

N00213.AR.000294
NAS KEY WEST
5090.3a

STATEMENT OF BASIS FOR BOCA CHICA AIRCRAFT INTERMEDIATE MAINTENANCE
BUILDING A-980 SOLID WASTE MANAGEMENT UNIT 4 NAS KEY WEST FL
7/12/1998
U S EPA REGION IV



STATEMENT OF BASIS



Naval Air Station Key West, Florida

Facility/Unit Type: Military Installation/Boca Chica Aircraft Intermediate Maintenance (AIMD) Building A-980 (SWMU 4)
Contaminants: Organics, Metals, and Pesticides
Media: Soil, Sediment, Surface Water, Groundwater, and Biota
Remedy: No Action with Land Use Controls

INTRODUCTION

The United States Environmental Protection Agency (EPA) issued the Hazardous and Solid Waste Amendments (HSWA) Corrective Action portion of the Resource Conservation and Recovery Act (RCRA) Permit (hereafter referred to as the "HSWA permit") to Naval Air Station Key West, Florida (NAS Key West) pursuant to Section 3004 (u) and 3004 (v) of RCRA. The permit was issued on July 31, 1990 and required NAS Key West to complete a further investigation to determine the nature and extent of contamination from a Solid Waste Management Unit (SWMU), the Boca Chica Aircraft Intermediate Maintenance (AIMD) Building A-980 known as SWMU 4.

The purpose of this Statement of Basis is several-fold. The Statement of Basis identifies the proposed remedy for SWMU 4 at NAS Key West and explains the rationale for the preference; solicits public review and comment on conclusions of the RCRA Facility Investigation (RFI); and provides information as to how the public can be involved in the remedy selection process. The Statement of Basis provides a summary of past work at SWMU 4 at NAS Key West. This document provides key highlights of the RFI, but should not be used as a substitute for that document. Additional details regarding the facility and the investigation conducted may be found in the RFI Report that is kept as part of the administrative record and

the information repository. Refer to the Public Participation section for their location.

The public is encouraged to comment on the proposed remedy based on the conclusions of the RFI Report. EPA 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

As discussed above, the proposed remedy represents EPA's initial recommendation for SWMU 4. The proposed remedy is no remedial action beyond that done in the removal action because the contamination at the site has been sufficiently remediated by the removal action. There is no cost associated with the proposed no action remedy.

FACILITY BACKGROUND

The U.S. Navy owns 4,670 acres on Boca Chica Key in Monroe County, Florida as part of NAS Key West. Currently, Boca Chica Key is the location of an active military airstrip and the facilities that support the airstrip.

Statement of Basis – SWMU 4

Adjacent properties are zoned for residential use.

In 1988, a RCRA Facility Assessment (RFA) was conducted at NAS Key West. Based on the results of the RFA an RFI was recommended at SWMU 4, Boca Chica AIMD Building A-980.

The AIMD Building A-980 is located on the northwestern portion of Boca Chica Key, on Midway Avenue south of U.S. Highway 1 (Figure 1). The building provides electronics maintenance support to aircraft at the NAS Key West airfield. The building was constructed in the late 1960s on 6 feet of crushed limerock fill (Figure 2). The site includes Building A-980, a paved parking area, and turf grass. A small stormwater drainage ditch lies to the south of the site. A shallow brackish marsh lies to the north, east and west of the site. A narrow strip of red mangroves occurs along the edge of the marsh. The site is flat, except where it slopes approximately 4 feet down to the marsh and ditch. In August 1981, two plastic 55-gallon drums were installed in-ground on the north (Location "A") and south (Location "B") sides of the building to capture and store waste liquids generated by maintenance activities within the building. Those liquids included 70 percent Freon 113 and 30 percent electrical insulating oil

mixture. The Navy ceased using the drums in 1987.

In December 1989, the two drums and a 6-inch layer of soil from around and under each drum were removed from the ground. The removal included post excavation samples of the soil. The samples were analyzed for a variety of hazardous waste parameters including ignitability, corrosivity, reactivity, and toxicity; metals; polychlorinated biphenyls (PCBs); oil/grease; and total organic carbon. Elevated cadmium, chromium, lead, and mercury were reported in samples from both excavations. These analytical results were not used in the RFI Report because of data quality issues. The excavated soil and drums were removed from their former locations and properly disposed. The excavation was backfilled with crushed limerock to match the surrounding grade.

