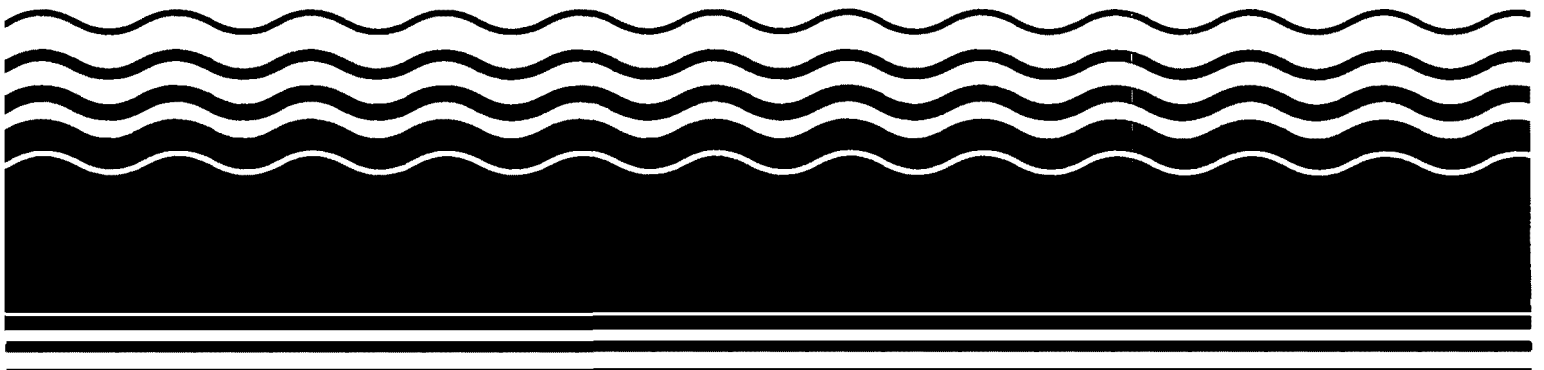




# **Superfund Record of Decision:**

Naval Air Engineering Center  
(Operable Unit 9), NJ



<b>REPORT DOCUMENTATION PAGE</b>		<b>1. REPORT NO.</b> EPA/ROD/R02-93/209	<b>2.</b>	<b>3. Recipient's Accession No.</b>	
<b>4. Title and Subtitle</b> SUPERFUND RECORD OF DECISION Naval Air Engineering Center (Operable Unit 9), NJ Ninth Remedial Action				<b>5. Report Date</b> 06/21/93	
<b>7. Author(s)</b>				<b>8. Performing Organization Rept. No.</b>	
<b>9. Performing Organization Name and Address</b>				<b>10. Project Task/Work Unit No.</b>	
				<b>11. Contract(C) or Grant(G) No.</b> (C) (G)	
<b>12. Sponsoring Organization Name and Address</b> U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460				<b>13. Type of Report &amp; Period Covered</b> 800/800	
				<b>14.</b>	
<b>15. Supplementary Notes</b> PB94-963818					
<b>16. Abstract (Limit: 200 words)</b>  The Naval Air Engineering Center (Operable Unit 9) site is part of the 7,400-acre Naval Air Warfare Center Aircraft Division located in Lakehurst, Ocean County, New Jersey, approximately 14 miles inland from the Atlantic Ocean. Land use in the area is predominantly undeveloped woodlands, open areas, and limited commercial and industrial areas, with the closest residential area, the Borough of Lakehurst, located southeast of the facility. The Naval Air Engineering Center (NAEC),-which lies within the Toms River Drainage Basin, contains over 1,300 acres of flood-prone areas. The estimated 65,400 people who reside in the vicinity of NAEC, use municipal wells to obtain their drinking water supply. Some private wells exist, but these are used primarily for irrigation purposes. In 1916, Eddystone Chemical Company leased the property to develop an experimental firing range for testing chemical artillery shells. In 1919, the U.S. Navy assumed control of the property, and it was formally commissioned Naval Air Station (NAS) Lakehurst in 1921. In 1974, the NAEC was moved from the Naval Base in Philadelphia to NAS Lakehurst. The NAEC's mission is to conduct research, development, engineering, testing and systems integration, limited production, and procurement for aircraft and airborne weapons systems. Historically, various operations at NAEC have required the use, handling, storage, and occasional onsite  (See Attached Page)					
<b>17. Document Analysis</b>					
<b>a. Descriptors</b> Record of Decision - Naval Air Engineering Center (Operable Unit 9), NJ Ninth Remedial Action Contaminated Medium: None Key Contaminants: None					
<b>b. Identifiers/Open-Ended Terms</b>					
<b>c. COSATI Field/Group</b>					
<b>18. Availability Statement</b>			<b>19. Security Class (This Report)</b> None		<b>21. No. of Pages</b> 14
			<b>20. Security Class (This Page)</b> None		<b>22. Price</b>

