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NAS WHITING FIELD
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FINAL PROPOSED PLAN FOR SITE 30 NAS WHITING FIELD FL

6/1/2001

TETRA TECH NUS

Naval Air Station Whiting Field, Milton, Florida

PROPOSED PLAN

Site 30, South Field Maintenance Hangar

The Department of Defense and the Navy have completed the investigation of Naval Air Station (NAS) Whiting Field Site 30, South Field Maintenance Hangar. The site history and current conditions indicate a need to implement land-use controls for future use.

June 2001

In accordance with the National Contingency Plan (NCP) §300.430(f) as well as Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this document summarizes the Navy's proposal for land-use controls at Site 30 (South Field Maintenance Hangar) at Naval Air Station Whiting Field.

The proposed plan is a document intended to fulfill the public participation requirements under CERCLA and the NCP with the specific purposes as follows: provide basic background information; identify the preferred alternative for remedial action at the site and explain the reasons for the preference; describe other remedial alternatives considered before the proposed selection was made; solicit public review and comment on all alternatives described; and provide information on how the public can be involved in the remedy selection process.

Comments

The Navy will be accepting written comments (see insert) from July 2 through August 1, 2001. The comment period includes an opportunity for a public meeting where the Navy would present more detailed site information. A meeting will be held if there is a request from members of the public before the end of the comment period.

All comments will be considered before a final decision is reached.

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The Proposal

The proposed final remedy for surface and subsurface soil contamination at Site 30 is land-use controls (LUCs). Areas covered with concrete or asphalt would not require soil removal because the existing cover material is a barrier preventing exposure to contaminated soil as long as the concrete/asphalt remain in place. LUCs would restrict future use of the site to non-residential activities involving less than full-time human contact with surface and subsurface soil. Residential use of the site would be prohibited, and the Navy would perform periodic site inspections and ensure the LUCs are being properly maintained and administered. Groundwater at Site 30 is being investigated separately as part of the NAS Whiting Field basewide groundwater study (Site 40) and is not addressed by the proposed remedy. There is no surface water or sediment at Site 30. This proposal was developed by the Navy with concurrence from the U.S. Environmental Protection Agency (USEPA) and the Florida Department of Environmental Protection (FDEP). The NAS Whiting Field Restoration Advisory Board (RAB) has provided input into the development of the proposed remedy.

The Navy, USEPA, and FDEP will select a final response action for soil contamination at Site 30 after the public comment period has ended and all written comments received have been evaluated. The final response action will be selected to ensure adequate protection of human health and the environment and will be detailed in a Record of Decision (ROD) document for the site. This document will be published as a permanent part of the public record for NAS Whiting Field.

This Proposed Plan summarizes information found in greater detail in the Remedial Investigation Report for Surface and Subsurface Soil, Sites 3, 4, 6, 30, 32, and 33; the Feasibility Study for Surface and Subsurface Soil, Sites 3, 4, 6, 30, 32, and 33; Project Completion Report for UST and Soil Removal Activities at Sites 30, 32, and 33; and other site documents. These materials are available for review at the **NAS Whiting Field Information Repository, West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida 32570; (850) 623-5565.**

Site History

Location: Site 30 is approximately 4.3 acres and located at the South Field Maintenance Hangar, Building 1406 in the South Field Industrial Area (Figure 1). Site 30 includes Building 1406, the adjacent wash rack area, and the location of the abandoned waste oil underground storage tanks (USTs) west of Building 1406.

Operational and Waste Disposal History: The South Field Maintenance Hangar was constructed in the middle 1940s to support maintenance service for training aircraft. Activities at this site included engine maintenance, corrosion control, and aircraft cleaning. These activities generated waste stripping compounds, cleaning solvents, paint wastes, alkaline cleaners, detergents, oil, and hydraulic fluids.

Current Conditions: The site is characterized by concrete, asphalt, buildings, and heavy human activity. A small area of mowed turfgrass is located along the western boundary of the site.

