer, and storm sewer. Since the installation is vacant, the utilities are currently not being used (U.S. Army Forces Command 1995).

3.4.9 Natural Gas Service

Natural gas service was installed at the Bellmore Maintenance Facility in 1957. Two lines enter the facility: one enters the site across the south property line and serves Building 100, and the other enters the site across the east property line and serves Building 200.

3.4.10 Telephone Service

Telephone service was installed in 1957 via two overhead lines. The lines enter the facility from the south.

3.4.11 Fire Training

The records review found no reference made to fire training operations being conducted at the Bellmore Maintenance Facility.

3.4.12 Medical Activities

Rooms in Building 200 at the Bellmore Maintenance Facility may have been used for dental and/or medical activities and for the storage of medical supplies and equipment (Galston Technical Services, Inc. 1989; Kaselaan and D'Angelo 1994). The two rooms are referred to as X-ray and medical supply rooms. It is not certain if medical activities were actually conducted at the Bellmore Maintenance Facility or if X-ray and medical equipment was serviced in Building 200. The "medical supplies" might have been spare parts or other materials used in repair and maintenance activities.

3.4.13 On-Site Housing

Since the U.S. Army acquired the Bellmore Maintenance Facility property in 1956, the mission of the installation has been limited to vehicle and equipment repair and maintenance support activities. Information obtained during the records review makes no reference to providing on-site housing to military personnel.

3.5 SENSITIVE ENVIRONMENTS

No known archaeological surveys or formal historic buildings inventories have been conducted for the Bellmore Maintenance Facility. Several important archaeological sites are located in the vicinity of the town of Bellmore and on Long Island in general. The sites include archaeological resources related to the Paleo-Indian Period (during and immediately following the last glaciation, until about 9,000 Before Present) and later prehistoric periods. Other sites of importance in the area are related to the contact and early settlement period (1600s to 1857). There are at least four acres of open land

at the Bellmore Maintenance Facility that may have archaeological potential. An archaeological survey has been scheduled for fiscal year 1997 (Fort Hamilton Environmental Division 1995b). The project is identified in the *Cultural and Natural Resources (CNR) Action Plan, Closure of Minor Fort Dix Sites* (U.S. Army Forces Command 1995).

No threatened or endangered species or wetlands are known to exist on the Bellmore Maintenance Facility property. However, a formal survey of threatened and endangered species and wetlands resources will be conducted as part of the above CNR survey (U.S. Army Forces Command 1995).

4.0 INVESTIGATION RESULTS

This section describes the results of the EBS investigation. It discusses:

- Sources of potential contamination that have been addressed in prior reports
- Sources of potential contamination that have not been addressed by previous investigations
- Adjacent properties that may be potential sources of contamination to the installation property
- Areas containing contamination substances not regulated by CERCLA (non-CERCLA)
- Remediation activities that have occurred
- Real property within the installation property that will be retained by the U.S. Army (reserve enclaves)

4.1 PREVIOUSLY IDENTIFIED SOURCES OF POTENTIAL CONTAMINATION

A comprehensive list of potential on-site sources of soil and groundwater contamination at the Bellmore Maintenance Facility was documented in reports from an installation assessment conducted in 1994 and a preliminary site investigation conducted in 1995 (Tate 1994; SCE 1995). Some of these sites had been identified by studies or observations made prior to 1994.

The 1994 installation assessment included an examination of existing environmental investigation reports, as well as an exhaustive search of engineering, design, maintenance, and environmental files dating back to 1956 that were maintained at several U.S. Army installations. The older files were located principally in U.S. Army archives at Forts Hamilton, Totten, and Dix. The *Draft Installation Assessment* report (Tate 1994) identified 36 potential sources of contamination, 35 of them located within the Bellmore Maintenance Facility property limits and one (drainage ditch) located about 20 feet outside of the western property line.

No new sample analyses were done in conjunction with the 1994 assessment, but in 1995, an installation-wide preliminary environmental site investigation was conducted (SCE 1995), which

included limited soil and groundwater sampling at many of the 36 potential contamination sites. The following is a summary of the previously identified sources of potential contamination, some of which have been confirmed as sites of contaminant releases by analyses conducted prior to 1994 or in conjunction with the 1995 environmental investigation.

4.1.1 Leaching Trench (Site W100B)

This is the site of a former leaching trench located on the west side of Building 100. A common practice was to dump used oil, battery acid, and other solvents utilized in vehicle maintenance and painting activities directly into the grassy area at this location (Tate 1994). Analytical results from surficial soil samples collected at the surface of the leaching trench (to a depth of 3 to 6 inches below the surface) did not indicate the presence of contamination in surficial soil (SCE 1995). However, surface soil samples may be inadequate to determine the presence of contamination because the soil porosity, weathering, and time lapse since these contaminants were released may have allowed the contaminants to migrate deeper into the vadose zone.

4.1.2 Oil/Water Separator and Dry Well (Site W100D)

This potential source of contamination is an oil/water separator and dry well connected to drains in Building 100 that service the paint booth (floor drain and sink), the floor drain in the hydraulic lift, and possibly other floor drains in this section of the building. The effluents from these drains flow directly into the oil/water separator and dry well. Analytical results of sampling from the dry well during the 1995 preliminary site investigation indicate that levels of regulated compounds (priority pollutant metals, TPH, and volatile organic compounds [VOCs]) are above regulatory limits (SCE 1995).

4.1.3 Dry Well (Site W100G)

This potential source of contamination is a dry well connected to floor drains in Building 100 that service a paint shop and acid storage area. Results of sampling from this dry well during the 1995 preliminary site investigation indicate levels of regulated compounds (priority pollutant metals, TPH, semi-volatile organic compounds [SVOCs] and VOCs) above regulatory limits (SCE 1995).

4.1.4 Oil/Water Separator and Dry Well (Site W100H)

This potential source of contamination is an oil/water separator and dry well connected to floor drains in the central areas of Building 100. Former operations in this section of Building 100 include a field maintenance shop, storage, and electronic repair. No sampling activities have been documented at this location (Tate 1994).

4.1.5 Oil/Water Separator and Dry Wells (Paired) (Site W100I)

This potential source of contamination is an oil/water separator and dry wells (paired) connected to floor drains in Building 100 that received wastes from a paint shop (Site N100A(1)) and wash rack (Site N100A(2)) located in the U.S. Army Reserve vehicle maintenance area at the north end of the building. No sampling activities have been documented at this location (Tate 1994).

4.1.6 Drainage Ditch (Site S100A)

This source of contamination is a drainage ditch located at the southwest corner of Building 100. This area may have received contaminated runoff from the vehicle parking area adjacent to the ditch and from nearby fueling operations. No sampling activities have been documented at this location (Tate 1994).

4.1.7 Dry Well (Site N100C)

This potential source of contamination is a dry well connected to the floor drains in Building 100. The dry well receives effluents from the battery room, wash rack, and paint booth (Sites N100A(1), N100A(2), and N100B, respectively). In addition, the dry well receives stormwater runoff from the vehicle parking/storage area north of Building 100 (Site N100). This area was used as general purpose storage for flammable and combustible liquids; gasoline, lubricating and hydraulic oils, waste oil, and other petroleum products; paints and paint solvents; and detergents, antifreeze, degreasers, and other solvents used for the maintenance and repair of vehicles and equipment. The area was also used to store military vehicles and equipment in need of repair. Several inspections of the area made between 1992 and 1994 revealed that many of the materials were stored in containers that were in good to very poor condition, including collapsed drums. A visual inspection conducted in 1994 indicated that asphalt and unpaved areas were oil-stained in various locations (SCE 1995).

Surface soil, dry well sludge, and split spoon samples were collected as part of the 1995 site investigation. Analytical results indicate that soil and groundwater were contaminated with TPH and priority pollutant metals at levels exceeding regulatory requirements (SCE 1995).

4.1.8 Dry Wells (Sites N100D and N100E)

These potential sources of contamination are dry wells located on the north side of Building 100. There is no evidence of pipes from Building 100 leading to these wells. However, the dry wells are located within a concrete area that was used for parking military vehicles and other equipment in need of repair. The site is suspected of having received stormwater runoff (Tate 1994).

4.1.9 Waste Oil UST (Site N100A)

This potential source of contamination is the site of a former underground waste oil storage tank. Documentation indicates that contaminated soil was removed, and verification soil samples collected from the tank bed contained no compounds of concern at concentrations above NYSDEC guidance values (TONE 1994).

4.1.10 Dry Well (Site N100F)

This potential source of contamination consists of two dry wells located northwest of Building 100. These dry wells receive effluents from a 6-inch sanitary line from Building 100 and the waste stream from floor drains of a paint booth, dark room, and vehicle maintenance area located in the U.S. Army Reserve portion (north wing) of Building 100 (Site N100G). Dry well sludge and samples were collected at this site. Test results for the samples indicated the presence of TPH and priority pollutant metals contamination at levels exceeding regulatory requirements (SCE 1995).

4.1.11 Former Wash Rack/Vehicle Storage Area (Site E100A)

This potential source of contamination is the site of a wash rack, oil/water separator, and dry well. This area may have received wash rack water effluent and stormwater runoff contaminated with vehicle oil drippings, other petroleum and non-petroleum products, and detergents and solvents from washing activities. When inspected in 1992, 1994, and 1995, this fenced area was being used for secured storage of old military vehicles and vehicle parts, and equipment that was left uncovered on

the deteriorated concrete surface. There is no evidence that soil or groundwater samples were collected and analyzed for contamination at this site (SCE 1995).

4.1.12 Dry Well and Drainage Ditch (Site E100B)

This potential source of contamination is the site of a dry well and drainage ditch. This area has been used for parking old military vehicles and machinery. On past visits there has been evidence of oil stains and spills at the site (Tate 1994). Stormwater runoff from the drainage ditch and surrounding areas collected in the dry well. There is no evidence that soil or groundwater was collected and analyzed for contamination at this site (SCE 1995).

4.1.13 Closed-in-Place UST (Site E100C)

This potential source of contamination is the site of a closed-in-place, 10,000-gallon UST installed in 1957. The tank is located on the northwest side of Building 100. Numerous attempts to conduct sampling activities in this location in 1995 resulted in the discovery of debris and construction materials below the surface. The field crews conducting these activities were unable to sample the site due to the presence of 6 inches or more of asphalt underlain by 6 inches of stone sub-base on top of a 6- to 8-inch concrete slab that rested on assorted construction debris. No documented sampling activities have occurred at this location (SCE 1995).

4.1.14 Closed-in-Place UST (Site E100E)

This potential source of contamination is the site of a closed-in-place, 15,000-gallon UST installed in 1957. The tank is located on the southwest side of Building 100. Results of split spoon sample analyses indicated the presence of TPH but at concentrations that did not exceed the regulatory guidelines (concentrations were less than 55 parts per million [ppm]) (SCE 1995).

4.1.15 Septic Tank, Cesspool, and Drain (Site N300A)

This potential source of contamination is the site of an abandoned septic tank/cesspool and drain. This area has received sanitary and other wastes from Building 300 from the early 1920s until the Bellmore Maintenance Facility was connected to the municipal sewer system in 1982. The 400- to 500-gallon tank drained into the leaching field at Site N100B. A number of floor drains appear to contribute to the waste stream from the basement of Building 300, including drains from the boiler room (Site N300E) and a floor drain located underneath the stairs to the basement (Site N300C).

Sanitary drains from the bathrooms and kitchen also discharge into the septic tank and leaching field (Tate 1994).

The septic system of Building 300 received inflow from basement floor drains. Any spills in the basement storage rooms or boiler rooms would have been captured by the drains and channeled to the septic tank and leaching field. The 1994 preliminary site assessment lists possible contaminants of concern as petroleum hydrocarbons, PCBs, and other unknown hazardous chemicals (SCE 1995).

