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NAS KEY WEST  
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MINUTES FROM 16 NOVEMBER 1998 RESTORATION ADVISORY BOARD MEETING WITH  
ATTACHMENTS NAS KEY WEST FL  
11/16/1998  
NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION

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RESTORATION ADVISORY BOARD/PUBLIC MEETING  
NAVAL AIR STATION KEY WEST

Meeting Location:  
Holiday Inn Beachside  
North Roosevelt Blvd., Key West

Meeting Date/Time:  
November 16, 1998 7:00 p.m.

Welcome and Introductions  
Begin Public Meeting  
-Ron Demes-  
Navy Co-Chair

Presentation of Proposed Plans Installation Restoration (IR)  
Sites & Area of Concern (AOC) Site  
(IRs) 7, 8 & AOC B  
Question and Answer Period  
-Chuck Bryan-  
Tetra Tech NUS, Inc.

Conclude Public Meeting/Begin RAB Meeting  
-Ron Demes-

Review and Approval of Previous RAB Meeting Minutes  
-Ron Demes-

Update of Budget  
Dudley Patrick  
Southern Division

Update of BRAC Site Studies  
-Chuck Bryan-

Update of ERNA Site Studies  
-Chuck Bryan-

Introduction of Remedial Action at Trumbo Point  
Byas Glover  
Southern Division  
Mike Dunaway  
Harding Lawson Associates

Potential Topics for Next Meeting  
-Update of BRAC Activities-  
-Update of ERNA Activities-  
-Ron Demes-

Adjournment  
-Ron Demes-



## DEPARTMENT OF THE NAVY

NAVAL AIR STATION  
PO BOX 9001  
KEY WEST FL 33040-9001

5090  
Ser 1883/2027  
October 15, 1997

Dear Community Member:

Naval Air Station Key West (NASKW) is inviting the public to comment on Proposed Plans for two Installation Restoration (IR) sites and an Area of Concern (AOC) site. The designated sites, (IR 3, IR 7 and AOC B) are located at Naval Air Station Key West (NASKW) Truman Annex, Fleming Key, and Big Coppitt Key, respectively. The Proposed Plans are issued by the U.S. Navy, the lead agency for NAS Key West remedial activities, with concurrence by the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection. NAS Key West will hold a meeting open to the public on Monday, November 16, 1998 at 7:00 PM to present the proposed remedies described in the Proposed Plans and to address comments. The meeting will be held at the Holiday Inn Beachside (Convention Center), 3841 North Roosevelt Boulevard, Key West. Enclosed for your information are the following documents:

1. Public Notice of the proposed plans
2. Proposed Plans for three facilities located at NAS Key West Truman Annex (IR 3), Fleming Key (IR 7), and Big Coppitt Key (AOC B).

For further information, please call Phillip Williams at (305) 293-2061 or JOC Stephen Estes at (305) 293-2425.

Sincerely,

A handwritten signature in black ink, appearing to read "R. A. Demes", with a long horizontal line extending to the right.

R. A. DEMES  
Engineering Director  
Public Works Department  
By direction of  
the Commanding Officer

- Enclosures: 1. Public Notice of Proposed Plans  
2. Proposed Plans for IR 3, IR 7, and AOC B



## **PUBLIC NOTICE OF PROPOSED PLANS**

U.S. Naval Air Station (NAS) Key West submitted a request on October 18, 1998 to the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) for approval of the Proposed Plans for three facilities located at NAS Key West, Florida. The facilities (designated as IR 3, IR 7, and AOC B) are located on Key West, Fleming Key, and Big Coppitt Key, respectively, where past Navy operations have resulted in environmental contamination. In this request for approval, the Navy is seeking authorization for the proposed remedies described in the Proposed Plans for these facilities.

The public is invited to submit written comments on this request to the following NAS Key West contact person through the 60-day period ending December 18, 1998:

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001.  
Phone: 305-293-2061 or Fax: 305-293-2542

A copy of the request for approval of the proposed remedies and supporting documentation may be viewed and copied at the following location:

Local and State History Department  
Monroe County Library  
700 Fleming Street, Key West, Florida  
(305) 292-3595

NAS Key West will hold a meeting open to the public on Monday, November 16, 1998 at 7:00 pm for the purpose of presenting the proposed remedies described in the Proposed Plans and to address comments. The meeting will be held at Holiday Inn Beachside Key West, Florida, on N. Roosevelt Blvd. Contact Phillip Williams or the Public Affairs Officer at (305) 293-2425 for directions to the meeting location.



## PROPOSED PLAN



### Naval Air Station Key West, Florida

**Facility/Unit Type:** Military Installation/Former Truman Annex DDT Mixing Area (IR 3)  
**Contaminants:** Organics, Metals, and Pesticides  
**Media:** Soil and Groundwater  
**Remedy:** Asphalt Cap with 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 U. S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP). The proposed remedial activities are conducted under the Department of Defense's Installation Restoration Program (IRP) in accordance with Section 120 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the National Contingency Plan (NCP). The Former Truman Annex DDT Mixing Area is the site of interest and is known as IR 3.

The purpose of this Proposed Plan is several-fold. The Proposed Plan identifies the proposed remedy for IR 3 at NAS Key West and explains the rationale for the preference, solicits public review and comment on conclusions of the CERCLA Remedial Investigation (RI), 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 IR 3 at NAS Key West. This document provides key highlights of the Supplemental RCRA Facility Investigation and Remedial Investigation Report, January 1998 (RI Report), but should not be used as a substitute. Additional details regarding the facility and the investigation conducted may be found in the RI Report that is kept as part of the information repository. Please refer to the Public Participation section for its location.

The public is encouraged to comment on the proposed remedy that is based on the conclusions of the RI Report. 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

As discussed above, the proposed remedy represents the U.S. Navy's initial recommendation for IR 3. The proposed remedy is an asphalt cap with land-use controls because actions taken in the Interim Remedial Action (IRA) along with implementation of the proposed remedy will reduce the potential risks to human health and the to acceptable levels. The cost of an asphalt cap at IR 3 will be low, particularly when compared with other remedial measures such as soil removal and groundwater remediation.

#### FACILITY BACKGROUND

The U.S. Navy owns 5,660 acres in Monroe County, Florida as part of NAS Key West. Truman Annex is located on the western end of Key West (Figure 1) that borders the Gulf of Mexico.

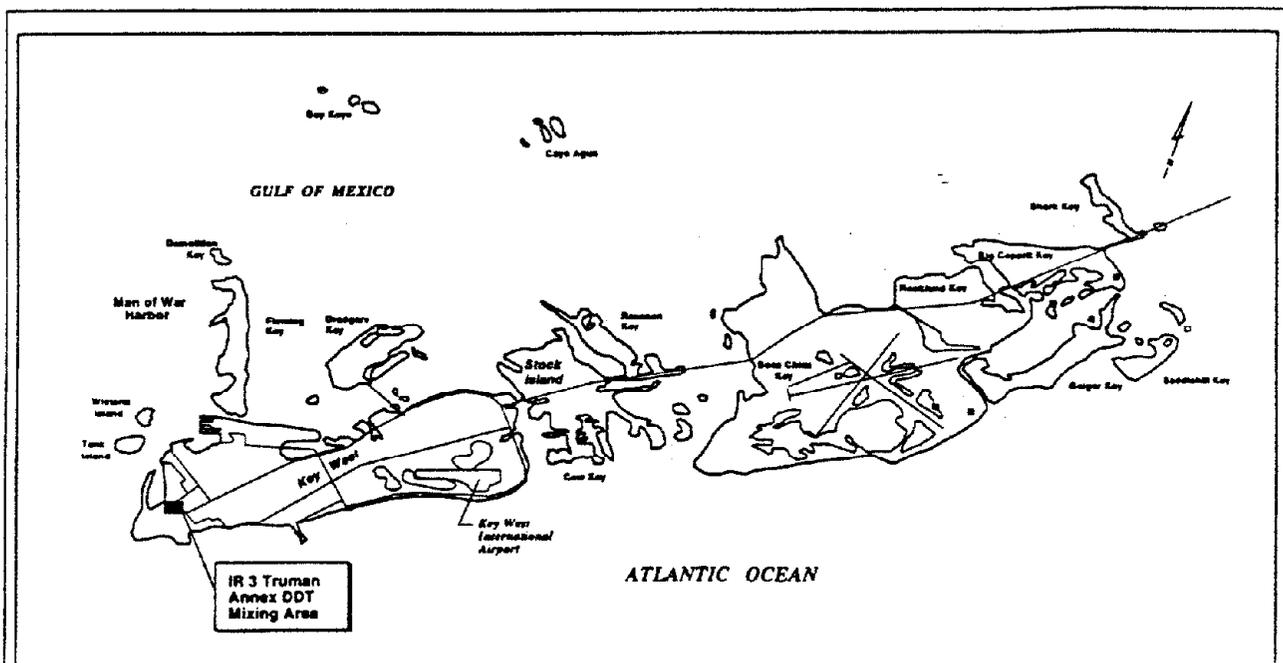


Figure 1. NAS Key West IR 3 Former Truman Annex DDT Mixing Area.

In 1986, an Initial Assessment Study (IAS) was conducted at IR 3, the Truman Annex DDT Mixing Area. Based on the results of the study, an RI was recommended for the site.

The Truman Annex DDT Mixing Area (IR 3) is located at the former site of Building 265 (Figure 2). The site covers an area of about ¼ acre and is located approximately 1,100 feet inland from the coast line. Fort Street, which is the westernmost street of an adjacent residential area, is located opposite the chain-link fence that marks the U. S. Navy’s property boundary to the northeast of the site.

The topography of the site is flat and turf grass covers most of the soils. The site is underlain by highly permeable soil with no surface-water drainage or holding features present.

