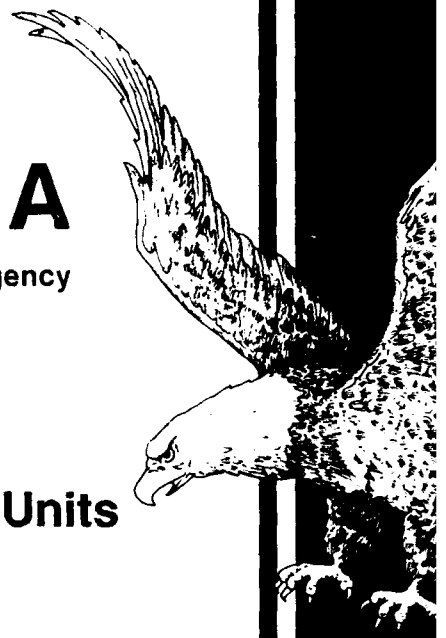
CETHA-BC-CR-89036



U S A T H A M A

U.S. Army Toxic and Hazardous Materials Agency

Enhanced Preliminary Assessment Report:

Rocky Point Army Housing Units Rocky Point, New York

November 1989

prepared for

Commander
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland 21010-5401

prepared by

Environmental Research Division
Argonne National Laboratory
Argonne, Illinois 60439

NOTICE

The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision unless so designated by other documentation.

The use of trade names in this report does not constitute an official endorsement or approval of the use of such commercial products. This report may not be cited for purposes of advertisement.

CETHA-BC-CR-89036

Enhanced Preliminary Assessment Report:

Rocky Point Army Housing Units Rocky Point, New York

November 1989

prepared for

Commander, U.S. Army Toxic and Hazardous Materials Agency,
Aberdeen Proving Ground, Maryland 21010-5401

Environmental Research Division
Argonne National Laboratory, Argonne, Illinois 60439-4815

U.S. Department of Energy Contract W-31-109-Eng-38

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

a REPORT SECURITY CLASSIFICATION Unclassified	1b RESTRICTIVE MARKINGS
a SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION / AVAILABILITY OF REPORT Distribution Unlimited
b DECLASSIFICATION / DOWNGRADING SCHEDULE	
PERFORMING ORGANIZATION REPORT NUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S) CETHA-BC-CR-89036
a NAME OF PERFORMING ORGANIZATION Environmental Research Div. Argonne National Laboratory	6b OFFICE SYMBOL (If applicable) ERD
	7a NAME OF MONITORING ORGANIZATION U.S. Army Toxic & Hazardous Matls. Agency
ADDRESS (City, State, and ZIP Code) Building 203 9700 South Cass Avenue Argonne, IL 60439	7b ADDRESS (City, State, and ZIP Code) Attn: CETHA-BC Aberdeen Proving Ground, MD 21010-5401
a NAME OF FUNDING / SPONSORING ORGANIZATION U.S. Army Toxic & Hazardous Materials Agency	8b OFFICE SYMBOL (If applicable) CETHA-BC
	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER U.S. Department of Energy Contract W-31-109-ENG-38
ADDRESS (City, State, and ZIP Code) U.S. Army Toxic & Hazardous Materials Agency Attn: CETHA-BC Aberdeen Proving Ground, MD 21010-5401	10 SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO / PROJECT NO / TASK NO. / WORK UNIT ACCESSION NO

TITLE (Include Security Classification)
Enhanced Preliminary Assessment Report: Rocky Point Army Housing Units
Rocky Point, NY

PERSONAL AUTHOR(S)

a TYPE OF REPORT	13b TIME COVERED	14 DATE OF REPORT (Year, Month, Day)	15 PAGE COUNT
Final	FROM ____ TO ____	November, 1979	

SUPPLEMENTARY NOTATION

COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	

ABSTRACT (Continue on reverse if necessary and identify by block number)

Argonne National Laboratory has conducted an enhanced preliminary assessment of the Army housing property located in Rocky Point, NY. The objectives of this assessment include identifying and characterizing all environmentally significant operations, identifying areas of environmental contamination that may require immediate remedial actions, identifying other actions which may be necessary to resolve identified environmental problems, and identifying other environmental concerns that may present impediments to the expeditious sale of this property.

DISTRIBUTION / AVAILABILITY OF ABSTRACT	21 ABSTRACT SECURITY CLASSIFICATION
☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	Unclassified
NAME OF RESPONSIBLE INDIVIDUAL Joseph A. Ricci, Project Officer	22b TELEPHONE (Include Area Code) (301)671-3461 / 22c OFFICE SYMBOL CETHA-BC

FORM 1473, 84 MAR 83 APR edition may be used until exhausted. All other editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

CONTENTS

FIGURES

TABLE

SUMMARY

The Rocky Point housing area presents no imminent or substantial threat to human health or the environment. Although the area was originally developed to support a Nike missile battery, there is no evidence that any wastes associated with missile operations were ever delivered to or managed at the housing property.

A number of 55-gallon drums have been deposited at the northern property boundary. Four empty drums are located on the housing property itself. Approximately 50 additional drums were positioned north of the property on land now owned by the town of Brookhaven. A locked fence between the properties prevented close inspection of the rusted and discarded drums.

Appropriate Army housing authorities have already begun actions to address potential problems from asbestos and radon at the housing area. Those actions should continue to completion.

The following additional actions are recommended prior to release of this property.

- Sample each of the three on-site electrical transformers for the presence of polychlorinated biphenyls (PCBs); label the transformers appropriately.

- Investigate the source and possible contents of discarded 55-gallon drums on property adjacent to the housing area to guarantee that they present no threat to the area.

These recommendations assume that the property will most likely continue to be used for residential housing.

1 INTRODUCTION

In October 1988, Congress passed the Defense Authorization Amendments and Base Closure and Realignment Act, Public Law 100-526. This legislation provided the framework for making decisions about military base closures and realignments. The overall objective of the legislation is to close and realign bases so as to maximize savings without impairing the Army's overall military mission. In December 1988, the Defense Secretary's ad hoc Commission on Base Realignment and Closure issued its final report nominating candidate installations. The Commission's recommendations, subsequently approved by Congress, affect 111 Army installations, of which 81 are to be closed. Among the affected installations are 53 military housing areas, including the Rocky Point housing area addressed in this preliminary assessment.[1]

Legislative directives require that all base closures and realignments be performed in accordance with applicable provisions of the National Environmental Policy Act (NEPA). As a result, NEPA documentation is being prepared for all properties scheduled to be closed or realigned. The newly formed Base Closure Division of the U.S. Army Toxic and Hazardous Materials Agency is responsible for supervising the preliminary assessment effort for all affected properties. These USATHAMA assessments will subsequently be incorporated into the NEPA documentation being prepared for the properties.

This document is a report of the enhanced preliminary assessment (PA) conducted by Argonne National Laboratory (ANL) at the Army stand-alone housing area near Rocky Point, N.Y.

1.1 AUTHORITY FOR THE PA

The USATHAMA has engaged ANL to support the Base Closure Program by assessing the environmental quality of the installations proposed for closure or realignment. Preliminary assessments are being conducted under the authority of the Defense Department's Installation Restoration Program (IRP); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 91-510, also known as Superfund; the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499; and the Defense Authorization Amendments and Base Closure and Realignment Act of 1988, Public Law 100-526.

In conducting preliminary assessments, ANL has followed the methodologies and procedures outlined in Phase I of the IRP. Consequently, this PA addresses all documented or suspected incidents of actual or potential release of hazardous or toxic constituents to the environment.

In addition, this PA is "enhanced" to cover topics not normally addressed in a Phase I preliminary assessment. Specifically, this assessment considers and evaluates the following topical areas and issues:

- Status with respect to regulatory compliance,
- Asbestos,
- Polychlorinated biphenyls (PCBs),
- Radon hazards (to be assessed and reported on independently),
- Underground storage tanks,
- Current or potential restraints on facility utilization,
- Environmental issues requiring resolution,
- Health-risk perspectives associated with residential land use, and
- Other environmental concerns that might present impediments to the expeditious "excessing," or transfer and/or release, of federally owned property.

1.2 OBJECTIVES

This enhanced PA is based on existing information from Army housing records of initial property acquisition, initial construction, and major renovations and remodeling performed by local contractors or by the Army Corps of Engineers. The PA effort does not include the generation of new data. The objectives of the PA include:

- Identifying and characterizing all environmentally significant operations (ESOs),
- Identifying property areas or ESOs that may require a site investigation,
- Identifying ESOs or areas of environmental contamination that may require immediate remedial action,
- Identifying other actions that may be necessary to address and resolve all identified environmental problems, and
- Identifying other environmental concerns that may present impediments to the expeditious transfer of this property.