4.1.16 Leaching Field (Site N300B)

This potential source of contamination is the site of a septic leaching field that is part of the septic system installed in the early 1920s to service Building 300. The leaching field is connected to a 400- to 500-gallon septic tank (Site N300A) still buried on the north side of the building. The leaching field is connected to the septic tank by two 6-inch vitrified tile mains. The field consists of six 4-inch open-joint laterals, three on each side of the mains. The laterals are spaced 6 feet apart, making the total length of the leaching field approximately 30 feet.

The septic system of Building 300 received inflow from basement floor drains. Any spills in the basement storage rooms or boiler rooms would have been captured by the drains and channeled to the septic tank and leaching field. The 1994 preliminary site assessment lists possible contaminants of concern as petroleum hydrocarbons, PCBs, and other unknown hazardous chemicals (SCE 1995).

4.1.17 PCB-Oil Spill Inside Building 300 (Site N300D)

This potential source of contamination is related to a 1986 spill of PCB-containing oil from one of three large transformers or two switch boxes that were being removed from Building 300. One of the pieces of electrical equipment ruptured in the basement of Building 300 and was moved while leaking oil to an area of lawn east of the building. The oil dripped on floor tiles and concrete in the basement and up the stairs of Building 300 (Noble 1986a).

U.S. Army environmental authorities sent oil samples taken from the transformer to a local laboratory to be tested for PCBs. When it was determined that the oils were PCB-contaminated, cleanup operations were initiated. The cleanup included triple-cleaning (with kerosene) the concrete

surface where the oil had spilled inside Building 300. The concrete was later sealed with epoxy, and some of the floor tiles were removed.

Additionally, in 1989, sections of concrete in the basement and stairwell of Building 300 were removed and replaced. A floor drain under the basement stairs was permanently sealed. The area of the spill was noted on design drawings (Tate 1994). This area is currently under discussion by the BRAC Cleanup Team (BCT) for the Bellmore Maintenance Facility. The BCT will decide if additional evaluation is warranted.

4.1.18 Gasoline Distribution Point (Site N300E)

This potential source of contamination is shown on two drawings from 1956 indicating this site as a gasoline fill area. Other maps denote this area as a flagpole. There is no evidence that any attempt has been made to determine if a UST exists at this site. There is no record that soil or groundwater sampling was performed at this site (Tate 1994).

4.1.19 Building 300 Boiler Room #1 (Site N300F)

This potential source of contamination is the site of a boiler room containing two 275-gallon ASTs. Drains in the boiler room floor were reported to lead to the septic tank and leaching field at Sites N300A and N300B. The site also contained a large No. 2 fuel oil storage tank encased in concrete that was recessed into the basement floor (Tate 1994). This storage tank has been removed.

4.1.20 Dry Well/Catch Basin (Site NE300A)

This potential source of contamination is associated with a dry well/catch basin constructed in 1985. This dry well/catch basin apparently received PCB-contaminated oil following the 1986 transformer oil spill incident that occurred in Building 300. A U.S. Army memorandum for record (Noble 1986a) documents that the remediation activities included cleaning out this dry well/catch basin. A sludge sample was collected from the bottom of this dry well as part of the 1995 site investigation. The sample was analyzed for priority pollutant metals, SVOCs, VOCs, and PCBs. Testing results did not indicate the presence of PCBs; however, the sample did show slightly elevated levels of SVOCs and elevated levels of chromium, copper, lead, and zinc (SCE 1995).

4.1.21 PCB-Oil Spill Outside Building 300 (Site NE300B)

This potential source of contamination is related to the 1986 spill of PCB-containing oil previously described (Site N300D, Section 4.1.17).

Leaking equipment was temporarily placed on the ground outside of Building 300 where it continued to leak oil, covering an area 10 feet by 20 feet. The equipment was eventually moved by a forklift to the west side of the facility.

Following laboratory confirmation that the spilled oil contained levels of PCBs exceeding 50 ppm, remediation activities were conducted inside and outside of Building 300. Remediation outside of Building 300 involved the removal of approximately 7 cubic yards of soil. Samples were collected from soils below the excavated material. Analysis of the samples indicated that levels of PCBs detected in the soil were below regulatory requirements (Tate 1994).

4.1.22 Oil Fill/Manhole (Site NW300A)

This potential source of contamination is the site of an oil fill/manhole. Written correspondence from a U.S. Navy Commander to Fort Totten in 1956 stated that the manhole provided direct access to an underground oil tank. No records were found of any tank removal at this site or of any effort to verify the existence of an abandoned UST at this location. In addition, there is no record of soil or groundwater samples collected at this site (Tate 1994).

4.1.23 Cesspools/Manholes (Cluster of 2) (Site W300A)

These potential sources of contamination are shown on 1956 drawings. The 1994 preliminary assessment reported that this cluster of two cesspools/manholes was part of the pre-1920s sanitary system that handled wastes generated from Building 300. The 1956 drawings record no pipes or drains connected to these cesspools/manholes. There is no record of soil or groundwater samples collected at this site (Tate 1994).

4.1.24 Cesspools/Manholes (Cluster of 3) (Site W300B)

These potential sources of contamination are shown on 1956 drawings. The 1994 preliminary assessment reported that this group of three cesspools/manholes was part of the pre-1920s sanitary system that handled wastes generated from Building 300. The 1956 drawings record no pipes or

drains connected to these cesspools/manholes. There is no record of soil or groundwater samples collected at this site (Tate 1994).

4.1.25 Oil Fill/UST (Site S300)

This potential source of contamination is the site of a 1,080-gallon steel/carbon steel single-wall UST that was installed in 1984 to provide No. 2 fuel oil to fire one of the boilers in the building's basement. The UST was still active in 1994 and was registered with Nassau County. No leaks or spills have been reported at this site. There is no record of soil or groundwater samples collected at this site (Tate 1994).

4.1.26 Lead-Contaminated Soil Beneath Water Tower (Building 700)

This potential source of contamination is the site of a former elevated water tower constructed at the northwestern corner of the site in 1958. The water tower was demolished and removed in October 1991 after sampling revealed that the exterior surface of the tower had been painted over the years with LBP. The chipping and flaking paint had fallen onto the surrounding soils. Soil samples analyzed indicated lead levels that exceeded regulatory limits (Tate 1994).

4.1.27 Flammable Materials Storage Building (Building 900)

This potential source of contamination is a prefabricated metal storage building installed in 1967 over a concrete slab located north of Building 100. The building was used for almost twenty years to store flammable and corrosive liquids, lead-based and other paints, paint solvents, and other unknown chemicals. The site assessment conducted in 1994 found that the concrete slab flooring had deteriorated to the point that stored containers were resting on bare soil. In addition, the 1994 *Spill Prevention, Control and Countermeasures Plan* for the Bellmore Maintenance Facility contained materials inventories of hazardous substances and noted that incompatible liquids and other chemicals were stored in the building. The plan also noted that hazardous chemicals and petroleum products were stored behind and around Building 900 in deteriorated drums, cans, and other containers. During preparation of the materials inventories, the contractor found drums and containers stored in a haphazard manner on the concrete pavement behind Building 900, on pallets above the concrete, on pallets above bare ground, and directly on the bare ground.

No records of leaks or spills have been reported at this site, but the storage operations have been ongoing for many years and, based on reports of undisciplined storage practices, the 1994 site assessment concluded that spills and leaks may have occurred at the site in the past (Tate 1994).

Additionally, the exterior paint on Building 900 had been observed to be peeling and flaking onto the surrounding soil for a number of years (Tate 1994). Soil samples taken during the 1995 *Preliminary Environmental Site Investigation* indicated lead concentrations exceeding regulatory limits (SCE 1995).

4.1.28 1957 Septic System Tank and Pump Chamber (Site N800)

This potential source of contamination is the site of an abandoned septic tank and pump chamber that were installed in 1957 as part of the septic system servicing Buildings 100 and 200. This facility received sanitary wastes from the two buildings, as well as effluents from the former photographic darkroom located in the northeastern portion of Building 100 (Site N100H). The analytical results from split spoon samples collected at the groundwater interface downgradient from the tank indicate that a number of priority pollutant metals are present at slightly elevated concentrations (SCE 1995). Based on these analyses, it was reported that higher concentrations could be present beneath the leaching field tiles that remain in the subsurface (SCE 1995).

4.1.29 Dry Wells/Catch Basins (Site S800A)

This potential source of contamination is the site of three dry wells or catch basins located in the open area south of the facility flagpole (known as Building 800). The dry wells/catch basins received stormwater runoff and other effluents from activities that were conducted on the pavement at the east side of Building 100. The paved area was used to store damaged vehicles and equipment, and oil stains were visible over the paved surface. It was noted that the stormwater and effluents carried contaminants from petroleum products and other vehicle fluids and solvents into the three dry well/catch basins. There is no record of surface soil, dry well sludge, or groundwater samples collected at this site (Tate 1994).

4.1.30 Dry Wells (Paired) (Site S800B)

This potential source of contamination is the site of two dry wells constructed in 1985 to replace drainage ditch S800C. There is no record of surface soil, dry well sludge, or groundwater samples collected at this site (Tate 1994).

4.1.31 Drainage Ditch (Site S800C)

This potential source of contamination is a drainage ditch that receives stormwater runoff and effluents from maintenance activities that were conducted on the paved area in front of Building 100. Based on oil stains observed on the concrete and asphalt pavements in the vicinity, stormwater and other runoff could be expected to carry contaminants, including petroleum products and cleaning solvents. There is no record of soil or groundwater samples collected at this site (Tate 1994).

4.1.32 Gas Pump/Distribution Point (Site NW600)

This potential source of contamination is the site of a former gasoline dispensing facility situated outside the northwest side of Building 600. The equipment is shown on 1956 drawings of the Bellmore Maintenance Facility, prior to the U.S. Army assuming possession of the property. The pump and some piping were removed several years ago, but the concrete pad was left in place. There are no records to determine if a UST exists at this site. Furthermore, there is no record of soil or groundwater samples collected at this site (SCE 1995).

4.1.33 Abandoned AST (Site N200)

This potential source of contamination is the site of an abandoned 275-gallon AST located in the west boiler room of Building 200. The tank is one of two that held No. 2 fuel oil and fired a boiler that heated the building. When the building was converted to a natural gas heating system, one of the two tanks was used in some unknown capacity by the new heating system. The other AST was abandoned. The status of the tank is described as inactive. It is unknown if the tank has been emptied (Tate 1994).

4.1.34 Grease Interceptor/Manhole (Site NE200)

This potential source of contamination is the site of a grease interceptor accessed by a manhole on the north side of Building 200. This location may have accepted waste from the drain in the boiler room and possibly the kitchen facility that has existed in the building since approximately 1957. It is not known if the grease interceptor discharges into the municipal sewer system (Tate 1994).

4.1.35 Dry Well (Site SW700)

This potential source of contamination is a dry well located near the site of the water tower (Building 700) that was demolished in 1991. For a number of years, the dry well received wastes generated in Building 100 and stormwater runoff from the area of lead-contaminated soil that existed beneath the water tower. There is no evidence of soil, sludge, or groundwater samples collected at this site.

4.2 POTENTIAL CONTAMINATION AREAS IDENTIFIED DURING THE EBS INVESTIGATION

4.2.1 PCB-Oil Storage Areas in the Basement of Building 300 (Sites N300F(3) and S300F)

In addition to the PCB-oil spilled during transport in Building 300 (discussed in Section 4.1.17), Building 300 was used to store over 200 gallons of PCB-containing oil associated with transformers and other electrical equipment. There is no record of wipe tests or other sampling for residues from spills or leaks in the basement storage areas of Building 300. In addition to PCB-containing electrical equipment, other hazardous or toxic materials may have been stored in these areas.

4.3 SOURCES OF POTENTIAL CONTAMINATION FROM ADJACENT OR SURROUNDING PROPERTY

Adjacent properties to the Bellmore Maintenance Facility that may represent potential sources of contamination are listed below. Only those potential sources that are upgradient within a 0.75-mile distance are listed, because the other sources are small and could have released only limited quantities of contaminants to the local groundwater. One exception, however, is a metal plating plant located near South Farmingdale, approximately 5 miles northeast of the Bellmore Maintenance Facility. The adjacent property sources include only facilities with LUSTs and facilities permitted as RCRA small and large quantity generators.

