



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1

JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

N00129.AR.000643
NSB NEW LONDON
5090.3a

June 26, 1998

Mark Evans, Remedial Project Manager
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Re: Record of Decision for the Rubble Fill Area at Bunker A-86

Dear Mr. Evans:

I am enclosing the fully executed original of the Record of Decision for the Rubble Fill Area at Bunker A-86. As you know, a copy should be placed in the Administrative Record.

I appreciate your efforts in meeting this commitment and look forward to working with you toward the cleanup of other areas of the Naval Submarine Base in Groton, CT. Please do not hesitate to contact me at (617) 573-5777 should you wish to discuss anything regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Kimberlee Keckler".

Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Enclosure

cc: Mark Lewis, CTDEP, Hartford, CT
Jeff Sullivan, NSBNL, Groton, CT
David Peterson, USEPA, Boston, MA
Mary Sanderson, USEPA, Boston, MA

RECORD OF DECISION

**SOURCE CONTROL OPERABLE UNIT
SITE 4 - RUBBLE FILL AREA AT BUNKER A-86**

**NAVAL SUBMARINE BASE - NEW LONDON
GROTON, CONNECTICUT**

JUNE 1998

TABLE OF CONTENTS

	<u>Page</u>
TABLE OF CONTENTS.....	i
DECLARATION FOR THE RECORD OF DECISION.....	ii
I. SITE NAME, LOCATION, AND DESCRIPTION	1
II. SITE HISTORIES AND ENFORCEMENT ACTIVITIES	4
III. COMMUNITY PARTICIPATION	6
IV. SCOPE AND ROLE OF RESPONSE ACTION.....	8
V. SUMMARY OF SITE CHARACTERISTICS.....	8
VI. SUMMARY OF SITE RISKS.....	9
VII. DOCUMENTATION OF NO SIGNIFICANT CHANGES.....	9
VIII. STATE ROLE.....	9

LIST OF FIGURES

Figure 1-1: NSB-NLON Location	2
Figure 1-2: Location of the Site 4 at the NSB-NLON	3

LIST OF APPENDICES

Appendix A: Declaration of Concurrence	
Appendix B: Responsiveness Summary	

DECLARATION FOR THE RECORD OF DECISION

Site Name and Location:

Site 4 - Rubble Fill Area at Bunker A-86 (Site 4)
Naval Submarine Base - New London (NSB-NLON)
Groton, CT

Statement of Basis and Purpose:

This document presents the no further action decision for the soils at the Site 4 at the NSB-NLON in Groton, CT. Groundwater at the Site 4 will be addressed as part of the basewide groundwater management strategy for the NSB-NLON as part of a separate Record of Decision (ROD). This decision document was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 U.S.C. Subsection 9601 *et seq.*) and the National Contingency Plan (NCP) (40 C.F.R. Part 300). This decision document is based on the Administrative Record for the site, which is available for public review.

The Connecticut Department of Environmental Protection concurs with the selected remedy (*see* Appendix A).

Description of the Selected Remedy:

No further action is necessary to protect human health and the environment.

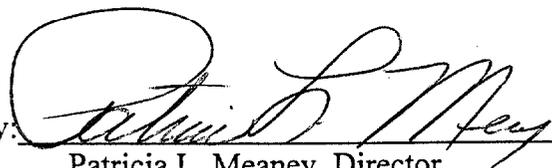
Declaration Statement:

No further remedial action is necessary to ensure protection of human health and the environment at the Site 4. A previous removal action eliminated the need to conduct additional remedial action. No 5-year reviews are necessary. The foregoing represents a determination by the U.S. Navy and the U.S. Environmental Protection Agency that no remedial action is necessary under CERCLA at Site 4.

Concur and recommended for immediate implementation:

By: 
Captain R. M. Nestlerode
Commanding Officer, U.S. Navy
U.S. Submarine Base
Groton, CT

Date: 17 Jun 98

By: 
Patricia L. Meaney, Director
Office of Site Remediation and Restoration
U.S. Environmental Protection Agency, Region I
JFK Federal Building (HIO)
Boston, MA

Date: 26 June 98

DECISION SUMMARY

I. SITE NAME, LOCATION, AND DESCRIPTION

The United States Navy Submarine Base - New London (NSB-NLON) was placed on the National Priorities List (NPL) on August 30, 1990 by the United States Environmental Protection Agency (EPA) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. There are several sites within NSB-NLON that are being addressed by CERCLA. This Record of Decision (ROD) relates to soil at the Rubble Fill Area at Bunker A-86 (Site 4) within the NSB-NLON.

