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PROPOSED PLAN FOR OPERABLE UNIT 12 (OU 12) SITE 32 DEFENSE REUTILIZATION  
AND MARKETING OFFICE ASPHALT STORAGE YARD NAS CECIL FIELD FL  
9/1/2003  
TETRA TECH NUS INC



# Installation Restoration Program September 2003



## Proposed Plan for Operable Unit 12, Site 32, Naval Air Station Cecil Field Jacksonville, Florida

### Facility Description

Naval Air Station (NAS) Cecil Field (see Figure 1) was established in 1941 and provided facilities, services, and material support for naval operations. It was added to the **National Priorities List (NPL)** in 1989. In July 1993, the Base Realignment and Closure (BRAC) Commission recommended the closure of the Air Station. On September 30, 1999, the Base was closed and the majority of the flightline was transferred to the Jacksonville Airport Authority. In September 2000, most of the remainder of the Base was transferred to the City of Jacksonville.

### Site Description

**Operable Unit (OU) 12, Site 32, Defense Reutilization and Marketing Office (DRMO) Asphalt Storage Yard**, is located in the central portion of the Main Base Area of NAS Cecil Field (see Figure 1) just north of the western end of Crossover Street (formerly 2<sup>nd</sup> Street) and west of New World Avenue (formerly "D" Avenue) in the area north of the east-west flightline (see Figure 2). The site includes Buildings 325 and 335 and the adjacent area. Building 335 is 100 feet by 60 feet and is a fully enclosed facility. Building 325 is 120 feet by 20 feet and is partially enclosed. The portion of the 2-acre site in the vicinity of Building 325 (approximately 1.4 acres) is a paved, fenced storage area, and the remaining portion of the site, located east of the fenced storage area and north of Building 335, is unpaved. A stormwater retention pond, approximately 110 feet by 30 feet, is located in the unpaved area north of Building 335. Two-thirds of the pond is normally dry except after a rain event. Site 32 was used until the 1990s for the initial storage and warehousing of both hazardous and nonhazardous materials as they arrived at the Base. The site is in an industrial area, and the reuse plan identifies that this area will continue to be used in that manner. Current and future uses of the site have been taken into consideration in the remedy selection process.

Site activities have resulted in contamination of surface soil with **polynuclear aromatic hydrocarbons (PAHs)**, 4-methylphenol, antimony, barium, lead, nickel, selenium, chromium, manganese, and vanadium. Site activities have not resulted in contamination of either the **surficial aquifer** groundwater or the surface water and sediments in the stormwater retention pond.

Contaminated soil in the unpaved area of the site has previously been excavated and disposed offsite; however, contaminated soil beneath the paved area of the site could represent a hazard if the asphalt pavement would deteriorate.