**Table 4-1
SOURCES OF POTENTIAL CONTAMINATION
FROM ADJACENT PROPERTY**

LOCATION	TYPE	STATUS	DISTANCE
Saw Mill Road Elementary School	LUST	Case closed/cleanup complete	0.28 mile
Ben Art Realty	LUST	Case closed/cleanup complete	0.43 mile
Village Valet Cleaners	RCRA large generator	Active	0.43 mile
Ciminelli Motors	RCRA small generator	Active	0.43 mile
Zee Corporation	RCRA small generator	Active	0.43 mile

**Table 4-1
(Continued)**

LOCATION	TYPE	STATUS	DISTANCE
Saw Mill Road Elementary School	RCRA large generator	Active	0.44 mile
James Auto Body	RCRA small generator	Active	0.45 mile
West side of Bellmore Maintenance Facility property line	Drainage ditch (Site W100A)	Abandoned	20 feet
South Farmingdale Plating Plant	NPL	Under remediation	Less than 5 miles

4.3.1 South Farmingdale Plating Plant

This plant was in operation from the 1940s through the mid-1970s. The metal plating operation disposed untreated industrial wastewater into an infiltration pond. Contamination from priority pollutant metals in the wastewater is responsible for a groundwater plume emanating from the plant. The plant is located northwest of the Bellmore Maintenance Facility, approximately 5 miles upgradient. In 1962, the plume was 4,200 feet long by 1,000 feet wide. Maximum concentrations in samples collected at that time were 14 ppm for chromium and 3.7 ppm for cadmium. Contaminant concentrations of up to 2.1 ppm of chromium were detected in Massapequa Creek at a point about 2/3 mile downgradient from the plant (Perlmutter et al. 1963). The South Farmingdale plating plant is now an NPL site.

There are no groundwater wells (and therefore, no groundwater analytical results) at the Bellmore Maintenance Facility from which to assess the impact on the Bellmore Maintenance Facility from this contamination source.

4.4 NON-CERCLA RELATED ENVIRONMENTAL, HAZARD, AND SAFETY ISSUES

The following sections summarize the results of the records review pertaining to non-CERCLA contamination substances as well as any documented hazard or safety issues.

4.4.1 Asbestos-Containing Material

Two asbestos assessment surveys were conducted at the Bellmore Maintenance Facility (Galson Technical Services, Inc. 1989; Kaselaan and D'Angelo 1994). Buildings 100, 200, and 300 were surveyed on March 22 and 23, 1989. Much of the thermal insulation sampled was found to contain asbestos; in addition, the floor tiles in all three buildings were found to contain non-friable ACM. The following summarizes the results of the first survey:

- ACM in Building 100 consists of floor tiles, domestic hot and cold water line insulation, domestic hot and cold water fitting insulation, steam fitting insulation, and condensate fitting insulation.
- ACM in Building 200 consists of floor tiles, ceiling board, steam fittings insulation, domestic hot and cold fitting insulation, steamline insulation, domestic hot and cold water line insulation, expansion tank insulation, and vibration joint cloth.
- ACM in Building 300 consists of ceiling tile, wall plaster, floor tiles, steam and condensate fitting insulation, steam and condensate line insulation, and domestic hot water line insulation.

The second ACM assessment survey was conducted in 1994 and focused on thermal system insulation (Kaselaan and D'Angelo 1994). Buildings surveyed included Buildings 100, 200, and 300.

Materials surveyed for ACM during the 1994 survey included:

- Pipe and pipe fitting insulation (including elbows, joints, etc.)
- Vibration dampening cloth
- Duct insulation
- Tank insulation
- Boiler insulation
- Breeching/flue insulation

Thermal system insulation with suspected ACM was found in Buildings 100 and 200. No asbestos-containing insulation was found in Building 300. Those areas suspected of containing ACM within Buildings 100 and 200 are listed in Table 4-2. The building, location within the specific building, and the type and quantity of suspected ACM are included. In addition, notes of other suspected ACM other than the thermal system insulation (floor tile, transite board, etc.) are also provided (Kaselaan and D'Angelo 1994).

**Table 4-2
SUSPECTED ACM WITHIN BUILDINGS 100 AND 200**

BUILDING NUMBER	LOCATION	TYPE/QUANTITY OF SUSPECTED ACM
Building 100	Civilian Area	Approximately 20 linear feet (LF) of asbestos-containing pipe insulation located behind the water fountain.
	449th Motor Shop	240 LF < 6" outer diameter (OD) pipe insulation. Note: 1,200 square feet (SF) 1' x 1' black floor tile.
	449th Field Storage Area	200 LF of < 6" OD pipe insulation and 15 fittings, 4 fittings > 10" OD.
	Tech Storage	2 fittings >10" OD. Approximately 300 LF <6" OD pipe insulation throughout and approximately 30 fittings. Note: Approximately 1,500 SF of 9" x 9" green VFT and approximately 1,000 SF of 1' x 1' black VFT was also found in this area.
	Mess Hall	155 LF of <6" OD pipe insulation and 16 fittings found in cafeteria area. Note: Approximately 20' ceilings (materials found above suspended ceiling).
	Arms Room	200 SF of 9" x 9" green VFT
	Kitchen Area	5 fittings
	Rear East Office	115 LF of <6" OD pipe insulation and 10 fittings found above suspended ceiling. Note: Approximately 500 SF of 1' x 1' black VFT.

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	449 Main Office South-Southeast Corner	Toilet, 5 LF of pipe insulation. Rear Office, 60 LF of pipe insulation. Note: Approximately 700 SF of 1' x 1' black VFT.
Building 200	Supply Closet	24 LF <6" OD pipe insulation and 3 fittings. Note: 180 SF of transite panels found.
	Ladies Room	26 LF <6" OD pipe insulation. Note: 1' x 1' beige VFT and 689 SF of transite panels.
	Men's Room	15 LF <10" OD pipe insulation. Note: 48 SF 1' x 1' beige VFT and 48 SF of transite panels.

**Table 4-2
(Continued)**

BUILDING NUMBER	LOCATION	TYPE/QUANTITY OF SUSPECTED ACM
	Vestibule	No suspected ACM materials found; however, approximately 180 SF of transite panels found.
	Boiler Room	55 LF <6" OD pipe insulation, 168 SF of tank insulation, 64 fittings.
	Pit	15 LF <6" OD pipe insulation. Note: 220 SF of transite panel.
	PP&C Section	40 LF <6" OD pipe insulation and 18 fittings. Note: 350 SF of transite board along perimeter walls and behind radiators, 480 SF 9" x 9" blue/green VFT, 604 SF 9" x 9" black VFT.
	Keypunch Room	75 LF <6" OD L/P and 60 fittings; 4 SF of vibration dampening cloth. Note: Approximately 350 SF of transite panel and 830 SF 9" x 9" VFT.
	Shop Supply Office	58 LF <6" OD pipe insulation and 40 fittings. Note: 1' x 1' beige VFT 689 SF, 1,100 transite panels around perimeter walls.
	Break Room	Approximately 11 fittings. Note: 525 SF 9" x 9" green VFT.
	Mail Room	26 LF pipe insulation <6" OD and 13 fittings. Note: 250 SF of 1' x 1' green VFT.
	Corridor Outside of Mail Room	4 fittings
	Corridor	95 LF pipe insulation
	Conference Room	25 LF <6" OD pipe insulation and 3 fittings. Note: 790 SF of 9" x 9" VFT.
	Rear Lobby	30 LF <6" OD pipe insulation and 8 fittings. Note: Approximately 300 SF 9" x 9" blue/black VFT.
	Shower Room	65 LF <6" OD pipe insulation, 40 LF <10" OD pipe insulation. Note: Approximately 260 SF of transite panel.
	Ladies Room	85 LF <6" OD pipe insulation. Note: Approximately 144 SF 1' x 1' beige VFT.
	Restroom Easement	6 LF <6" OD pipe insulation. Note: 18 SF 1' x 1' beige VFT.
Building 200 (300th Med.)	X-Ray Room	45 LF <6" OD pipe insulation. Note: Approximately 60 SF 9" x 9" green VFT.

Det.)		
	Boiler Room	75 LF <6" OD pipe insulation and 20 fittings; 90 SF tank insulation.
	Ladies Room	45 LF <6" pipe insulation. Note: 144 SF transite panel.
	Commander's Office	5 LF <6" OD pipe insulation. Note: 384 SF 9" x 9" blue/black VFT.

Table 4-2
(Continued)

BUILDING NUMBER	LOCATION	TYPE/QUANTITY OF SUSPECTED ACM
	Supply Room	65 LF <6" OD pipe insulation and 1 fitting. Note: 256 SF blue/black VFT.
	Supply Office	42 LF <6" OD pipe insulation and 6 fittings. Note: 308 SF 9" x 9" blue/black VFT, 135 SF transite board.
	Training Office	5 LF <6" OD pipe insulation. Note: 156 SF 9" x 9" VFT and 12 SF of transite board.
	Medical Supply	16 LF <6" OD pipe insulation and 1 fitting.

Because no insulation with ACM was found in Building 300, the thermal system insulation ACM must have been removed from Building 300 sometime between 1989 and 1994. However, no documentation was obtained indicating the date of abatement activities or the quantity of ACM removed.

4.4.2 Lead-Based Paint

No LBP survey has been conducted at the Bellmore Maintenance Facility; however, LBP is likely to have been used in all of the buildings at the Bellmore Maintenance Facility because they were all constructed prior to 1978. Maintenance records indicate that LBP was used on Building 100. Soil samples and analyses performed on samples collected in the vicinity of the old water tower (Building 700) and Building 900 confirmed the presence of lead in soil as a result of LBP use.

4.4.3 Polychlorinated Biphenyls

No transformers currently located on the Bellmore Maintenance Facility property contain oils with PCB concentrations in excess of 50 ppm. As part of a 1992 initiative to remove all PCB-containing electrical equipment from the Bellmore Maintenance Facility, the 17 transformers at the facility were analyzed for PCB content. The sample results indicated that 8 of the 17 transformers contained oils with PCB concentrations exceeding 50 ppm. The PCB concentrations ranged from 64.7 to 534 ppm. The eight PCB-containing transformers were removed and replaced by LCW Pole Line

Construction. Seven of the eight transformers had PCB levels of less than 500 ppm and were issued certificates of destruction to that effect. One transformer had a PCB level of greater than 500 ppm and was destroyed separately. All eight certificates of destruction were available for review. All remaining transformers at the Bellmore Maintenance Facility have been determined to have PCB concentrations below 50 ppm.

4.4.4 Radon

A limited number of localities in the U.S. Army portion of the Bellmore Maintenance Facility were randomly selected for radon testing. The testing was conducted by installation personnel between July 6, 1993 and April 14, 1994. Analytical results reveal that no radon values in the areas tested (limited to portions of Buildings 100, 200, and 300) exceeded 4 picocuries per liter (pCi/L) (Koutroubis and Rhee 1995).

4.4.5 Radionuclides

The U.S. Army Reserve 300 Medical Detachment (Dental), a U.S. Army tenant at the Bellmore Maintenance Facility until approximately 1993, may have used the facility for repair and maintenance of medical and dental equipment. Dental equipment and medical supplies may have been stored in at least two rooms located in the east wing of Building 200. Two rooms are listed as an X-ray room and a medical supply room. It is not known if radiological sources were used in medical and/or dental X-ray machine(s) handled or stored at the Bellmore Maintenance Facility.

4.4.6 Unexploded Ordnance

The Bellmore Maintenance Facility provided repair and maintenance support to missile systems and armament (small guns and artillery). The repairs, however, were mostly mechanical or electronic in nature. No records were found to indicate whether explosive materials were or were not removed before missile components or armament was transported to the Bellmore Maintenance Facility. Records were found that indicate the U.S. Army units that utilized the Bellmore Maintenance Facility stored arms in the warehouse areas of Building 100; however, all stored materials have been removed.

