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PROPOSED PLAN FOR SOIL REMEDY AT TRUMAN ANNEX DEFENSE REUTILIZATION
AND MARKETING OFFICE WASTE STORAGE AREA NAS KEY WEST FL
9/19/1999
NAS KEY WEST



PROPOSED PLAN



Naval Air Station Key West, Florida

Facility/Unit Type: Truman Annex DRMO Waste Storage Area
Contaminants: Inorganics, SVOCs, and PCBs
Media: Soil
Remedy: Land-Use Controls

INTRODUCTION

This Proposed Plan is issued by the U.S. Navy, the lead agency for Naval Air Station (NAS) Key West remedial activities, with concurrence by the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP). The proposed remedial activities are conducted under the Department of Defense's Base Realignment and Closure (BRAC) program in accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), and the FDEP Brownfields Cleanup Criteria Rule (62-785 F.A.C.). The Defense Reutilization and Marketing Office (DRMO) Waste Storage Area at Truman Annex is the site of interest and is known as Parcel C, Subzones 3 and 4.

This Proposed Plan identifies the proposed remedy for the DRMO Waste Storage Area at NAS Key West, explains the rationale for the preference, solicits public review and comments on the conclusions of the Supplemental Site Inspection (SSI), and provides information as to how the public can be involved in the remedy selection process. The Proposed Plan provides a summary of past environmental work at the Truman Annex DRMO Waste Storage Area. This document provides key highlights of the SSI Report but should not be used as a substitute. Additional details regarding the site and the investigation conducted may be found in the SSI Report that is kept as part of the information repository. Please refer to the cover letter for the repository location.

The public is encouraged to comment on the proposed remedy. The U.S. Navy emphasizes that the proposed remedy is the initial recommendation of the Agency. Changes to the proposed remedy, or a change from the proposed remedy to another remedy, may be made if public comments or additional data indicate that such a change would result in a more appropriate solution.

PROPOSED REMEDY

The proposed remedy is land-use controls because contamination at the site has been sufficiently remediated. Minimal costs are associated with implementing and administering these land-use controls.

FACILITY BACKGROUND

The property used by the DRMO includes Buildings 795, 284, and 261 and two large, fenced storage areas known as the Former Oil Container and Scrap metal and Refugee Item Storage Area. The DRMO received excess government materials. In the recent past, Building 261 was used to store hazardous materials, and Building 795 stored inert materials. The two large storage areas primarily stored metal debris. In addition, motors, vehicles, boats, refugee debris, and fuel trucks have been stored in those areas. Maps from the 1940s and 1950s indicate the presence of oil racks within the storage areas.

The 1998 Site Inspection (SI) sample results for samples taken at the DRMO Storage Area indicated levels of two inorganics, lead and antimony, and one semivolatile organic compound (SVOC), benzo(a)pyrene, in excess of their respective FDEP residential action levels of 500 mg/kg, 26 mg/kg, and 100 µg/kg respectively. Delineation sampling at the DRMO Storage Area was performed during the SSI, also conducted in 1998. One additional inorganic and four SVOCs were detected in excess of their FDEP or NAS Key West Partnering Team selected action levels during this sampling event. Benzo(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene were all detected above their FDEP action levels of 1400 µg/kg at one location. Dibenzo(a,h)anthracene was detected in excess of its FDEP action level of 100 µg/kg at two locations. Arsenic was detected in excess of the NAS Key West Partnering Team selected action level of 2.7 mg/kg at six locations. The Engineer's

Estimate/Cost Analysis (EE/CA) for Alternatives for BRAC Fast Track Soil Removal Parcels and the Action Memorandum for BRAC Fast Track Soil Removal Parcels briefly describe contamination at the DRMO Storage, remedial alternatives evaluated for the Interim Remedial Action (IRA), and costs associated with remediation. The SSI Report describes in detail delineation sampling, the IRA performed, and the locations and results of confirmation samples taken at the site.

The IRA at the DRMO Waste Storage Area removed more than 12,000 cubic yards of contaminated soil to depths of 2 and 4 feet from the areas shown in Figure 1. A total of 112 confirmation samples were collected from the perimeter of the excavation and analyzed at an offsite laboratory for inorganics and SVOCs.

The laboratory analysis showed three of the five SVOCs of concern were no longer present in concentrations exceeding FDEP action levels following the excavation. Benzo(a)anthracene was detected at 1870 µg/kg before the excavation and following the excavation the maximum detection concentration (MDC) was 916 µg/kg. Benzo(b)fluoranthene was detected with a MDC of 1480 µg/kg before the excavation and following the excavation the MDC was reduced to 781 µg/kg. Indeno(1,2,3-cd)pyrene was detected at 702 µg/kg before the excavation and reduced to 568 µg/kg following the excavation.