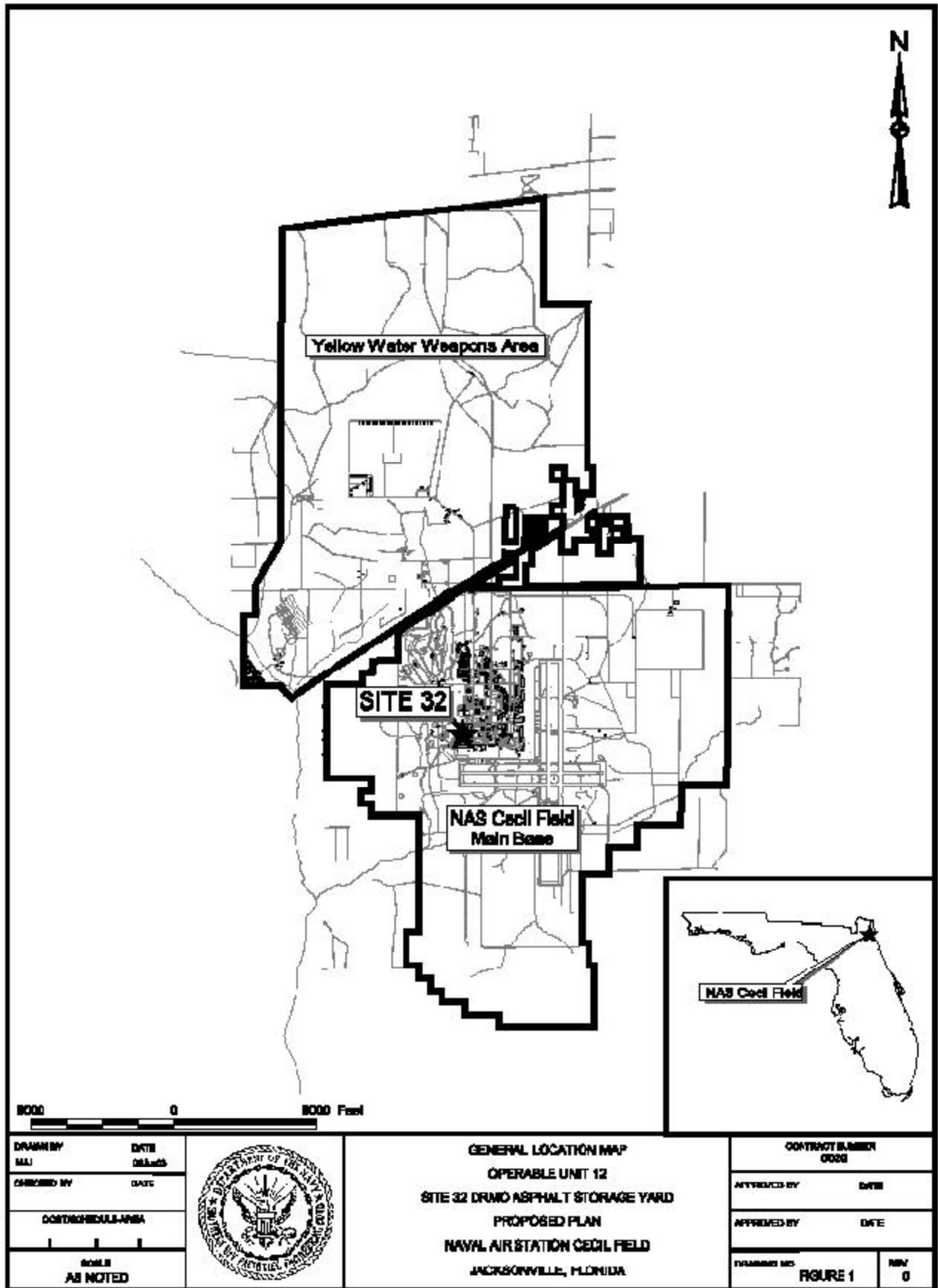
### The Proposed Cleanup Plan

To address the contaminated soil beneath the asphalt pavement at Site 32, the Navy and United States Environmental Protection Agency (U.S. EPA) in consultation with the Florida Department of Environmental Protection (FDEP) propose the following:

- Implementation of **land use controls (LUCs)** to prevent residential development of the site and to provide that maintenance of the asphalt pavement would be required of the property owner. Continued implementation of these controls will be verified by regular site inspections.
- Monitoring of groundwater, surface soil, and subsurface soil quality to verify that no contaminant migration is occurring.
- Performance of a site review every 5 years to verify the continued adequacy of the proposed remedy. If this is not the case, another approach may be implemented.

*This document summarizes the cleanup plan proposed by the Navy and U.S. EPA, in consultation with FDEP. For detailed information on the options evaluated for **OU 12, Site 32**, consult the documents contained within the **Administrative Record**, which is available for review at the Information Repository located at Building 907, 13357 Lake Newman Street, Cecil Commerce Center, Jacksonville, Florida.*

***Bolded terms throughout this Proposed Plan are explained in the Glossary of Terms provided on pages 10 and 11.***



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## About This Document

In accordance with Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** and with Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), this document summarizes the Navy's proposal for site cleanup to help the public understand and comment on the proposed alternatives. This Proposed Plan has been developed by the Navy and U.S. EPA, in consultation with FDEP. These agencies, in consultation with FDEP and the **Restoration Advisory Board (RAB)**, will select a final remedy for **OU 12, Site 32** after public comments have been addressed. One of the purposes of this Plan is to solicit the public's views and comments on the alternatives described. The Navy and U.S. EPA, in consultation with FDEP, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all alternatives presented in this Proposed Plan. This Plan highlights the key information from the **Engineering Evaluation/Cost Analysis (EE/CA)** report but is not a substitute for that document. More complete information can be found in the **EE/CA** report and other documents within the **Administrative Record**, which is available for review at the Information Repository located at Building 907, 13357 Lake Newman Street, Cecil Commerce Center, Jacksonville, Florida.

## What do you think?

The Navy, as the lead agency, is accepting formal public comments on this Proposed Plan from September 24, 2003 to October 24, 2003. You don't have to be a technical expert to comment. If you have a concern or preference, the Navy, U.S. EPA, and FDEP want to hear it before making a final decision on how to protect your community. To comment formally:

Offer oral comments during the comment portion of the public hearing, if such a hearing is requested (see page 12 for details).