4.4.7 Pesticide Usage

The use of pesticides, herbicides, and fungicides by the Bellmore Maintenance Facility personnel was limited to roach strips and mouse traps (Foster Wheeler Enviresponse 1993). The pesticide, herbicide, and fungicide program was managed by Fort Hamilton but carried out by personnel stationed at Fort Wadsworth, another Fort Hamilton sub-installation. No related chemicals were stored at the Bellmore Maintenance Facility (Rhee 1995).

4.5 REMEDIATION EFFORTS

During the records review, a number of yearly updates to management reports were surveyed to gain an understanding of the previously identified environmental concerns at the Bellmore Maintenance Facility and the actions planned to remediate those concerns.

Because many of the remediation projects have changed project numbers over the past years, the following table was prepared to assist in cross-referencing project numbers.

**Table 4-3
BELLMORE MAINTENANCE FACILITY INSTALLATION
RESTORATION PROGRAM
CROSS-REFERENCE OF PROJECT NUMBERS**

REMEDICATION	PROJECT NUMBERS		
	1995 INSTALLATION ACTION PLAN	DEFENSE ENVIRONMENTAL RESTORATION TRACKING SYSTEM	REQUIREMENTS CONTROL SYMBOL 1383
PROJECT DESCRIPTION			
Waste Oil Accumulation Tank (Site W100E)	BELL-00001	Site 01	Unknown
Septic Leach Field (Sites N300B and N800) (Abandoned)	BELL-00002	Site 02	BELL96S008
Remove and Remediate Wash Rack (Site E100A)	BELL-00003	Site 03	BELL96S007
Former PCB Spill (Sites N300A and NE300B)	BELL-00004	Site 04	None
Survey and Remove PCB Transformers	Unknown	None	None
USTs (3 tanks at Building 100) (Sites E100C, E100E, and Unknown)	BELL-00005	Site 05	BELL96S005
Gasoline UST (Site W100C)	BELL-00006	Site 06	HAM091S001

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at Building 100			
Waste Oil UST (Site N100A)	BELL-00007	Site 07	None

**Table 4-3
(Continued)**

REMEDIATION	PROJECT NUMBERS		
PROJECT DESCRIPTION	1995 INSTALLATION ACTION PLAN	DEFENSE ENVIRONMENTAL RESTORATION TRACKING SYSTEM	REQUIREMENTS CONTROL SYMBOL 1383
Water Tower Area (Building 700)	BELL-00011	Site 11	None
Oil/Water Separators (Sites W100D, E100A, W100H, and W100I)	BELL-00014	Site 14	BELL96S010
LBP Abatement	None	Site 12	BELL96S012
Asbestos Survey/Abatement	None	Site 13	BELL96S013
UXO Archive Search/Survey/Removal	None	None	BELL96S014
Radiological Survey and Closeout	None	None	BELL96S015
Remediate Dry Wells (Sites SW700, N100C, N100D, N100E, and N100F)	None	Site 18	BELL96S018
Remediation of Soil by Building 900	None	Site 17	BELL96S017

OTHER IRP PROJECTS	PROJECT NUMBERS		
PROJECT DESCRIPTION	1995 INSTALLATION ACTION PLAN	DEFENSE ENVIRONMENTAL RESTORATION TRACKING SYSTEM	REQUIREMENTS CONTROL SYMBOL 1383
Installation Restoration Advisory Board	None	None	BELL96S001
Installation Wide Remedial Investigation/Feasibility Study	None	None	BELL96S002
Environmental Baseline Survey	None	None	BELL96S011
National Environmental Policy Act Documentation Preparation	None	None	BCLR95S001
Cultural Resources Survey	None	None	BCLR95S002

4.5.1 Past Remediation Efforts

Records were reviewed to identify past remediation efforts at the Bellmore Maintenance Facility. Available documentation was supplemented by information obtained from interviews to provide a full description of the Bellmore Maintenance Facility remediation efforts that were completed as of December 1995. The remedial activities are described in the following sections.

- **BELL-00001: Waste Oil AST, Site W100E**

This project included the removal of an AST that contained waste oil and the remediation of any spills or leaks onto the underlying concrete or nearby soil. The site is designated W100E, located in the southwest corner of the installation behind Building 100. The tank was a 400-gallon AST of single-walled, steel/carbon steel construction that was installed over a concrete slab in 1990. It was used to store waste oil from U.S. Army vehicle maintenance activities conducted inside Building 100. The oil was shown to be a hazardous waste by analysis.

- **BELL-00004: Final Remediation of 1986 PCB Spill**

This project is associated with the final remedial actions required for the 1986 PCB spill described in Sections 4.1.17 and 4.1.21. The Defense Site Environmental Restoration Tracking System (DSERTS) reports included as Attachment 2 to the March 1995 *Installation Action Plan* indicate that this action is complete. Remedial actions taken immediately after the spill involved the cleanup of PCB contamination on the basement floor, landing, and stairs of Building 300. The cleanup included triple-washing (with kerosene) of the concrete surface where the oil had spilled inside Building 300. The concrete was later sealed with epoxy, and some of the floor tiles were removed.

Outside the building, approximately 7 cubic yards of contaminated soil were removed from a 10-foot by 20-foot area (Site NE300B). Additionally, sludge from the bottom of a dry well (Site N300A) was removed. Results from soil samples collected from below the excavated materials indicated that PCB levels were below regulatory requirements.

In 1989, it was determined that additional remediation was warranted. Sections of concrete in the basement and stairwell were removed and replaced. A floor drain under the basement stairs was permanently sealed. There is no record of additional testing for PCB contamination

conducted prior or subsequent to the 1989 actions. The area of the spill was noted on design drawings and entered into official property records to ensure that any future owners are advised that the contaminated concrete slab must be handled as hazardous waste at the time the building is demolished.

- **BELL-00006: Gasoline UST, Site W100C**

This project was completed in December 1995. It involved the removal of a 2,000-gallon steel/carbon steel single-walled UST that supplied gasoline for the gas pump located in the southwest corner of the Bellmore Maintenance Facility property. The tank was installed in 1958 and had served as the principal gasoline distribution point for U.S. Army activities for over 35 years.

The UST was removed by D&K Construction Company in June 1995. When removed, the tank contained about 50 gallons of water. The D&K letter report on the removal (D&K Construction 1995) stated that there was no soil staining or discoloration in the excavation. No soil was removed from the tank bed. Soil samples taken from the tank bed after removal of the tank indicated that no contamination was present.

- **BELL-00007: Removal of Waste Oil UST, Site N100A**

This project was completed in 1994. It involved removal of a UST that was once used to store gasoline but most recently had been used to store waste oil. The tank was located at Site N100A in the northwest corner of the property near the site of the former water tower. The 1,080-gallon tank of single-walled, steel/carbon steel construction was installed in 1983. The waste oil stored in the tank was generated by vehicle maintenance activities of U.S. Army Reserve units who occupied the north end of Building 100. The waste oil was not designated a hazardous waste.

The tank and one truckload of contaminated soil was removed and disposed of (TONE 1994). A representative of NYSDEC supervised the removal. Analytical results from six soil samples collected during the tank removal are also documented. Analyses of the samples indicated that no compounds of concern were present above NYSDEC guidance values.

- **BELL-00011: Removal of Elevated Water Tower, Building 700**

This project involved removal of a water tower identified as Building 700, located in the northwest corner of the installation. The 250,000-gallon elevated water tower was constructed on the Bellmore Maintenance Facility property in 1957. Chipping and peeling paint had fallen from the water tower for an unknown period of time until the early 1990s. Suspected contamination was confirmed by soil analyses reported in a 1994 investigation (Tate 1994). A pre-abatement sampling and inspection survey was conducted in 1991 by Environmental Management Systems, Inc. (Environmental Management Systems 1992). Soil samples taken beneath and downwind of the water tower (on and off site) were analyzed for lead. The survey confirmed a high lead content in the underlying soil, with lead concentrations ranging from 50 to 4,450 milligrams per kilogram (mg/kg).

The tower was demolished and disposed of and the contaminated soil beneath the tower was excavated and disposed of as hazardous waste. Approximately 145 cubic yards of soil were removed from the ground surface beneath the tower. Remediation verification sampling results, which used toxicity characteristic leaching procedure (TCLP) analyses for lead, indicate lead levels in the remaining soil to range between 103 to 671 ug/l (in the leachate). These levels are below action limits; however, the actual lead content in the remaining soil is unknown.

- **Removal of PCB-Containing Transformers**

As part of a 1992 initiative to remove all PCB-containing electrical equipment from the Bellmore Maintenance Facility, the 17 transformers at the facility were analyzed for PCB content. The sample results indicated that 8 of the 17 transformers contained oils with concentrations of PCB exceeding 50 ppm. The PCB concentrations in the eight transformers ranged from 64.7 to 534 ppm. The eight PCB-containing transformers were removed and replaced by LCW Pole Line Construction. Seven of the eight transformers had PCB levels of less than 500 ppm and were issued certificates of destruction to that effect. One transformer had a PCB level greater than 500 ppm and was destroyed separately. All eight certificates of destruction were available for the records review. All remaining transformers at the Bellmore Maintenance Facility have been determined to have PCB concentrations below 50 ppm.

4.5.2 Ongoing Remediation Efforts

There are no ongoing remedial actions at the Bellmore Maintenance Facility.

4.5.3 Planned Remediation Efforts

The active remediation projects at the Bellmore Maintenance Facility include more than a dozen of the sites listed as potential sources of contaminants in Section 4.1 of this report. Each project and the potential sources of contamination that will be remediated are described in the following sections.

- **BELL-00002 (BELL965008): Septic Leach Field**

This project includes the evaluation (and removal and remediation, if necessary) of a series of dry wells and vertical leach fields associated with the septic leach fields (Sites N300B and N800). These leaching fields were designed to receive stormwater runoff; however, they have received hazardous and POL wastes from several spills. The contaminants of concern include PCBs, POL, and solvents, and the media of concern are soil and groundwater. Four soil borings are planned to be drilled and one downgradient monitoring well is planned to be installed to evaluate the leach field area further.

- **BELL-00003 (BELL96S007): Remediate Former Wash Rack/Vehicle Storage Area, Site E100A**

This project included the removal and remediation of the former wash rack/vehicle storage area at Site E100A. The site includes three components installed in 1976: (1) a vehicle wash rack, (2) an oil/water separator, and (3) a dry well that handled the effluents from vehicle washing operations. All are located together at the northeast end of the Bellmore Maintenance Facility.

- **BELL-00005 (BELL96S005): Soil Sampling and Evaluation Associated with Three USTs (Sites E100C, E100E, and NW600)**

This project includes the sampling and evaluation of soils associated with three USTs and the potential remediation of soil and groundwater contamination, if necessary. The tanks are located at Sites E100C and E100E, on the east side of Building 100, and Site NW600, on the northwest corner of Building 600. UST E100C and UST E100E (a 10,000-gallon tank and a 15,000-gallon tank, respectively) are of single-walled, steel/carbon steel construction and stored No. 2 fuel oil that fired large boilers inside Building 100. Each tank is enclosed in a concrete vault. The tanks were installed in 1957. New tanks were installed approximately 20 feet east of the old tanks in

1983. At that time, the old tanks and concrete vaults were emptied of fuel oil and filled with sand excavated during installation of the replacement tanks. There is no record that tests for soil or groundwater contamination were performed at that time. A split spoon soil sample taken in 1995 at the soil groundwater interface at a location approximately 15 feet downgradient from Site E100E showed slightly elevated levels of TPH.

No documentation was found to indicate the size of UST NW600. This tank was installed prior to 1956 and was used to store gasoline. Documentation indicates that this UST has been abandoned, but no additional information was found.