Abstract (Continued)

disposal of hazardous substances. During the operational period of the facility, there were reported and suspected releases of these substances into the environment. The Department of Defense's Installation Restoration Program (IRP) has identified 44 potentially-contaminated sites at NAEC, 16 of which have warranted further investigation to assess potential impacts. IRP investigations revealed potential soil and ground water contamination at the Recovery Systems Track Sites (Site 2), and the Oil Skimming and Sewage Disposal Area (Site 38). Site 2 is located approximately 2,990 feet from the nearest installation boundary and was used from 1967 to 1970 for the operation of experimental machinery. The machinery was removed, but the concrete foundation pads are still present. This site is still considered an active test site and was last used in 1983 to test materials for use in remote airfields. Jet fuel, ethylene glycol, and hydraulic fluid were reportedly used at the site and incidental spills may have occurred. However, no dumping was reported at the site. In 1981, two patches of oil-stained earth were observed at the edges of the pads. At that time, 200 yd<sup>3</sup> of visually-stained soil were drummed and disposed of offsite at a hazardous waste disposal facility. Site 38 is located 1,500 feet from the installation boundary in a wooded, undeveloped region. The site is approximately 320,000 ft<sup>2</sup> and, from 1966 to 1974, reportedly was used by sewage pumping contractors to dispose of liquid waste from the holding ponds at the Catapult Test Facility (Site 6). Materials reportedly disposed of at the site included sewage from septic tanks and oil waste consisting of hydraulic fluid, lubricating oils, ethylene glycol, and various organic solvents. An estimated 40,000 gallons of oily waste and an unknown amount of sewage were disposed of at the site. Subsequent investigations of both Site 2 and Site 38 revealed no significant contamination in the soil and ground water. Previous 1991 and 1992 RODs addressed OUs 1, 2, 3, and 4, and OUs 5, 6, and 7, respectively. This ROD addresses any potential contamination at Sites 2 and 38, as OU9. Other 1993 RODs address OUs 8, 10, 11, 12, 13, 14, 15, 22, and 23. EPA has determined that the previously implemented removal actions at Site 2 have eliminated the need for additional cleanup activities at this site. EPA has also determined that previous disposal activities at Site 38 have not significantly impacted the environment and that no cleanup activities are needed at this site; therefore, there are no contaminants of concern affecting Site 2 and 38.

The selected remedial action for this site is no further action. EPA has determined that previously implemented removal actions have eliminated the need to conduct additional remedial actions and the results of the RI indicated that conditions at the site do not pose unacceptable risk to human health and the environment. There are no costs associated with this no action remedy.

PERFORMANCE STANDARDS OR GOALS:

Not applicable.