Send written comments postmarked no later than October 24, 2003 to:

Commander  
Department of the Navy  
Southern Division  
Naval Facilities Engineering Command  
Attn: Jeffrey Meyers, P.E., CHMM (Code ES3)  
2155 Eagle Drive  
North Charleston, SC 29406  
Tel: 843-820-5609

E-mail comments by October 24, 2003 to:

meyersjg@efdsouth.navfac.navy.mil

## Site History

Following is a brief history of environmental investigations and remediation at Site 32:

- **1994** – During the BRAC Investigation, Site 32 was first designated as Area of Interest (AOI) 32.
- **1995 - 1996** – Phase II Investigation of Zone C Administration and Light Industrial Area, which included AOI 32, was conducted. Soil, sediment, and groundwater samples were collected at AOI 32 and analyzed for **volatile organic compounds (VOCs)**, **semivolatile organic compounds (SVOCs)**, pesticides, **polychlorinated biphenyls (PCBs)**, and inorganics. The investigation determined that concentrations of analytes detected in surface soil within the study area may represent a hazard to human health or the environment if deterioration of the asphalt pavement resulted in an exposure pathway.
- **1999** – AOI 32 was reclassified as **Potential Source of Contamination (PSC) 32** in February 1999.
- **1999 - 2000** – Investigation of PSC 32. Samples were collected to delineate soil contamination. Seven rounds of surface and subsurface soil samples were collected and analyzed for target analyte list (TAL) inorganics and **PAHs**. In addition, preliminary human health and ecological risk assessments were performed. As a result of this investigation, approximately 142 tons of contaminated soil in the unpaved area of PSC 32 were identified as requiring excavation and off site disposal. An Action Memorandum to complete the remedial excavation was submitted in May 2000, and the **Interim Removal Action (IRA)** was performed in August 2000.
- **2000 - 2001** – Following the removal action, a draft Technical Memorandum for No Further Action for PSC 32 was submitted. This draft report recommended no further action at the site except the implementation of **LUCs** for the asphalt pavement. Upon review of the draft document, the Navy and U.S. EPA, in consultation with the FDEP, recommended that the Technical Memorandum be replaced by an **EE/CA** because soil exhibiting contamination in excess of FDEP Soil Cleanup Target Levels (SCTLs) for leachability to groundwater was left in place beneath the asphalt pavement. For the same reason, PSC 32 was redesignated as **Installation Restoration (IR)** Site 32 and placed within **OU 12**.
- **2001-2002** – Site 32 **EE/CA**. Based on the results of previous investigations and the **IRA**, soil **Remedial Action Objectives (RAOs)** were developed, soil **chemicals of concern (COCs)** were identified, and **cleanup goals** were established. Remedial alternatives for soil were assembled, analyzed, and compared, and a recommended remedial alternative was presented.

## Summary of Site Risks

Investigation of the groundwater at Site 32 did not detect any organic contamination. The only contamination detected included aluminum, iron, and manganese. These inorganic analytes were detected at concentrations greater than the State (GCTLs) and federal maximum contaminant levels (MCLs); however, concentrations were less than the NAS Cecil Field **Inorganic Background Data Set (IBDS)**. In addition, no exposure pathways to human or ecological receptor were identified for groundwater at the site. Therefore, groundwater in this area does not pose an increased risk to human health or the environment, and no further action regarding the groundwater is required.

The **interim remedial action (IRA)** conducted in the unpaved areas of Site 32 removed soil to permit non-residential use of the area based on the 95-percent **upper confidence level (UCL)** of the concentrations of the soil remaining at the site being less than the FDEP industrial SCTLs, but greater than the FDEP residential SCTLs. However, soil with contaminant concentrations greater than the FDEP industrial SCTLs still exists beneath the paved areas of Site 32 and could represent a risk to human health or the environment if not removed and if deterioration of the asphalt pavement resulted in an exposure pathway.

The ecological risk assessment performed as part of the **EE/CA** established that Site 32 consists primarily of buildings and parking lots that provide an ecological habitat of marginal quality and of little use to terrestrial wildlife. Ecological habitat consists of an area of turf grass north of Building 335 and a retention pond. Earlier studies at Site 32 had indicated that no human health or ecological screening criteria were exceeded in the sediment from the storm water retention pond, and as a result, no further investigation of ecological risk associated with the retention pond was conducted. Based on analytical data from surface soil samples, potential ecological risks are minor and are limited to soil invertebrates from **PAHs**. Therefore, ecological risks at Site 32 appear to be negligible.

## Why is Cleanup Needed?

The Navy's studies of **OU 12**, Site 32 have resulted in the following conclusions:

- As a result of past activities, several chemicals were found in the Site 32 soil that could potentially be harmful to human health or the environment.

- The **IRA** adequately addressed concerns associated with soil contamination in the unpaved areas at Site 32 for non-residential reuse; however, additional action would be required to achieve residential reuse.
- Several contaminants remain in the soil beneath the asphalt pavement at Site 32 that could result in unacceptable human health and ecological risk if deterioration of the asphalt pavement results in an exposure pathway.