1.3 PROCEDURES

The PA began with a review of Army housing records at Fort Hamilton, Brooklyn, N.Y., on August 7, 1989.[2-5] A site visit was conducted at the Rocky Point military housing area in Suffolk County, Long Island, on August 8, 1989, at which time some of the unit interiors were inspected and additional information was obtained through personal observations of ANL investigators.[6] Photographs were taken of the housing units and surrounding properties as a means of documenting the condition of the units and immediate land uses. Site photographs are appended. ANL investigators revisited the property on September 7, 1989, at which time the interiors of the remaining units were inspected.

All available information was evaluated with respect to actual or potential releases to air, soil, and surface and ground waters.

Access to individual housing units was obtained through the military housing inspector stationed at Fort Hamilton.

2 PROPERTY CHARACTERIZATION

2.1 GENERAL PROPERTY INFORMATION

The Rocky Point housing area is located on Rt. 25A (North Hempstead Turnpike), the primary east-west roadway in northern Suffolk County, central Long Island. The entrance to the housing facility at Defense Hill Road is just east of Rt. 46 (William Floyd Parkway), the major local north-south roadway. The small town of Rocky Point is approximately 3 miles to the west, and the town of Wading River is approximately 2 miles to the east. Brookhaven, a fast-expanding metropolitan area, is approximately 10 miles south.

The housing property, consisting of 16 residences on approximately 6 acres, was originally developed in support of a Nike battery. The battery's former fire-control area is located just north of the housing property; the former missile-launch area is to the south. Gradients in the area are such that the fire-control area to the north is substantially higher than the housing property, which in turn is higher than the former launch area. The area adjacent to the Rocky Point housing facility is generally undeveloped, although scattered private residences are present. A home for retarded children and a senior citizens facility are located nearby to the west on Rt. 25A.

Figures 1 and 2 show the general location of the facility.

The family housing units, now administered through Fort Hamilton, were constructed between 1957 and 1959.[2-5] No additional major construction has taken place on the property since that time, although Defense Hill Road, the main roadway through the housing property, and residence driveways were modified in 1962 to improve storm drainage.[7] The buildings are occupied at nearly full capacity by active-duty military personnel assigned to military bases in the region.

2.2 DESCRIPTION OF FACILITY

Figure 3 presents the site plan of the housing property.

Housing Units

The Rocky Point housing area consists of 16 "Capehart"-style homes, with either 2 or 3 bedrooms, built on concrete slab foundations. Capehart is the model name given to these homes by the builder, National Homes. Nine 2-bedroom units each have a gross area of 1,036 square feet; seven 3-bedroom units have 1,200 square feet. Renovations performed the last several years include the replacement of roofs, the addition of outdoor aluminum siding, and the replacement of existing furnaces with new oil-fired furnaces.[6]