From the 1940s to the early 1970s, the location was used as a DDT mixing area. Powdered DDT concentrate was mixed with water and temporarily stored in 55-gallon drums both inside and outside former Building 265. The mixed solution was then transferred to trucks for dispersal. Discharges at the site were from accidental spills.

The U. S. Navy conducted an IRA at IR 3 in 1996 to excavate and dispose of

pesticide-contaminated soil. The IRA removed 735 cubic yards of contaminated soil to a depth of 1-2 feet and reduced DDT soil concentration maximum values from 60,000 to 21,000 micrograms/kilogram. The site was backfilled with clean soil and restored with grass sod.

Sampling was performed in 1986, 1990, 1993, 1995, and 1996 during a series of investigations at the site. Inorganics and pesticides were the most prevalent compounds detected at IR 3. Although both types of contaminants were detected in the only two media at the site, soil and groundwater, they were generally more widespread in soil. Arsenic, lead, mercury, and zinc were most frequently detected in excess of the applicable or relevant and appropriate requirements and screening action levels (ARAR/SALs) although other metals (antimony, arsenic, copper, cyanide, iron, silver, and tin) were also detected. Concentrations were generally highest on the eastern edge of the area that was used for mixing the DDT solutions. The pesticides 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT, and endrin were detected at in excess of their ARAR/SALs.

Many of the inorganics detected in soil were also detected in groundwater; however, aluminum, antimony, arsenic, cadmium, iron, and lead were the only inorganics detected in

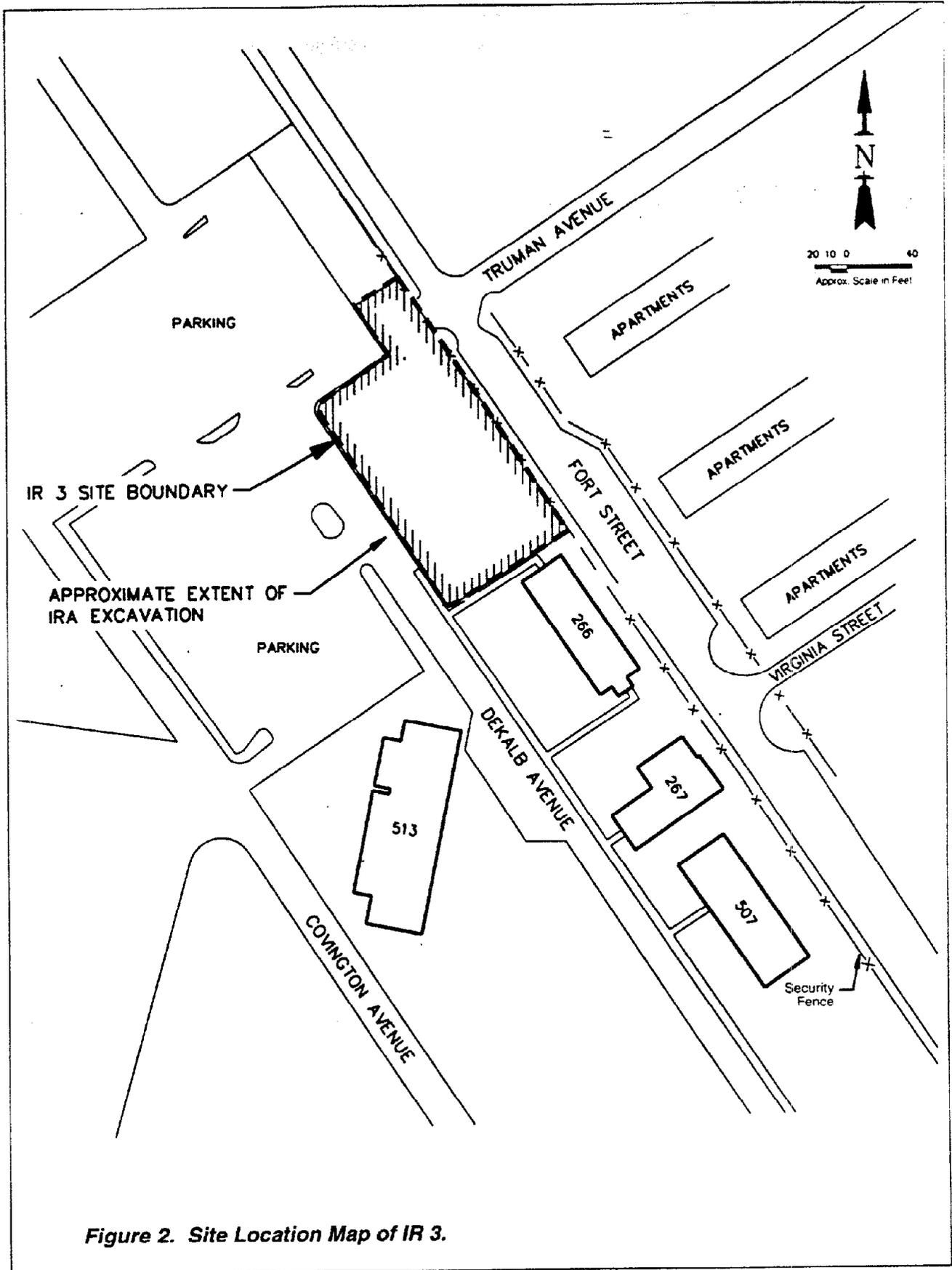


Figure 2. Site Location Map of IR 3.

excess of ARAR/SALs. The pesticides 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT, and endrin were detected in groundwater in excess of their ARAR/SALs in during the 1990 and 1993 sampling events. However, the materials were not detected in 1996. Several volatile organic compounds (VOCs) (1,1-dichloroethane, acetone, chlorobenzene, and methylene chloride) were detected at IR 3; however, none were detected in excess of ARAR/SALs.

#### SUMMARY OF FACILITY RISKS

A Human Health Baseline Risk Assessment (BRA) and an Ecological Risk Assessment (ERA) were performed as part of the RI Report. The IR sites at NAS Key West were evaluated for risk following CERCLA guidance at the request of FDEP and EPA Region IV.

In the BRA, human health risks associated with the exposure to contaminants detected in soil 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 full BRA is in the RI Report.

The potential receptors were based on current and future land uses. The current potential receptors identified for IR 3 include adolescent/adult trespasser, occupational worker, and site maintenance worker. Under the future land-use scenario, the most likely potential receptor is believed to be an excavation worker. Also considered under the future land-use scenario are a residential child and adult, although residential development of IR 3 is considered unlikely. Under the master plan for land use on NAS Key West, the future land use for the area where IR 3 is located is as a restricted-access military base, with future zoning to limit access at the site. In addition, a memorandum of agreement has been developed and signed, and land-use controls have been developed.

Although residential development is highly unlikely as explained above, there would be potential for a future resident to be exposed to concentrations of contaminants that may cause limited carcinogenic and noncarcinogenic risks. This potential risk was modeled for possible human receptors. The chemicals 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 IR 3 that are expected to contribute significantly to one or more of the exposure pathways selected for risk estimation. The BRA identified antimony, arsenic, beryllium, iron, lead, mercury, 4,4'-DDD, 4,4'-DDE and 4,4'-DDT as COPCs in soil for all receptors.

The IR 3 BRA identified five risk scenarios exceeding the one in one million ( $1 \times 10^{-6}$ ) cancer threshold. The risk for the hypothetical future resident scenario exceeds the one in ten thousand cancer(s). The principal constituents contributing to the cancer risks are arsenic, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT. However, the uncertainty analysis indicates that the estimate of the cancer risk associated with these constituents for all the receptors is very conservative.

The BRA also identified a single noncarcinogenic risk scenario for the future resident exceeding the hazard index threshold of 1.0. The principal constituent contributing to the noncarcinogenic risk is 4,4'-DDT in surface soil. However, again the uncertainty analysis indicates that the estimate of the noncarcinogenic risk associated with 4,4'-DDT for the future residential receptor is very conservative.

An ERA was conducted to evaluate the possibility that aquatic or terrestrial ecological receptors may be at risk from site-related contaminants. The ERA was based on laboratory analyses of groundwater and soil samples. IR 3 and the adjacent areas provide only limited terrestrial habitat of marginal quality in an urban setting. No surface water is present at the site, and the nearest surface water is approximately 1,100 feet to the south. The ERA concluded that potential risk to terrestrial receptors at IR 3 is negligible.

As discussed above, sufficient concentrations of inorganics and pesticides remain in the soil at IR 3, after completion of the IRA, to cause potential health effects to the hypothetical future resident. Present contaminant release pathways are limited to dermal exposure and possible infiltration into the water table. Therefore, an asphalt cap is recommended for the final remedial action at IR 3.

**SCOPE OF THE REMEDIAL ACTION**

The U.S. Navy recognizes that CERCLA allows various options for implementing remedies based on site conditions. For IR 3 at NAS Key West, the RI Report indicates that no ecological risks and minimal human health risks remain at IR 3 after completion of the IRA (soil removal); therefore, there is sufficient justification to propose an asphalt cap and land-use controls as the remedy for the site. The cost of land-use controls and the installation of an asphalt cap at IR 3 will be low, particularly when compared with other remedial measures such as further soil removal and groundwater remediation.

**PUBLIC PARTICIPATION**

To make a final decision and incorporate a remedy into the Decision Document, the U.S. Navy is soliciting public review and comment on this Proposed Plan for the proposed remedy to IR 3 at NAS Key West. CERCLA requires a comment period for public to review and comment of the proposed remedy.

The comment period will begin on Sunday, October 18, 1998, which is the date of publication of the public notice in *The Citizen* newspaper. Friday, December 18, 1998, is the end of the comment period.