- **BELL-00014 (BELL 96S010): Remove and Remediate Oil/Water Separators, Sites W100D, W100H, and W100I**

This project consists of remediation at three oil/water separator sites listed as potential contamination sources in Section 4.1. The sites are located on the west side of Building 100 in an area used to store and dispense gasoline, and store other petroleum products, hazardous wastes, antifreeze, and chemicals. The area is also used for parking military vehicles and other equipment in need of repair.

These oil/water separators receive stormwater runoff and effluents from floor and sink drains in Building 100. The floor and sink drains flow principally from the vehicle maintenance area where vehicle painting, repair, battery charging, equipment repair, and other activities occurred.

- **BELL96S015: Radiological Survey and Closeout**

A memorandum issued by the U.S. Army Center for Health Promotion and Preventive Medicine (Provisional) (USACHPPM), dated August 7, 1995, reported on the evaluation of the need for surveys of potential radiological releases at U.S. Army facilities scheduled for closure under BRAC 95. The USACHPPM memorandum listed facilities that were exempt from conducting radiological surveys as part of the EBS process. The list of exempted facilities included the Bellmore Maintenance Facility. However, an interview with installation personnel indicated that a radiological survey will be conducted at the Bellmore Maintenance Facility.

- **BELL96S012: Lead-Based Paint Abatement**

LBP is known to have been used on Building 100. Soil sample analyses performed on samples collected in the vicinity of the water tower (Building 700) and Building 900 confirmed the presence of lead in the soil as a result of LBP use.

This project provides resources for surveys and analysis of the lead content of paints in all major structures at the Bellmore Maintenance Facility. Abatement will include removal of chipping or flaking paint, or other techniques as appropriate to limit human exposure to the lead hazards of the paint.

- **BELL96S013: Asbestos Survey and Abatement**

This project is a continuation of an effort begun in 1989 to identify all potential sources of human exposure to ACM in Buildings 100, 200, and 300. The ACM in thermal pipe insulation within Building 300 was removed under a previous abatement program. The focus of this project is residual ACM that is still found in Buildings 100, 200, and possibly 300.

- **BELL96S014: Unexploded Ordnance Archive Search, Survey, and Removal**

The Bellmore Maintenance Facility provided mechanical and electrical repair and maintenance support to missile systems and armament. All stored materials have been removed. The probability of explosives having been inadvertently misplaced or buried on site is minimal compared to installations where ordnance testing or operational training is done. However, U.S. Army policy requires that each BRAC property be surveyed for UXO prior to transfer or lease. This archive search, survey, and removal project will address that requirement.

- **BELL96S018: Evaluate Dry Wells/Vertical Leaching Field**

This project includes the evaluation (and removal and remediation, if necessary) of a series of dry wells and vertical leaching fields located on the north and west side of Building 100 that were designed to collect stormwater and effluents from sink and floor drains in the north wing of Building 100. The runoff and effluents that were collected in the dry wells and leaching fields have been infiltrating into the soil at these sites for nearly 30 years of Bellmore Maintenance Facility operations. These leaching fields received effluents from several recorded spills, as well as contaminants from nearby paved areas where the U.S. Army Reserve Maintenance Shop stored military vehicles and greasy equipment in need of repair. A 1995 *Preliminary*

Environmental Site Investigation (SCE 1995) documented slightly to moderately elevated levels of TPH, priority pollutant metals, SVOCs, and VOCs in several of the wells.

4.6 RESERVE ENCLAVES

The BRAC 95 recommendations include disposal of the entire Bellmore Maintenance Facility property. No part of the property is to be retained as an enclave.

5.0 ENVIRONMENTAL CONDITION OF THE PROPERTY AREA

This section presents the parcelization of the BRAC property in accordance with the criteria described in the CERFA guidance and the DOD *BCP Guidebook* (DOD 1993).

5.1 PARCEL DESIGNATIONS

Based on a review of installation documents; federal, state, and local records; and a site visit including employee interviews and visual inspections of the installation property and adjacent properties, Woodward-Clyde divided the Bellmore Maintenance Facility into BRAC parcels that represent the environmental condition of the property area. The BRAC parcels and corresponding categorizations are identified in Table 5-1a and on the CERFA map, Figure 5-1. Areas containing non-CERCLA contamination substances are identified and delineated separately as qualified parcels in Table 5-1b and Figure 5-1. Qualified parcels overlay all environmental condition of the property categories (Categories 1 through 7). Parcels are labeled as described in Section 1.3. A one-acre grid coordinate system is overlaid on the CERFA map to facilitate the parcelization discussion by geographically locating the various parcels.

Parcel boundaries are drawn using the best available information on the extent of contamination and do not follow map grids lines. Small point sources of contamination or storage, such as USTs, are delineated by circular 0.25-acre parcels centered on the source, as stipulated in DOD guidance. For consistency and to facilitate the summation of acreages, parcel acreages were calculated to two decimal places using the digitized map (Figure 5-1) and AutoCad Release 12. This method is not meant to imply an accuracy to one one-hundredth of an acre.

5.1.1 Category 1 Parcels

Based on the environmental information available for the Bellmore Maintenance Facility, no areas within the installation meet the criteria of Category 1 parcels.

5.1.2 Category 2 Parcels

Three parcels were identified as Category 2 parcels. This section describes the Category 2 parcels and their location on Figure 5-1.

BRAC Parcel Number and Label 11(2)PS

CERFA Map Location 5,3

This parcel is associated with an active 25,000-gallon UST (Site E100D) located near Building 100, the maintenance shop. There has been no documented release associated with this UST and, therefore, this parcel has been designated as Category 2.

BRAC Parcel Number and Label 17(2)PS

CERFA Map Location 3,2

This parcel is associated with two petroleum USTs (Site S300 [1,080-gallon] and Site NW300A [capacity unknown]) and a possible gasoline distribution point (Site N300E), located near Building 300. There has been no documented release associated with the USTs.

The gasoline distribution point is shown on two drawings from 1956; however, other recent maps denote this feature as a flagpole. This feature has been included in the parcel because of the potential for a UST to be present, currently or in the past, at this location.

This parcel also contains three cesspools/manholes (Site W300B) that were part of the pre-1920s sanitary system. However, there is no evidence that hazardous substances or petroleum disposal was associated with this system.

This parcel has been designated as Category 2.

BRAC Parcel Number and Label 20(2)PS**CERFA Map Location 2,3**

This parcel is associated with an active 25,000-gallon fuel oil UST (Site E100F) located adjacent to Building 100, the maintenance shop. There has been no documented releases associated with the UST and, therefore, this parcel has been designated as Category 2.

5.1.3 Category 3 Parcels

Two parcels were identified as Category 3 parcels. This section describes the Category 3 parcels and their location on Figure 5-1.

BRAC Parcel Number and Label 10(3)PS/PR(P)**CERFA Map Location 5,3**

This parcel is associated with a closed-in-place, 10,000-gallon fuel oil UST (Site E100C) that was installed in 1957. There has been no documented release associated with this UST; however, no environmental samples have been collected in this area. Attempts to conduct sampling were abandoned because construction debris and a concrete/asphalt slab were encountered, and samples could not be collected. However, because this UST was installed at the same time as UST Site E100E (15,000-gallon), it is probable that the same environmental condition of the property would be encountered at Site E100C as found at Site E100E (see Parcel Number and Label 21(3)PS/PR). Therefore, this parcel has been designated as Category 3.

BRAC Parcel Number and Label 21(3)PS/PR**CERFA Map Location 2,3**

This parcel is associated with a closed-in-place, 15,000-gallon fuel oil UST (Site E100E) located near Building 100, the maintenance shop. Results from soil samples collected in the area of E100E indicated the presence of TPH but at concentrations that were below the regulatory requirements. Therefore, this parcel has been designated as Category 3.

5.1.4 Category 4 Parcels

One parcel was identified as a Category 4 parcel. This section describes this parcel and its location on Figure 5-1.

BRAC Parcel Number and Label 13(4)HR**CERFA Map Location 4,2**

This parcel is associated with PCB-contaminated soil (Site NE300B) that resulted from the transformer oil spill that occurred in Building 300. The leaking transformer was temporarily stored at this location outside the building. Approximately 7 cubic yards of contaminated soil were removed and disposed of. Remediation verification sampling results indicated PCB levels were below the regulatory requirements. This parcel has been designated as Category 4.

5.1.5 Category 5 Parcels

One parcel was identified as a Category 5 parcel. This section describes this parcel and its location on Figure 5-1.

BRAC Parcel Number and Label 14(5)HR**CERFA Map Location 4,2**

This parcel is associated with the 1986 PCB spill that occurred in Building 300 (Site N300D). Immediately after the spill occurred, floor tiles were removed and the concrete surface was triple-washed with kerosene and subsequently sealed with epoxy. In 1989, additional sections of concrete were removed and replaced, and a floor drain was permanently sealed. This area is currently under discussion by the BCT for the Bellmore Maintenance Facility. The BCT will decide if additional evaluation is warranted. Because remedial actions have been taken, but it has not been determined if all necessary actions have been taken, this area has been designated as Category 5.

5.1.6 Category 6 Parcels

Three parcels were identified as Category 6 parcels. This section describes the Category 6 parcels and their location on Figure 5-1.

BRAC Parcel Number and Label 1(6)PS/PR/HS/HR**CERFA Map Location 4,4**

This parcel is associated with a leaching trench, several dry wells, a UST, and two ASTs. Records and interviews indicate the leaching trench (Site W100B) was used for the disposal of battery acids,

SECTION FIVE

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waste oil, and other unspecified solvents. Surface soil sampling results obtained during the 1995 Preliminary Site Assessment indicated contaminants at concentrations below the regulatory requirements. However, surface soil samples may not adequately characterize contamination associated with the trench.

Dry wells (Site W100D, Site W100G, Site W100H, and Site W100I [two wells]) are located within this parcel. Oil/water separators are associated with Sites W100D, W100H, and W100I. Site W100D received wastes generated from a paint booth and hydraulic lift. Site W100G received wastes generated or spilled from a paint shop and acid storage area. Analytical results for samples collected from dry wells W100D and W100G indicated the presence of priority pollutant metals, TPH, and VOCs at concentrations above the regulatory limits. Site W100H received wastes generated from a maintenance shop, and Site W100I received wastes generated from a paint shop and wash rack. No sampling has been associated with these dry wells.

Additionally, this parcel is the location of a former 2,000-gallon gasoline UST (Site W100C) and two former 440-gallon ASTs (Sites W100E and W100F). W100E was used to store waste oil/hazardous wastes and W100F was used to store waste antifreeze. The tank associated with W100C was removed in 1995, and the closure report indicated no further actions were required. The W100E and W100F tanks have also been removed.

Because of the hazardous and petroleum waste disposal practices associated with the leaching trench and dry wells, and because sampling results indicate the presence of priority metals, TPH, and VOCs at concentrations above the regulatory limits, this parcel has been designated as Category 6.

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BRAC Parcel Number and Label 3(6)/PS/PR/HS/HR

CERFA Map Location 7,3

The parcel is associated with a former UST (Site N100A), a dry well (Site N100C), a drum storage area, and a flammable materials storage building (Building 900). Site N100A was a 1,080-gallon waste oil UST that received wastes generated from the vehicle maintenance activities conducted in Building 100. The tank and one truckload of contaminated soil were removed and disposed of in 1993. Remediation verification sampling results found no contamination above the regulatory limits. Site N100C received wastes generated or spilled in the Battery Room in Building 100. Results from samples collected from dry well Site N100C exhibited elevated levels of TPH and metals. The drum storage area at one time stored over 100 containers ranging from packages up to 55-gallon drums that contained cleaners, motor oil, antifreeze, paint, and degreasers. The condition of the drums and packages was documented as ranging from excellent to very poor, with some drums having collapsed. The flammable storage building (Building 900) at one time contained incompatible flammable and corrosive liquids, paints, solvents, and other unknown chemicals.