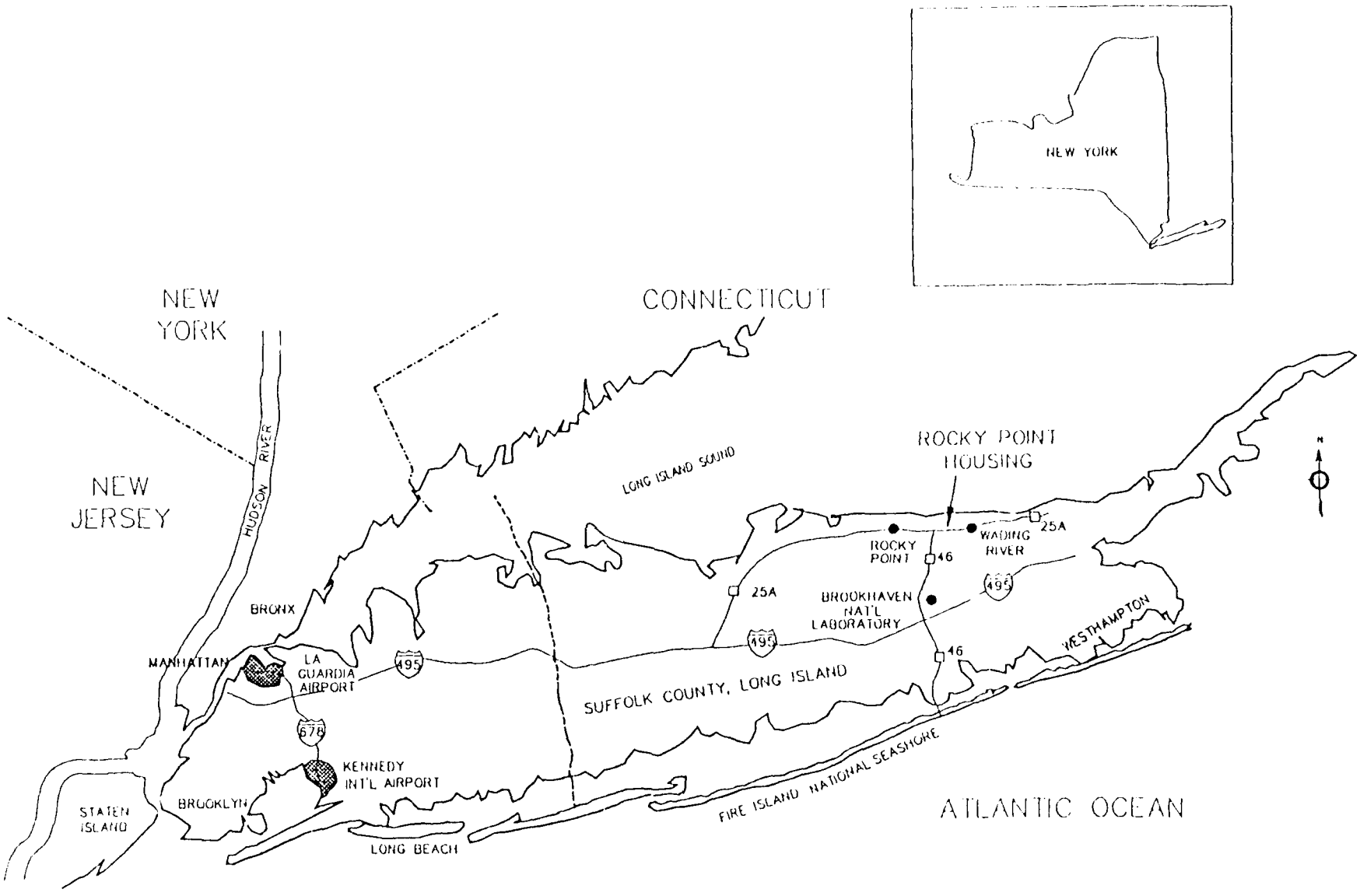


FIGURE 1 Location Map of Rocky Point Army Housing Facilities

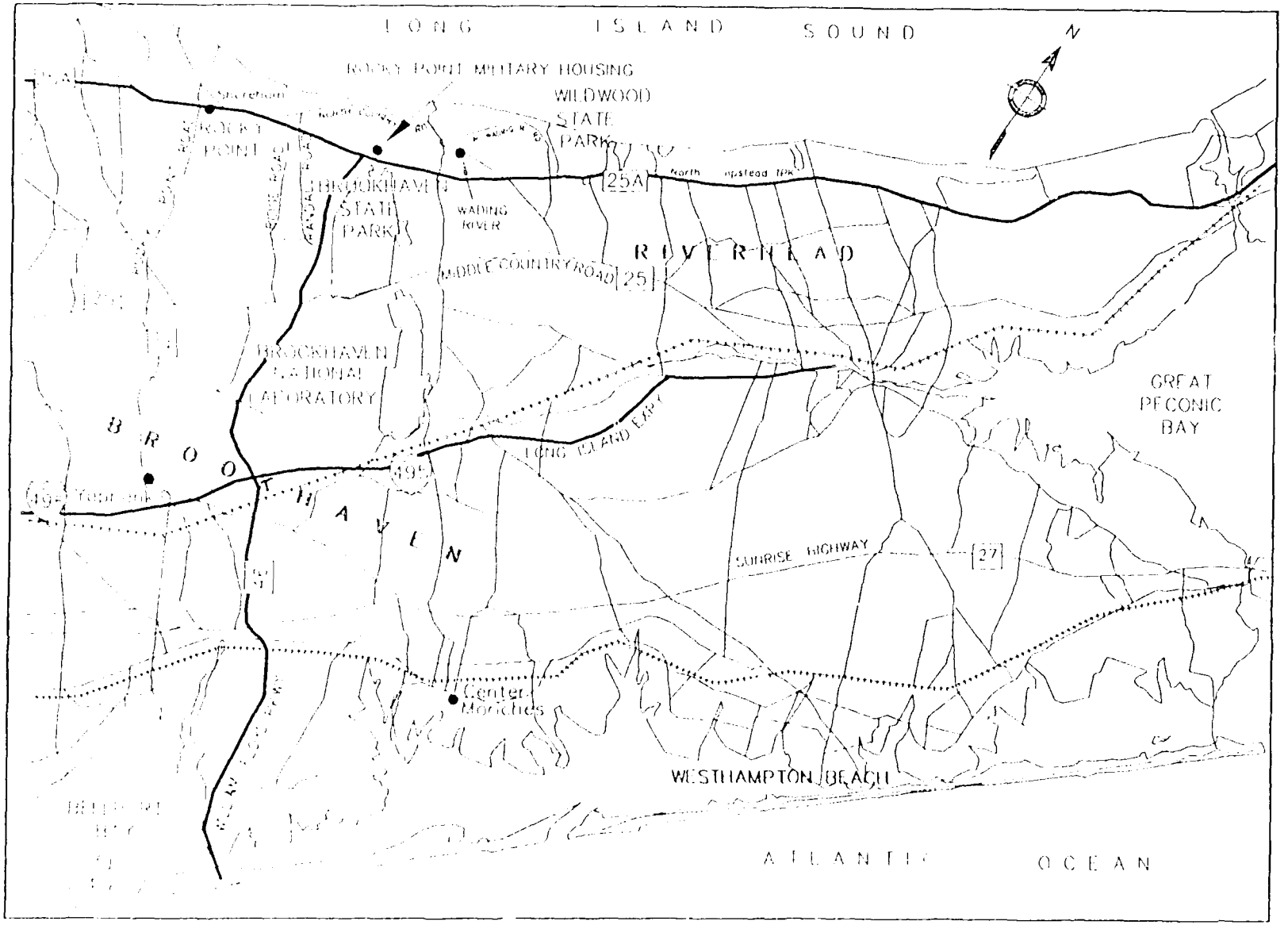


FIGURE 2 Vicinity Map of Rocky Point Army Housing Units

TOWN OF BROOKHAVEN PARK AREA

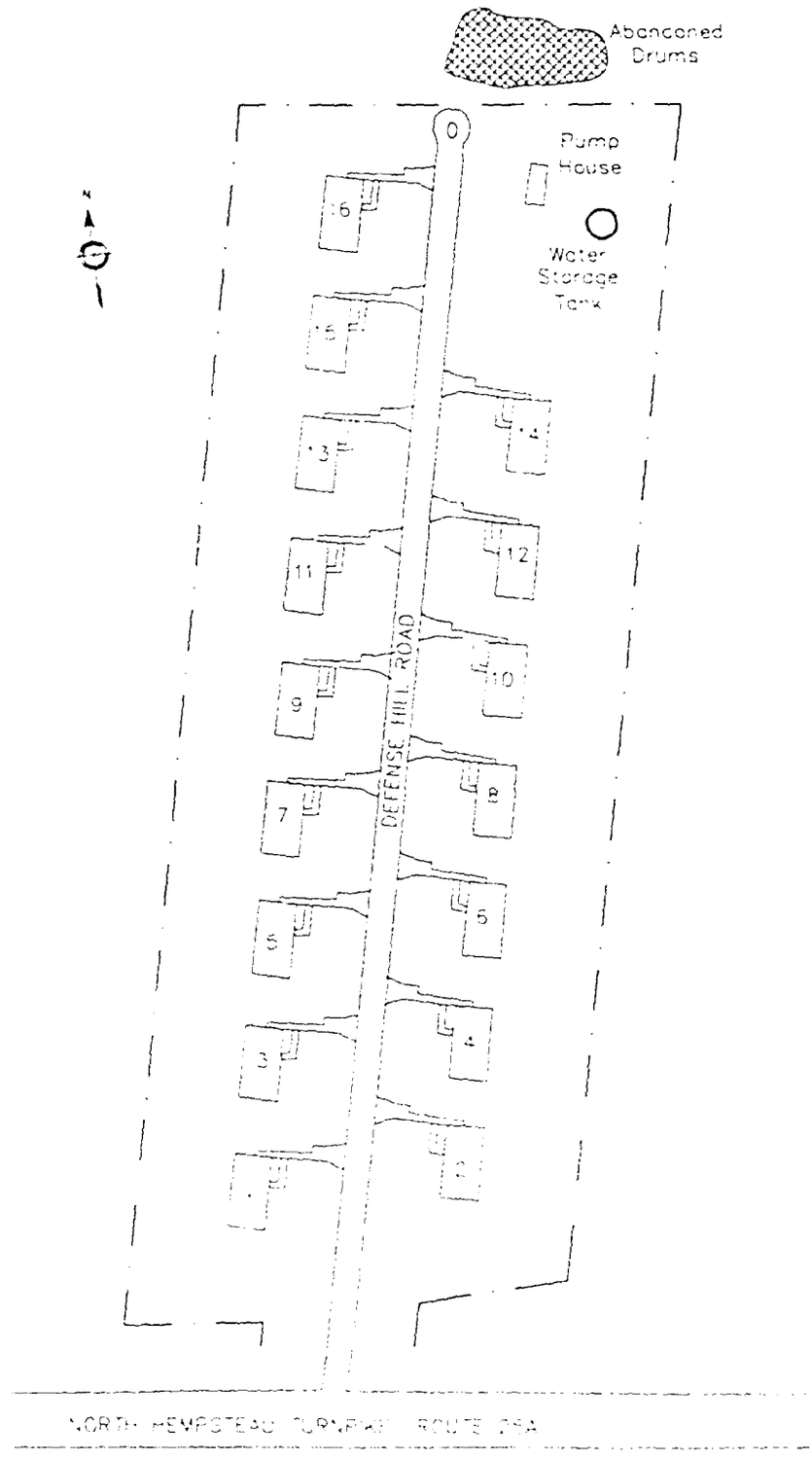


FIGURE 3 Site Plan Map of Rocky Point Army Housing Units

Utilities

Since development of the property, utility services have been provided by local utility companies. Fort Hamilton officials have reported that drinking water was originally supplied to the units by an on-site well located at the pumphouse. This well was capped (but not sealed) when the houses were connected to the municipal water supply.[8] There are no drinking water wells on the property. Prior to transfer of control of the housing property to Fort Hamilton, utility service was provided through the IFC area of the Nike battery. Upon transfer, provision for separate metering of services was made.[3] Solid waste is removed by the local disposal service.

Sewage

Each housing unit has a septic tank leading to a leaching well located in the backyard.[9] Each septic tank was installed 20 feet from the residence; the leaching field was placed an additional 20 feet from the tank.[6] The installation standards for the sewer system required that the entire system be built at a minimum depth of 3 feet - 4 inches, with a downward slope of at least 1% leading away from the houses. Connecting piping of 6-inch diameter was used. Construction of the sewage system began in 1957 and was completed in 1960.[9]

Recent system malfunctions indicate that the sewage system, after 30 years of operation, may be exhausted. Individual septic tanks are reported to have backed up, causing raw sewage to enter individual homes.[6]

Fuel Storage

Each of the 16 housing units was originally equipped with a 275-gallon underground storage tank (UST),[6] located to the front of each house. Twelve tanks have been replaced with 550-gallon fiberglass USTs, installed in the approximate locations of the original tanks.[10] The four remaining original USTs were replaced with 550-gallon fiberglass tanks installed above-ground to the sides of the houses.

Each house is also equipped with an above-ground liquified propane gas (LPG) tank, which supplies fuel for cooking and water heating.

Storm Drainage System

There is no record of storm drainage problems at the facility. The property is located on an incline, increasing toward the north, with the housing units positioned on either side of Defense Hill Road. The property is not within a designated floodplain.[11]

In 1962, a beautification project at the housing facility also improved storm drainage conditions.[7] Defense Hill Road (the main roadway through the housing property) was widened and resurfaced. Residence driveways, then made of stone, were improved to include drainage gutters at the roadway and were surfaced with asphalt. At

the same time, a turnaround area for school buses was constructed at the northern boundary of the property.