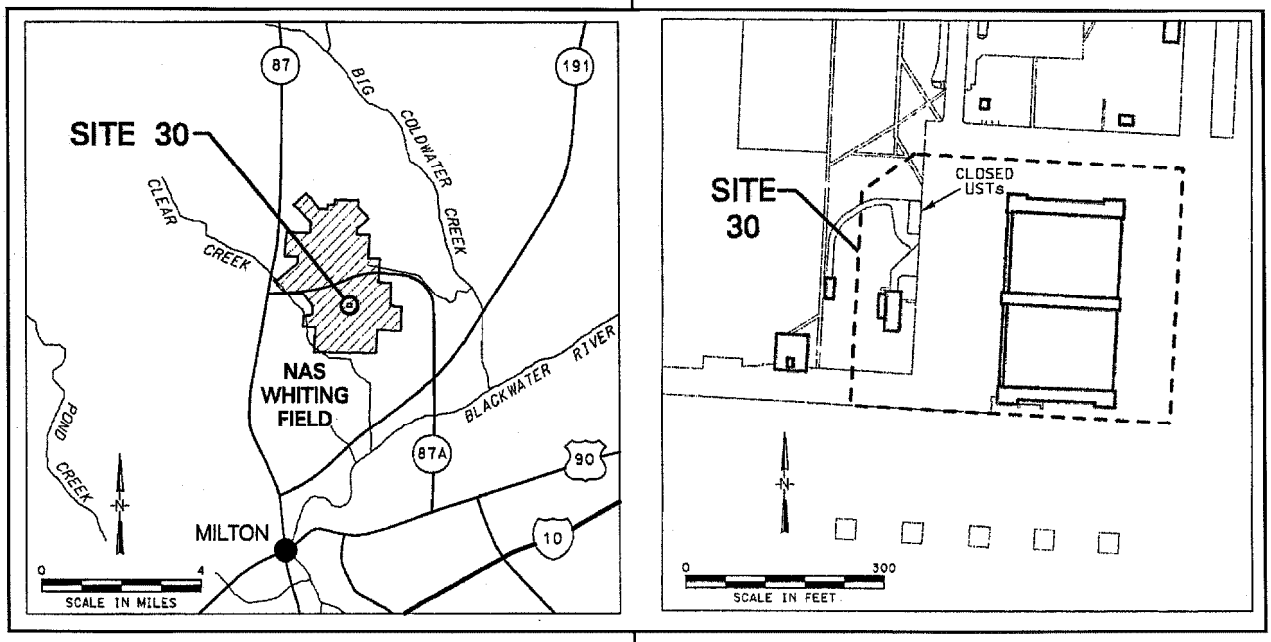
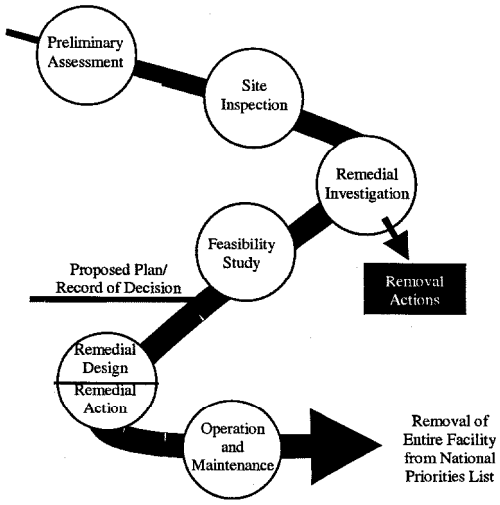


Figure 1 – Site 30 Location Map

Environmental History

Regulatory Framework

Environmental work at Site 30 is part of the ongoing Installation Restoration program at NAS Whiting Field. This is a Department of Defense program to investigate and, if necessary, clean up conditions related to suspected past releases of hazardous materials at military facilities. The program complies with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and other applicable Florida and Federal environmental regulations, and is typically performed in the following stages:



NAS Whiting Field was placed on the USEPA National Priorities List for environmental study and cleanup in June 1994.

Investigation Activities

The Remedial Investigation at Site 30 was conducted in phases from 1986 through 1999. Fieldwork included a range of environmental studies to collect data needed to determine the presence, nature, and extent of contamination. The field activities and their objectives included the following:

Surface Soil Sampling: conducted to determine surface soil contaminant concentrations by laboratory chemical analysis.

Subsurface Soil Sampling: provided subsurface soil characteristics and contaminant concentration data. Activities included a soil gas survey, installation of soil borings, and sampling of subsurface soil to develop a description of subsurface soil characteristics.

Investigation Findings

The Remedial Investigation Report provided an understanding of the soil environmental conditions at Site 30. Groundwater at Site 30 will be investigated and evaluated separately in the basewide groundwater study (Site 40). The present findings are summarized below.

General Site Conditions:

- Groundwater flows to the southwest and appears to discharge into Clear Creek. The water table at Site 30 is 80–90 feet below ground surface.
- Surface and subsurface soil is predominantly sand and silt with thin layers of clay.