The Proposed Plan and the associated administrative file, including the RI Report, may be viewed and copied at the FDEP Office in Tallahassee, Florida between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except legal holidays. Additional copies of the RI Report and Proposed Plan are 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, the U. S. Navy has determined there is sufficient need to hold a public meeting. It will occur at 7:00 p.m. on Monday, November 16, 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 will be answered. The public meeting will also address the proposed remedies for IR 7 and AOC B. To request information about the public meeting or comment period, to obtain more information concerning this Proposed Plan, or to submit written comments, please contact Phillip Williams at the following address:

**NAS Key West Contact**

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001  
(Phone: 305-293-2061; Fax: 305-293-2542)

All comments must be postmarked by Friday, December 18, 1998.

**NEXT STEPS**

Following the 60-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 IR 3, will include responses to oral and written comments received during the public comment period. Concurrence from EPA and FDEP will be obtained before implementing the final remedy.



**Comments on Proposed Plan  
Truman Annex DDT Mixing Area (IR 3)**

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Place  
Stamp  
Here

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001



## PROPOSED PLAN



### Naval Air Station Key West, Florida

**Facility/Unit Type:** Military Installation/Former Fleming Key North Landfill (IR 7)  
**Contaminants:** Organics, Metals, and Pesticides  
**Media:** Soil, Sediment, Surface Water, Groundwater, and Biota  
**Remedy:** Monitoring with 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 U. S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP). The proposed remedial activities are conducted under the Department of Defense's Installation Restoration Program (IRP) in accordance with Section 120 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the National Contingency Plan (NCP). The Former Fleming Key North Landfill is the site of interest and is known as IR 7.

The purpose of this Proposed Plan is several-fold. The Proposed Plan identifies the proposed remedy for IR 7 at NAS Key West and explains the rationale for the preference, solicits public review and comment on conclusions of the CERCLA Remedial Investigation (RI), 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 IR 7 at NAS Key West. This document provides key highlights of the Supplemental RCRA Facility Investigation and Remedial Investigation Report January 1998 (RI Report), but should not be used as a substitute. Additional details regarding the facility and the investigation conducted may be found in the RI Report that is kept as part of the information repository. Please refer to the Public Participation section for its location.

The public is encouraged to comment on the proposed remedy which is based on the conclusions of the RI Report. 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

As discussed above, the proposed remedy represents the U.S. Navy's initial recommendation for IR 7. The proposed remedy is land-use controls and groundwater monitoring because actions taken in the Interim Remedial Action (IRA) along with implementation of the proposed remedy will reduce the potential risks to human health and the environment to acceptable levels. The cost of implementing land-use controls and groundwater monitoring will be minimal particularly when compared with other remedial measures such as soil removal or groundwater remediation.

#### FACILITY BACKGROUND

The U.S. Navy owns 5,660 acres in Monroe County, Florida as part of NAS Key West. Currently, Fleming Key is the location of military and civilian government facilities. The key is a man-made island surrounded by the Gulf of Mexico.

In 1987, an Initial Assessment Study (IAS) was conducted at NAS Key West. Based on the results of the IAS, an RI was recommended at IR 7, the Former Fleming Key North Landfill.

The Former Fleming Key North Landfill is located on Fleming Key north of the island of Key West (Figure 1). The former landfill site is the current location of the U.S. Department of Agriculture (USDA) Animal Import Center (Figure 2). The site was used from 1952 to 1962 as the landfill for NAS Key West and the city of Key West. Approximately 4,000 to 5,000 tons of unknown wastes were disposed of annually.

In 1977, the building housing the USDA Animal Import Center was constructed over a portion of the landfill. Some wastes were excavated and transferred to an area immediately west of the building site and buried under a soil and rock cover. Currently, the entire landfill area is covered with soil and is vegetated by grass, weeds, or trees.

Sampling was performed in 1986, 1990, 1993, and 1996 during a series of RIs at the site. Volatile and semi-volatile organic compounds (VOCs and SVOCs) were not detected in soil in excess of applicable or relevant and appropriate requirements and screening action levels

(ARAR/SALs). Metals and pesticides were most consistently detected in surface soil above ARARs/SALs at the north end of the site near Building 1419 (Figure 2). No polychlorinated biphenyls (PCBs) were detected.

Sediment from the Gulf of Mexico to the north, east, and west of the site was sampled. No VOCs were found at concentrations that exceeded ARAR/SAL levels. SVOC exceedances were only found during the 1990 sampling event. The pesticide 4,4'-DDT and its degradation products were detected most frequently in excess of ARAR/SAL levels as well as several metals (arsenic, beryllium, copper, lead, mercury, and silver).

Limited contamination was found in surface-water and groundwater samples. As in soil and sediment, inorganics were the most common class of contaminants detected in surface water. However, antimony was the only metal that consistently exceeded the screening criteria. Groundwater sample results indicated metals in all investigations; however, in 1996 the frequency and magnitude of the detections were reduced from previous investigations. In addition, a few VOCs and SVOCs were detected above ARAR/SALs during the investigations; however, the compounds detected differed from

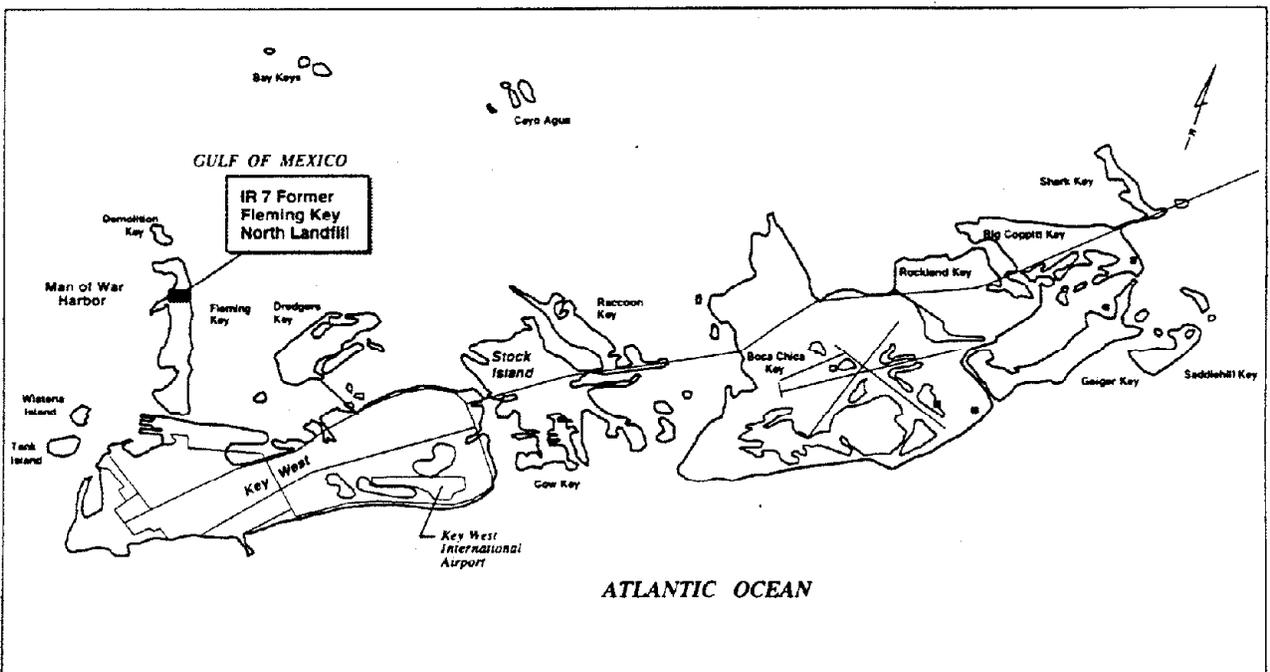


Figure 1. NAS Key West IR 7 Former Fleming Key North Landfill.