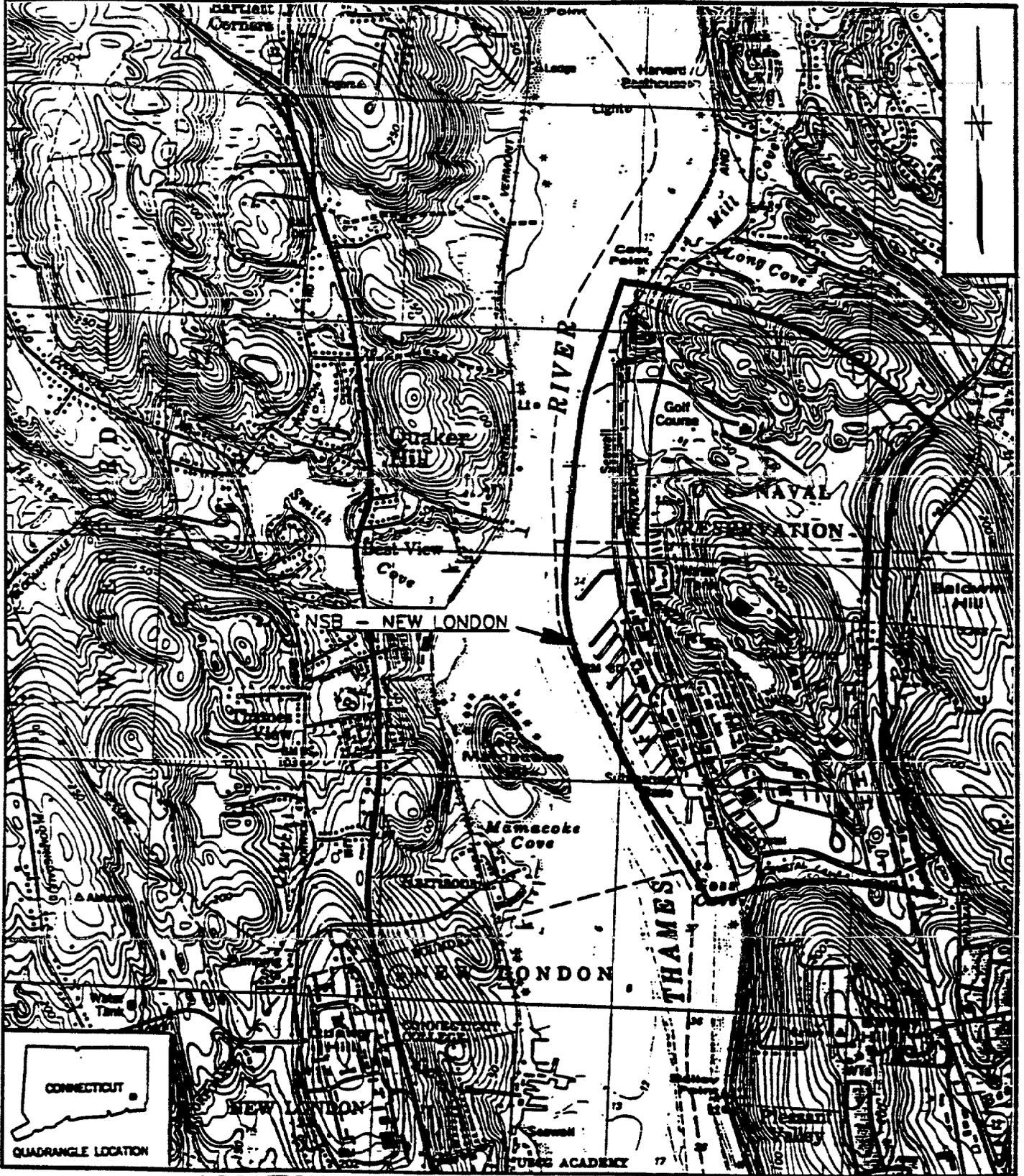
The NSB-NLON consists of approximately 547 acres of land and associated buildings in southeastern Connecticut in the towns of Ledyard and Groton. NSB-NLON is situated on the east bank of the Thames River, approximately 6.0 miles north of Long Island Sound, and is bounded to the east by Connecticut Route 12, to the south by Crystal Lake Road, and to the west by the Thames River. The northern border is a low ridge that trends approximately east-southeast from the river. Figures 1-1 and 1-2 show the NSB-NLON location and the Site 4 location, respectively.