Because of the documented hazardous substances and petroleum handling practices associated with this parcel, and because analytical results indicated the presence of contaminants at concentrations that exceed the regulatory limits, this parcel has been designated as Category 6.

BRAC Parcel Number and Label 6(6)PR/HR

CERFA Map Location 6,2

This parcel is associated with dry wells and a vehicle wash rack (Site E100A). A dry well pair, Site N100F, received wastes generated from a paint booth that was classified in 1957 drawings as a hazardous location, class I. Sample results from these dry wells indicated the presence of elevated levels of metals and TPH.

Site E100A includes a vehicle wash rack, an oil/water separator, and a dry well that received wastes generated from the vehicle washing operations. A remedial action is currently planned for Site E100A.

Because of the presence of elevated contaminants, and because a remedial action is planned, this parcel has been designated as Category 6.

5.1.7 Category 7 Parcels

Thirteen parcels were identified as Category 7 parcels. This section describes the Category 7 parcels and their location on Figure 5-1.

BRAC Parcel Number and Label 2(7)PR(P)/HR(P)**CERFA Map Location 7,4**

This parcel is associated with a dry well (Site SW700). Dry well Site SW700 may have received stormwater runoff from potentially contaminated areas. Very little documentation regarding this well was found during the EBS. Because there is very little documented evidence associated with dry well Site SW700, this parcel has been designated as Category 7.

BRAC Parcel Numbers and Labels 4(7)**CERFA Map Location 7,3**

This parcel is adjacent to Parcel 3(6)PS/PR/HS/HR. Though it appears that this parcel is hydrologically upgradient, the groundwater in this area may be affected by contamination associated with Parcel 3(6)PS/PR/HS/HR. Additionally, because there are no groundwater monitoring wells located within the Bellmore Maintenance Facility, there is no way to adequately evaluate the effects of potential unknown upgradient sources on the groundwater quality in this area.

Because of the potential for the groundwater quality in this area to be affected by on-site and/or potential unknown upgradient off-site contaminant sources, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 5(7)PR(P)**CERFA Map Location 6,3**

This parcel is associated with two dry wells, Sites N100D and N100E. The parcel is located within a concrete area used for parking military vehicles and other equipment in need of repair. No evidence of drains from Building 100 leading to these dry wells has been noted. It is suspected that these dry wells were used to receive stormwater runoff.

Because of the likelihood that these dry wells have received petroleum product runoff, additional evaluation is warranted; therefore, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 7(7)PR(P)

CERFA Map Location 5,2

This parcel is associated with a dry well/drainage ditch (Site E100B). In the past, this area has been used for parking old military vehicles and equipment. Previous investigations have documented petroleum spills and staining in this area. Additional evaluation is warranted; therefore, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 8(7)

CERFA Map Location 6,2

This parcel is located adjacent to Parcels 6(6)PR/HR and 7(7)PS/PR. Though it appears that this parcel is hydrologically crossgradient, the groundwater in this area may be affected by contamination associated with the adjacent parcels. Additionally, because there are no groundwater monitoring wells located within the Bellmore Maintenance Facility, there is no way to adequately evaluate the effects of potential upgradient sources on the groundwater quality in this area.

Because of the potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 9(7)

CERFA Map Location 6,3

This parcel is located hydrologically downgradient from Parcels 3(6)PS/PR/HS/HR and 5(7)PR(P) and, therefore, may be affected by potential contamination associated with these parcels.

Additionally, because there are no groundwater monitoring wells located within the Bellmore Maintenance Facility, there is no way to adequately evaluate the effects of potential upgradient sources on the groundwater quality in this area.

Because of the potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources, this parcel has been designated as Category 7.

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BRAC Parcel Number and Label 12(7)PR(P)/HS/HR

CERFA Map Location 5,2

This parcel is associated with a leaching field system that received hazardous as well as sanitary wastes, including metals and possibly solvents, and a dry well/catch basin (NE300A). The leaching field system includes two leaching fields (the old leaching field, Site N300B, and Site NE800), an abandoned 500-gallon septic tank (Site N300A), and a 65,000-gallon septic tank (Site N800). The N300A septic tank has existed since the 1920s and received wastes generated from Building 300. Possible contaminants of concern are petroleum hydrocarbons and other undetermined contaminants. The N300B leaching field received wastes from the N300A septic tank. Leaching field NE800 received wastes from the N800 septic tank; contaminants of concern are metals and possibly solvents. Four soil borings are planned to be drilled and a downgradient monitoring well is planned to be installed to further evaluate the leaching field area.

Dry well/catch basin NE300A received PCB-contaminated oil following the 1986 transformer oil spill that occurred in Building 300. Testing results indicated the presence of SVOCs and metals at concentrations above the regulatory limits.

The contaminants of concern in this area are petroleum hydrocarbons, metals, and solvents, and limited sampling results have indicated the presence of SVOCs and metals at concentrations above the regulatory limits. Because additional evaluation is planned, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 15(7)

CERFA Map Location 4,2

This parcel is hydrologically downgradient from Parcel 12(7)PR(P)/HS/HR and, therefore, may be affected by potential contamination associated with this parcel. Additionally, because there are no groundwater monitoring wells located within the Bellmore Maintenance Facility, there is no way to adequately evaluate the effects of potential upgradient sources on the groundwater quality in this area.

Because of the potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 16(7)PR(P)**CERFA Map Location 4,2**

This parcel is associated with a former gasoline dispensing station (Site NW600) located adjacent to Building 600. There was some documented evidence to indicate that a UST may have been installed in this area some time prior to 1956. However, no information on the tank's contents or capacity, or if it was removed, was found. Because insufficient information was available to categorize the area, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 18(7)PR(P)**CERFA Map Location 3,3**

This parcel is associated with a series of dry wells/catch basins (Site S800A), dry wells (Site S800B), and a drainage ditch (Site S800C). These features received runoff from a vehicle and associated equipment parking area. No environmental samples have been collected in this area and, therefore, insufficient information was available to categorize the parcel.

This parcel also contains two cesspools/manholes (Site W300A) that were part of the pre-1920s sanitary system. However, there is no evidence that hazardous substances or petroleum disposal was associated with this system.

This parcel has been designated as Category 7.

BRAC Parcel Number and Label 19(7)**CERFA Map Location 2,2 and 5,4**

This parcel consists of the area of real property associated with the remainder of the Bellmore Maintenance Facility. This parcel is located hydrologically downgradient from potential on-site and off-site sources of contamination. Because there are no groundwater monitoring wells located within the Bellmore Maintenance Facility, there is no way to adequately evaluate the effects of potential upgradient sources on the groundwater quality in this area.

Additionally, this parcel contains a grease interceptor (Site NE200) that received wastes generated in the boiler room and the kitchen facility of Building 200. No environmental sampling has occurred at this site.

Because of the potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 22(7)PR(P)

CERFA Map Location 1,4

This parcel is associated with a drainage ditch (Site S100A) located at the south end of Building 100. This area received runoff from a vehicle parking area and fueling operations located nearby. No environmental samples have been collected from which to evaluate this area. Therefore, this parcel has been designated as Category 7.

BRAC Parcel Number and Label 23(7)PR(P)/HR(P)

CERFA Map Location 3,2

This parcel is associated with Building 300, the administrative/supply building. There are two active 275-gallon ASTs located at this facility (Site N300F) that are used to fuel a boiler. There are no documented releases associated with these tanks. The basement of Building 300 was used to store inactive PCB-containing transformers prior to their removal from the installation. A portion of Building 300 was individually parcelized (see the discussion for Parcel 14(5)HR) because of a PCB spill that occurred in 1986. No other environmental concerns have been documented; however, additional environmental information may be warranted. Additionally, the groundwater quality in this area may be affected by on-site and/or off-site upgradient contaminant sources; therefore, this parcel has been designated as Category 7.

5.1.8 Qualified Parcels

In determining the qualified parcels, Woodward-Clyde observed the following guidelines:

- If a complete asbestos survey has not been conducted, then buildings constructed prior to 1985 were assumed to contain ACM. An “A(P)” for the possible presence of asbestos was used to qualify the parcel.

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- If a complete LBP survey has not been conducted, then buildings constructed prior to 1978 were assumed to contain LBP. An “L(P)” for the possible presence of LBP was used to qualify the parcel.

Additionally, if an area is characterized by lead in the soil resulting from LBP, the area will be qualified as “L.”

Eight parcels, approximately 3.11 acres, were identified as qualified parcels as described in Table 5-1b and illustrated on the CERFA map, Figure 5-1. When a qualified parcel is associated with a building/facility, the acreage presented corresponds to the “footprint” of the building/facility.

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APPENDIX A
COMMENT RESPONSE PACKAGE

**RESPONSES TO COMMENTS ON THE
BELLMORE MAINTENANCE FACILITY, NEW YORK
DRAFT ENVIRONMENTAL BASELINE SURVEY REPORT
DATED APRIL 11, 1996**

APPENDIX A

COMMENT RESPONSE PACKAGE

Appendix A presents the comments Woodward-Clyde Federal Services received on the *Bellmore Maintenance Facility, New York Draft Environmental Baseline Survey Report*, dated April 11, 1996, and the Draft Final Environmental Baseline Survey Report, dated October 7, 1996, and the responses to these comments.

The comments have been typed verbatim and may include misspellings, grammatical errors, format inconsistencies, internal agency numbering systems, etc. Each comment and response has been sequentially numbered (A-1, A-2, A-3, etc., for comments on the draft report and B-1, B-2, B-3, etc., for comments on the draft final report). This numbering system is used to reference previous comments or a response that may clarify a previously addressed issue.

The comments have been organized by agency and are separated by sections (A.1, A.2, A.3, etc., for comments on the draft report and B.1, B.2, B.3, etc., for comments on the draft final report). The comments are presented in the following order:

- Installation
- U.S. Environmental Protection Agency
- State of New York
- U.S. Army Environmental Center
- U.S. Army Corps of Engineers
- Other Agencies and Organizations

A.1 RESPONSES TO INSTALLATION COMMENTS ON THE DRAFT EBS REPORT**A.1.1 RESPONSES TO BELLMORE LOGISTICS CENTER COMMENTS ON THE DRAFT EBS REPORT**

ENTITY: Bellmore Logistics Center

INDIVIDUAL: Peter Koutroubis

TITLE: BRAC Environmental Coordinator

DATE: August 15, 1996

Comment A-1:**List of Acronyms**

pg. ix Acronym DSERTS: Insert “Site” between “Defense” and “Environmental”.

Response:

The text has been revised accordingly.

Comment A-2:**Section Two**

2.5.1 pg. 2-7: John Rhee’s phone number is 718-630-4488.

pg. 2-8: George McLellan’s phone number is 609-562-2264.

Response:

The text has been revised accordingly.

Comment A-3:

3.4.5 Last sentence: Since October 1994, there are no personnel stationed at the facility.

Response:

The sentence has been deleted.

Comment A-4:

Section Four

4.1.8 pg. 4-4: These dry wells are not paired.

Response:

Comment noted. The text has been revised accordingly.

Comment A-5:

4.5 pg. 4-19 Table: Site 06 delete “BELL96S004” and insert HAM091S001. Site 07 delete “BELL96S003 and/or BELL96S009” and insert “None”.

pg. 4-20, add project: remediation of soil by Bldg. 900. 1995 IAP: None. Site 17. BELL96S017.

pg. 4-20, under other IRP Projects: Delete BRAC Cleanup Plan/Yearly Update.

Response:

Comment noted. The text has been revised accordingly.

Comment A-6:

Section Five

pg. 5-10, BRAC parcel number and label: 23(7), fifth line: “14(5)HR” should read “14(4)HR”.

Also, correct in Table 5-1, parcel 23(7), in BASIS column.

Response:

The text has been revised accordingly.

Comment A-7:**Table 5-1**

Parcel 1, under remed./mitig. column: oil/water separators and dry wells will be removed. ASTs and UST have been removed. Leaching trench to be investigated.

Response:

Comment noted. The text has been revised accordingly.