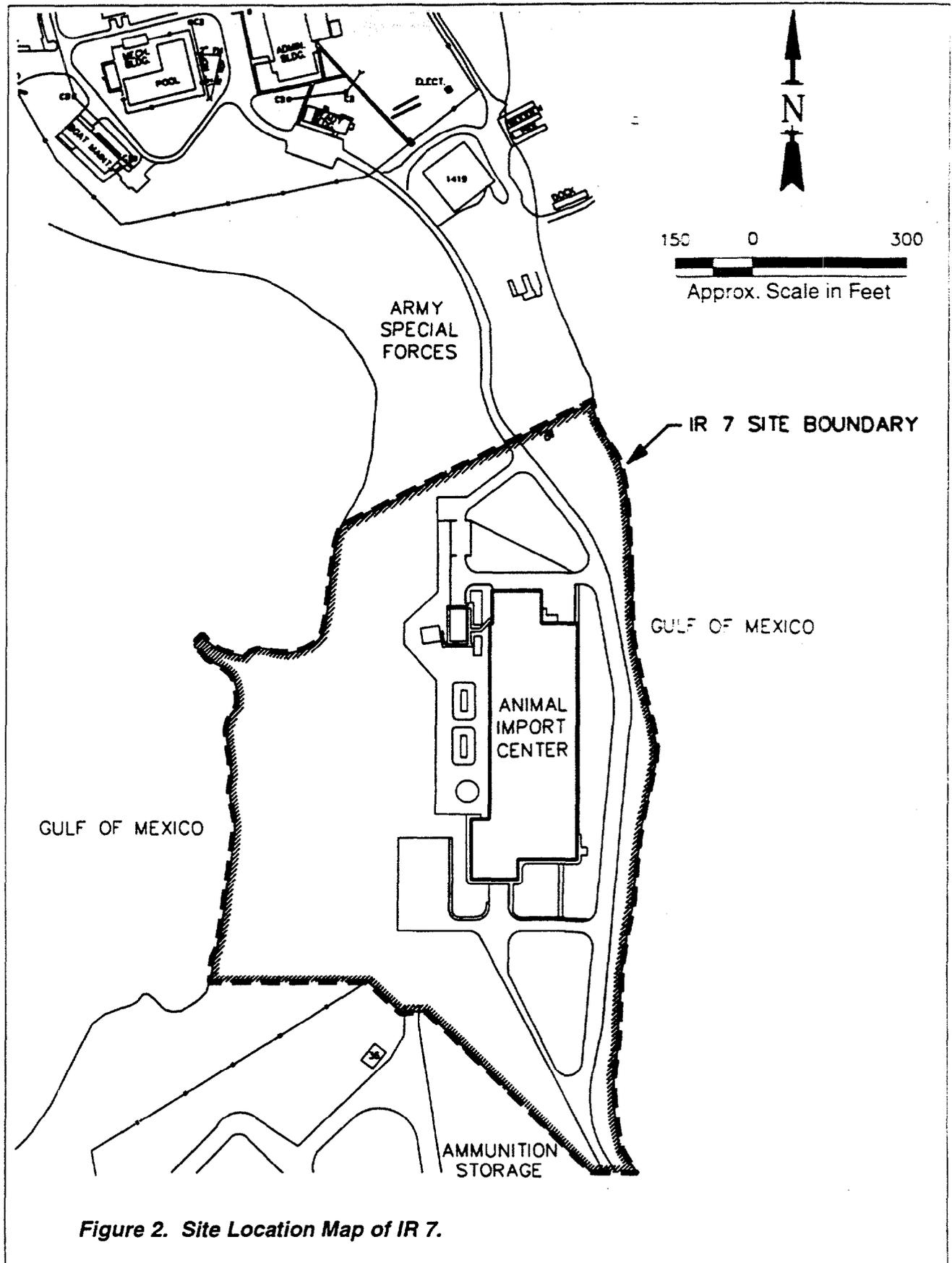


Figure 2. Site Location Map of IR 7.

year to year. Lastly, pesticides were consistently found in 1996, but were detected infrequently in previous investigations.

In September 1995, an IRA was performed to minimize infiltration of rainwater through the former landfill waste. Clean topsoil was imported to fill low areas and promote runoff, and vegetative cover was established to prevent erosion.

### **SUMMARY OF FACILITY RISKS**

A Human Health Baseline Risk Assessment (BRA) and an Ecological Risk Assessment (ERA) were performed as part of the RI Report. The IR sites at NAS Key West were evaluated for risk following CERCLA guidance at the request of FDEP and EPA Region IV.

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 full BRA is in the RI Report.

The potential receptors were based on current and future land uses. The current potential receptors identified for IR 7 include adolescent/adult trespasser, occupational worker, and site maintenance worker. Under the future land-use scenario, the most likely potential receptor is believed to be an excavation worker. Also considered under the future land-use scenario are a residential child and adult, although residential development of IR 7 is considered unlikely. Under the master plan for land use on NAS Key West, the future land use for the area where IR 7 is located is as a restricted-access military base, with future zoning to limit access at the site. In addition, the memorandum of agreement has been developed and signed and land-use controls have been developed. Although residential development is highly unlikely as explained above, there would be potential for a future resident to be exposed to concentrations of contaminants that may cause limited carcinogenic and noncarcinogenic risks. This potential risk was modeled for possible human receptors.

The chemicals 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 IR 7 that are expected to contribute significantly to one or more of the exposure pathways selected for risk estimation. The BRA identified antimony and arsenic as COPCs in soil for all receptors. Arsenic, beryllium, several polynuclear aromatic hydrocarbon compounds and pesticides were identified in sediment, and several inorganics (i.e., aluminum, antimony, barium, iron, mercury, tin, vanadium, and zinc) and the SVOC naphthalene were identified in surface water as COPCs for the current adolescent and adult trespasser and potential future residents. Lastly, mercury and pesticides (i.e., heptachlor epoxide, heptachlor, and aldrin) were selected as COPCs in shellfish for the future adult resident. Conservative risk-based screening levels are used in the exposure pathway model for sediment and surface water. This results in the selection of COPCs that do not contribute significantly to the quantitative risk.

For the BRA, the carcinogenic and noncarcinogenic risks associated with detected contaminants are considered negligible. Further, both types of risks are calculated for certain receptors that in all probability will never be present at the site (e.g., residential). The land use for that part of NAS Key West does not include residential use in the foreseeable future, and access is restricted because it is part of a military installation. The IR 7 BRA identified three exposure scenarios resulting in risk exceeding the one in one million ( $1 \times 10^{-6}$ ) cancer threshold. The principal constituent contributing to the cancer risks is arsenic in soil and sediment. However, the uncertainty analysis indicates that the estimate of the cancer risk associated with arsenic for the three receptors (current adolescent or adult trespasser, future resident) is very conservative.

The BRA also identified a single noncarcinogenic risk scenario for the future resident exceeding the hazard index threshold of 1.0. The principal constituent contributing to the noncarcinogenic risk is antimony in surface water. However, the uncertainty analysis indicates that the estimate of the noncarcinogenic risk is very conservative as it involves exposure of hypothetical future residents.

An ERA was conducted to evaluate the possibility that aquatic or terrestrial ecological receptors may be at risk from site-related contaminants. The ERA was based on laboratory analyses of groundwater, surface-water, sediment, and soil samples; and laboratory analyses of shellfish collected from near-shore waters of IR 7. Contaminant concentrations in all media did not appear to pose significant risks to plants or animals. The ERA concluded that potential risk to terrestrial and aquatic receptors at IR 7 is negligible.

The proposed remedy for IR 7 is groundwater monitoring with land-use controls. The previous soil grading activities at IR 7 eliminated the need for additional remedial action. Monitoring with land-use controls will therefore be protective of human health and the environment at IR 7. The cost of implementing land-use controls and groundwater monitoring will be minimal particularly when compared with other remedial measures such as soil removal or groundwater remediation.

#### **SCOPE OF THE REMEDIAL ACTION**

The U.S. Navy considers that CERCLA Remedial Action allows various options for implementing remedies based on site conditions. For IR 7 at NAS Key West, the RI Report indicates that the IRA (soil cover) performed at the site reduced the threat to human health and the environment to acceptable levels in accordance with CERCLA and the NCP. Therefore, there is sufficient justification to propose the remedy of land-use controls and groundwater monitoring.

#### **PUBLIC PARTICIPATION**

To make a final decision and incorporate a remedy into the Decision Document, the U.S. Navy is soliciting public review and comment on this Proposed Plan for the proposed remedy to IR 7 at NAS Key West. CERCLA requires a comment period for the public to review and comment of the proposed remedy.

The comment period will begin on Sunday, October 18, 1998, which is the date of publication of the public notice in *The Citizen* newspaper. Friday, December 18, 1998 is the end of the comment period.

The Proposed Plan and the associated administrative file, including the RI Report, may be viewed and copied at the FDEP Office in Tallahassee, Florida between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except legal holidays. Additional copies of the RI Report and Proposed Plan are 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, the U. S. Navy has determined there is sufficient need to hold a public meeting. It will occur at 7:00 p.m. on Monday, November 16, 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 will be answered. The public meeting will also address the proposed remedies for IR 3 and AOC B. To request information about the public meeting or comment period, to obtain more information concerning this Proposed Plan, or to submit written comments, please contact Phillip Williams at the following address:

#### **NAS Key West Contact**

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001  
(Phone: 305-293-2061; Fax: 305-293-2542)

All comments must be postmarked by Friday, December 18, 1998.

#### **NEXT STEPS**

Following the 60-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 IR 7, will include responses to oral and written comments received during the public comment period. Concurrence from EPA and FDEP will be obtained before implementing the final remedy.



**Comments on Proposed Plan  
Former Fleming Key North Landfill (IR 7)**

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Place  
Stamp  
Here

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001



## PROPOSED PLAN



### Naval Air Station Key West, Florida

**Facility/Unit Type:** Military Installation/Big Coppitt Key Abandoned Civilian Disposal Area (AOC B)  
**Contaminants:** Organics, Metals, and Pesticides  
**Media:** Soil, Sediment, Surface Water, Groundwater, and Biota  
**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 Florida Department of Environmental Protection (FDEP). The proposed remedial activities are conducted under the Department of Defense's Installation Restoration Program (IRP) in accordance with Section 120 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the National Contingency Plan (NCP). The Big Coppitt Key Abandoned Civilian Disposal Area is the site of interest and is known as AOC B.

The purpose of this Proposed Plan is several-fold. The Proposed Plan identifies the proposed remedy for AOC B at NAS Key West and explains the rationale for the preference, solicits public review and comment on conclusions of the CERCLA Remedial Investigation (RI); 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 AOC B. This document provides key highlights of the Supplemental RCRA Facility Investigation and Remedial Investigation Report January 1998 (RI Report), but should not be used as a substitute. Additional details regarding the facility and the investigation conducted may be found in the RI Report that is kept as part of the

information repository. Please refer to the Public Participation section for its location.

The public is encouraged to comment on the proposed remedy which is based on the conclusions of the RI Report. 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

As discussed above, the proposed remedy represents the U.S. Navy's initial recommendation for AOC B. The proposed remedy is no remedial action beyond that done in the Interim Remedial Action (IRA) because the contamination at the site has been sufficiently remediated. Land-use controls will be required. Minimal costs are associated with implementing and administering land-use control.

#### FACILITY BACKGROUND

The U.S. Navy owns 5,660 acres in Monroe County, Florida as part of NAS Key West. AOC B is located on Big Coppitt Key to the east of Boca Chica Key (Figure 1).

