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PROPOSED PLAN FOR SOIL REMEDY AT TRUMAN ANNEX SEMINOLE BATTERY NAS
KEY WEST FL
9/19/1999
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PROPOSED PLAN



Naval Air Station Key West, Florida

Facility/Unit Type: Truman Annex Seminole Battery
Contaminants: Arsenic, Benzo(a)pyrene, and Benzo(b)fluoranthene
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.). Seminole Battery Building 261 at Truman Annex is the site of interest and is known as Parcel D, Subzone 1.

This Proposed Plan identifies the proposed remedy for the Seminole Battery 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 Seminole Battery. 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 Seminole Battery was constructed during the Civil War, and a modern battery addition was added in the 1950s. Both structures are currently unused, and entry is restricted. The materials used while the Batteries were in operation are unknown. The oldest portion of the Battery has the remnants of a generator exhaust system. The former fueling area known as 248 Tanks A&B is located west of the Seminole Battery. The fueling island and the tanks were removed in August 1995. The area is now covered in asphalt. To the northeast of the former tank location, concrete slabs are present from former grease racks used to lubricate and service vehicles.

The Site Inspection (SI) sample results for samples taken at Seminole Battery indicated concentrations of benzo(a)pyrene, and benzo(b)fluoranthene, at one location, in excess of their respective FDEP residential action levels of 100 µg/kg and 1400 µg/kg. Arsenic was also detected at the same location at a concentration equal to the NAS Key West Partnering Team selected action level of 2.7 mg/kg. 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 Seminole Battery, remedial alternatives evaluated for the Interim Remedial Action (IRA), and costs associated with remediation. The SSI Report describes in detail the IRA performed and locations and results of confirmation samples taken at the site.

The IRA at Seminole Battery removed approximately 62 cubic yards of contaminated soil to a depth of 2 feet from the area shown in Figure 1. Four confirmation samples were collected following excavation and analyzed at an offsite laboratory for metals and Semivolatile Organic Compounds (SVOCs). Arsenic showed a reduction in concentration from 2.7 mg/kg before the IRA to maximum concentration of 1.7 mg/kg following excavation. Benzo(b)fluoranthene also was reduced from 1900 µg/kg to a maximum concentration of 571 µg/kg following the IRA. However, concentrations of benzo(a)pyrene although below the SI detected concentration of 505 µg/kg remain in excess of its FDEP residential action level at two sidewall sample locations beneath the battery foundation with concentrations of 283 µg/kg and 454 µg/kg. The foundations provide an engineering control limiting exposure to soils on the sides of the excavations where elevated concentrations of benzo(a)pyrene remain. 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 Controls for definitions) such as alternate cleanup criteria for the soil contaminant concentrations two feet below land surface. The 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. In addition, it was determined that the concrete foundations in the ground provided a permanent containment to the migration of contaminants in accordance with the regulation.

SCOPE OF THE REMEDIAL ACTION

Land-Use Controls

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 may 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, notices (in deeds, newspapers, etc.) zoning, agreements with regulators and land-use control maintenance reporting.

Soil excavation was impeded by building foundations and an asphalt road. Each of these impediments provide engineering controls to the remaining soil contaminants preventing exposure of the soil to the environment. Further, the excavation of all of the remaining low-level contaminated soils was not deemed practical due to the possible adverse impact to the surrounding building and roadway.

The land-use controls at Seminole Battery will include deed restrictions (institutional control) 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) regulations (promulgated under Chapter 29 of the Code of Federal Regulations, Section 1910.120) and appropriate Resource Conservation and Recovery Act (RCRA) and CERCLA laws as a result of elevated benzo(a)pyrene concentrations 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 for Seminole Battery was evaluated. Under the alternative action additional excavation activities are required beneath the foundation of the Seminole Battery. Due to the possible adverse impact to the structure and the current level of protection provided by the structure, this alternative was not selected.

The U.S. Navy recognizes that CERCLA allows various options for implementing remedies based on site conditions. For the Seminole Battery 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 for the site. There are no costs to implement land-use controls.

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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 Seminole Battery Building 261 and other BRAC sites, will include responses to oral comments received during the public comment period. Concurrence from EPA and FDEP will be obtained before implementing the final remedy.