Comment A-8:

Parcels 2, 4, 8, 9, 10, 12, 15, 16, 18, 19, 21, 22, 23, under remed./mitig. column: No remediation currently planned.

Response:

The text has been revised accordingly.

Comment A-9:

Parcel 3, under remed./mitig. column: additional remediation to consist of removal of dry well N100C and soil removal around Bldg. 900.

Response:

Comment noted. The text has been revised accordingly.

Comment A-10:

Parcel 5. This parcel should be changed to Category 7. Remed./mitig. column: No remediation currently planned.

Response:

We concur. The text, table, and figure have been revised accordingly.

DRAFT

APPENDIX A

COMMENT RESPONSE PACKAGE

Comment A-11:

Parcel 6, remed./mitig. column: dry wells N100F to be removed. Site E100A wash rack drainage and oil/water separator to be removed; dry well sampled.

Response:

Comment noted. The text has been revised accordingly.

Comment A-12:

Parcel 7, remed./mitig. column: additional sampling required to determine remedial action required.

Response:

Comment noted. The text has been revised accordingly.

Comment A-13:

Parcel 20, remed./mitig. column: None required.

Response:

The text has been revised accordingly.

Comment A-14:

Parcels 25 through 30 in general: there will be additional asbestos and LBP surveys to determine what mitigation, if any, may be necessary.

Response:

This information has been added to the table.

Comment A-15:

Parcel 31, remed./mitig. column: Chipping/flaking LBP will be scraped and protective coating applied to building. A layer of soil surrounding building to be disposed and replaced by clean soil.

Response:

This information has been added to the table.

Comment A-16:**Figure 5-1**

Make changes discussed in these comments. Also, change legend of lower left hand corner to read 1" = 50' not 1' = 50'.

Response:

Comment noted. The figure has been revised accordingly.

A.2 RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT EBS REPORT**A.2.1 RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT EBS REPORT****ENTITY:** U.S. Environmental Protection Agency, Region 2**INDIVIDUAL:** John S. DeMurley**TITLE:** Base Closure Team, Federal Facilities**DATE:** September 20, 1996**Comment A-17:****A. General Comments**

1. The map of Bellmore should carry designations which are commonly used for each CERCLA and for each non-CERCLA contaminant; e.g. parcel qualifiers should follow the nomenclature in the text and appear as ACP, LBP, PCB, UXO, etc. This would be helpful to members of the RAB who may wish to review this document on their own.

Response:

The parcel label designations have been developed over previous rounds of base realignment and closure. The designations are described in Section 1.3 and in the Figure 5-1 label.

Comment A-18:

2. Our comments on qualifiers are based upon the information supplied. Wherever confirmation is lacking, we withhold further comment until the presence of qualifiers might be confirmed.

Response:

Comment noted.

Comment A-19:

3. Until groundwater contamination, if any, and the flows are determined it may be premature to assume that “clean” parcels would not be affected by migration of contaminants from such groundwater.

Response:

Comment noted.

Comment A-20:

4. It should not be assumed that dormant underground storage tanks (USTs) have not leaked until any appropriate sampling and analyses have provided the basis for a closure report.

Response:

Comment noted.

Comment A-21:

B. Specific Comments

1. A series of dry wells have been noted; not very much appears to be known about their past usage and possible contaminations. In view of this a pattern of sampling and analyses of spills and groundwater is recommended. Unless additional information is forthcoming this effort would investigate primary pollutant metals, total petroleum hydrocarbon, volatile organic chemicals and semi-volatile organic chemicals.

Response:

Comment noted.

Comment A-22:

2. Leaching Trench W100B, and Leaching Field N300B should included in the sampling and analysis plan, as discussed in the preceding Paragraph B (1) to acquire sufficient information, to resolve any doubts.

Response:

Comment noted.

Comment A-23:

3. Reference is made to the earlier cleanup of a PCB-Oil spill at Site N300D. Reference should be made to a closure report.

Response:

The references cited were the only information found during the EBS.

Comment A-24:

4. In view of the relatively small acreage of this non-NPL site it is likely that a basewide groundwater monitoring program would be feasible.

Response:

Comment noted.

A.3 RESPONSES TO STATE OF NEW YORK COMMENTS ON THE DRAFT EBS**A.3.1 RESPONSES TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION COMMENTS ON THE DRAFT EBS REPORT**

ENTITY: New York State Department of Environmental Conservation

INDIVIDUAL: David K. Harrington

TITLE: Environmental Engineer 1
Eastern Investigation Section
Bureau of Hazardous Site Control

DATE: May 17, 1996

Comment A-25:

I have received and reviewed the above-referenced EBS prepared by Woodward-Clyde. At this time, I am in agreement with the designations made in Section Five of the report as they coincide with the conclusions we made at our previous meetings (see my February 9, 1996 letter to you and your subsequent March 8, 1996 letter to me).

Response:

Comment noted.

**A.4 RESPONSES TO U.S. ARMY FORCES COMMAND COMMENTS ON THE
DRAFT EBS REPORT**

ENTITY: U.S. Army Forces Command

INDIVIDUAL: Joseph H. Plunkett
(contact Victor M. Bonilla for further information)

TITLE: Chief, Base Realignment and Closure Division, DCSPIM

DATE: June 28, 1996

Comment A-26:

Page: 5-4

Section five; 4th paragraph

Comment:

Conflict with statement concerning the removal of tanks (associated with sites W100C) in 1995 indicating that no further action was necessary, being that the site was designated as Category 6 meaning required removal or remediation is not yet complete. Please clarify.

Response:

The property area associated with Site W100C was designated as Category 6 because of other, overlapping hazardous release concerns. In particular, concerns associated with leaching trench W100B and dry well W100D.

Comment A-27:

Page: 5-5

Section five; 3rd paragraph

Comment:

Recommends changing status of sites from category 6 to category 4 or 7.

Response:

We concur. The text, table, and figure have been revised accordingly.

Comment A-28:

Page: 5-6

Section five; 4th paragraph

Comment:

Recommends including information on whether or not clean-up efforts were conducted.

Response:

Information on whether cleanup efforts were conducted was not found. The BEC has indicated that additional sampling is necessary to determine what remedial action is warranted, if any.

This information has been added to the “Remediation/Mitigation” column in Table 5-1a.

A.5 RESPONSES TO U.S. ARMY ENVIRONMENTAL CENTER COMMENTS ON THE DRAFT EBS REPORT

ENTITY: U.S. Army Environmental Center

INDIVIDUAL: Kenneth E. Wiggans

TITLE: Acting Chief, Restoration and Oversight Branch

DATE: June 18, 1996

Comment A-29:

1. Page 2-8. Suggest working copies of the visual inspection forms be included in the Appendix to provide additional information for the reader.

Response:

We do not concur. The information was incorporated into the text as appropriate.

Comment A-30:

2. General Comment, CERFA Map Figure 5-1. Several parcels have been identified as CERFA parcel categories 2 and 3 which are by definition transferable at this time. It is likely, however, that sampling results from adjacent contaminated parcels will more accurately define the boundaries of these parcels. As a result, it may be prudent for the Army to gather as much back up information as possible to justify these parcel categories if this becomes an issue with the regulatory agencies.

Response:

Comment noted.

A.6 RESPONSES TO U.S. ARMY CORPS OF ENGINEERS COMMENTS ON THE DRAFT EBS REPORT**A.6.1 RESPONSES TO U.S. ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT COMMENTS ON THE DRAFT EBS REPORT**

ENTITY: U.S. Army Corps of Engineers, Baltimore District

INDIVIDUAL: Charles Bragdon

TITLE: Not Identified

DATE: August 15, 1996

Comment A-31:**General Comments**

1) It would be helpful if the BRAC Parcel Labels used in Figure 5-1, were included in the text of Chapter 4. This would enable you to reference both Figure 5-1 and the Chapter 5 Tables while reading Chapter 4.

Response:

We do not concur. Section Five provides sufficient detail to allow the reader to cross-reference with Section Four.

A.7 RESPONSES TO OTHER COMMENTS ON THE DRAFT EBS REPORT

No other agencies or organizations commented on the Draft EBS Report.

**RESPONSES TO COMMENTS ON THE
BELLMORE MAINTENANCE FACILITY, NEW YORK
DRAFT FINAL ENVIRONMENTAL BASELINE SURVEY REPORT
DATED OCTOBER 7, 1996**

**B.1 RESPONSES TO INSTALLATION COMMENTS ON THE DRAFT FINAL EBS
REPORT**

The Bellmore Maintenance Facility did not comment on the Draft Final EBS Report.

**B.2 RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS
ON THE DRAFT FINAL EBS REPORT****B.2.1 RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON
THE DRAFT FINAL EBS REPORT****ENTITY:** U.S. Environmental Protection Agency, Region 2**INDIVIDUAL:** John S. DeMurley**TITLE:** Base Closure Team, Federal Facilities**DATE:** January 8, 1997**Comment B-1:**

From our review of the draft final EBS (and prior EPA comments/Army responses summarized in Appendix A), closure reports, further investigation or further acceptable clarifying discussion is required for the dry wells. Leaching Trench W100B, Leaching Field N300B, and PCB Spill at Site N300D.

EPA will consider these areas Category 7 pending closure reports, further investigation and determination, or otherwise acceptable clarification that the property may be uncontaminated or has been satisfactorily remediated.

Response:

Comment noted. The Leaching Field (N300B) is associated with BRAC Parcel 12(7) and the Leaching Trench (W100B) is associated with BRAC Parcel 1(6). The PCB Spill (Site N300D) will be changed from a Category 4 designation to a Category 5 (to acknowledge the remedial actions taken) in the Final EBS Report. Currently this area is under discussion with the BCT. The BCT will determine if additional evaluation is warranted.

B.3 RESPONSES TO STATE OF NEW YORK COMMENTS ON THE DRAFT FINAL EBS REPORT**B.3.1 RESPONSES TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION COMMENTS ON THE DRAFT FINAL EBS REPORT**

ENTITY: New York State Department of Environmental Conservation

INDIVIDUAL: David K. Harrington

TITLE: Environmental Engineer 1
Eastern Investigation Section
Bureau of Hazardous Site Control

DATE: November 14, 1996

Comment B-2:

The leaching field area (BRAC Parcel 12) should have an Environmental Condition Category Number 7 instead of 6. Category 6 areas are areas where **required** remedial actions or removals have not yet been initiated, yet the seventh column in CERFA Table 2a (remediation/ mitigation) indicates that no remediation is currently planned. In reviewing the August 1996 draft work plan for Bellmore, Exhibit 4-5 shows that four soil borings and a downgradient monitoring well will be installed in the leaching field area. This indicates that the area is being evaluated further prior to determining an appropriate remedial action (if any), which is the definition of Category 7 parcels.

Response:

Comment noted. The text, table, and figure have been revised accordingly.

**B.4 RESPONSES TO U.S. ARMY FORCES COMMAND COMMENTS ON THE
DRAFT FINAL EBS REPORT**

The U.S. Army Forces Command did not comment on the Draft Final EBS Report.

**B.5 RESPONSES TO U.S. ARMY ENVIRONMENTAL CENTER COMMENTS ON THE
DRAFT FINAL EBS REPORT**

The U.S. Army Environmental Center did not comment on the Draft Final EBS Report.

**B.6 RESPONSES TO U.S. ARMY CORPS OF ENGINEERS COMMENTS ON THE
DRAFT FINAL EBS REPORT**

The U.S. Army Corps of Engineers did not comment on the Draft Final EBS Report.

B.7 RESPONSES TO OTHER COMMENTS ON THE DRAFT FINAL EBS REPORT

No other agencies or organizations commented on the Draft Final EBS Report.

APPENDIX E

**CHAIN OF TITLE REPORT
BRAC PROPERTY
BELLMORE MAINTENANCE FACILITY, NEW YORK**

REPORT PARCEL	DATE TRANSFERRED	ACREAGE	OWNER	OWNERSHIP MAP REFERENCE	COMMENTS
1	11/13/1945	16.62	F.B.Q Co., Inc.	4	Prior ownership does not indicate any for environmental concern.