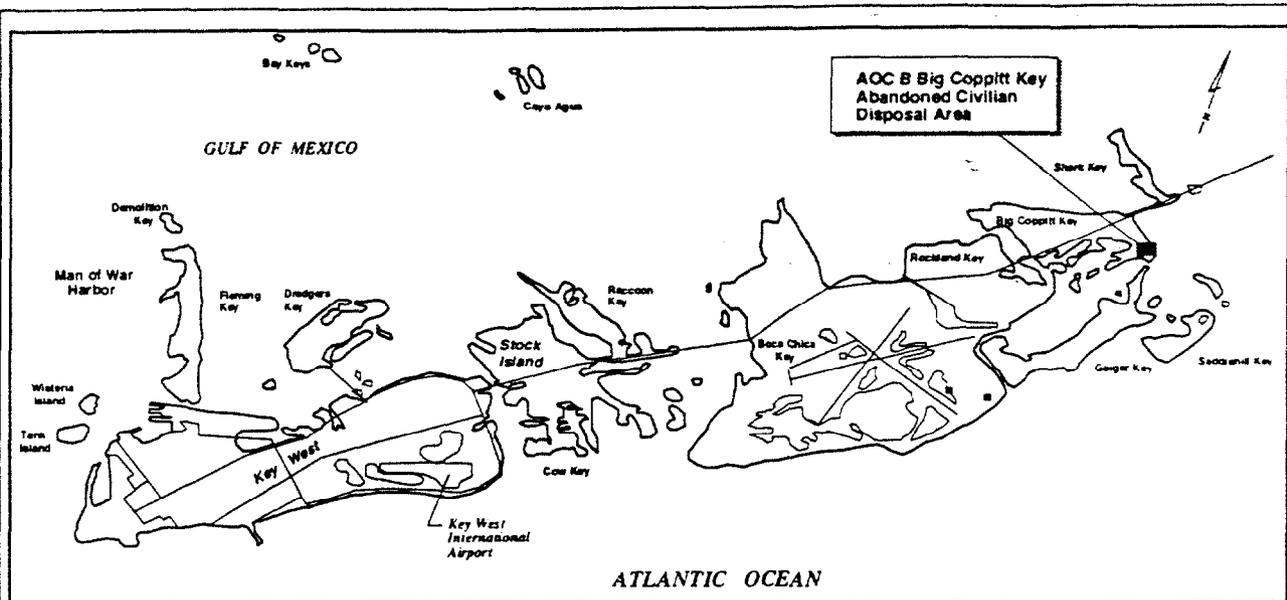


Figure 1. NAS Key West AOC B Big Coppitt Key Abandoned Civilian Disposal Area.

In 1987, an Initial Assessment Study (IAS) was conducted at NAS Key West. Based on the results of the IAS, an RI was recommended at AOC B, the Big Coppitt Key Abandoned Civilian Disposal Area.

AOC B encompasses approximately 10 acres, of which approximately 1.6 acres is occupied by a dead-end canal (Figure 2). The southeastern end is the former disposal area. A mangrove swamp extends to the east, west, and south of the former disposal area. A canal and a large cleared area are located north of the former disposal area. Ground elevations at the site vary from sea level up to approximately 2 feet above sea level. All runoff from precipitation appears to drain directly into the canal and into the mangrove wetlands.

The area was used by civilians to dispose of discarded car/truck body and frame parts. The U. S. Navy purchased the property in 1985 to comply with the Federal Aviation Administration requirement for an Aircraft Compatibility Usage Installation Zone. In 1996, the U. S. Navy conducted an IRA to excavate and dispose of contaminated soils at AOC B. The action removed 1,251 cubic yards of soil for offsite treatment and disposal.

Sampling was performed in 1993, 1995, and 1996 during a series of remedial investigations at the site. Metals were the only

compounds analyzed in soil sampling during the 1995 study. Zinc was the only metal detected in excess of its applicable or relevant and appropriate requirements and screening action levels (ARAR/SAL) although several other metals were detected.

In 1993, sediment sampling did not detect the presence of volatile organic compounds (VOCs). One semivolatile organic compound (SVOC) (phenanthrene) was found at concentrations below its ARAR/SAL level. In addition pesticides (4,4'-DDT and its degradation products), polychlorinated biphenyls (PCBs), and metals (arsenic, beryllium, cadmium, chromium, copper, iron, lead, mercury, nickel, and zinc) were detected in excess of ARAR/SALs.

Surface water was sampled at AOC B in 1993. No VOCs or SVOCs were detected during the sampling events. No pesticides were detected above ARAR/SALs. Four PCBs were detected at one sampling location in excess of ARAR/SALs in 1993. Inorganics (antimony, arsenic, beryllium, chromium, copper, iron, lead, nickel, tin, and zinc) were detected in excess of ARAR/SALs in 1993. Generally, fewer metals were detected, and the concentrations were less in 1996, compared to the 1993 surface water sampling study; only copper, iron, manganese, and nickel exceeded SALs in 1996.

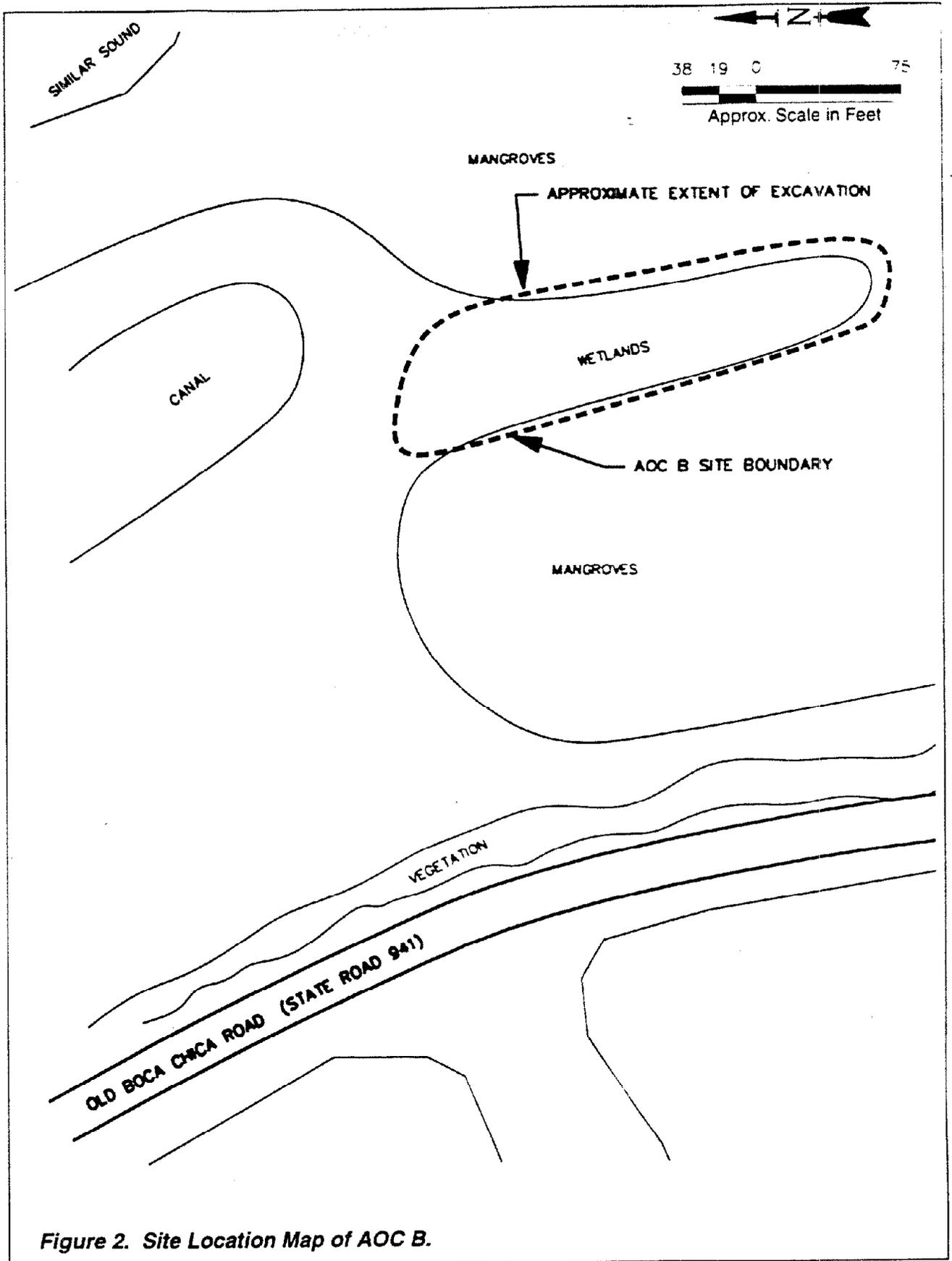


Figure 2. Site Location Map of AOC B.

Groundwater was sampled at AOC B in 1993 and 1996. Groundwater analytical results indicated the presence of metals in all investigations; however, in 1996 the frequency and magnitude of the detections were reduced from previous investigations. No VOCs and SVOCs were detected; however, pesticides were detected in excess of ARAR/SALs.

### **SUMMARY OF FACILITY RISKS**

A Human Health Baseline Risk Assessment (BRA) and an Ecological Risk Assessment (ERA) were performed as part of the RI Report. The IR sites at NAS Key West were evaluated for risk following CERCLA guidance at the request of FDEP and EPA Region IV. No data from samples that were taken from the area excavated during the IRA were used during the risk analyses to account for the contamination that was removed at AOC B.

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 full BRA is in the RI Report.

The potential receptors were based on current and future land uses. The current potential receptors identified for AOC B include adolescent/adult trespasser, occupational worker, and site maintenance worker. Under the future land-use scenario, the most likely potential receptor is believed to be an excavation worker. Also considered under the future land-use scenario is a residential child and adult, although residential development of AOC B is considered unlikely. Under the master plan for land use on NAS Key West, the future land use for the area where AOC B is located is as a restricted-access military base, with future zoning to limit access at the site. In addition, the memorandum of agreement has been developed and signed and land-use controls have been developed.