Soil Conditions:

- Arsenic, aluminum, chromium, iron, manganese, total petroleum hydrocarbons, and vanadium in surface soil exceed the standards set by USEPA or FDEP for residential areas.
- Arsenic and total petroleum hydrocarbons in subsurface soil exceed the standards set by USEPA or FDEP for industrial areas.

Data collected during the Remedial Investigation were also used in two risk assessments: the human health risk assessment and the ecological risk assessment. The human health risk assessment estimated health risks for humans potentially exposed to site-related chemicals. In the Remedial Investigation, all hazardous substances of potential concern detected in the soil are identified. The substances listed above are those driving the risk and requiring remedy selection. The ecological risk assessment evaluated potential risks to animals and plants from exposure to site contaminants. Risk assessment findings for soil are presented below.

Risk estimates were calculated using FDEP and USEPA guidelines designed to protect human health and the environment. For cancer-causing chemicals, the cancer risk numbers shown below are an expression of an individual's likelihood of developing cancer as a result of exposure. The estimate can also be presented in terms of the number of excess cases of cancer in a given population. For example, a cancer risk level of 1.0E-06 means one additional case of cancer in 1,000,000 exposed persons. For noncancer-causing chemicals, the measure of the likelihood of adverse effects occurring in humans is called the Hazard Index (HI). An HI greater than 1.0 suggests adverse effects are possible.

Human Health Risks:

- Arsenic in surface soil poses an increased lifetime cancer risk greater than the FDEP's threshold level of 1.0E-06 to site trespassers (3.6E-06), occupational workers (6.3E-06), and hypothetical future residents (3.5E-05). Total petroleum hydrocarbons and iron in surface soil result in unacceptable noncarinogenic HIs greater than 1.0 for hypothetical future child residents (4.7 and 1.1, respectively).

Ecological Risks:

- The quantity of the terrestrial habitat at Site 30 is limited and the quality is poor. The site is comprised almost entirely of concrete and is surrounded by intensive development, with the exception of some turfgrass to the west. In addition, helicopters are parked adjacent to the turfgrass, and helicopter take-offs and landings are made in this area on a regular and frequent basis. As a result, the area is characterized by loud noise, deterring some types of terrestrial wildlife from using the turfgrass area. Most importantly, the site comprises only a small portion of the home ranges of most of the terrestrial wildlife species found on-base. Therefore, reduction in growth, survival, and reproduction of small mammal and bird populations at and near the site is unlikely. For these reasons, potential risks appear to be acceptable and further ecological study at Site 30 is unwarranted.

Next, a **Feasibility Study** was conducted to identify the best approach to address the soil contamination at Site 30. The Feasibility Study for Surface and Subsurface Soil, Sites 3, 4, 6, 30, 32, and 33 contains a more detailed description of the remedial alternatives evaluated and their estimated 30-year present worth operation and maintenance (O&M) and capital costs. Four alternatives were evaluated.

Risk Assessment Findings: Exposure to contaminants found in soil samples at Site 30 poses an increased health risk to trespassers, occupational workers, and hypothetical future residents due primarily to arsenic and total petroleum hydrocarbons.

Environmental History
(continued from Page 2)

- Alternative S30-1, No Action (estimated present worth cost of $18,000): evaluated for comparison in all Feasibility Studies. The No Action alternative includes costs for conducting 5-year reviews over a 30-year monitoring period.
- Alternative S30-2, UST Removal, Surface Soil Removal, and LUCs (estimated present worth cost of $176,000 including O&M costs for 30 years): removal of USTs; removal of surface soil not covered with concrete and asphalt and exceeding levels allowed for Florida industrial sites, and off-site disposal; and LUCs. LUCs are restrictions on the use of the site to non-residential activities involving less than full-time human contact with surface and subsurface soil.
- Alternative S30-3, UST Removal, Surface Soil Removal, Soil Venting, and LUCs (estimated present worth cost of $352,000 including O&M costs for 30 years): removal of USTs; removal of surface soil not covered with concrete and asphalt and exceeding levels allowed for Florida industrial sites, and off-site disposal; in situ soil venting to promote volatilization and biodegradation of organic constituents in subsurface soil; and LUCs, as described above.
- Alternative S30-4, UST Removal, Surface And Subsurface Soil Removal, and LUCs (estimated present worth cost of $884,000 including O&M costs for 30 years): removal of USTs; removal and off-site disposal of surface and subsurface soil exceeding levels allowed for Florida industrial sites; and LUCs, as described above.