Sampling was performed in 1993 and 1996 during two remedial investigations (RIs). Metals and other inorganics were the most common class of contaminants detected in subsurface soil. Specifically, antimony, beryllium, cyanide, tin, and sulfide were detected in excess of applicable or relevant and appropriate requirements and screening action levels (ARARs/SALs) near the former location of Drum B (south of the building). Antimony,

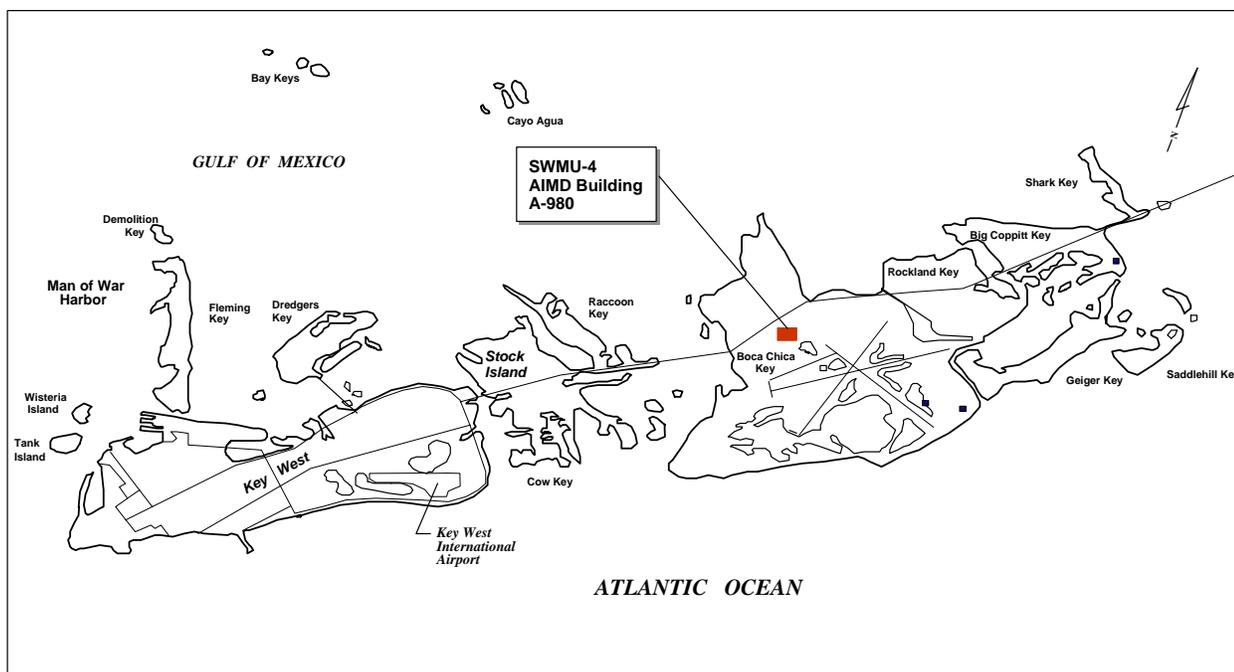


Figure 1. NAS Key West SWMU 4 Boca Chica AIMD Building A-980.