**ROD FACT SHEET**

**SITE**

Name : NAWC Lakehurst  
Location/State : Lakehurst, New Jersey  
EPA Region : II  
HRS Score (date): 49.48 (July 22, 1987)

**ROD**

Date Signed: June 21, 1993  
Remedy: No Action  
Operating Unit Number: OU-9 (Sites 2 and 38)  
Capital cost: \$ N/A  
Construction Completion:  
O & M in 1993:  
1994:  
1995:  
1996:  
Present worth: N/A

**LEAD**

Enforcement  
Federal Facility  
Primary contact Jeffrey Gratz (212) 264-6667  
Secondary contact Robert Wing (212) 264-8670  
Main PRP U.S. Navy  
PRP Contact Lucy Bottomley (908) 323-2612

**WASTE**

Type Metals, Organics  
Medium Soil  
Origin Assorted spills  
Est. quantity N/A

RECORD OF DECISION  
FOR  
SITES 2 AND 38

OW-9

NAVAL AIR WARFARE CENTER  
AIRCRAFT DIVISION  
LAKEHURST, NEW JERSEY

17 MARCH 1993

RECORD OF DECISION  
DECLARATION  
SITES 2 AND 38  
NAVAL AIR WARFARE CENTER  
AIRCRAFT DIVISION  
LAKEHURST, NEW JERSEY

FACILITY NAME AND LOCATION

Naval Air Warfare Center  
Aircraft Division  
Lakehurst, New Jersey 08733

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for two individual sites (Sites 2 and 38) located at the Naval Air Warfare Center Aircraft Division Lakehurst, New Jersey (NAWCADLKE). The selected remedial action was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on information contained in the Administration Record for these sites, which is available for public review at the Ocean County Library, 101 Washington Street, Toms River, New Jersey.

Both the United States Environmental Protection Agency (USEPA), Acting Region II Acting Administrator, and the Commissioner of the New Jersey Department of Environmental Protection and Energy (NJDEPE) concur with the selection remedy.

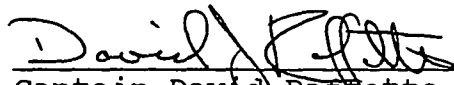
DESCRIPTION OF THE SELECTED REMEDY

The United States Department of the Navy, the lead agency for this Site, and the United States Environmental Protection Agency have selected the "no action" alternative as the appropriate action for Site 2 in Area H and for Site 38 in Area F.

DECLARATION STATEMENT

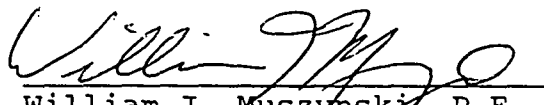
The United States Department of the Navy and the United States Environmental Protection Agency have determined that no additional remedial action is necessary at Sites 2 and 38 to ensure protection of human health and the environment. At Site 2, remedial action was taken during the original assessment, removing all contamination at the site, thereby eliminating the need to conduct additional remedial action. At Site 38, no contamination was detected that would require remedial action to protect human health and the environment.

This Record of Decision concerns Sites 2 and 38 only. The locations of these two sites within NAWCADLKE are shown in Figure 2. Other areas of concern at NAWCADLKE have been or will be addressed in separate studies and Records of Decision.

  
\_\_\_\_\_  
Captain David Ruffetto  
Commanding Officer  
Naval Air Warfare Center Aircraft Division  
Lakehurst, New Jersey

16 MAR 93  
(Date)

with the concurrence of:

  
\_\_\_\_\_  
William J. Muszynski, P.E.  
Acting Regional Administrator  
U.S. Environmental Protection Agency,  
Region II

21 June 93  
(Date)

## BACKGROUND

The Naval Air Warfare Center, Aircraft Division (NAWCADLKE) is located in Jackson and Manchester Townships, Ocean County, New Jersey, approximately 14 miles inland from the Atlantic Ocean. NAWCADLKE is approximately 7,400 acres and is bordered by Route 547 to the east, the Fort Dix Military Reservation to the west, woodland to the north (portions of which are within the Colliers Mill Wildlife Management Area), and Lakehurst Borough and woodland, including the Manchester Wildlife Management Area, to the south. NAWCADLKE and the surrounding areas are located within the Pinelands National Reserve, the most extensive undeveloped land tract of the Middle Atlantic Seaboard. The ground water at NAWCADLKE is designated as Class I-PL (Pinelands) by the NJDEPE.