Other Permanent Structures or Property Improvements

A pump house and a 3,360-gallon above-ground water tank, remnants of Nike battery fire-control operations and reported to be no longer in use, are located at the northern edge of the property on the east side.[4,6]

2.3 PROPERTY HISTORY

2.3.1 Nike Defense Program and Typical Battery-Level Practices

Generic information on the national Nike antiaircraft defense program has been compiled in two studies, one commissioned by the Army Corps of Engineers[12] and the other by the U.S. Army Toxic and Hazardous Materials Agency.[13] In both studies, independent contractors relied on information contained in unclassified documents related to the Nike surface-to-air missile program, including engineering drawings and specifications (for the facilities and the missiles themselves), interviews with Army personnel participating in the Nike program, and operations manuals and directives relating to the operations and maintenance of Nike facilities. Taken together, these two reports represent the most complete assemblage of generic information on the Nike missile program from an environmental perspective. Salient points from both reports are condensed below.

At its zenith in the early 1960s, the Nike program included 291 batteries located throughout the continental United States. The program was completely phased out by 1976, with many of the properties sold to private concerns or excessed to state or local governments for nominal fees.

Nike Ajax missiles were first deployed in 1954 at installations throughout the continental United States, replacing, or in some cases augmenting, conventional artillery batteries and providing protection from aerial attack for strategic resources and population centers. Typically, Nike batteries were located in rural areas encircling the protected area. The Ajax was a two-stage missile using a solid-fuel booster rocket and a liquid-fuel sustainer motor to deliver a warhead to airborne targets.

The Ajax missile was gradually replaced by the Nike Hercules missile, introduced in 1958. Like the Ajax, the Hercules was a two-stage missile, but it differed from the Ajax in that its second stage was a solid-fuel rather than liquid-fuel power source and its payload often was a nuclear rather than conventional warhead. Ajax-to-Hercules conversions occurred between 1958 and 1961 and required little change in existing Nike battery facilities. A third-generation missile, the Zeus, was phased out during development and consequently was never deployed.

A typical Nike missile battery consisted of two distinct and separate operating units, the launch operations and the IFC operations. The two operating areas were

separated by distances of less than two miles, with lines of sight between them for communications purposes. A third separate area was also sometimes part of the battery. This area was typically equidistant from the two battery operating sites and contained housing for married personnel assigned to the battery. Occasionally, these housing areas also contained battalion headquarters, which were responsible for a number of Nike batteries.

Depending on area characteristics and convenience, the housing areas were often reliant on the launch or IFC sites for utilities such as potable water, electrical power, and sewage treatment. In those instances, buried utility lines connected the housing area to one or both of the other battery properties. It is also possible, however, that housing areas were completely independent of the missile launcher and tracking operations. In those instances, the necessary utilities were either maintained on the housing site or purchased from the local community. In many localities, as the character of the land area around the housing units changed from rural to suburban or urban, communities extended utility services to the housing unit locations, in which case conversions from independent systems to community systems were made.

A large variety of wastes was associated with the operation and maintenance of Nike missile batteries. Normally encountered wastes included benzene, carbon tetrachloride, chromium and lead (contained in paints and protective coatings), petroleum hydrocarbons, perchloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and trichloroethylene. Because of the rural locations of these batteries, and also because very few regulatory controls existed at that time, most of these wastes were managed "on-site." (Unused rocket propellants and explosives, however, would always have been returned to central supply depots and not disposed of on-site.) It is further conceivable that wastes generated at one of the Nike properties may have been transferred to its companion property for management or disposal.

Wastes related to missile operation and maintenance would not have been purposely transferred from a battery operating area to a housing area with no facilities for waste management or disposal. In some instances, however, the sewage treatment facilities for all Nike battery properties were located at the housing area; that possibility cannot be automatically ignored. Finally, where housing areas received various utilities from either of the operating areas, it is also possible that wastes disposed of on those other properties may have migrated to the housing area via the buried utility lines. And since decommissioning of the Nike batteries did not normally involve removal of buried utility or communication lines, any such contaminant migration is likely to have gone unnoticed.

2.3.2 Rocky Point Military Housing

Control of Rocky Point military housing, constructed between 1957 and 1959 to support a Nike missile site, was transferred to the Fort Hamilton military housing section in 1975.[11] Since that time, these buildings have been occupied by the families of active-duty military personnel assigned to military bases in the area. Housing occupancy is near capacity. Except for periodic renovations, including roadwork throughout the housing property, no other permanent structures have been added.[6]

The Nike battery consisted of two distinct and separate operating units, the fire-control area and the missile-launch area. These two areas, north and south of the housing property, respectively, were separated by less than 2 miles, with a line of site between them for communications purposes. See Fig. 4 for a site plan of the former Nike battery.

2.4 ENVIRONMENTAL SETTING AND SURROUNDING LAND USE

The land immediately surrounding the Rocky Point housing area is primarily undeveloped, belonging either to Suffolk County or the Town of Brookhaven, although some scattered private residences are present. Farther away from the housing area, the land includes more densely populated residential property.

As the Nike program drew to a close, the U.S. Army Air Defense Command transferred a parcel of land to the west of the housing area and along Rt. 25A to the New York State Association for Retarded Children.[14] In 1975, both operational areas of the former Nike battery were declared excess.[5] In 1977, the former fire-control area was transferred to the Town of Brookhaven.[6,14]

A U.S. Department of Energy research facility, Brookhaven National Laboratory, is somewhat south of the housing area. To the east is largely undeveloped Suffolk County land.

The urbanization of Long Island and Suffolk County has rapidly extended eastward from the New York City metropolitan area. The population of all of Suffolk County is more than one million.[15] The northern part of the Town of Brookhaven, just a few miles south of the Rocky Point housing area, increased in population nearly 300% in the 20 years from 1960 to 1980, to about 50,000.[16] The current population of Rocky Point is estimated to be 5,000.

There are no known endangered or threatened animal or plant species in the area affected by the proposed closure action. No structures on-site are considered to be of historical significance. No cemetery (private or military) is situated on the housing property.[6,17]

The area to the north of the housing property now belongs to the Town of Brookhaven, Parks and Recreation Department, but it is not currently being used. It was formerly the site of the fire-control area of the Nike battery. The missile-launch area was located south of the housing property, across Rt. 25A. That property is now the Brookhaven State Park. There is no evidence that any hazardous or toxic material was ever disposed of or managed on that property. However, a number of 55-gallon drums, rusted and in poor condition, were observed at the northern boundary of the housing area on Brookhaven State Park property.[6] Four empty drums are located on housing property; the remaining drums are to the north. A locked fence, with a "No Admittance" sign separates the two areas.

Fort Hamilton housing officials have reported that there were no drums on the former Nike fire-control site when it was sold to the Town of Brookhaven. They have no additional information on the origin or contents of these drums.[8]