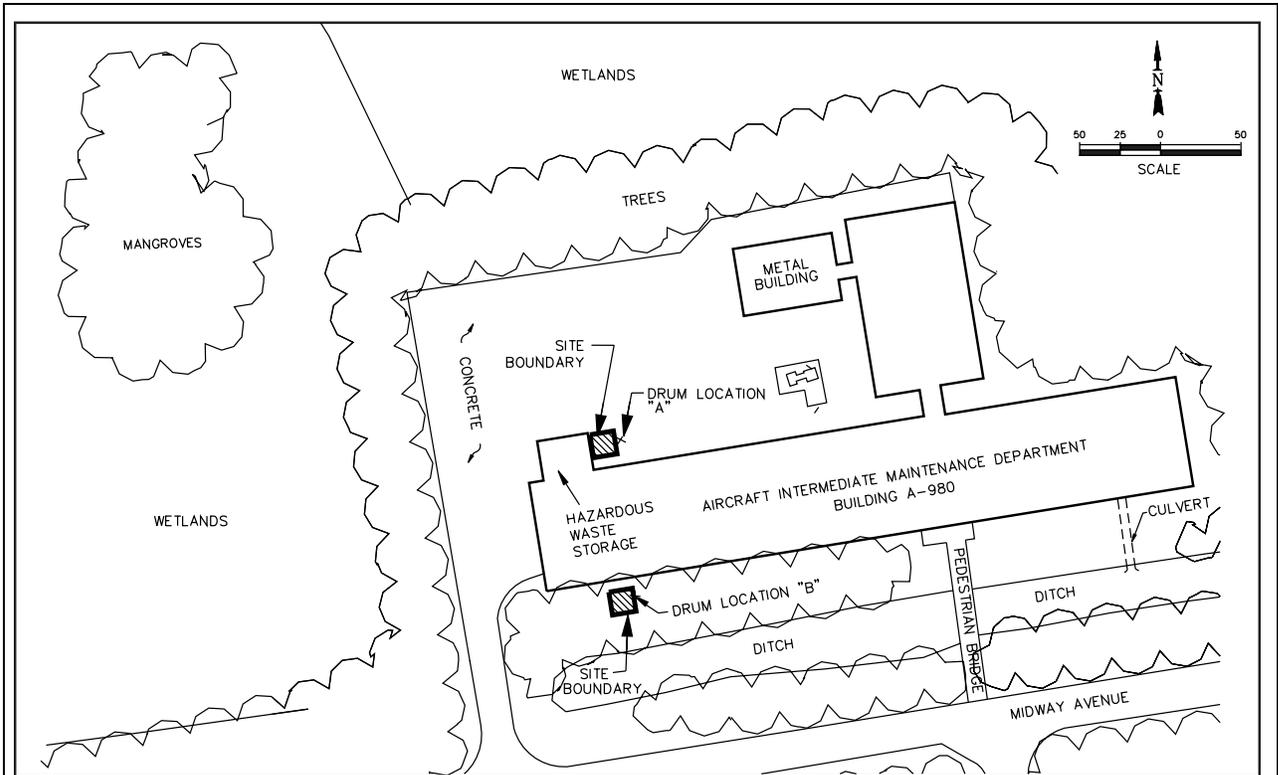


Figure 2. Site Location Map of SWMU 4.

beryllium, mercury, silver, tin, and zinc were detected in excess of ARARs/SALs near the former location of Drum A (north of the building). A single semivolatile organic carbon (SVOC), naphthalene, exceeded the ARARs/SALs in subsurface soils in two of the samples collected near the former location of Drum B. As in subsurface soil, metals and other inorganics were the most common class of contaminants detected in surface soil above ARARs/SALs. The metals found in surface soil include antimony, beryllium, cadmium, chromium, copper, cyanide, lead, mercury, sulfide, silver, tin, vanadium, and zinc.

Sediment sampled from the ditch to the south of the building and from the wetlands north of the building contained a single metal, volatile organic carbon, and SVOC (lead, acetone, and bis(2-ethylhexyl)phthalate, respectively) in excess of ARARs/SALs at only a single sample location. Surface water sampled in the same areas contained a single SVOC, N-nitroso-di-n-propylamine, as well as antimony, lead, and tin in excess of their ARAR/SAL criteria.

The main groundwater contaminants detected included 1,4-dioxane, bis(2-ethylhexyl)phthalate, chloroform, and vinyl chloride. Metals detected in excess of ARARs/SALs in 1993, including antimony, arsenic, and cyanide, were not detected in excess of screening criteria in 1996.

As a result of the source drum and soil removal, contaminant concentrations were lower in samples taken in 1996 than in previous years' samples.

SUMMARY OF FACILITY RISKS

A Human Health Baseline Risk Assessment (BRA) and an Ecological Risk Assessment (ERA) were performed as part of the RFI report. The risk assessments for the RFI/RI activities at NAS Key West were conducted in accordance with guidance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The RCRA sites at NAS Key West were evaluated for risk following CERCLA guidance at the request of EPA Region IV.

Statement of Basis – SWMU 4

In the BRA, human health risks associated with the exposure to detected contaminants in soil, sediment, and surface water were estimated for each potential receptor. Although groundwater was sampled and analyzed, it was not considered a pathway of concern since groundwater at this site meets the FDEP criteria for a Class G-III nonpotable aquifer.

The potential receptors were based on current and future land uses. The current potential receptors identified for SWMU 4 include adolescent/adult trespasser, occupational worker, and site maintenance worker. Under the future land use scenario, the most likely potential receptor is an excavation worker. Also considered under the future land use scenario are a residential child and adult, although residential development of SWMU 4 is considered unlikely. Under the master plan for land use on NAS Key West, the future land use for the area where SWMU 4 is located is as a restricted-access military base. In addition, a memorandum of agreement (MOA) for land use control will be developed and signed by the FDEP, EPA and the Navy. Future zoning will limit access at the site because it is near an active airstrip. In addition, the full BRA is in the Supplemental RFI/RI Report.

The contaminants of potential concern (COPCs) were selected within a medium based on comparison of the detected concentrations to risk-based screening levels. The selected COPCs represent those chemicals at SWMU 4 that are expected to contribute significantly to one or more of the exposure pathways selected for risk estimation. The BRA identified antimony, beryllium, and cadmium as COPCs in surface soil. Antimony and phenanthrene were identified as COPCs in sediment, and antimony and N-nitroso-di-n-propylamine were identified as COPCs in surface water. Since compounds were identified as COPCs, carcinogenic and noncarcinogenic risks for the five future and current use scenarios were modeled. There was no unacceptable carcinogenic or noncarcinogenic risk for any of the scenarios modeled.