Notes:

^aSource: Nassau County Land and Tax Map, Section 56, Block F.

Table 5-1a
BRAC PARCEL DESCRIPTIONS
BELLMORE MAINTENANCE FACILITY, NEW YORK

BRAC PARCEL NUMBER AND LABEL ^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIATION/ MITIGATION
1(6)PS/PR/HS/HR	4,4	2.02	6	Associated with a leaching trench, several dry wells, a UST, and two ASTs. The leaching trench (Site W100B) was used for the disposal of battery acids, waste oil, and other unspecified solvents. Dry wells (Site W100D, Site W100G, Site W100H, and Site W100I [two wells]) received wastes generated from vehicle painting and maintenance operations in Building 100. Oil/water separators are associated with Sites W100D, W100H, and W100I. Analytical results for samples collected from W100D and W100G indicated the presence of priority pollutant metals, TPH, and VOCs at concentrations above the regulatory limits.	1, 2	The ASTs and UST have been removed. Removal of the oil/water separators and dry wells is planned. Investigation of the leaching trench is planned.
2(7)PR(P)/HR(P)	7,4	0.23	7	Associated with a dry well (SW700). SW700 may have received stormwater runoff from potentially contaminated areas. Additional evaluation is warranted.	2, 12	No remediation is currently planned.

**Table 5-1a
(Continued)**

BRAC PARCEL NUMBER AND LABEL ^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIATION/ MITIGATION
3(6)PS/PR/HS/HR	7,3	0.46	6	Associated with a former 1,080-gallon waste oil UST (Site N100A), a dry well (Site N100C), a drum storage area, and a flammable materials storage building (Building 900). Levels of TPH and metals exceeding regulatory limits have been documented.	1, 2	Tank N100A and one truckload of contaminated soil were removed and disposed of in 1993. Remediation verification sampling results found no contamination above the regulatory limits. Additional remediation consisting of removal of dry well (N100C) and soil around Building 900 is planned.
4(7)	7,3	0.08	7	There is a potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources.	1, 10	No remediation is currently planned.
5(7)PR(P)	7,3	0.46	7	Associated with two dry wells, Sites N100D and N100E, located within a concrete area used for parking military vehicles and other equipment in need of repair. It is suspected that these dry wells were used to receive stormwater runoff that may have contained petroleum products.	1, 2	No remediation is currently planned.
6(6)PR/HR	6,2	0.64	6	Associated with a dry well pair (Site N100F) and a vehicle wash rack (Site E100A). Sample results from the dry wells indicated the presence of elevated levels of metals and TPH. Site E100A includes a vehicle wash rack, an oil/water separator, and a dry well that received wastes generated from the vehicle washing operations.	1, 2	Removal of dry wells (N100F) and the wash rack (Site E100A) and its associated oil/water separator is planned. Sampling of the dry well at Site E100A is planned.

**Table 5-1a
(Continued)**

BRAC PARCEL NUMBER AND LABEL^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES)^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE^c	REMEDIATION/ MITIGATION
7(7)PR(P)	5,2	0.44	7	Associated with a dry well/drainage ditch (Site E100B). Documented evidence of oil stains and spills from vehicles and the storage of equipment exists.	1	Additional sampling necessary to determine if remedial action is required.
8(7)	6,2	0.23	7	There is a potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources.	1, 10	No remediation is currently planned.
9(7)	6,3	0.56	7	There is a potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources.	1, 10	No remediation is currently planned.
10(3)PS/PR(P)	5,3	0.09	3	Associated with a closed-in-place, 10,000-gallon fuel oil UST (Site E100C). No evidence of leaking; however, because of the age of the tank (installed in 1957), release is probable, but like Parcel 21, concentrations are probably below regulatory requirements.	1, 2	No remediation is currently planned.
11(2)PS	5,3	0.19	2	Associated with an active 25,000-gallon UST (Site E100D) located near Building 100, the maintenance shop. No evidence of release, disposal, or migration has occurred.	1, 2	None required.
12(7)PR(P)/HS/HR	5,2	1.68	7	Associated with a leaching field system (Site N300B, NE800, N300A, and N800) and a dry well/catch basin (NE300A). Contaminants of concern are TPH, metals, and solvents. Sampling results indicated SVOCs and metals above regulatory limits. Additional evaluation is planned.	1, 2	Four soil borings are planned to be drilled and one downgradient monitoring well is planned to be installed to further evaluate this area.

**Table 5-1a
(Continued)**

BRAC PARCEL NUMBER AND LABEL^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES)^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE^c	REMEDIATION/ MITIGATION
13(4)HR	4,2	0.02	4	Associated with PCB-contaminated soil (Site NE300B) that resulted from a transformer oil spill.	13, 14, 1, 2	Approximately 7 cubic yards of contaminated soil were removed and disposed of. Remediation verification sampling results indicated PCB levels were below the regulatory requirements.
14(5)HR	4,2	0.02	5	Associated with the 1986 PCB spill in Building 300 (Site N300D).	13, 14, 1, 2	Immediately after the spill occurred, floor tiles were removed and the concrete surface was triple-washed with kerosene and subsequently sealed with epoxy. In 1989, additional concrete sections were removed and replaced and a floor drain sealed. Currently under discussion by the BCT to determine if additional evaluation is warranted.
15(7)	4,2	0.13	7	There is a potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources.	1, 10	No remediation is currently planned.
16(7)PR(P)	4,2	0.14	7	Associated with a former gasoline dispensing station (Site NW600) located adjacent to Building 600. Documented evidence indicates that a UST may have been installed in this area some time prior to 1956. No information on the tank's contents or capacity, or if it was removed, was found.	1, 2	No remediation is currently planned.

**Table 5-1a
(Continued)**

BRAC PARCEL NUMBER AND LABEL ^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIATION/ MITIGATION
17(2)PS	3,2	0.45	2	Associated with two petroleum USTs (Site S300 [1,080-gallon] and Site NW300A [capacity unknown]) and a possible gasoline distribution point (Site N300E) located near Building 300. No evidence of release, disposal, or migration has occurred.	1, 2	None required.
18(7)PR(P)	3,3	1.12	7	Associated with a series of dry wells/catch basins (Site S800A), dry wells (Site S800B), and a drainage ditch (Site S800C). These features received runoff from a vehicle and associated equipment parking area. No environmental samples have been collected in this area.	1	No remediation is currently planned.
19(7)	2,2	7.26	7	There is a potential for the groundwater quality in this area to be affected by on-site and/or potential upgradient off-site contaminant sources.	1	No remediation is currently planned.
20(2)PS	2,3	0.20	2	Associated with an active 25,000-gallon fuel oil UST (Site E100F) located adjacent to Building 100, the maintenance shop. No evidence of release, disposal, or migration has occurred.	1	None required.
21(3)PS/PR	2,3	0.07	3	Associated with a closed-in-place, 15,000-gallon fuel oil UST (Site E100E) located near Building 100, the maintenance shop. Results from soil samples indicated the presence of TPH, but at concentrations that were below the regulatory requirements.	1, 2	No remediation is currently planned.

**Table 5-1a
(Continued)**

BRAC PARCEL NUMBER AND LABEL ^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	ENVIRONMENTAL CONDITION CATEGORY NUMBER	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIATION/ MITIGATION
22(7)PR(P)	1,4	0.20	7	Associated with a drainage ditch (Site S100A) located at the south end of Building 100. Area received runoff from a vehicle parking area and fueling operations located nearby. No environmental samples have been collected.	1	No remediation is currently planned.
23(7)PR(P)/HR(P)	3,2	0.10	7	Associated with Building 300, the administrative/supply building. There are two active 275-gallon ASTs located at this facility (N300F) that are used to fuel a boiler. There are no documented releases associated with these tanks. The basement of Building 300 was used to store inactive PCB-containing transformers prior to their removal from the installation. A portion of Building 300 was individually parcelized (see the discussion for Parcel 14(5)HR) because of a PCB spill that occurred in 1986. No other environmental concerns have been documented; however, additional environmental information may be warranted. Additionally, the groundwater quality in this area may be affected by on-site and/or off-site upgradient contaminant sources.	1, 2	No remediation is currently planned.

Notes:

^a BRAC parcel label definitions are as follows:

- PS = petroleum storage
- PR = petroleum release or disposal
- HS = hazardous substance storage
- HR = hazardous substance release or disposal

Qualified parcel label definitions are as follows:

- A = asbestos-containing material
- L = lead-based paint
- P = polychlorinated biphenyls
- R = radon
- X = UXO and/or ordnance fragments

Table 5-1a
(Continued)

RD = radionuclides
(P) = possible (unverified)

^b Acreage figures are approximate; they have been calculated using AutoCad Release 12.

^c EBS Source of Evidence numbers refer to documents listed in Table 2-1 of this report.

**Table 5-1b
QUALIFIED PARCEL DESCRIPTIONS
BELLMORE MAINTENANCE FACILITY, NEW YORK**

QUALIFIED PARCEL NUMBER AND LABEL^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES)^b	BASIS	EBS SOURCE OF EVIDENCE^c	REMEDIATION/ MITIGATION
24Q-L(P)	7,4	0.23	Chipping and peeling LBP from a 250,000-gallon water tower (Building 700) resulted in lead contamination in the soil beneath the tower. Lead-contaminated soil was removed and verification sampling using the TCLP methodology indicated that the lead content in the remaining soil was below action limits. However, the actual lead content in the remaining soil is not known.	1	The tower was demolished and disposed of, and approximately 145 cubic yards of soil were removed and disposed of.
25Q-A/L(P)	4,4	2.48	Building 100; ACM has been documented by previous surveys. LBP possible based on the age of building.	8, 3, 7	Asbestos survey is planned; LBP survey is complete. No remediation is currently planned.
26Q-A/L(P)	1,2	0.24	Building 200; ACM has been documented by previous surveys. LBP possible based on the age of building.	8, 7	Asbestos and LBP surveys are complete. No remediation is currently planned.
27Q-A/L(P)/P(P)	3,2	0.10	Building 300; ACM has been documented by previous surveys. LBP possible based on the age of building. PCBs in concrete flooring may still be present.	8, 3, 7	Thermal system insulation ACM was removed, but additional ACM (floor tiles) is present. LBP survey is complete. No remediation is currently planned.
28Q-L(P)	1,3	<0.01	Building 400 (sentry post, main gate); LBP possible based on the age of the structure.	1, 2	LBP survey completed.

**Table 5-1b
(Continued)**

QUALIFIED PARCEL NUMBER AND LABEL ^a	LOCATION X,Y (COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIATION/ MITIGATION
29Q-L(P)	1,2	<0.01	Building 401 (sentry post); LBP possible based on the age of the structure.	1, 2	LBP survey completed.
30Q-L(P)	4,2	0.02	Building 600 (a garage and storage area); LBP possible based on the age of the building.	1, 2	LBP survey completed.
31Q-L(P)	7,3	0.01	Building 900 (flammable materials storage); analytical results indicate elevated levels of lead in areas adjacent to this building. LBP on surfaces possible based on age of the building.	1, 2	Chipping/flaking LBP was scraped and a protective coating was applied to the building. A layer of soil surrounding the building was removed, disposed of, and replaced with clean soil.

Notes:

^a BRAC parcel label definitions are as follows:

- PS = petroleum storage
- PR = petroleum release or disposal
- HS = hazardous substance storage
- HR = hazardous substance release or disposal

Qualified parcel label definitions are as follows:

- A = asbestos-containing material
- L = lead-based paint
- P = polychlorinated biphenyls
- R = radon
- X = UXO and/or ordnance fragments
- RD = radionuclides
- (P) = possible (unverified)

^b Acreage figures are approximate; they have been calculated using AutoCad Release 12.

^c EBS Source of Evidence numbers refer to documents listed in Table 2-1 of this report.