These four alternatives were evaluated using nine criteria developed by the USEPA to assess cleanup alternatives. The criteria used to select a preferred alternative are as follows:

- Overall protection of human health and the environment
- Compliance with applicable environmental regulations and requirements
- Long-term effectiveness and permanence
- Reduction of contaminant toxicity, mobility, or volume
- Short-term effectiveness
- Implementability
- Cost effectiveness
- State acceptance
- Community acceptance

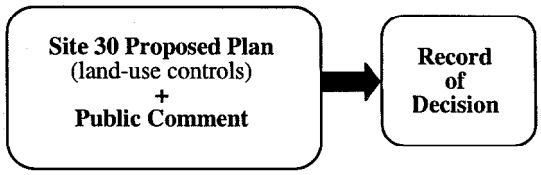
The Feasibility Study for Surface and Subsurface Soil, Sites 3, 4, 6, 30, 32, and 33 contains a detailed evaluation of each alternative with the nine criteria. The evaluation in the Feasibility Study concluded the "No Action" alternative was not protective of human health for trespassers, occupational workers, and hypothetical future site residents. The UST removal, surface soil removal, and LUCs alternative was preferred over the other two alternatives because it would protect human health, be more cost effective, and satisfy the other evaluation criteria. The community acceptance criterion will be assessed after the public comment period is complete. Actual or threatened releases of hazardous substances from this site, if not addressed by the preferred alternative or one of the other active measures considered, may present a current or potential threat to public health, welfare, or the environment.

Based on additional review of inorganic data from the facility and surrounding area, it was determined the observed arsenic values represent naturally occurring levels. Since the previously identified human health risk associated with arsenic is now considered to be due to naturally occurring levels, no action will be taken to remediate arsenic in surface and subsurface soil. Through an earlier removal action (Project Completion Report for UST and Soil Removal Activities at Sites 30, 32, and 33; June 2001) the USTs and associated contaminated surface soil were removed. Therefore, Alternative S30-2, UST Removal, Surface Soil Removal, and LUCs, as identified in the Feasibility Study is modified to only include LUCs.

The LUCs alternative will prevent prolonged and frequent human exposure to soil with chemicals exceeding residential standards. The reporting and certification requirements for the LUCs have been incorporated into the LUC Memorandum of Agreement between the Navy, USEPA, and FDEP dated November 4, 1999, and also will be specified in the Site 30 ROD. LUCs will include a provision for surface and subsurface soil remediation if soil is exposed by concrete or asphalt disturbance and exceeds acceptable levels. Site 30 will be available for non-residential use. No other cleanup actions for soil are proposed at Site 30.

Basis for the Proposal

Based on the Remedial Investigation, risk assessment, and Feasibility Study findings, the Navy is proposing LUCs as a final remedy with 5-year reviews because soil contamination will remain on-site. These actions will allow activities involving less than full-time direct contact with the soil and would prohibit future residential use.



The USEPA and FDEP concur with institution of LUCs to protect human health at Site 30. Community acceptance of the proposed remedial action is the next step. Once the proposal is approved, the ROD will be signed by the Navy, with concurrence by FDEP and USEPA. This document will establish the procedure to assure LUCs at Site 30 remain effective over the long term. No other soil cleanup measures at Site 30 will be proposed after approval of the selected remedial action.

Public Involvement

The Navy has established an active outreach program to ensure community involvement in environmental activities at Site 30 and throughout NAS Whiting Field. The Navy will be accepting written comments on the proposed Site 30 remedial action from July 2 to August 1, 2001. Public participation in the selection process is encouraged. Comments can be submitted using the enclosed form. Comments received will be summarized and responses provided in the responsiveness summary section of the ROD.

Comments

For your convenience a public comment form is included with this proposed plan. Written comments and requests for more information or a public meeting must be mailed (postmarked) by August 1, 2001.

Public Involvement
(continued from Page 3)

The comment period includes an opportunity for a public meeting where the Navy would present the Remedial Investigation and Feasibility Study reports and the Proposed Plan, answer questions, and receive comments in writing from the public. A public meeting will be held if one is requested by members of the public before the end of the comment period.

RAB Meeting Attendees

The NAS Whiting Field RAB is another method used by the Navy to promote public involvement in the base environmental cleanup program. For example, the RAB has been invited to participate in developing the proposed remedy by reviewing the documents, offering suggestions, and expressing their concerns on the proposed remedial actions. The RAB meets regularly at convenient times and locations to discuss Installation Restoration program status and provide community input into the cleanup process. RAB meetings are open to the public and are advertised in local media.