NAWCADLKE lies within the Outer Coastal Plain physiographic province, which is characterized by gently rolling terrain with minimal relief. Surface elevations within NAWCADLKE range from a low of approximately 60 feet above mean sea level in the east central part of the base, to a high of approximately 190 feet above mean sea level in the southeastern part of the base. Maximum relief occurs in the southwestern part of the base because of its proximity to the more rolling terrain of the inner Coastal Plain. Surface slopes are generally less than five percent.

NAWCADLKE lies within the Toms River Drainage Basin. The basin is relatively small (191 square miles) and the residence time for surface drainage waters is short. Drainage from NAWCADLKE discharges to the Ridgeway Branch to the north and to the Black and Union Branches to the south. All these streams discharge into the Toms River. Several headwater tributaries to these branches originate at NAWCADLKE. Northern tributaries to the Ridgeway Branch include Elisha, Success, Harris and Obhanan Ridgeway Branches. The southern tributaries to the Black and Union Branches include the North Ruckles and Middle Ruckles Branches and the Manapauqua Brook. The Ridgeway and Union Branches feed Pine Lake; located approximately 2.5 miles east of NAWCADLKE before joining the Toms River. Storm drainage from NAWCADLKE is divided between the north and the south, discharging into the Ridgeway Branch and Union Branch, respectively. The Paint Branch, located in the east-central part of the base, is a relatively small stream which feeds the Manapauqua Brook.

Three small water bodies are located in the western portion of NAWCADLKE: Bass Lake, Clubhouse Lake, and Pickerel Pond. NAWCADLKE also contains over 1,300 acres of flood-prone areas, occurring primarily in the south-central part of the base, and approximately 1,300 acres of prime agricultural land in the western portion of the base.

There are 913 acres on the eastern portion of NAWCADLKE that lie within Manchester Township and the remaining acreage is in Jackson



Township. The combined population of Lakehurst Borough, Manchester and Jackson Townships, is approximately 65,400, for an area of approximately 185 square miles. The average population density of Manchester and Jackson Townships is 169 persons per square mile.

The areas surrounding NAWCADLKE are, generally, not heavily developed. The closest commercial area is located near the southeastern section of the facility in the borough of Lakehurst. This is primarily a residential area with some shops but no industry. To the north and south are State Wildlife Management areas which are essentially undeveloped. Adjacent to, and south of, NAWCADLKE are commercial cranberry bogs, the drainage from which crosses the southeast section of NAWCADLKE property.

For the combined area of Manchester and Jackson Townships, approximately 41 percent of the land is vacant (undeveloped), 57 percent is residential, one percent is commercial and the remaining one percent is industrial or farmland. For Lakehurst Borough, 83 percent of the land is residential, 11 percent is vacant, and the remaining six percent is commercially developed.

In the vicinity of NAWCADLKE, water is generally supplied to the populace by municipal supply wells. Some private wells exist, but these are used primarily for irrigation and not as a source of drinking water. In Lakehurst Borough a well field exists consisting of seven, fifty-foot deep wells, located approximately two-thirds of a mile south of the eastern portion of NAWCADLKE. Three of the seven wells (four of the wells are rarely operated) are pumped at an average rate of 70 to 90 gallons per minute and supply drinking water for a population of approximately 3,000. Jackson Township operates one supply well in the Legler area, approximately one-quarter mile north of NAWCADLKE, which supplies water to a very small population (probably less than 1,000) in the immediate vicinity of NAWCADLKE.

The history of the site dates back to 1916, when the Eddystone Chemical Company leased from the Manchester Land Development Company property to develop an experimental firing range for the testing of chemical artillery shells. In 1919, the U. S. Army assumed control of the site and named it Camp Kendrick. Camp Kendrick was turned over to the Navy and formally commissioned Naval Air Station (NAS) Lakehurst, New Jersey on 28 June 1921. The Naval Air Engineering Center (NAEC) was moved from the Naval Base, Philadelphia to Lakehurst in December 1974. At that time, NAEC became the host activity, thus, the new name NAEC. In January 1992, NAEC was renamed the Naval Air Warfare Center Aircraft Division Lakehurst, due to a reorganization within the Department of the Navy.