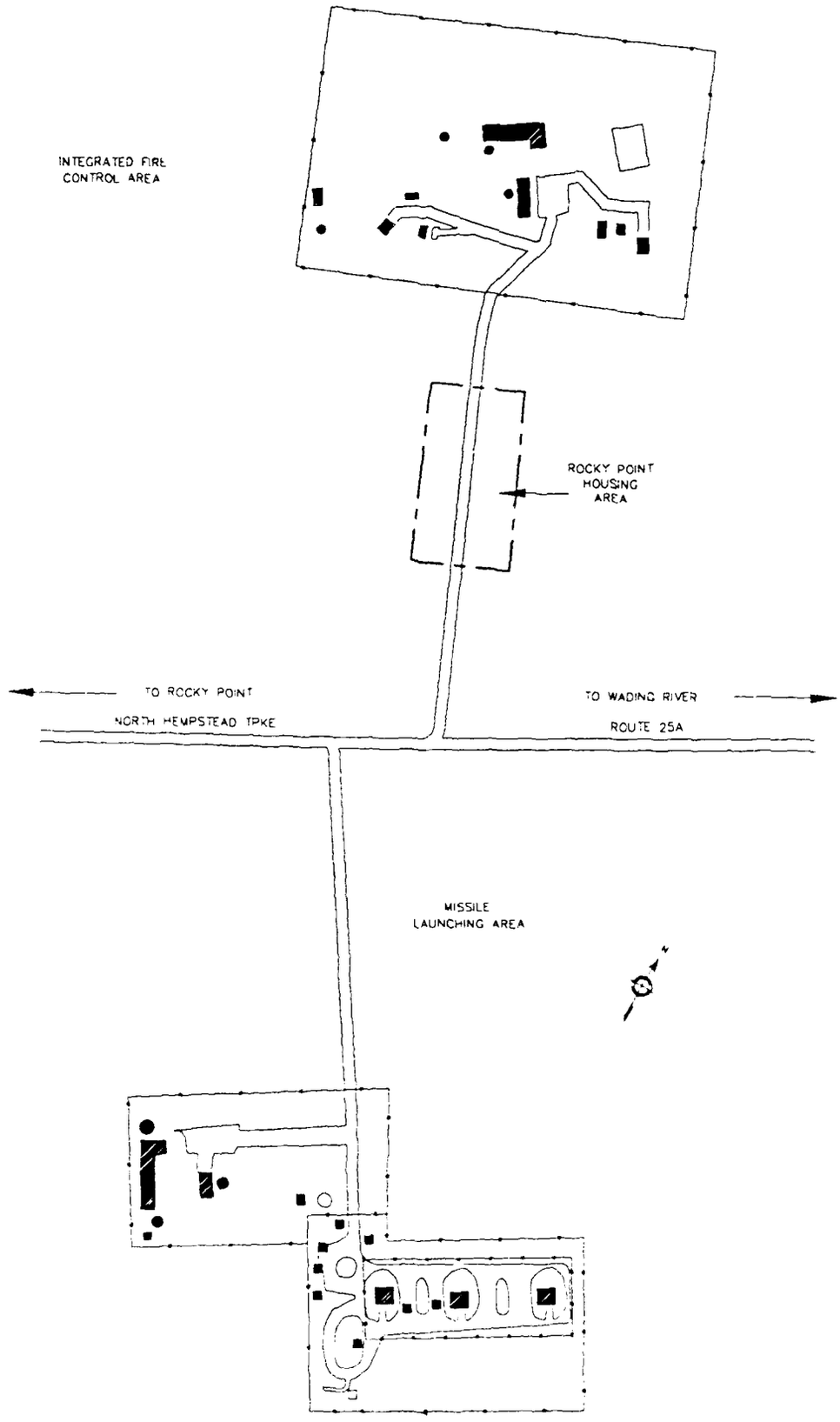


FIGURE 4 Site Plan Map of Nike Missile Battery

2.5 GEOLOGIC AND HYDROLOGIC SETTINGS

Suffolk County, Long Island, N.Y., is situated in the Coastal Plain Province of the mid-Atlantic area. It is underlain by a wedge-shaped mass of sediments, consisting of clay, sand, and gravel, which dips and thickens toward the south. These sediments are underlain by igneous and metamorphic rock, which comprise the basement rock complex. The top of the bedrock is about 610 meters below sea level in south-central Suffolk County and somewhat closer to the surface north, toward Rocky Point.

Generally, the surface soils in Suffolk County consist of layers of permeable sediments (sand and gravel) which are separated by layers of poorly permeable sediments (silts and clays). The sands and gravels, which are of glacial origin, act as aquifers. The less permeable deposits act as confining layers.[18] The following table summarizes the geologic units and the corresponding hydrologic units in the region.[18]

In north-central Suffolk County public-supply and industrial water is obtained from the upper glacial aquifer and the underlying Magothy aquifer; no water is obtained from the Lloyd (deep) aquifer in this area. (Withdrawal from the Lloyd aquifer is restricted to use by the south-shore barrier islands of Long Island.) Total public-supply withdrawal in the area in 1979 was approximately 23.2 million gallons per day (gal/d).[18] The upper glacial aquifer, the major source in the area, provided some 15.8 million gal/d, while approximately 7.4 million gal/d was provided by the Magothy aquifer. Pumpage from private wells used for farm and golf-course irrigation is unknown, but is estimated to be less than 0.5 million gal/d, all from the upper glacial aquifer.

Groundwater is the sole source of freshwater in Suffolk County (as well as adjacent Nassau County) on Long Island. Precipitation, and the corresponding natural percolation to the groundwater system, is the only source of replenishment. Precipitation averages about 45 inches per year. However, only about 50% of this is available for recharge of the groundwater system. Groundwater recharge has been reduced in recent years as a result of the increased development of sanitary sewer and storm drainage systems which ultimately discharge to the sea. As replenishment of the groundwater system is decreased, the groundwater level on the island also declines. While the two major aquifers in the region are considered capable of producing more than is currently being withdrawn, increasing development on Long Island has prompted investigations of this very serious problem.[19]

Because groundwater is the sole source of freshwater in the region, any degradation of the available aquifers by infiltration of hazardous or toxic materials is a serious concern.

The northern part of Suffolk County has a temperate marine climate that is greatly influenced by the Atlantic Ocean and Long Island Sound. Precipitation falls in almost the same total amount during the cool season as during the warm season. Storms are less severe, though more frequent, in the cool season. Most precipitation in central and eastern Long Island is in the form of rain; only 5 to 10% is in the form of snow or sleet. This is an indication of the moderating effect that the surrounding water has on temperature.[16]

TABLE Summary of Geologic and Hydrologic Units in North-Central Suffolk County, Long Island

System	Series	Geologic unit	Hydrogeologic unit
Quaternary	Holocene	Recent shore, beach, and salt-marsh deposits	Upper glacial aquifer
	Pleistocene	Moraine deposits Glaciofluvial deposits Smithtown clay (informal usage)	
		Unconformity	
		Gardiners Clay Marine Clay	Gardiners Clay Marine clay
		Unconformity	
Cretaceous	Upper Cretaceous	Matawan Group and Magothy Formation, undifferentiated	Magothy aquifer
		Unconformity	
		Raritan Formation: Unnamed clay member	Raritan confining unit
		Raritan Formation: Lloyd Sand Member	Lloyd aquifer
		Unconformity	
Paleozoic and/or Precambrian		Bedrock	Bedrock

The annual precipitation recorded at Setauket Weather Station (very close to Rocky Point) from 1930 to 1979, ranged from a maximum 56.50 inches in 1975 to a minimum 26.55 inches in 1965.[16] The long-term average annual precipitation over the nearly 40-year period is 44.44 inches. Mean monthly precipitation at Setauket over the same period ranges from 3.26 inches in February to a high of 4.27 inches in November. Precipitation, in general, increases slightly toward southern Suffolk County.

3 ENVIRONMENTALLY SIGNIFICANT OPERATIONS

3.1 ASBESTOS

In July 1989, Fort Hamilton issued a request for proposals to do a comprehensive survey of all military housing under its administration, including those units at the Rocky Point military housing area. The objective is to identify those buildings with friable and nonfriable materials containing asbestos.[20] The materials to be sampled include suspended ceiling tile, floor tile, asbestos siding, plaster-gypsum wallboard, and dust accumulated inside ductwork. The proposal also requires that the recipient contractor/laboratory doing the asbestos analysis be a participant in the Environmental Protection Agency Bulk Sample Quality Assurance Program at Research Triangle Park, N.C., and in the National Institute of Occupational Safety and Health Proficiency Analytical Testing Program. At the time of the ANL site visit, however, no contract had been awarded to do the asbestos sampling and testing at the Rocky Point housing area.

Unit #3, representative of the Rocky Point housing units, was inspected during the site visit. There was no insulation material on the heating pipes extending from the furnace. The floor tiles do not appear to be made of asbestos-containing materials. Aluminum siding covers the outside frame.

3.2 RADON

The New York Area Command (NYAC) instituted a radon surveillance program in February, 1989.[21] The radon monitoring program is to consist of two parts: (1) radon measurement and (2) radon mitigation, if necessary.

Radon detectors were distributed in March/April 1989 to residents at Rocky Point Housing. No detector was placed in vacant unit #3.[21] Monitoring is intended to continue for a period of one year.

In September 1989, ANL investigators installed radon monitors in the housing units in a separate monitoring effort under the Base Closure Program. Monitoring will last for a period of 90 days.