It is the judgment of the Navy and U.S. EPA, in consultation with FDEP, that the preferred remedy identified in this Proposed Plan is necessary to protect public health and welfare from actual or threatened releases of hazardous substances into the environment.

**Final Records of Decision (RODs)** have been approved for **OU 1** through **OU 4**; **OU 5**, Site 14; **OU 6** through **OU 8**; **OU 9**, Sites 36 and 37; and **OU 12**, Sites 42, 44 and Old Golf Course. A Remedial Investigation (RI), Baseline Risk Assessment (BRA), and Feasibility Study (FS) have also been prepared for **OU 5**, Site 15, but the FS is currently being re-evaluated. An **EE/CA** was finalized for **OU 5**, Site 49 in February 2002. RI and FS reports were finalized for **OU 9**, Sites 57 and 58 in August and October 2002, respectively. RI reports for **OU 10**, Sites 21 and 25 were finalized in October 2001. The FS report for Site 21 was submitted in September 2002, and the FS for Site 25 was finalized in October 2001. RI and FS reports were finalized for **OU 11**, Site 45 in August 2001. Decision documents are forthcoming for Sites 21, 25, 45, and 49.

## What are the Cleanup Objectives and Goals?

Using the information gathered during the site investigations and the results of the risk assessments, the Navy and U.S. EPA, in consultation with FDEP, have identified the following **RAOs** for the soil at **OU 12**, Site 32:

- Prevent unacceptable risk from exposure to soil with concentrations of **PAHs** and inorganics greater than their respective industrial FDEP SCTLs or NAS Cecil Field **IBDS** values (HLA, 1998).
- Address the potential risk of transfer of organic and inorganic contamination from soil to groundwater from soils with concentrations that exceed the FDEP SCTL for leachability.

Table 1 shows the soil **COCs** and target **cleanup goals**

TABLE 1

COCs and Cleanup Goals in Soil Operable Unit 12, Site 32 – NAS Cecil Field						
COCs	Range of Detections	Residential Pick-Up Level	Cleanup Goals <sup>(1)</sup>	Industrial Pick-Up Level	Cleanup Goals <sup>(1)</sup>	
			Residential Exposure		Industrial Exposure	Leachability to Groundwater
<b>Organics (µg/kg)</b>						
Benzo(a)pyrene (BaP)	17.6 - 4,640	204 <sup>(2)</sup>	100	1,520 <sup>(2)</sup>	500	8,000
4-Methylphenol	45	30	300,000	30	3,400,000	30
BaP Equivalents (BaPEq)	11.9 - 5,601	272 <sup>(2)</sup>	100	1,812 <sup>(2)</sup>	500	8,000
<b>Inorganics (mg/kg)</b>						
Lead	1.1 - 1,850	400	400	920	920	NC
Nickel	1.3 - 202	110	110	130	28,000	130
Selenium	77.4 - 1,030	5	390	5	10,000	5
Vanadium	0.78 - 2,100	15	15	980	7,400	980
Barium	2.2 - 2,990	110	110	1,600	87,000	1,600
Antimony	5.8 - 206	9.4 <sup>(3)</sup>	26	9.4 <sup>(3)</sup>	240	5

**NOTES:**

- (1) SCTL from Florida Administrative Code (FAC) 62-777 SCTL (FDEP, 1999).
- (2) Based on the 95% **UCL** of the concentrations of the soil remaining at the site being less than the limiting SCTL.
- (3) Based on NAS Cecil Field **IBDS** value (HLA, 1998).
- NC No Criteria.

**Cleanup Alternatives for OU 12, Site 32  
Soil**

The **OU 12, Site 32 EE/CA** reviews the options that the Navy and U.S. EPA, in consultation with FDEP, considered for cleanup of Site 32 soil. These options, referred to as “cleanup alternatives,” are different combinations of plans to restrict access and to contain, remove, or treat contamination in order to protect public health and the environment. The preferred alternative is Alternative 2: **LUCs** and Monitoring.

**No Action**

**Alternative 1: No-Action**

Evaluation of the No Action alternative is required by law as a basis for comparison with other alternatives. No remedial action would be conducted to reduce risks to human health and the environment, and no restrictions would be imposed to prevent site development. Concentrations of **COCs** in soil might eventually be reduced to **cleanup goals** through natural attenuation processes, but no monitoring would be performed that would quantify this reduction.