Similar reductions were observed for the five remaining analytes of concern, however these analytes are still present at concentrations in excess of their action levels. Arsenic showed a reduction in MDC from 6.2 mg/kg before excavation to 4 mg/kg following excavation. Antimony showed a reduction from 41.1 mg/kg before the excavation to 30.6 mg/kg following the excavation. Lead also showed a reduction in concentration from 4763.2 mg/kg before excavation to a MDC of 2890 mg/kg following excavation. Dibenzo(a,h)anthracene an SVOC showed a similar reduction from a MCD of 886.25 µg/kg before excavation to a MCD of 159 µg/kg following excavation. Benzo(a)pyrene showed a MCD of 2794 µg/kg before excavation and a MCD of 702 µg/kg following the excavation. Even though reductions in concentrations were observed following excavation for these five analytes, levels in excess of their respective action levels still remain in the sidewalls of the excavation. However these locations are in areas where the excavation was completed to an existing structure (road or concrete pad); which provides engineering controls to cap soil and limit possible exposure.

The required 95 percent-confidence level set by the NAS Key West Partnering Team, that all exposed soils within 2 feet of land surface be below action levels, was achieved for the site. Clean fill was placed in the excavation to return the site to grade.

The soil removal activities were performed in accordance with the FDEP Brownfields Cleanup Criteria Rule, no further action Criteria [62-785.680 F.A.C.] that provided a secondary regulatory driver to the site action levels. The regulation addresses no-further-action remedies with institutional controls and engineering controls (refer to the Land-Use Control section below for definitions) such as alternate cleanup criteria for the soil contaminant concentrations 2 feet below land surface. These cleanup criteria were implemented during the soil removal activities at the site. The no-further-action regulation also addresses the use of permanent cover and containment material to prevent human exposure and limit water infiltration. The asphalt and concrete covered areas found during excavation activities meet the definition of permanent cover material.

SCOPE OF THE REMEDIAL ACTION

Land-Use Control

In accordance with U.S. Navy and FDEP policies, the site remedy will include land-use controls. These remedies are often used when contamination poses low, long-term threats to the environment or where full treatment is impracticable. Land-use controls include engineering controls and institutional controls. Engineering controls include signs, guards, landfill caps, provisions for potable water, sheet pile, pumping and treatment of groundwater, monitoring wells and vapor extraction systems. Institutional controls are a variety of legal devices imposed to ensure that the engineering controls stay in place or, where there are no engineering controls, to ensure the restrictions on land use stay in place. Institutional controls include easements, covenants, permits, legal notices (in deeds, newspapers, etc.) zoning, agreements with regulators and land-use control maintenance reporting.

Soil excavation at DRMO was impeded by asphalt road surfaces and concrete slabs. Each of these impediments provide engineering controls to the remaining soil contaminants preventing exposure to the soil.

The land-use controls at DRMO will include deed restrictions (institutional controls) that will require anyone who disturbs structures identified as a permanent cover and/or containment material, do so in compliance with appropriate laws and regulations. For example, future workers who disturb these areas shall be in compliance with Occupational Safety and Health Administration (OSHA) 1910.120 and appropriate RCRA and CERCLA laws as a result of elevated concentrations of inorganics and SVOCs in soils.

Alternative Remedial Action

As required by the Department of the Navy Environmental Policy 99-02; Land-Use Controls, an alternative that provides for unrestricted property use was evaluated for DRMO. Under this alternative additional excavation activities are required under two base roads. Due to the impact on the roads and the current level of protection provided by them, this alternative was not selected.

The U.S. Navy recognizes that CERCLA allows various options for implementing remedies based on site conditions. For the DRMO Waste Storage Area at NAS Key West, the SSI Report indicates that the IRA (soil removal) reduced the threat to human health and the environment to acceptable levels in accordance with CERCLA, the NCP, and the Brownfields Cleanup Criteria Rule. Therefore, there is sufficient justification to propose land-use controls. There are minimal costs to implement land-use controls.

NAS Key West Contact

Phillip Williams
Installation Restoration Coordinator
Environmental Branch
U.S. Naval Air Station Key West
P.O. Box 9007
Key West, Florida 33040-9007
(Phone: 305-293-2061; Fax: 305-293-2542)

NEXT STEPS

Following a 30-day public comment period, the U.S. Navy will issue a final decision on the proposed remedy. The Decision Document, which will describe the remedy chosen for the Truman Annex DRMO Waste Storage Area and other BRAC sites, will include responses to comments received during the public comment period. Concurrence from EPA and FDEP will be obtained before implementing the final remedy.