The ERA was conducted to evaluate the possibility that aquatic and terrestrial ecological receptors may be at risk from site-related contaminants. The ERA was based on laboratory analyses of ground water, surface water, sediment, and soil samples; and

laboratory analyses of fish and vegetation. Sediment concentrations of lead, tin, acetone, 2-butanone, and bis(2-ethylhexyl)phthalate were elevated in a single sample, although concentrations were associated with relatively low potential risks. Downstream samples did not contain elevated concentrations of COPCs, indicating that migration from the site has not occurred. Contaminant concentrations in all media do not pose significant risks to plants or animals.

The proposed remedy for SWMU 4 is no action with land use controls. The previous soil removal activities at SWMU 4 have eliminated the need to perform additional remedial action. The SWMU 4 BRA identified no carcinogenic or noncarcinogenic risks. The ERA identified one sediment sample that had elevated concentrations of five contaminants, although the concentrations were associated with relatively low potential risks. No Action will therefore be protective of human health and the environment at SWMU 4. There are no costs associated with the proposed remedy.

SCOPE OF THE CORRECTIVE ACTION

EPA considers that HSWA Corrective Action has various options for implementing remedies based on site conditions. For SWMU 4 at NAS Key West, the RFI Report indicates that the removal performed at the site reduced the threat to human health and the environment to acceptable levels in accordance with the NAS Key West HSWA permit. Therefore, there is sufficient justification to propose a no action remedy for the site with land use controls.

PUBLIC PARTICIPATION

To make a final decision and incorporate a remedy into the RCRA permit, EPA is soliciting public review and comment on this Statement of Basis for the proposed remedy to SWMU 4 at NAS Key West. The regulations under 40 CFR 270.42(c)(2) require a 60-day comment period for a permit modification request made by the permittee under RCRA. EPA has undertaken the lead role on this request initiated by the U.S. Navy (the permittee). The comment period will begin on Sunday, July 12, 1998, which is the date of publication of the public notice in *The*

Citizen newspaper, and will end on Saturday, September 12, 1998.

The Statement of Basis and the associated administrative file, including the RFI Report, may be viewed and copied at the EPA Regional Office in Atlanta, Georgia between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except legal holidays. Additional copies of the RFI Report and Statement of Basis will be available for public review at the information repository in the Local and State History Department at the Monroe County Library, 700 Fleming Street, Key West, Florida (Phone 305-292-3595).

Further, EPA has determined there is sufficient need to hold a public meeting. It will occur at 7:00 p.m. on Monday, July 27, 1998, at the Holiday Inn Beachside, N. Roosevelt Blvd., Key West, Florida. Please call Phillip Williams at 305-293-2061 for directions to the public meeting. At the meeting, the proposed remedy will be discussed and questions answered. The public meeting will also address the proposed remedies for SWMUs 1, 2, and 3. To request information about the public meeting or comment period, to obtain more information concerning this Statement of Basis, or to submit written comments contact: Martha Berry, Remedial Project Manager, U.S. Environmental Protection Agency, 61 Forsyth Street, SW, Atlanta, GA 30303-3104 (Phone: 404-562-8533; Fax: 404-562-8518). All comments must be postmarked no later than September 12, 1998.

NEXT STEPS

Following the 60-day public comment period, EPA will issue a final decision on the RCRA permit modification request. The RCRA permit modification will detail the remedy chosen for SWMU 4 and will include responses to oral and written comments received during the public comment period in the Responsiveness Summary. Upon receipt of all of the Statement of Basis documents for NAS Key West SWMUs (SWMUs 1, 2, 3, 4, 5, 7, and 9), EPA will develop and issue the draft permit modification.

When the EPA makes a final decision to modify the permit, notice will be given to the Navy and each person who has submitted written comments or requested notice of the final decision. The final permit decision shall become effective 30 days after the service of notice of the decision unless a later date is specified or review is requested under 40 CFR 124.19. If no comments are received requesting a change in the draft permit, the final permit modification shall become effective immediately upon issuance.

CONTACT PERSON

EPA

Martha Berry
Remedial Project Manager
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, GA 30303-3104
(404) 562-8533 or Fax (404) 562-8518

**Comments on Statement of Basis
Boca Chica AIMD Building A-980 (SWMU 4)**

Place
Stamp
Here

Martha Berry
Remedial Project Manager
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, GA 30303-3104