**Limited Action**

**Alternative 2: Land Use Controls and Monitoring**

**LUCs** would consist of limiting land use to industrial purposes. Specifically, these **LUCs** would prevent residential development of Site 32 and require maintenance of the asphalt cap or pavement by the property owner. Monitoring would consist of checking **COC** concentrations by advancing soil borings in the contaminated area and field testing the samples collected at various depths. Soil samples containing the highest field readings would be submitted to a fixed-based laboratory for verification analyses. Monitoring would also consist of collecting groundwater samples within and downgradient to the contaminated soil area to verify that the **COCs** are not migrating. Every 5 years, a site review would be conducted to verify that contaminants beneath the asphalt pavement are not migrating beyond the DRMO Storage Yard. If it is determined that migration is occurring, additional remedial measures such as

groundwater treatment or excavation of contaminated soil would be evaluated and might be implemented.

## Removal, Ex-Situ Treatment, and Disposal

### **Alternative 3: Excavation and Off-Base Treatment and Disposal**

A total of 1,165 cubic yards of asphalt pavement plus 2,626 cubic yards of contaminated soil, including 296 cubic yards of soil from the unpaved areas of the site, would be excavated to meet residential land use requirements. Cavities resulting from the excavation would be backfilled with clean fill, graded, and restored to pre-excavation conditions. The excavated soil and crushed pavement would be disposed of off-site. The exact nature and extent of treatment would be determined by the disposal facility based upon actual analysis of the contaminated materials. It is assumed that the treated soil would be nonhazardous and could be disposed in a Resource Conservation and Recovery Act (RCRA) Subtitle D landfill. Laboratory analysis of the treated soil would ensure that it complies with the landfill permit. This alternative would enable the site to be available for unrestricted use.

### **Use of ARARs in Evaluation Process**

**Applicable or relevant and appropriate requirements (ARARs)** are Federal and State environmental requirements used to evaluate the appropriate extent of site cleanup, scope and formulate remedial alternatives, and control the implementation and operation of a selected remedial action. Chemical-, location-, and action-specific **ARARs** that apply to **OU 12, Site 32** are presented in Section 3.0 of the **EE/CA** report. Each alternative has been evaluated to determine its compliance with **ARARs**.

### **Detailed Analysis of Cleanup Alternatives**

In accordance with **CERCLA**, a detailed analysis of each cleanup alternative must be performed using nine evaluation criteria. These include two threshold criteria (Overall Protection of Human Health and the Environment and Compliance with **ARARs**), five balancing criteria (Long-Term Effectiveness and Permanence; Reduction of Toxicity, Mobility, and Volume through Treatment; Short-Term Effectiveness; Implementability; and Cost) and two modifying criteria (State Acceptance and Community Acceptance). An analysis of these criteria was performed for each cleanup alternative during the **EE/CA**, and summary comparisons of these analyses are presented in Table 2. Please consult the **OU 12, Site 32 EE/CA** report for more detailed information.

Both Alternatives 2 and 3 are effective in achieving their designed objectives, are technically feasible, comply with regulatory requirements, and are relatively easy to implement. Because Site 32 has been identified in the reuse plan as an industrial area, it is recommended that the lower cost Alternative 2 be selected.

State acceptance was secured during the **EE/CA** review. As part of the community acceptance process, the Navy, U.S. EPA, and FDEP briefed the **RAB** on July 15, 2003. During the upcoming public comment period, the Navy, U.S. EPA, and FDEP also welcome your comments on the proposed cleanup plan and on the other technical approaches that were evaluated.

### **A Closer Look at the Proposed Cleanup Plan**

#### **1. Land Use Controls**

**LUCs** would be put in place to limit the use of Site 32 for only industrial purposes. The controls would be prepared and implemented to ensure that prior to any development at the site adequate measures would be taken to minimize adverse human health and environmental effects. The **LUCs** would prevent residential development of Site 32 and require maintenance of the asphalt cap or pavement be provided by the property owner. Site inspections would be conducted every 5 years to verify the continued implementation of these **LUCs**, except for the cap maintenance, which would be inspected annually.

#### **2. Monitoring**

Monitoring would consist of checking **COC** concentrations every 5 years by advancing four soil borings in the contaminated area and field testing the samples collected at various depths for organic vapor analysis (OVA). For each boring, the sample with the highest OVA reading or highest historical inorganic concentrations would also be analyzed for specific **COCs** by a fixed-base laboratory. Monitoring would also consist of collecting two groundwater samples from existing and proposed wells within and downgradient from the contaminated soil area to verify that the **COCs** in the soil are not migrating into the groundwater.

#### **3. Five-Year Review**

Every 5 years, a site review would be conducted to evaluate the continued adequacy of the selected remedial action. These site reviews, which would include an evaluation of the sampling data, would be required because the selected remedy allows for contaminants to remain in the soil at levels that exceed **cleanup goals**.