3.3 UNDERGROUND STORAGE TANKS

A 550-gallon underground storage tank for heating fuel is located in the front of each residence.[6,10] Inspection of the area surrounding the nearby fill pipe at some of the residences showed minor soil stains probably resulting from inadvertent spills during tank refilling. In 1986, the original tanks were replaced with fiberglass tanks (underground piping is black wrought iron painted with asphaltum). (Four of the replacement fuel storage tanks were positioned above-ground adjacent to the homes.) No documentation was found to indicate that failure or suspected leaks prompted the replacement. There is no documentation that soil sampling was performed during the tank replacement operation.[6]

3.4 PCB TRANSFORMERS

Two transformers on one pole and one transformer on another pole, serving the housing units, are located on the east side of Defense Hill Road near the middle of the block. These transformers are owned by the Army. There was no evidence of oil spillage on the ground underneath the transformers. Personnel at Fort Hamilton had no record whether the transformers had been tested for the presence of PCBs. A PCB warning label was not displayed.[6]

3.5 WASTEWATER DISPOSAL

Since the beginning of 1989, there have been failures in the sewage systems at several of the homes in the housing facility. According to local residents, the septic pipes in unit #11 collapsed in January and raw sewage backed up into the home. The lead lines from the house to the septic tank and leach well were replaced by Dual County Cess Pool, a local contractor. Some time later, the same problem occurred in units #13 and #6. Those lead lines were also replaced. A maintenance contract was formed with Dual County Cess Pool to clean the system lines in each residence twice per year beginning in November 1989.[6]

There is no documentation that regular maintenance was performed on the sewage systems at the Rocky Point housing area in previous years. According to Fort Hamilton personnel, the above-ground water tank and pump house at the northern boundary of the housing facility was used by Nike base personnel to clean the septic lines at the housing facility. This claim is unsubstantiated.[6]

4 KNOWN AND SUSPECTED RELEASES

No major releases or impacts to the environment have occurred at the Rocky Point housing area. Minor fuel oil stains, resulting from inadvertent spills during tank refilling, are evident on the ground at underground tank fill pipes at some residences. No other hazardous materials or hazardous wastes are stored on site.

One area of concern is the aging sewage system at the Rocky Point property. After 30 years, the septic systems may be reaching the limit of efficient operation. Backups of raw sewage into at least three of the homes produced a clear health hazard for the residents.

Of immediate concern, however, is the presence of approximately 54 discarded 55-gallon drums at the northern end of the housing property. Four of the drums are located on the housing property itself. The rest are located beyond the fenced property boundary. Although that land is now owned by the Town of Brookhaven, Parks and Recreation Department, it was formerly the location of the IFC area of the Nike battery. The drums are rusted and in poor condition. Some are without tops and empty. Others are closed. Because of the locked fence with the "No Admittance" sign, it was not possible to verify whether these closed drums are empty. There was no evidence of discharges from any of these drums, and no obvious signs of releases were observed inside the housing area.

5 PRELIMINARY ASSESSMENT CONCLUSIONS

This housing property was originally developed in support of the Nike missile battery near Rocky Point, N.Y. The former fire-control area was immediately north of the housing site. The missile-launch area was a short distance to the south. There is no evidence, however, that any wastes associated with the Nike battery operation were ever delivered to or managed at the housing property. A number of deteriorated 55-gallon drums were observed at and beyond the northern property boundary. A locked fence between the properties prevented close inspection of the discarded drums. Because the property is located on an incline, any runoff from the drum area (property now owned by the Town of Brookhaven) flows directly into the housing area. The groundwater in the region is at risk from any releases of hazardous constituents to the ground surface since it is replenished solely by percolation of precipitation.

The septic system at the housing facility was installed more than 30 years ago. Continued operational problems, such as sewage blockages at several locations and some sewage backups into residences, indicate that the septic systems may be nearing the end of their useful lives. Apparently, for several years, no preventative maintenance was performed. In 1989, renovations at several of the septic systems were performed, and a regular maintenance program, including cleanout of the lead lines from all the housing units, was begun.

It is not known whether three Army-owned transformers on site, which show no signs of leakage, have been tested for the presence of PCBs.

6 RECOMMENDATIONS

On the basis of currently available information, the Rocky Point housing area does not present an imminent or substantial threat to human health and the environment. Fort Hamilton housing authorities have initiated actions to investigate possible asbestos and radon problems at the housing site. These actions should continue to completion.

The abandoned drums on adjacent property at the northern boundary of the housing property must be further investigated to determine whether they contain hazardous materials. (A locked fence prevented closer inspection at the time of the site visit.)

The three on-site electrical transformers should also be sampled for the presence of PCBs and labeled accordingly.

These recommendations assume that this property will most likely continue to be used for residential housing.

REFERENCES

1. *Base Realignments and Closures*, Report of the Secretary's Commission (Dec. 1988).

2. Nike Hercules Site - NY25, Rocky Point, New York; U.S. Army Building Schedule/ Building Use.

3. *Report of Excess Real Property Nike NY25, N.Y. (Installation #36650)*, prepared for Commander, U.S. Army Forces Command, Fort McPherson, Ga., by Fort Hamilton, Brooklyn (March 27, 1974).

4. *Report of Excess NYD 307, Portion of New York Defense Area, Nike Battery 25, New York*, prepared for Corps of Engineers, New York District, New York City, by Fort Hamilton (May 15, 1975).

5. *Final Report of Excess NYD-307, Portion of New York Defense Area, Nike Battery 25, New York*, prepared for U.S. General Services Administration, New York City, by the U.S. Army Corps of Engineers, New York District, New York City (June 2, 1975).

6. New York Military Housing Site Visit Notes by ANL investigators (Aug. 7-11, 1989).

7. Modification of Storm Drainage, Nike Site NY25, Rocky Point, N.Y., Office of Post Engineer, Fort Totten, N.Y. (May 10, 1962).

8. Letter from Anthony Pierro, Department of the Army, Office of the Director of Engineering and Housing (NYAC), Fort Hamilton (Oct. 1989).

9. Rocky Point Housing, Utilities Plan - Sanitary & Water, figure prepared by Turano - Gardner Associates (architectural firm), New York City, for the U.S. Army Corps of Engineers, New York District, New York City (April 12, 1957 to May 10, 1960).

10. Replacement of 16 Fuel Tanks, figures (2) prepared by Brodsky & Adler (architectural firm), New York City, for the U.S. Army, Office of the Facility Engineer, Headquarters of the New York Area Command (1986).

11. Information Checklist for Rocky Point Housing (Nike Site 25), Rocky Point, N.Y., prepared by Fort Hamilton.

12. U.S. Army Corps of Engineers, Huntsville Div., *Investigation of Former Nike Missile Sites for Potential Toxic and Hazardous Waste Contamination*, Law Engineering and Testing Co., LEG-Government Services Division, LEG Job #601 (March 1986).

13. U.S. Army Toxic and Hazardous Materials Agency, *Historical Overview of the Nike Missile System*, prepared by B.N. McMaster et al., Environmental Science and Engineering, Inc., for USATHAMA Assessments Div., Aberdeen Proving Ground, Md. (Dec. 1984).

14. Ownership and Use of Defense Hill Road, Rocky Point Housing Area, Long Island, New York, memo prepared by Facilities Engineers, Fort Hamilton, N.Y. for Commander, New York Area Command, New York (Jan. 7, 1982).

15. *Appraisal of Hydrogeologic Conditions in Suffolk County, New York (NY 68-061)*, by Richard K. Krulikas (March 1968 - December 1981) summarized in the report *Water Resources Investigations in New York*, U.S. Geological Survey by Anne Finch, Albany, N.Y. (1981)

16. Koszalka, E.J., *Geohydrology of the Northern Part of the Town of Brookhaven, Suffolk County, New York*, U.S. Geological Survey, Water-Resources Investigation Report 83-4042, Syosset, N.Y. (1984).

17. Historical Significance and Flood Hazard, memo prepared by Fort Hamilton regarding Rocky Point Housing for the U.S. Army Corps of Engineers, New York District, New York (July 7, 1976).

18. *Geologic Reconnaissance of an Extensive Clay Unit in North-Central Suffolk County, Long Island, New York*, by R.K. Krulikas and E.J. Koszalka, U.S. Geological Survey, Water Resources Investigations 82-4075, Syosset, N.Y. (1983).

19. *Ground-Water-Recharge Rates in Nassau and Suffolk Counties, New York*, by D.S. Peterson, U.S. Geological Survey, Water-Resources Investigations Report 86-4181, Syosset, N.Y. (1987).