There is potential for a future resident to be exposed to concentrations of contaminants that may cause limited carcinogenic and noncarcinogenic risks. This potential risk was modeled for possible human receptors. Conservative risk-based screening levels are used in the exposure pathway model for

sediment and surface water. This results in the selection of chemicals of potential concern (COPCs) that do not contribute significantly to the quantitative risk. The 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 AOC B that are expected to contribute significantly to one or more of the exposure pathways selected for risk estimation. The BRA identified no COPCs in soil because all detected contaminants were detected at levels below risk based concentrations (RBCs) developed for the residential land-use scenario. The BRA identified metals (antimony, arsenic, beryllium, cadmium, chromium, copper, iron, manganese, and zinc), PCBs (Aroclor-1254, Aroclor-1260), and one polynuclear aromatic hydrocarbon (phenanthrene) in sediment and surface water as COPCs for the current adolescent and adult trespasser and potential future residents. Lastly, manganese and pesticides (heptachlor, alpha-BHC, chlorobenzilate, dieldrin, and aldrin) were identified as COPCs in surface water for potential consumption of shellfish by the future resident.

For the BRA, the carcinogenic and noncarcinogenic risks associated with detected contaminants are considered negligible. Further, both types of risk are calculated for receptors, who, in all probability, will never be present at the site (i.e., residential). The land use for that part of NAS Key West does not include residential use in the foreseeable future, and access is restricted because it is part of a military installation. The AOC B BRA identified four risk scenarios exceeding the one in one million ( $1 \times 10^{-6}$ ) cancer threshold. The principal constituents contributing to the cancer risks are arsenic, dieldrin, and heptachlor in sediment. However, the uncertainty analysis indicates that the estimate of the cancer risk associated with these constituents for the three receptors (current adolescent or adult trespasser, future resident) is very conservative.

The BRA also identified a single noncarcinogenic risk scenario for the future resident exceeding the hazard index threshold of 1.0. The principal constituent contributing to the noncarcinogenic risk is antimony in surface water and arsenic in sediment. However, again the uncertainty analysis indicates that the estimate of the noncarcinogenic risk associated

with arsenic for the future residential receptor is very conservative.

An ERA was conducted to evaluate the possibility that aquatic or terrestrial ecological receptors may be at risk from site-related contaminants. The ERA was based on laboratory analyses of groundwater, surface-water, sediment, and soil samples; and laboratory analyses of fish collected from the nearby lagoon. Contaminant concentrations in all media did not appear to pose significant risks to plants or animals. The ERA concluded that potential risk to terrestrial and aquatic receptors at AOC B is negligible.

The proposed remedy for AOC B is land-use controls. The previous soil removal has eliminated the need for additional remedial action. Land-use controls will be protective of human health and the environment at AOC B.

#### **SCOPE OF THE REMEDIAL ACTION**

The U.S. Navy recognizes that CERCLA allows various options for implementing remedies based on site conditions. For AOC B at NAS Key West, the RI Report indicates that the IRA (soil removal) performed at the site reduced the threat to human health and the environment to acceptable levels in accordance with CERCLA and the NCP. Therefore, there is sufficient justification to propose no remedial action for the site with land-use controls. There are no costs associated with the no remedial action remedy and minimal cost to implement and administer land-use controls.

#### **PUBLIC PARTICIPATION**

To make a final decision and incorporate a remedy into the Decision Document, the U.S. Navy is soliciting public review and comment on this Proposed Plan for the proposed remedy to AOC B at NAS Key West. CERCLA requires a comment period for public to review and comment of the proposed remedy.

The comment period will begin on Sunday, October 18, 1998, which is the date of publication of the public notice in *The Citizen* newspaper. Friday, December 18, 1998 is the end of the comment period.

The Proposed Plan and the associated administrative file, including the RI Report, may be viewed and copied at the FDEP Office in Tallahassee, Florida between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except legal holidays. Additional copies of the RI Report and Proposed Plan are 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, the U. S. Navy has determined there is sufficient need to hold a public meeting. It will occur at 7:00 p.m. on Monday, November 16, 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 will be answered. The public meeting will also address the proposed remedies for IR 3 and IR 7. To request information about the public meeting or comment period, to obtain more information concerning this Proposed Plan, or to submit written comments, please contact Philip Williams at the following address:

#### **NAS Key West Contact**

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001  
(Phone: 305-293-2061; Fax: 305-293-2542)

All comments must be postmarked by Friday, December 18, 1998.

#### **NEXT STEPS**

Following the 60-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 AOC-B, will include responses to oral and written comments received during the public comment period. Concurrence from EPA and FDEP will be obtained before implementing the final remedy.



**Comments on Proposed Plan  
Big Coppitt Key Abandoned Civilian Disposal  
Area (AOC B)**

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Place  
Stamp  
Here

Phillip Williams  
Installation Restoration Coordinator  
Environmental Branch  
U.S. Naval Air Station Key West  
P.O. Box 9000  
Key West, Florida 33040-9001



# Update of BRAC Cleanup Efforts

Dudley Patrick

Southern Division - Navy - Charleston, SC

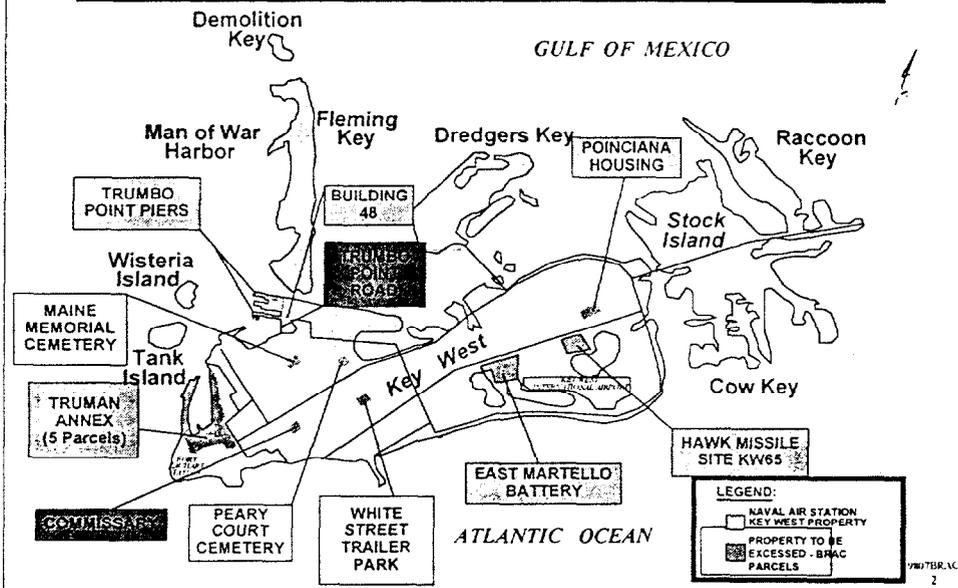
November 16, 1998



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1



## BRAC Parcel Location Map





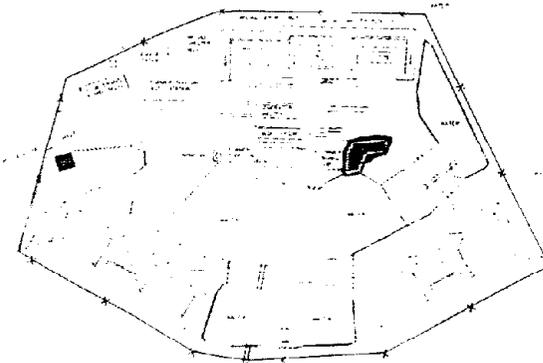
## BRAC Cleanup - Progress

- The Environmental Response Action Contractor (RAC) has prepared Rev. 0 of the Remedial Action Work Plan for Fast Track Soil Removals at BRAC parcels
- SOUTHDIV has negotiated the budget for the cleanup with the RAC
- Fiscal Year 99 funds arrived in SOUTHDIV on November 12, 1998
- RAC was awarded funds on November 13, 1998 to begin field mobilization and field operations

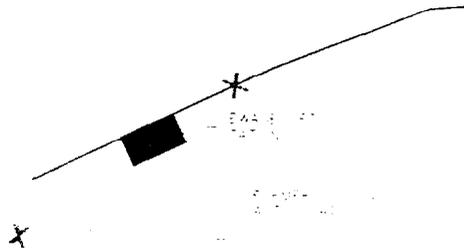


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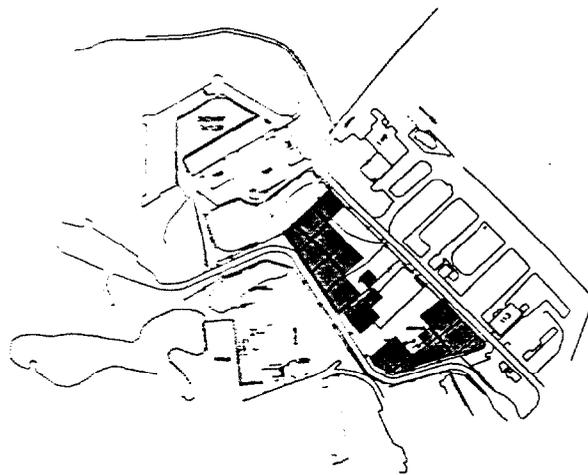
## BRAC Parcel A - Subzone 9 Hamaca Hawk Missile Site



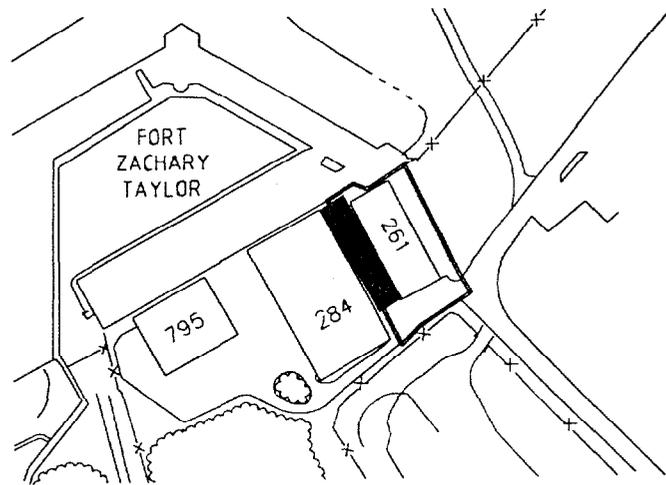
**BRAC Parcel A - Subzone 4  
Hamaca Hawk Missile Site**