Currently, NAWCADLKE's mission is to conduct programs of technology development, engineering, development evaluation and verification, systems integration, limited manufacturing, procurement, integrated

logistic support management, and fleet engineering support for Aircraft-Platform Interface (API) systems. This includes terminal guidance, recovery, handling, propulsion support, avionics support, servicing and maintenance, aircraft/weapons/ship compatibility, and takeoff. The center provides, operates, and maintains product evaluation and verification sites, aviation and other facilities, and support services (including development of equipment and instrumentation) for API systems and other Department of Defense programs. The Center also provides facilities and support services for tenant activities and units as designed by appropriate authority.

NAWCADLKE and its tenant activities now occupy more than 300 buildings, built between 1919 and 1992, totalling over 2,845,000 square feet. The command also operates and maintains: two 5,000-foot long runways, a 12,000 foot long catapult and arrest runway, one-mile long jet car test track, four one and one-quarter mile long jet car test tracks, a parachute jump circle, a 79-acre golf course, and a 3,500-acre conservation area.

In the past, the various operations and activities at the Center required the use, handling, storage and occasionally the on-site disposal of hazardous substances. During the operational period of the facility, there have been documented, reported or suspected releases of these substances into the environment.

#### **INITIAL INVESTIGATIONS**

As part of the DOD Installation Restoration Program and the Navy Assessment and Control of Installation Pollutants (NACIP) program, an Initial Assessment Study (IAS) was conducted in 1983 to identify and assess sites posing a potential threat to human health or the environment due to contamination from past hazardous materials operation.

Based on information from historical records, aerial photographs, field inspections, and personal interviews, the study identified a total of 44 potential contaminated sites. An additional site, Bomarc, was also investigated by NAWCADLKE. The Bomarc site is the responsibility of the U. S. Air Force and is located on Fort Dix, adjacent to the western portion of NAWCADLKE. A Remedial Investigation (RI) was recommended to confirm or deny the existence of the suspected contamination and to quantify the extent of any problems which may exist. Following further review of available data by Navy personnel, it was decided that 42 of the 44 sites should be included in the RI. Two potentially contaminated sites, an ordnance site (Site 41) and an Advanced Underground Storage Facility (Site 43), were deleted from the RI because they had already been addressed. In 1987, NAWCADLKE was designated as a National Priorities List (NPL) or Superfund site under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Pursuant to the Department of Defense Installation Restoration Program, the Navy Assessment and Control of Installation Pollutants Program, and Section 120 of CERCLA, a RI was implemented at NAWCADLKE.

## **ENVIRONMENTAL INVESTIGATIONS**

Phase I of the Remedial Investigation (RI-Phase I) was conducted from 1985 to 1987 to (a) confirm or refute the existence of contamination at potentially contaminated sites identified during previous studies; and (b) develop recommendations for further Phase II investigations. The results of the RI-Phase I were presented in a report issued in 1987.

Phase II of the RI was conducted from June 1988 to January 1989 to: (a) confirm the results of the Phase I study, specifically the presence or absence of contamination; (b) identify where contamination is located; (c) assess the potential for contaminant migration; (d) define the sources of contamination; and (e) support a feasibility study and final actions at the sites.

Phase III of the RI was initiated in the summer of 1991 to: a) further evaluate and, if necessary, modify or finalize the interim remedial actions; b) perform a human health and ecological Endangerment Assessment (EA) evaluating the need for remedial actions to eliminate threats to human health and the environment, and to develop compliance criteria on a site specific basis; and c) perform a feasibility study if necessary to identify, evaluate and select remedial alternatives for those sites where remediation is required.

The Navy determined in the spring of 1992 that it had sufficient data to propose a Remedial Action Plan at Area F-Site 38, Oil Skimming and Sewage Disposal Area and Area H-Site 2, Recovery Systems Track Sites where contamination had not been detected at elevated levels which could pose a threat to human health or the environment.