#### **4. Contingency Remedy**

If the results of the long-term monitoring and the five-year reviews indicate that the **COCs** beneath the asphalt pavement are migrating beyond the DRMO Storage Yard or that the asphalt cap is not being properly maintained, the site will be reevaluated at that time to determine whether excavation and disposal of all or part of the impacted soil beneath the asphalt pavement would be necessary or whether a groundwater treatment system would be required.

TABLE 2

SUMMARY OF COMPARATIVE ANALYSIS OF SOIL REMEDIAL ACTION ALTERNATIVES  
 OPERABLE UNIT 12, SITE 32  
 PROPOSED PLAN  
 NAS CECIL FIELD  
 JACKSONVILLE, FLORIDA  
 PAGE 1 OF 2

Evaluation Criteria	Alternative 1: No Action	Alternative 2: Land Use Controls and Monitoring	Alternative 3: Excavation and Off-Base Treatment and Disposal
Overall Protection of Human Health and Environment	Would not be protective because residential development could occur that would result in unacceptable risks to human and ecological receptors. The threat of soil COCs migrating to the groundwater would remain.	Would be protective of the environment by preventing residential development and detecting the migration of soil COCs.	Would be most protective by eliminating the risk of exposure to soil contaminated at concentrations greater than SCTLs for direct residential exposure and minimizing the potential for migration of COCs to groundwater.
Compliance with ARARs and To Be Considered Criteria (TBCs): Chemical-Specific Location-Specific Action-Specific	Would not comply Would not comply Not applicable	Would not comply Would comply Would comply	Would comply Would comply Would comply
Long-Term Effectiveness and Permanence	Would have very limited long-term effectiveness and permanence because all contaminants would remain on-site. Any long-term effectiveness would not be known because monitoring would not occur.	Would be long-term effective and permanent. The prevention of residential development through deed restrictions and the monitoring of contaminants to evaluate their migration would provide long-term effectiveness and permanence.	Would provide the most long-term effectiveness and permanence. Risks from exposure to soil contaminated at concentrations greater than the SCTLs for direct residential exposure and from the potential migration of contaminants would be effectively and permanently eliminated through excavation, treatment, and disposal.
Reduction of Contaminant Toxicity, Mobility, or Volume through Treatment	Would not achieve reduction of toxicity, mobility, or volume of contaminants through treatment but may achieve some reduction through natural processes.	Would not achieve reduction of toxicity, mobility, or volume of contaminants through treatment but may achieve some reduction through natural processes.	Would remove 2,626 cubic yards of contaminated soil and 1,165 cubic yards of asphalt. Treatment would reduce mobility and toxicity.

TABLE 2

SUMMARY OF COMPARATIVE ANALYSIS OF SOIL REMEDIAL ACTION ALTERNATIVES  
 OPERABLE UNIT 12, SITE 32  
 PROPOSED PLAN  
 NAS CECIL FIELD  
 JACKSONVILLE, FLORIDA  
 PAGE 2 OF 2

Evaluation Criteria	Alternative 1: No Action	Alternative 2: Institutional Controls and Monitoring	Alternative 3: Excavation and Off-Base Treatment and Disposal
Short-Term Effectiveness	Would not result in short-term risks to site workers or adversely impact the surrounding community but would also not achieve <b>RAOs</b> through treatment.	Would result in slight risk to site workers during sampling of the soil and groundwater. This risk would be reduced through the wearing of appropriate PPE and the compliance with site-specific health and safety procedures. <b>RAOs</b> would be achieved immediately upon implementation. Eventual compliance with <b>cleanup goals</b> would be determined through monitoring.	Would result in a significant risk of exposure to site workers to contaminated soil during the excavation, treatment, and disposal activities. This risk would be reduced through wearing of appropriate PPE and compliance with site-specific health and safety procedures. The <b>RAOs</b> would be achieved immediately upon implementation. <b>Cleanup goals</b> would be attained within 2 months.
Implementability	Would be simple to implement because no action would occur.	Would be easy to implement because the resources, materials, and equipment are readily available. Provisions will be incorporated into the property transfer documents to ensure the continuation of the <b>LUCs</b> and monitoring when ownership of the site is transferred to the private sector.	Would be more difficult to implement because contaminated soil would have to be excavated and transported off-base for treatment and disposal. No <b>LUCs</b> or monitoring would be required. A construction permit and manifesting would be required.
Costs:			
Capital	\$0	\$10,500	\$676,000
Average Annual Operation and Maintenance (O&M)	\$0	\$3,500	\$0
Net Present Worth (NPW)	\$0	\$50,000	\$676,000

Based on the information currently available, the Navy, U.S. EPA, and FDEP believe that the above proposed cleanup plan meets the threshold criteria and provides the best balance of tradeoffs with respect to the balancing and modifying criteria. The Navy, U.S. EPA, and FDEP expect the proposed cleanup plan to satisfy the following statutory requirements of **CERCLA** §121(b): (1) be protective of human health and the environment; (2) comply with **ARARs**, specifically the Safe Drinking Water Act and the Florida Administrative Code Chapter 62-520; (3) be cost effective; (4) utilize permanent solutions to the maximum extent practical; and (5) satisfy the preference for treatment as a principal element.