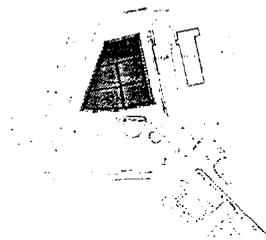
**BRAC Parcel C - Subzones 3 and 4  
DRMO Storage Waste**



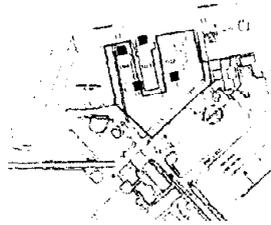
**BRAC Parcel C - Subzone 1  
DRMO Waste Storage Area**



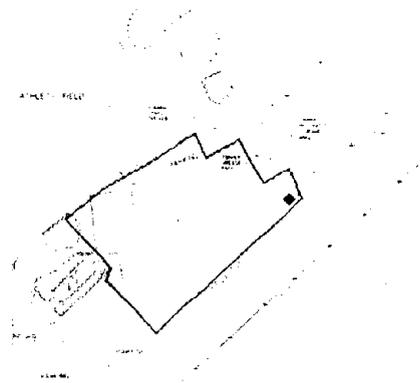
**BRAC Parcel E - Former Building 136**



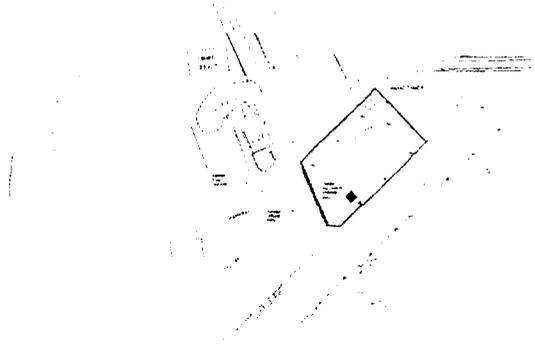
**BRAC Parcel E - Subzone 3  
Buildings 102, 103, and 104**



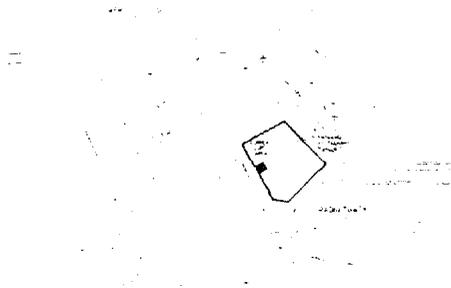
**BRAC Parcel D - Subzone 1  
Seminole Battery**



**BRAC Parcel F - Subzone 3  
Building 223**



**BRAC Parcel F - Subzone 1  
Lube Area**





## BRAC Cleanup - Plans

- Finalize BRAC Remedial Action Work Plan
- Begin field mobilization and field operations



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## BRAC Documents for RAB Review

<u>Document</u>	<u>Expected Mailing Date</u>
Remedial Action Work Plan for Fast Track Soil Removals at BRAC Parcels Naval Air Station Key West	23 November 1998

- Standard 30-day document review and comment period by RAB members



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14

In response to question, what was  
contaminant in Building. Lead  
was the answer.

Do we use any other agencies criteria for  
doing sampling other than EPA and FDEP.



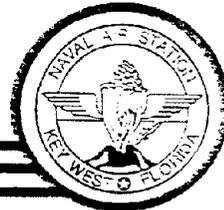
## Naval Air Station Key West Budget Update FY 1999 BRAC and ERN Accounts

Dudley Patrick, SOUTHDIV  
November 16, 1998



### BRAC Account

- New "FY 1999" fiscal year began on October 1, 1998
- As stands, Key West is slated to receive approximately \$3 million
- Compare this to FY 1998 which ended on September 30, 1998
- Spent \$1.34 million on studies and cleanup in FY 1998





## BRAC Work Planned for FY 1999

- Truman Annex complex and Hawk Missile Site soil and sediment cleanup
- Truman Annex petroleum free product assessment and cleanup



## Soil and Sediment Cleanup

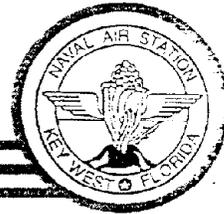
- Truman Annex complex (soil only)
  - DRMO Waste Storage
  - Seminole Battery
  - Building 223
  - Building 102, 103, & 104
- Hawk Missile Site (soil and sediment)





## Petroleum Free Product Assessment and Cleanup

- Truman Annex complex
  - Building 103 area



## ERN Account

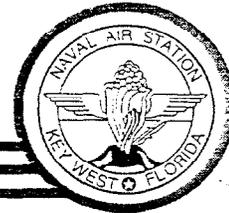
- As stands, Key West is slated to receive approximately \$537 thousand
- Compare this to FY 1998
- Spent \$690 thousand on final site studies and remedial designs in FY 1998





## ERN Work Planned for FY 1999

- Put final remedies in place for all sites
- Implement Land Use Controls (LUC)
- Update the Corrective Action Management Plan (CAMP)





# Update of ERNA Site Studies

Chuck Bryan

Tetra Tech NUS

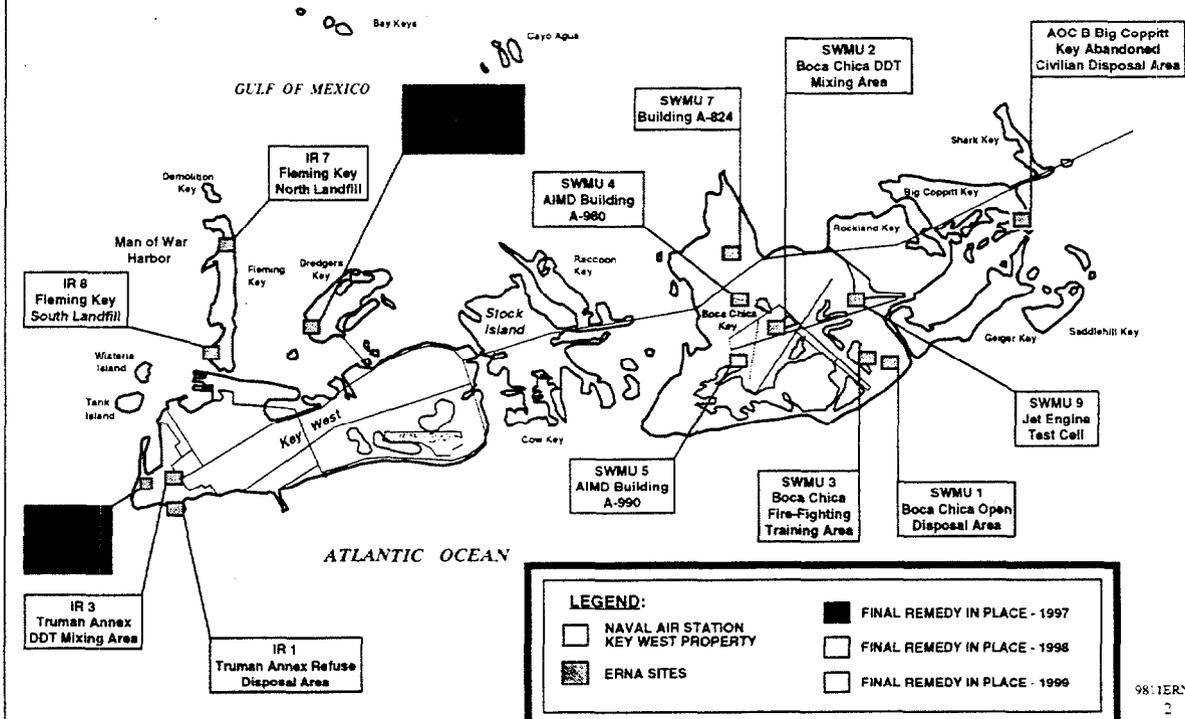
November 16, 1998



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## ERNA Site Location Map





## ERNA Site Studies - Progress

- **Public Comment Period for Statement of Basis for SWMUs 1, 2, 3, and 4 completed September 17, 1998**
  - Began preparation of Responsiveness Summary (EPA)
- **Issued Proposed Plan for IR 3, IR 7, and AOC B to the Public**
  - Began Public Comment Period October 18, 1998
  - Public Meeting held November 16, 1998
  - Public Comment Period ends December 18, 1998



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3



## ERNA Site Studies - Progress (continued)

- **Continued working the toxicity tests at IR 1 and IR 8**
  - Received approval of the technical memorandum for Phase II toxicity tests
  - Collected sediment samples and began toxicity tests
- **Continued to finalize CMS Reports for SWMU 5 and SWMU 7**
  - Continued preparation of responses to comments
  - Began revising report text



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## ERNA Site Studies - Progress (continued)

- **Began preparation of SWMU 9 Natural Attenuation Report**
  - Additional data required to calculate chemical degradation rates (a data gap)
  - Developed sampling strategy to fill the data gap
  - Began preparation for next SWMU 9 sampling effort



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## ERNA Site Studies - Plans

- **Finalize the CMS Reports for SWMU 5 and SWMU 7**
- **Prepare the Natural Attenuation Report for SWMU 9**
- **Complete the Responsiveness Summary and draft Permit Modification for SWMUs 1, 2, 3, and 4 (EPA)**
- **Begin preparing the Statement of Basis documents for SWMUs 5 and 7 (EPA)**
- **Prepare the Responsiveness Summary for IR 3, IR 7, and AOC B**
- **Begin preparing the Decision Document for IR 3, IR 7, and AOC B**



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## ERNA Public Participation