Site contamination concentrations summarized in the RI report did not exceed action or clean-up levels promulgated by Federal, State or other regulatory agencies.

## **SITE DESCRIPTION AND HISTORY**

### **Area H-Site 2, Recovery Systems Track Sites**

Site 2 is located approximately 2,990 feet from the nearest NAWCADLKE property boundary and approximately 850 feet west of the launching end of Recovery System Track Sites (RSTS) Track No. 2, between Tracks 1 and 2 (Figures 2 and 5). Ground water depth at the site ranges from approximately 12 to 14 feet. The nearest surface body of water, the Manapagua brook, is located

approximately 2,250 feet southeast (downgradient) of the site.

The site was used for the operation of experimental machinery during the period 1967 to 1970. The machinery was subsequently removed, but the concrete foundation pads are still present. This site is still considered an active test site, used on an as needed basis. It was last used in 1983 for testing materials for use in remote airfields. Various aircraft runway materials were blasted with jet engine exhaust to determine which could best stand up to jet blast effects. Jet Track two, which is adjacent to Site 2, has been used for testing laser systems during 1992.

At the edges of the pads, two patches of oil-stained earth were observed during the Initial Assessment Study (IAS) of 1981, one was approximately 10 by 20 feet and the other 15 by 15 feet. This soil was removed during the IAS. It was reported that jet fuel, hydraulic fluid and ethylene glycol were used at the site. Jet fuel used at this site was stored in an Underground Storage Tank (UST) at Site 32 (Site 32 is the subject of a separate study) while the hydraulic fluid and ethylene glycol were stored in drums at the site. It was reported that thirty drums containing hydraulic fluid and ethylene glycol were kept at the site. No dumping was reported at the site.

Approximately 200 cubic yards of visually stained soil was removed from the drainage swale adjacent to the site in 1981, under the direction of NAWCADLKE. The soil removed was stained with a viscous black "oil-like" substance probably resulting from an unreported spill. The soil was drummed and disposed of by a contractor at a hazardous waste disposal site.

#### **Area F-Site 38, Oil Skimming and Sewage Disposal Area**

Site 38 is located within Area F, in the north-central portion of NAWCADLKE (Figures 2, 3 and 4). The NAWCADLKE property boundary forms the northwestern boundary of the Area F (Site 38 is located approximately 1500 feet from the property boundary). There are no major buildings or structures present: the area is essentially a wooded region transected by a network of several dirt roads, with a large grass field at Site 38. The depth to ground water at this site varies from 24 to 31 feet below the ground surface. The general direction of groundwater flow at Site 38 is to the northeast.

It was reported that this site, which measures approximately 400 feet by 800 feet, was used by sewage pumping contractors for the disposal of liquid wastes from the holding ponds at the Catapult Test Facility (Site 6) (Site 6 is the subject of a separate study). This site was a former quarry or gravel pit. This waste disposal operation was reportedly conducted during the period between approximately 1966 and 1974. Use of the site as a disposal area ceased in 1974. The area is currently partially tree covered

and used as wildlife habitat and there is a trap range on it. Currently the trap range is seldom used.

Materials disposed of at Site 38 reportedly included sewage from septic tanks and oily waste consisting of: hydraulic fluid, lubricating oils, ethylene glycol, and various organic solvents. It is estimated that up to 5,000 gallons per year of the oily waste components may have been disposed of over an eight year period. This could have resulted in the disposal of up to 40,000 gallons of oily waste, in addition to an unknown amount of sewage.

#### **ENVIRONMENTAL INVESTIGATION SUMMARY**

##### **Area H-Site 2, Recovery Systems Track Sites**

November 1985 - January 1986: RI - Phase I. Analysis of a groundwater sample collected from one monitoring well installed at the site (DF) revealed no contamination.