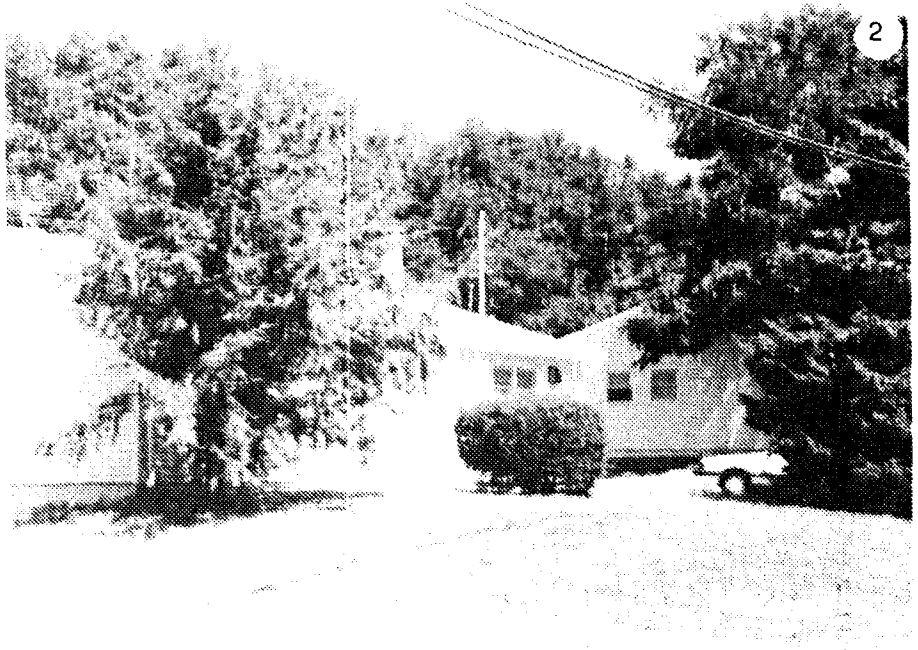
20. Work order for a comprehensive survey of asbestos at Fort Hamilton, N.Y., and housing units under its administration (July 1989).

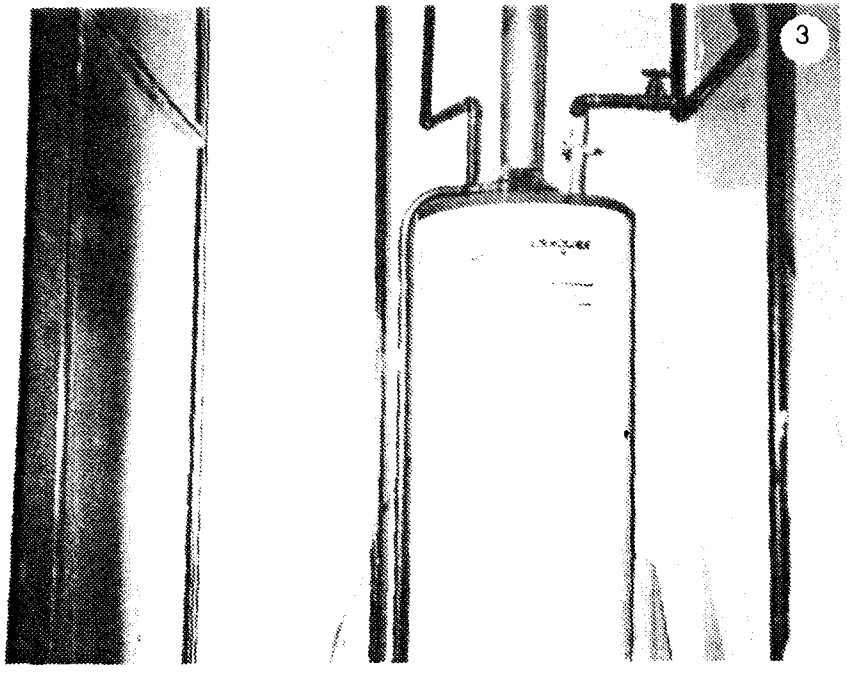
21. Radon Surveillance Program order from the Department of Engineering and Housing, New York Area Command (Feb. 1989).

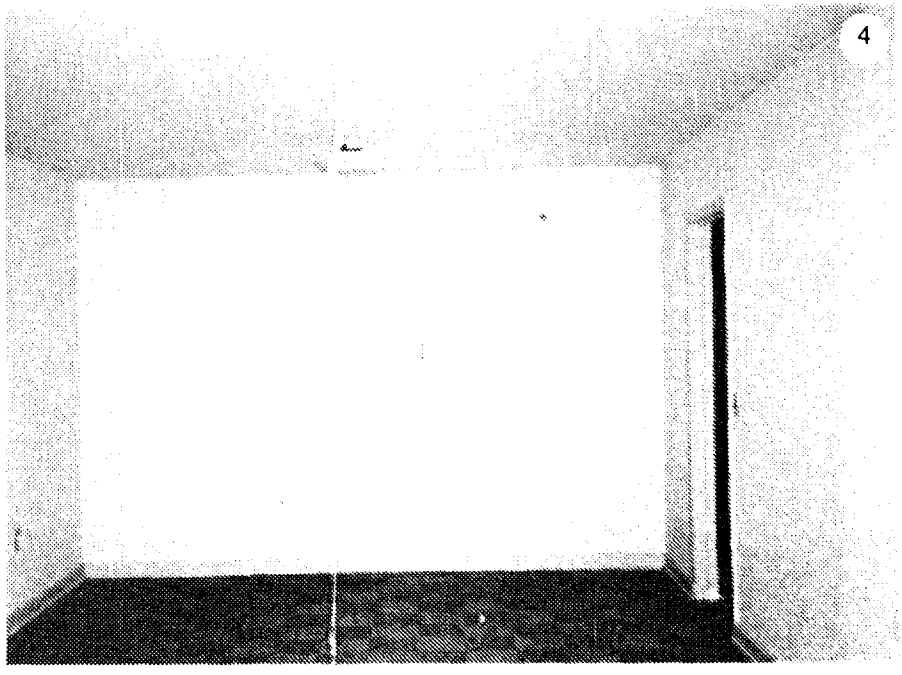
APPENDIX:

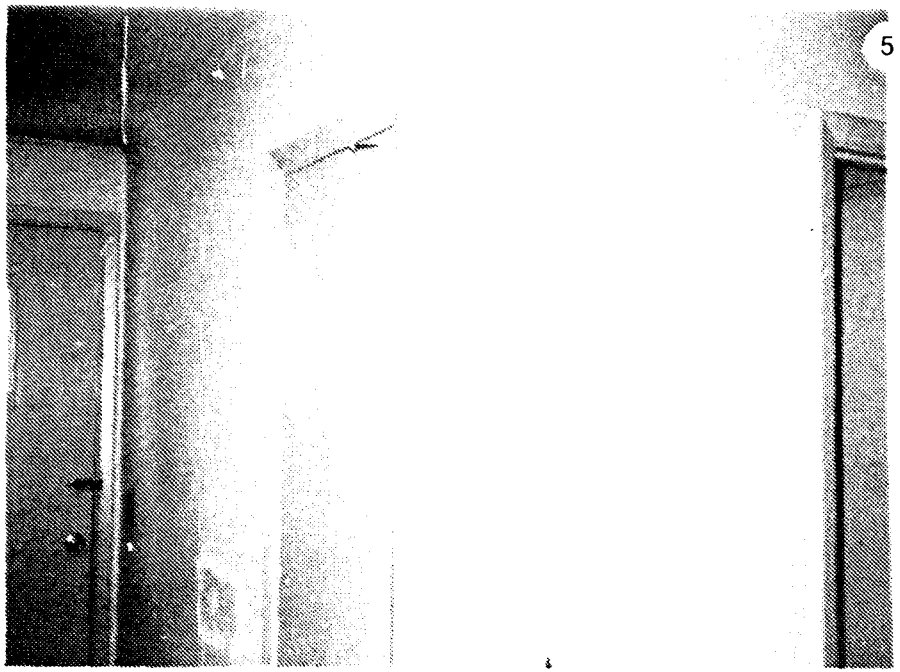
PHOTOGRAPHS OF ROCKY POINT HOUSING FACILITY AND SURROUNDING LAND

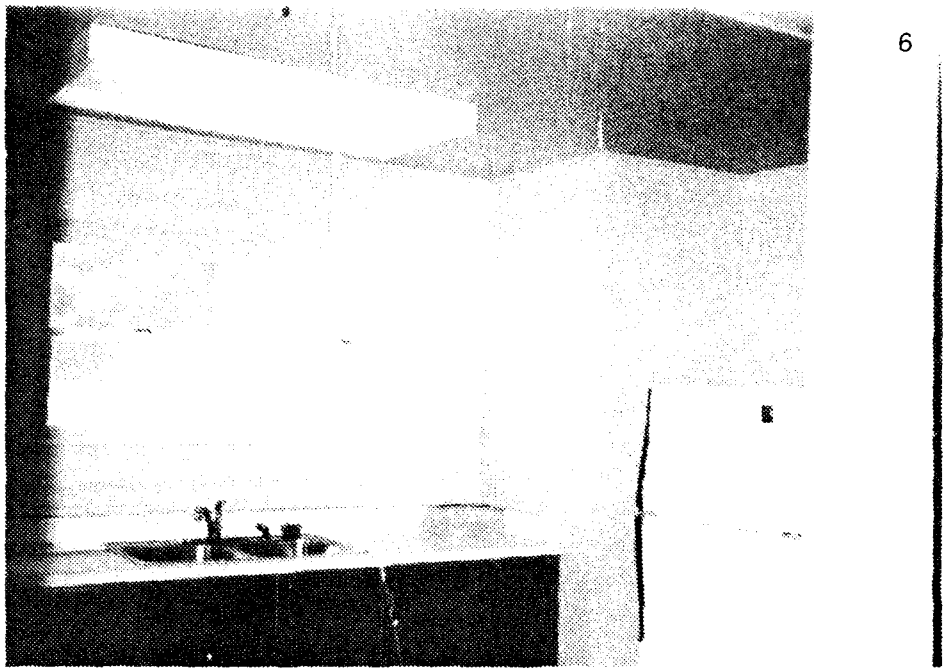

1

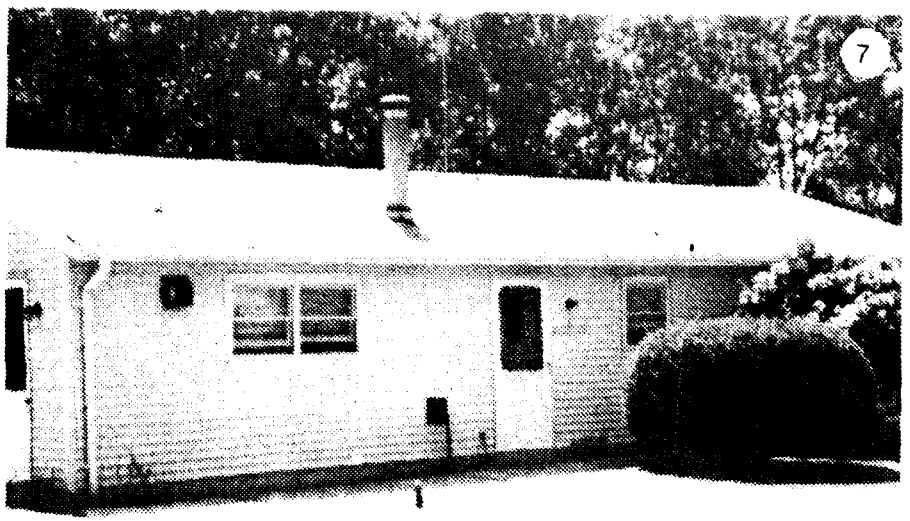

2

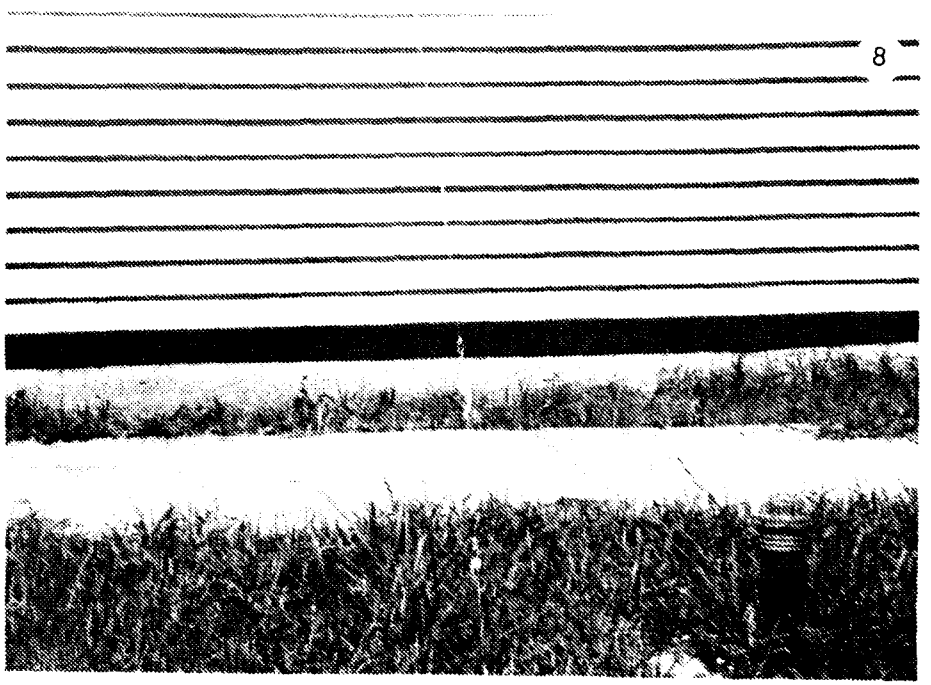

3


4

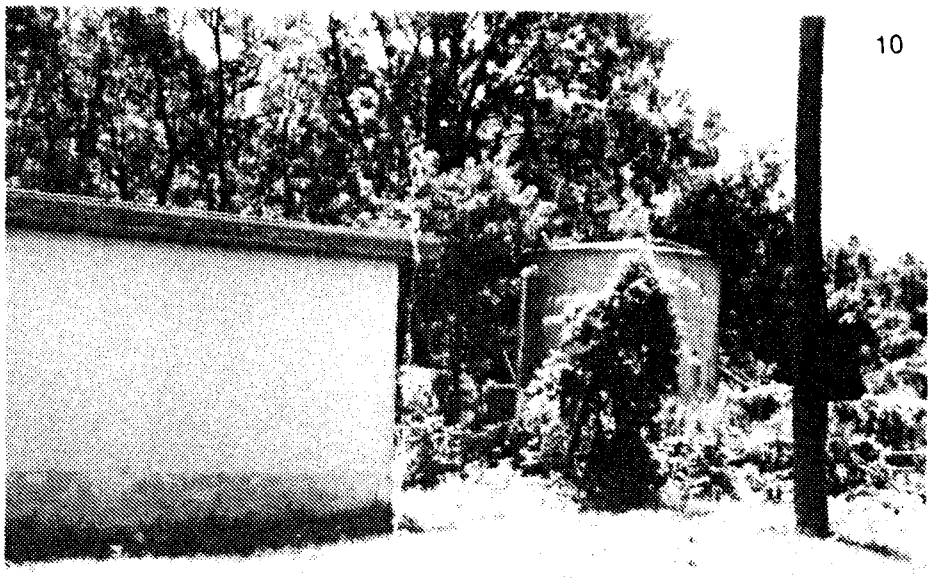

5


6


7


8

9



10

11

12

13


14


15


16

IDENTIFICATIONS OF PHOTOGRAPHS

1. Typical unit at Rocky Point housing; note concrete slab foundation.

2. Typical unit at Rocky Point housing; property east and west of housing site is primarily undeveloped county property.

3. Oil-fired furnace (to left) and propane hot water heater; typical for all housing units.

4. Interior of housing unit; note furnace heating duct vent on floor.

5. Interior of housing unit.

6. Kitchen typical of all units.

7. All units have a 550-gallon fiberglass underground storage tank for fuel oil located near the front door; note the fill pipe and vent pipe.

8. Fill pipe for fuel oil underground storage tank.

9. North view along access road toward turnaround loop, water-storage tank, and Brookhaven Park property.

10. A large water-storage tank and pumphouse, dating from the time the housing area was part of the Nike site, at the northern end of housing property; tank and pumphouse were located farther to north when Nike site was operating.

11. Playground for children of the housing residents is located between the water tank and pumphouse; the door to the pumphouse had been broken, presumably by children.

12. A large dumpster, one at each end of the property, is used for trash collection.

13. At the northern border of the housing property, a fence separates it from the former Nike fire-control area; that property is now owned by the town of Brookhaven.

14. Four empty 55-gallon drums are abandoned on the housing property, just south of Brookhaven Park area fence.

15. North of the housing area on Brookhaven Park property are located approximately 50 drums of 55-gallon capacity each; this property is the former Nike fire-control area.

16. Looking south along the access road, at the northern end of the property, toward entrance on Rt. 25A, North Hempstead Turnpike.