### ***What Impacts Would the Cleanup Have on the Local Community?***

- Alternatives which involve the treatment and handling of soil during construction and/or operation, could pose a limited risk to construction workers or operating personnel. However, measures would be taken to minimize and control these risks.
- Alternative 3, which involves the transportation of contaminated soil for offsite disposal, would pose a risk to nearby communities. However, measures would be taken to minimize and control these risks.
- Alternative 2, which does not immediately achieve **cleanup goals**, includes administrative actions to limit the use of the land.
- Alternatives 2 and 3, which involve on-site monitoring and/or site construction activities, would occupy the site. This would limit use and/or development of the site for the duration of the activity.
- The No-Action Alternative (Alternative 1) would not prevent exposure to site contaminants. This would result in unacceptable human health risks.

### ***Why Do the Navy and U.S. EPA, in Consultation with FDEP, Recommend This Cleanup Plan?***

This remedy is recommended for the following reasons:

- The detected concentrations of **COCs** in the soil in the unpaved areas of Site 32 are in excess of FDEP SCTLs for direct residential exposure; however, implementation of **LUCs** to prevent residential development will prevent unacceptable exposure risk. The detected concentrations of **COCs** in the soil in the paved areas of Site 32 are in excess of FDEP SCTLs for direct industrial exposure; however, if the asphalt cover is maintained in good condition, contaminants would not have a pathway to cause an unacceptable exposure risk.

- To date, there is no evidence of ongoing contaminant migration from the soil to the **surficial aquifer** beneath Site 32. Studies have shown that concentrations of **COCs** in the groundwater beneath Site 32 were not detected or less than the NAS Cecil Field IBDS or FDEP GCTLs.
- This cleanup plan will achieve risk reduction by imposing restrictions on site land usage and by requiring the owner of the site to properly maintain the asphalt cover.

### ***Next Steps***

By December 2003, the Navy and U.S. EPA expect to have reviewed comments in consultation with FDEP and signed the **ROD** describing the chosen cleanup plan. The **ROD**, which includes a summary of responses to public comments, will then be made available to the public at the Information Repository at Building 907, 13357 Lake Newman Street, Cecil Commerce Center, Jacksonville, Florida. The Navy and U.S. EPA, in consultation with FDEP, will also announce its decision through the local news media and the community mailing list.

### ***Glossary of Terms***

This glossary defines the bolded terms used in this Proposed Plan. The definitions in this glossary apply specifically to this Proposed Plan and may have other meanings when used in different circumstances.

**Administrative Record:** The complete body of documents pertaining to the investigation and restoration of an environmental site. This body of documents is kept at a location where it can be accessed by the general public.

**Applicable or Relevant and Appropriate Requirements (ARARs):** The Federal, State, and local environmental rules, regulations, and criteria that must be met by the selected remedy under **CERCLA**.

**Chemical of concern (COC):** A substance detected at a concentration and/or in a location where it could have an adverse effect on human health and the environment.

**Cleanup goal:** A numerical concentration agreed upon by the Navy and U.S. EPA in consultation with FDEP as having to be reached for a certain **COC** in order to meet one or more of the **RAOs**. A **cleanup goal** may be a regulatory-based criterion, a risk-based concentration, or even a background value.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** A Federal law also known as "Superfund". This law was passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). This law created a special tax that goes into a trust fund to investigate and cleanup abandoned or uncontrolled hazardous waste sites.

**Engineering Evaluation / Cost Analysis (EE/CA):** A report that presents the development, analysis, and comparison of cleanup alternatives.

**Inorganic Background Data Set (IBDS):** A compendium of the concentrations of non-organic substances, mostly metals, typically detected in soil and groundwater in uncontaminated areas of NAS Cecil Field.

**Installation Restoration (IR):** A program established by the Navy for the investigation and cleanup of Superfund sites at their facilities.

**Interim Removal Action (IRA):** An interim cleanup action performed to address an immediate environmental threat.

**Land Use Controls (LUCs):** Administrative measures taken to restrict site access, current land use or future development, or groundwater use. Typical **LUCs** consist of deed restrictions.

**National Priorities List (NPL):** The list of national Superfund sites.

**Net Present Worth:** A costing technique that expresses the total of initial capital expenditure and long-term **operation and maintenance (O&M)** costs in terms of present day dollars.