August - December 1988: RI - Phase II. Two rounds of groundwater samples were collected from monitoring well DF at the site. The only compound detected in the analysis of these samples was ethylene glycol, which was detected in the second round sample only. The analysis of soil samples collected from one soil boring and one test pit (at one of the previously stained soil locations) did not reveal any contaminants at concentrations exceeding USEPA acceptable risk range or NJDEPE soil clean-up criteria.

July 1991 - April 1992: RI - Phase III. Groundwater samples were collected from monitoring well DF at the site and two downgradient wells, DE and GD, located at Site 32, and analyzed for glycol. No ethylene glycol was detected.

##### **Area F-Site 38, Oil Skimming and Sewage Disposal Area**

November 1985 - January 1986: RI - Phase I. Three monitoring wells (EC, ED, EE) were installed at the site. Analysis of groundwater samples collected from these wells revealed no contamination.

May - June 1988: A soil gas screening survey conducted at the site revealed no evidence of either petroleum or chlorinated hydrocarbons in the 21 soil gas samples collected.

August - December 1988: RI - Phase II. Two additional monitoring wells, FY and GQ, were installed immediately downgradient of the site. Analysis of groundwater samples collected from the five wells at the site confirmed the absence of significant groundwater contamination. The only contaminants detected at levels exceeding ARARs in the analysis of unfiltered samples were the metals chromium and lead in well FY and chromium and selenium in well GQ.

July - August 1990: RI - Phase II Addendum. Both unfiltered and filtered groundwater samples were collected from monitoring wells FY and GQ to confirm or deny the presence of metals detected previously, during the phase II investigation, at levels exceeding ARARs. Samples from monitoring well FY were analyzed for chromium and lead. Both metals were detected at levels below ARARs in duplicate unfiltered samples. Neither metal was detected in duplicate filtered samples indicating that the metals were not dissolved in groundwater, but attributable to sediment present in the samples collected. Samples from monitoring well GQ were analyzed for chromium and selenium. Selenium was not detected in the filtered or unfiltered sample. Chromium was detected in the unfiltered sample at a concentration of 59.5 ug/l and not detected in the filtered sample. There are no records or evidence to suggest that these contaminants were disposed of at Site 38.

July - April 1992: RI - Phase III. Seven test pits were excavated at Site 38 and soil samples were collected from two of the pits. Analysis of one soil sample showed no contamination while the other revealed low concentrations of contaminants, semi-volatile organic compounds (SVOCs) and Pesticides (see Table 1.), none of which are above the USEPA acceptable risk range or NJDEPE soil clean-up criteria.

#### **SITE SUMMARY**

##### **Area H-Site 2, Recovery Systems Track Sites**

Past reported activities at Site 2 do not appear to have had any significant impact on soil or groundwater at the site. (See Table 1.) Visually contaminated soil which had been observed at the site was removed by NAWCADLKE in 1981, prior to initiation of the RI. Analysis of soil and groundwater samples collected during the three phases of the RI have not revealed the presence of any significant contamination at or emanating from Site 2.

##### **Area F-Site 38, Oil Skimming and Sewage Disposal Area**

This site was named as a possible site of contamination through a series of interviews conducted of personnel who formerly worked at NAWCADLKE. Individuals pointed out that this site was used as a dumping area for products which could potentially pose a threat to the environment or to human health.

##### Groundwater

During the RI (Phase II), three metals were detected in ground water at levels exceeding ARARs. Subsequent analysis of filtered and unfiltered samples taken during the Phase II Addendum confirmed the presence of these metals, below previously detected concentrations. Resampling of groundwater during the Phase II Addendum made use of filtered samples which also indicated that the metals were not dissolved in groundwater, but attributable to sediment present in the samples collected and not due to a widespread or systematic release related to past site activities.

This has been determined by comparing samples as taken from unfiltered groundwater samples against samples that had the sediments filtered out of them (See Table 1). If the metals were present due to dumping or other human activity the metals would have shown up in test wells throughout the area and the results would have been reproducible.