NSB-NLON currently serves as a major support center for the U.S. Atlantic fleet. Additionally, NSB-NLON includes housing for Navy personnel and their families, submarine training facilities, military offices, medical facilities, and facilities designed for the maintenance, repair, and overhaul of submarines.

Land use adjacent to the NSB-NLON is generally residential or commercial. Residential developments border the NSB-NLON to the north and extend north into the Gales Ferry section of Ledyard. Property along Route 12 to the east of the NSB-NLON consists of widely spaced private homes and open, wooded land. Further south on Route 12, development is a mixture of commercial and residential properties that include automobile sales and repair facilities, convenience stores, restaurants, a church, and a gasoline station. Private residences and an automobile service station are located along the south side of the NSB-NLON along Crystal Lake Road; further south is housing for Navy personnel.

The Groton Water Department supplies potable water to NSB-NLON. The primary sources of the Groton water supply are reservoirs that are supplemented with wells. The water supplies are located within the Poquonock River Watershed, located east of NSB-NLON, which is not within the NSB-NLON watershed. Groundwater at NSB-NLON is not used for potable water.

The land around NSB-NLON consists of a series of low bedrock ridges that trend generally north to south. Lowlands between the ridges are commonly wetlands and poorly drained stream



LOCATION MAP
NSB - NEW LONDON
GROTON, CONNECTICUT

FIGURE 1-1

0 2000 4000
 SCALE IN FEET

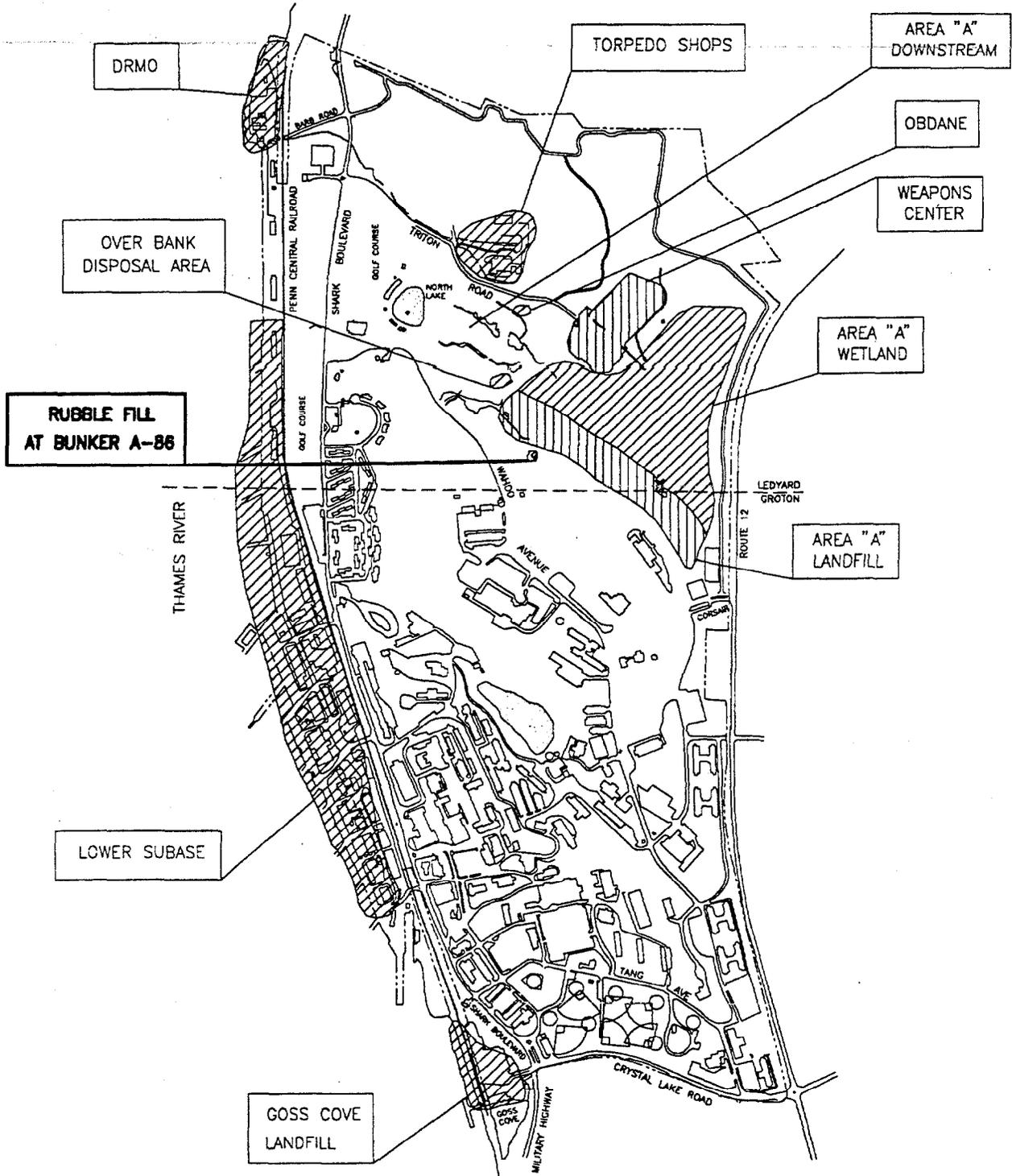


FIGURE 1-2. Location of Site 4

valleys. The topography of NSB-NLON is dominated by bedrock ridges in the northern (elevation 180 feet mean sea level [MSL]) and central (elevation 230 feet MSL) portions of the NSB-NLON, as well as an off-site ridge (Baldwin Hill, elevation 245 feet MSL) to the east. The low-lying area (elevation 50 feet MSL) between these ridges slopes to the west (USGS, 1984). The Thames River, adjacent to the west of NSB-NLON, is flanked by glacially-derived terrace deposits and more recent flood-plain deposits.