**Operable Unit (OU):** A discrete entity that comprises an incremental step toward the comprehensive cleanup of one or more environmental sites. An **OU** may address a specific medium within a site (e.g., soil or groundwater), a geographical portion of the site, a specific site environmental concern, or the initial phases of an action. At NAS Cecil Field, **OUs** have often been organized to group multiple sites with similar characteristics and environmental concerns.

**Polychlorinated biphenyls (PCBs):** High molecular weight, moderately mobile, and moderately to highly toxic liquid organic chemicals that feature multiple benzenic rings and chlorine atoms in their chemical formula. In the past, these were commonly used as cooling fluid in electric transformers and, as a result, **PCB** contamination is relatively widespread.

**Polynuclear Aromatic Hydrocarbons (PAHs):** High molecular weight, relatively immobile, and moderately toxic solid organic chemicals that feature multiple benzenic aromatic rings in their chemical formula. **PAHs** are typically formed during the incomplete combustion of coal, oil, gas, garbage, or other organic substances.

**Potential Source of Contamination (PSC):** An area where environmental contamination was identified but limited to the soil above the groundwater table (vadose or unsaturated zone).

**Record of Decision (ROD):** An official document that describes the selected Superfund remedy for a specific site. The **ROD** documents the remedy selection process and is issued by the Navy and U.S. EPA following the public comment period.

**Remedial Action Objective (RAO):** A cleanup objective agreed-upon by the Navy and U.S. EPA in consultation with FDEP. One or more **RAOs** are typically formulated for each environmental site.

**Restoration Advisory Board (RAB):** A body of representatives from the general public that meets on a regular basis to be briefed by the Navy and their contractors on the progress of environmental investigations and cleanup activities for a given facility. The **RAB** provides the opportunity for the community to give input into the cleanup program before final decisions are made.

**Semivolatile organic compounds (SVOCs):** Organic compounds that do not readily evaporate at normal ambient temperatures but still have a relatively low boiling point. Such compounds are typically found in asphalt, fuel, paints, plastics, and tars.

**Surficial aquifer:** A layer of groundwater that is separated from deeper groundwater by a confining formation. At NAS Cecil Field, the **surficial aquifer** typically extends from approximately 5 feet below ground surface to approximately 90 feet below ground surface.

**Upper confidence level (UCL):** Statistical term used to define a numerical value that is greater than a certain percentage of the numerical values of a given data set. For example, the 95-percent **UCL** of a data set of concentrations expresses the concentration value that is greater than 95 percent of the individual concentration values of the data set.

**Volatile organic compounds (VOCs):** Organic compounds that evaporate readily at normal ambient temperatures. Typical **VOCs** include the light fraction of gasoline (benzene, toluene, xylenes) and low molecular weight solvents, such as trichloroethylene (TCE).



### What's a Formal Comment?

Formal comments are used to improve the cleanup proposal. During the 30-day formal comment period, the Navy and U.S. EPA, in consultation with FDEP, will accept formal written comments and hold a hearing, if requested, to accept formal verbal comments.

To make a formal comment, you need to present your views during the public hearing or submit a written comment during the comment period. A request for a public hearing to present your formal comments must be made in writing. The request must be postmarked no later than October 24, 2003. Written comments and requests for a public hearing should be sent to

Commander  
Department of the Navy  
Southern Division  
Naval Facilities Engineering Command  
Attn: Mr. Jeffrey Meyers, P.E., CHMM (Code ES3)  
2155 Eagle Drive  
North Charleston, SC 29406



Federal regulations require the Navy and U.S. EPA to distinguish between "formal" and "informal" comments. Although the Navy and U.S. EPA, in consultation with FDEP, use both your comments and **RAB** comments throughout site investigation and cleanup activities, they are only required to respond in writing to formal comments on the Proposed Plan. If a public hearing is requested, there will be no verbal response to your comments during the formal hearing portion of the meeting. After the formal hearing portion of the public meeting is closed, the Navy and U.S. EPA may respond to informal questions, in consultation with FDEP .

The Navy and U.S. EPA will review , in consultation with FDEP, the transcript of all formal comments received at the hearing and all written comments received during the formal comment period before making a final cleanup decision. They will then prepare a written response to all formal comments. The transcript of formal comments and the written responses of the Navy and U.S. EPA will then be issued in a Responsiveness Summary included in the **ROD**.

### ***For More Detailed Information***

To help the public understand and comment on the proposal for the site, this publication summarizes a number of reports and studies. All the technical and public information publications prepared to date for the site are available at the following Information Repository:

Building 907  
13357 Lake Newman Street  
Cecil Commerce Center  
Jacksonville, Florida 32252  
904-573-0336