Data collected from wells throughout the base, where it has been established that there is no contamination, were reviewed to establish what the background levels are for metals on the NAWCADLKE (See Table 2). The "background level" is the amount of each metal which occurs naturally in the ground water without being disturbed by human activity. Background levels were established for chromium and lead. The background level for selenium was established to be below the limit of detection used during the investigation. Nearly all samples where selenium showed up were footnoted by the laboratory - estimated values below the reporting limit.

Detected levels of chromium fall within the established background level for this facility. During the phase II investigation lead was detected at a level slightly above MCLs in an unfiltered sample during the second round of sampling. Follow up investigations detected lead within background levels from the same well. Selenium showed up a single time in one well during the Phase II.

When a comparison is made between findings at NAWCADLKE and findings at other sites in the New Jersey Pine Barrens, including the BOMARC Site at McGuire Air Force Base and the McDonalds Branch of the Rancocas Creek, we find that the average levels of metals found are very similar. The average for detected levels of analytes in unfiltered samples proved to be similar or lower than those detected at the BOMARC Site at the McGuire Air Force Base (see Table 3). A comparison of filtered samples taken from the McDonalds Branch in the Lebanon State Forest, with filtered samples taken at NAWCADLKE, shows the level for lead detected at NAWCADLKE to be lower than that found in the McDonalds Branch. Chromium and Selenium were not targets of investigation in the McDonalds Branch, therefore no comparison can be made for these metals.

#### Soil

Low levels of Polycyclic Aromatic Hydrocarbon (PAH) compounds and two pesticides were detected in one soil sample collected at the site (see Table 1). In addition, there is no indication that the presence of these compounds has impacted groundwater quality at Site 38. The results of the investigation indicate localized, low concentrations of these compounds. These compounds have low solubility in water.

Based on the results of the investigations conducted to date at Site 38, there does not appear to be any significant soil or groundwater contamination associated with reported past activities

at the site which would pose unacceptable risk to human health or the environment.



### **HIGHLIGHTS OF COMMUNITY PARTICIPATION**

The Proposed Plan for Sites 2 and 38 was issued to concerned parties on 4 December 1992, a list of concerned parties is provided as Appendix B. A newspaper notification, inviting public comment on the Proposed Plan and to attend a public meeting, scheduled for 15 December 1992, appeared in The Asbury Park Press, The Ocean County Observer on 7 and 8 December 1993, and in The Advance News on 9 December 1992. The comment period was held open for the period from 15 December 1992 through 12 January 1993. The news paper also identified the Ocean County Library as the location of the Information Repository.

A public meeting was held on 15 December 1992. At this meeting representatives from the Navy, USEPA and NJDEPE were available to answer questions about Sites 2 and 38. A list of attendees is attached to this Record of Decision (ROD) as Appendix A. Comments received and responses provided during the public meeting are included in the official transcript of proceedings, which is included as Appendix C. No written comments were received during the public comment period.

This decision document presents the selected remedial action selected for these two sites, the no action alternative, chosen in accordance with CERCLA, as amended by SARA and, to the extent practicable, the National Contingency Plan (NCP). The decision for these two sites is based on information found in the Administrative Record which is available for public review at the Ocean County Library, 101 Washington Street, Toms River, New Jersey.

### **SCOPE AND ROLE OF RESPONSE ACTION**

The available data indicate that conditions at Sites 2 and 38 pose no unacceptable risks to human health or the environment. There is no action necessary for these two sites. Other areas of concern at NAWCADLKE have been or will be the subject of separate studies and response actions.

### **SUMMARIES OF SITE CHARACTERISTICS**

The locations of these two sites are shown on Figure 2. Figure 3 shows a closeup of Site 38 and Figure 5 shows a closeup of Site 2. The entire NAWCADLKE is underlain by the Cohansey Formation, a water-table sand aquifer. The general direction of groundwater flow at NAWCADLKE is to the east-northeast. Chemicals detected in soil are provided in Table 1.

### **SUMMARIES OF SITE RISKS**

The results of the Remedial Investigation and the analysis provided in Tables 2 and 3 indicate that conditions at Sites 2 and 38 pose no unacceptable risks to human health and the environment.