Site 4 is located southwest of the Area A Landfill. The size of the site is approximately 25 feet in width by 60 feet in length. The site is on a wooded hillside that slopes to the north-northeast at a grade of approximately 40 percent. The Initial Assessment Study (IAS) indicated that discarded construction materials including concrete, asphalt, an electric motor, tar buckets, wood, and gravel were present at the site.

Navy contractors inspected the site on October 20, 1988 and noted that the majority of the material present at that time was construction debris (wood and concrete). Chemical containers found at the base of the fill during this inspection included an empty 5 gallon container of monothanolamine (labeled as corrosive) and an empty 5 gallon container of thorite (labeled as non-shrinking compound for patching concrete) and a 55 gallon drum of lube oil that was approximately 10 percent full.

II. SITE HISTORIES AND ENFORCEMENT ACTIVITIES

A. Site History

In 1867, the state of Connecticut donated a 112-acre parcel on the east bank of the Thames River to the Navy. The Navy began using the property in 1868 when it was officially designated as a Navy Yard. The property was then used as a mooring site for small craft and obsolete warships, and as a coaling station for the Atlantic fleet.

The Navy designated the site a Submarine Base in 1916. During World War I, facilities at the base were expanded extensively; 6 piers and 81 buildings were added. In 1917, a submarine school was established and the Submarine Medical Center was founded one year later.

NSB-NLON experienced another period of growth during World War II. Between 1935 and 1945 the Navy built in excess of 180 buildings and expanded NSB-NLON from 112 to 497 acres through the acquisition of adjacent land.

The growth of NSB-NLON continued after World War II. The Medical Research Laboratory was established in 1946. In 1968 the status of the Submarine School was changed from an activity to a command and became the largest tenant on the base. The Naval Submarine Support Facility was established in 1974 and the Naval Undersea Medical Institute was established in

1975. NSB-NLON currently consists of over 300 buildings on 547 acres of land (U.S. Navy, 1988).

Enforcement History

Previous investigations and the enforcement history of the Site 4 are summarized below:

- ***Installation Restoration Program (IRP), 1975.*** In response to the growing awareness of the potential effects of hazardous materials on human health and the environment, the Department of Defense (DOD) developed the IRP to investigate and clean up potential problem areas created by past events at federal facilities. The IRP was the catalyst for environmental investigations at the NSB-NLON. All environmental investigations performed to date at Site 4 have been conducted under the IRP.
- ***Initial Assessment Study (IAS), Envirodyne Engineers, Inc. (Envirodyne), 1982.*** The purpose of the IAS was to identify and evaluate past hazardous waste disposal practices at the NSB-NLON and to assess the associated potential for environmental contamination. In the IAS report, Envirodyne recommended further investigation and testing of areas, including Site 4.
- ***Verification Study, Wehran Engineering, Inc., 1988.*** The purpose of the Verification Study was to determine whether toxic and hazardous materials identified in the IAS were present on site, and to further assess the potential impact of the contamination on human health and the environment. The presence of hazardous contaminants at Site 4 was confirmed during this study.
- ***NSB-NLON is Placed on the National Priorities List (NPL) by the EPA, 1990.***
- ***Phase I Remedial Investigation (RI) NSB-NLON, Atlantic Environmental Services, Inc., 1992.*** Site 4 was identified as one of several NSB-NLON sites posing potential risks to human health and the environment.
- ***Federal Facility Agreement (FFA) for NSB-NLON, January 5, 1995.*** The Navy entered into an FFA with EPA and the Connecticut Department of Environmental Protection (CTDEP) regarding the cleanup of environmental contamination at NSB-NLON. The FFA establishes the roles and responsibilities of each agency, sets deadlines for the investigation and cleanup of hazardous waste sites, and establishes a mechanism for the resolution of disputes among the agencies. Site 4 was included among the list of sites of concern.

- ***Phase II Remedial Investigation (RI), Brown & Root Environmental, March 1996.*** Work performed during the Phase II RI addressed and filled data gaps from the Phase I RI and previous investigations in order to further delineate the degree and extent of contamination. A quantitative risk assessment indicated that threats to human health and the environment exist at the Site 4.
- ***Final Report for Soil Remediation, Site 4 - Rubble Fill Area at Bunker A-86, OHM Remediation Services Corporation, July 1997.*** The post-removal report summarized the soil excavation activities and documented that no contaminated soil remains at the site. Pre-excavation leachability tests were also reported.

III. COMMUNITY PARTICIPATION

Throughout the history of the contamination investigations and enforcement activities at NSB-NLON, the community has been involved. The Navy has kept community members and other interested parties aware of site activities through informational meetings, published fact sheets and information updates, press releases, public meetings, and Restoration Advisory Board (RAB) meetings.

The Technical Review Committee was established in 1988 and was reorganized in late 1994 and renamed the RAB. The RAB has been an important vehicle for community participation in the NSB-NLON IRP. The RAB consists of representatives of the U.S. Navy, EPA, CTDEP, planners and officials of neighboring towns, Navy and EPA contractors, and local residents with scientific knowledge of or other interest in the sites. The RAB meets regularly to review technical aspects of the NSB-NLON IRP and provides a mechanism for community input to the program.

To ensure that the community is well informed about NSB-NLON IRP activities, the Navy has provided and will continue to provide the public with the following sources or vehicles of information.

- ***Public Information Repositories.*** The Public Libraries in Groton and Ledyard, are the designated information repositories for the NSB-NLON IRP.
- ***Key Contact Persons.*** The Navy has designated a Public Affairs Officer as an information contact for NSB-NLON. Their addresses and phone numbers are included in all information materials distributed to the public, including

any fact sheets or press releases. The Public Affairs Officer maintains the site mailing list to ensure that all interested individuals receive more pertinent information on the IRP activities. Representatives from the Navy, EPA, and the Connecticut Department of Environmental Protection attend all public meetings and hearings.

- ***Mailing List.*** To ensure that information materials reach the individuals who are interested in or affected by the IRP activities at NSB-NLON, the Navy maintains and regularly updates a mailing list of interested persons. Anyone interested in being placed on the list can do so by contacting the NSB-NLON Public Affairs Officer.
- ***Regular Contact With Local Officials.*** The Navy meets regularly to discuss the status of the IRP with the RAB, which includes representatives from neighboring towns. The Navy contacts other town officials as-needed.
- ***Press Releases and Public Notices.*** The Navy continues to issue press releases to local media sources to announce public meetings and comment periods, the availability of the IRP reports and plans, and to provide general information updates.
- ***Public Meetings.*** The Navy holds informal public meetings to keep residents and town officials informed about IRP activities at the NSB-NLON and significant milestones in the IRP. The meetings include presentations by Navy technical staff, EPA personnel, and/or support contractors for both agencies. The meetings also include a question-and-answer period. Minutes of meetings during public comment periods are included in the Administrative Record for public reference.
- ***Fact Sheets and Information Updates.*** The Navy has developed fact sheets that are mailed to interested individuals and used as handouts at the public meetings. Each fact sheet includes a schedule of upcoming meetings and other site activities. The fact sheets may explain why the Navy is conducting certain activities or studies, update readers on potential health risks, or provide general information on the IRP process.