A community mailing list is also maintained to distribute updates about the environmental program to interested members of the community.

If you need additional information, would like to comment on the proposed remedy or would like to request a public meeting, please contact:

Mr. James Holland
Public Works Department
NAS Whiting Field
7151 USS WASP Street
Milton, Florida 32570-6159
(850) 623-7181 (Ext. 49)

Glossary **(commonly used terms)**

Aquifer: an underground layer of rock, sand, or gravel capable of storing and transmitting water within cracks and pore spaces, or between grains.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): a Federal law enacted in 1980 and modified in 1986. CERCLA, administered by the USEPA and commonly known as Superfund, outlines a process to evaluate hazardous waste conditions that may pose a threat to human health or the environment.

Feasibility Study: an engineering analysis and report identifying and evaluating the most appropriate technical approaches for addressing contamination at a site.

Groundwater: water found within an aquifer.

Hazard Index (HI): the measure of the likelihood of adverse effects occurring to humans from noncancer-causing chemicals.

Information Repository: a public file containing technical reports, reference documents, and other materials relevant to the site cleanup.

Land-Use Controls (LUCs): restrictions limiting activities at hazardous waste sites to prevent or minimize human exposure to site contaminants. LUCs also require periodic site inspections and reports.

National Priorities List: the USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund.

Operation and Maintenance (O&M): activities occurring after a cleanup action is conducted to ensure treatment or containment systems are functioning properly.

Preliminary Assessment: a review of available information about a known or suspected hazardous waste site or release to determine if further study is needed.

Proposed Plan: a public participation document detailing the preferred response action at a site.

Public Comment Period: a legally required opportunity for the community to provide written and oral comments on a proposed environmental action at a hazardous waste site.

Record of Decision (ROD): a public document explaining selected cleanup alternatives at a site; it is based on information and technical analysis, and on consideration of public comments and concerns. The ROD is issued and signed by the Navy, the USEPA, and the FDEP at the completion of a Remedial Investigation and Feasibility Study and after community acceptance of the Proposed Plan.

Remedial Action: the actual construction or cleanup phase following the selection of cleanup alternatives.

Remedial Design: the cleanup phase where engineers design technical specifications for cleanup remedies.

Removal Action: an action taken to address a release or potential release of hazardous substances posing immediate danger to public health or the environment.

Remedial Investigation: an in-depth study to determine the nature and extent of contamination and establish cleanup criteria.

Response Action: a federally authorized action to respond to environmental contamination. There are two types: removal action taken over the short-term to respond quickly to a more immediate threat, and remedial action involving long-term activities for a more permanent cleanup solution.

Responsiveness Summary: a section of the ROD summarizing the public comments received and the responses to the comments.

Restoration Advisory Board (RAB): an advisory group composed of regulatory agency representatives, site personnel, and community volunteers who provide input and promote public involvement in cleanup activities.

Risk Assessment: a study estimating the potential risk from a site to human health and the environment.

Site Inspection: an investigation phase where readily available information is collected and analyzed to assess the extent and severity of contamination. A USEPA scoring methodology follows the site inspection to identify any immediate threat to human health or the environment.

Underground Storage Tank (UST): a tank and any underground piping connected to the tank having at least 10 percent of its combined volume underground.

Public Comments

If you have comments or questions on the Site 30 Proposed Plan, please provide them in the space below (use a separate sheet of paper, if needed). Include your name, address, and telephone number so we can contact you, if necessary. All comments will be considered in the final response decision for Site 30. Comments must be mailed (postmarked) by August 1, 2001.

Name: _____

Address: _____

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Telephone Number: _____

Mailing List Update

If you would like to be added or removed from the NAS Whiting Field environmental mailing list, please check the appropriate box and fill in the correct address information to your left.

- ❑ Address change
- ❑ Add to mailing list
- ❑ Delete from mailing list

Comments:

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Return to Mr. James Holland, Public Works Department,
NAS Whiting Field, 7151 USS Wasp Street,
Milton, Florida 32570-6159, (850) 623-7181 (Ext. 49)
e-mail: james.holland@cnet.navy.mil

Mr. James Holland
Public Works Department
NAS Whiting Field
7151 USS Wasp Street
Milton, Florida 32570-6159

Place
Stamp
Here

Forwarding address correction requested.