A detailed formal NSB-NLON Community Relations Plan was published in February of 1994. The plan identifies issues of community interest and concern regarding the NSB-NLON. The plan also describes a program of community relations activities that the Navy will conduct during the IRP.

The activities of the community relations program outlined in this plan have the following specific objectives: (1) to keep local officials, citizens, military personnel, and the media informed of site activities; (2) to increase community awareness of the goals and procedures of the IRP; and (3) to provide opportunities for public involvement in the cleanup process.

The information in the Community Relations Plan is based upon:

- interviews with area residents and local officials conducted in Groton and Ledyard on October 2-3, 1991;
- interviews with area residents and local officials conducted by phone in September and October of 1991;
- input from the RAB that regularly met to discuss progress at NSB-NLON;
 - public comments and questions at public information meetings held in 1990 and 1991;
- review of Navy site files; and
- discussions held with Navy, EPA, contractors, and technical and public affairs staff.

The Navy held several meetings to inform the public about the Site 4 investigations, studies, and cleanup activities.

The Navy published a notice and brief analysis of the Proposed Plan in the *New London Day* on April 29, 1998 and made the plan and a copy of the administrative record documents available to the public at the Groton Public Library, and the Bill Library.

The public comment period on the Site 4 Proposed Plan closed on May 29, 1998. A public meeting was held on May 6, 1998. No significant comments opposing the preferred alternative were received.

IV. SCOPE AND ROLE OF RESPONSE ACTION

Actual or threatened releases of hazardous substances from this site do not present an imminent or substantial endangerment to public health, welfare, or the environment. Unacceptable exposures to hazardous substances from this site will not occur. As a result, the method chosen for remediation of soils at the Site 4 is no action.

V. SUMMARY OF SITE CHARACTERISTICS

The Rubble Fill Area at Bunker A-86 (Site 4) is located on the hillside overlooking the southwest end of the Area A Landfill. The site is approximately 25 feet in width by 60 feet in length.

Construction debris was disposed at the site, including chunks of concrete and asphalt, tar buckets, wood, and gravel. Contaminants that have been detected at the site include Polynuclear Aromatic Hydrocarbons, bis(2-ethyl hexyl)phthalate, arsenic, antimony, beryllium, manganese, and vanadium.

In order to facilitate construction of an upgradient interceptor trench at the Area A Landfill, soil at Site 4 needed to be removed. A removal action was completed in May 1997, during which approximately 300 cubic yards of contaminated soil were removed from the Rubble Fill Area at Bunker A-86 (Site 4). Since bedrock was encountered during the excavations, it was not physically possible to scrape anymore soil off of the bedrock hillside. All soils excavated from Site 4 were placed underneath the RCRA C cap at the adjacent Area A Landfill. The wood debris, however, was disposed off-site. Since no additional soil remained on the site, post removal confirmatory sampling was not possible.

VI. SUMMARY OF SITE RISKS

As explained above, all of the contaminated soils at Site 4 were effectively removed. Therefore, no contaminated soils exist at the site that could pose an unacceptable risk to either human or ecological receptors because no exposure pathway exists.

VII. DOCUMENTATION OF NO SIGNIFICANT CHANGES

The Navy presented a proposed plan for the remediation of Site 4 on April 29, 1998. Based on the previous response action and the risk assessment, the Navy and EPA believe that no further action is required at the Site 4.

The final remedy selected, as described in this document, does not differ significantly from the proposed plan.

VIII. STATE ROLE

The CTDEP has indicated its support for the selected remedy. The CTDEP concurs with the selected remedy for the Site 4. A copy of the declaration of concurrence is attached as Appendix A.

APPENDIX A

DECLARATION OF CONCURRENCE