<u>Event</u>	<u>Expected Timetable</u>
EPA Issues Statement of Basis for SWMUs 5 and 7	February 1999
60-Day Public Comment Period for SWMUs 5 and 7	February - April 1999
Public Meeting for SWMUs 5 and 7	March 1999



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## ERNA Site Studies - Background

- Supplemental Work Plan for conducting sampling and surveys at 12 ERNA sites was finalized in December 1995
  - 7 Solid Waste Management Units (SWMUs)
  - 4 Installation Restoration (IR) Sites
  - 1 Area of Concern (AOC)
  - 8 Facility-Wide Background Locations
- Various field investigations performed from 1986 to the present



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## Some Useful Acronyms

- **AIMD - Aircraft Intermediate Maintenance Department**
- **AOC - Area of Concern**
- **CMS - Corrective Measures Study**
- **EPA - U. S. Environmental Protection Agency, Region IV**
- **ERNA - Environmental Restoration, Navy Account**
- **FDEP - Florida Department of Environmental Protection**
- **IR - Installation Restoration**
- **SWMU - Solid Waste Management Unit**



# **Naval Air Station (NAS) Key West Trumbo Point Fuel Farm**

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## **History**

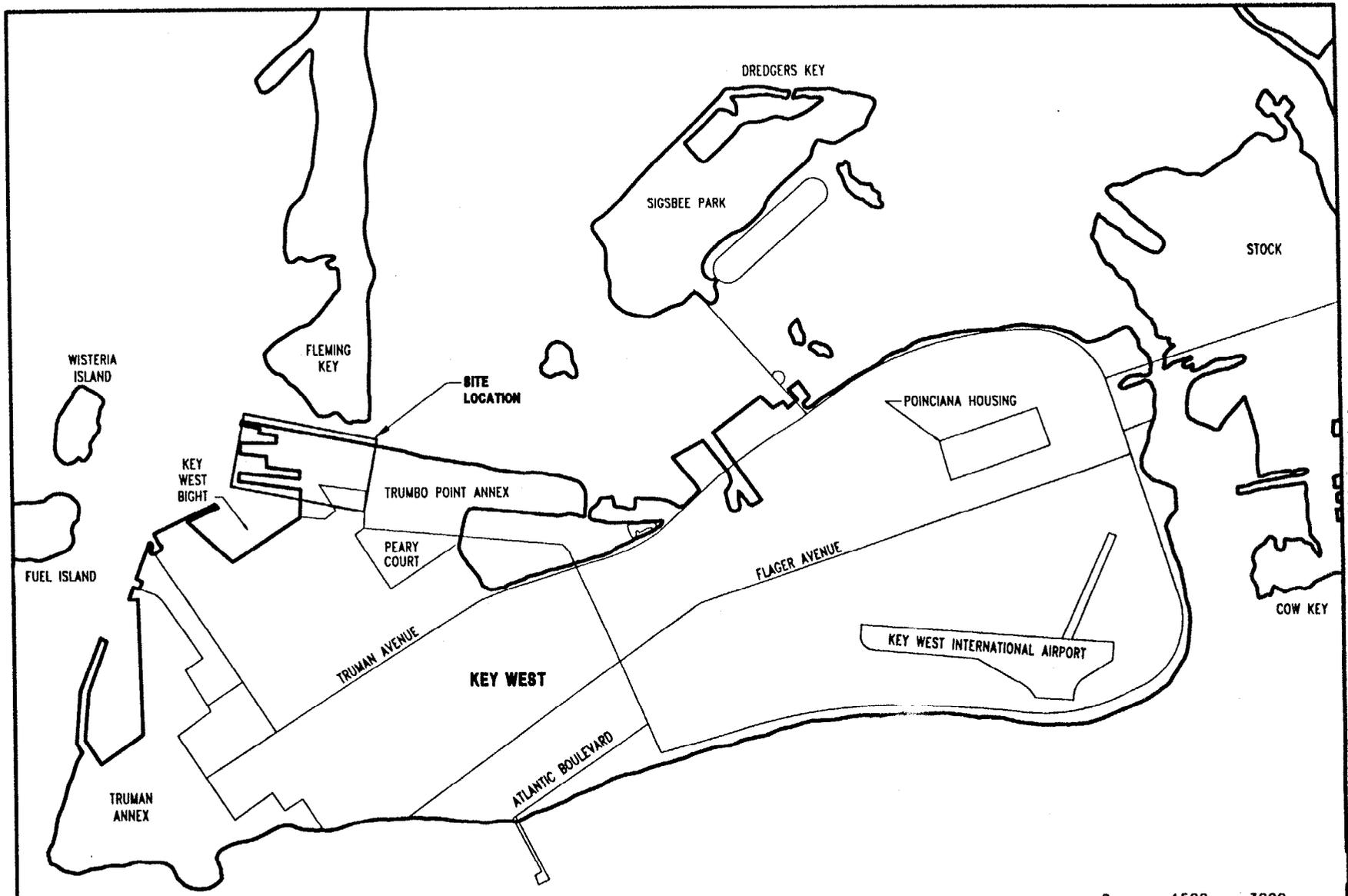
- ✓ Used by the Navy for fuel storage and distribution since 1942.
- ✓ Includes two piers and support buildings leased by U.S. Coast Guard since 1983 and a fuel tank farm leased by Key West Pipeline Company.

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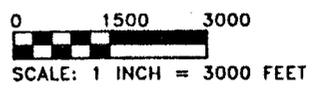
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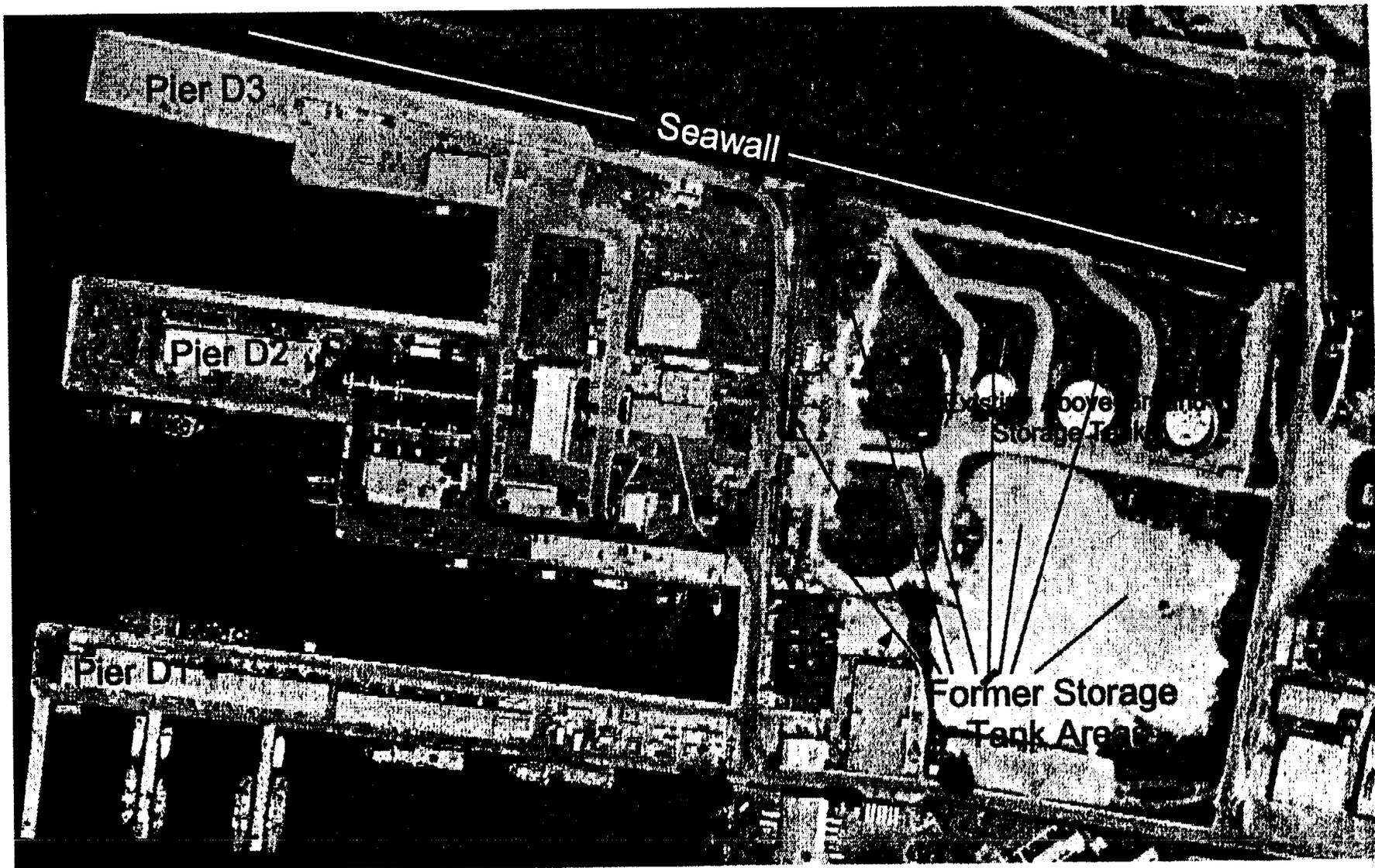
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**Trumbo Point Fuel Farm Location**





Pier D3

Seawall

Pier D2

Existing Above-ground  
Storage Tanks

Pier D1

Former Storage  
Tank Area

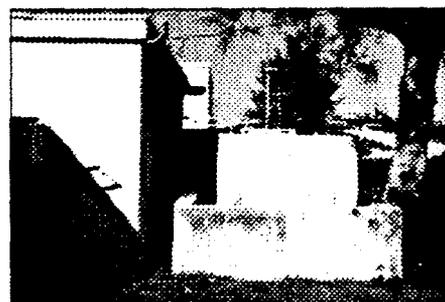
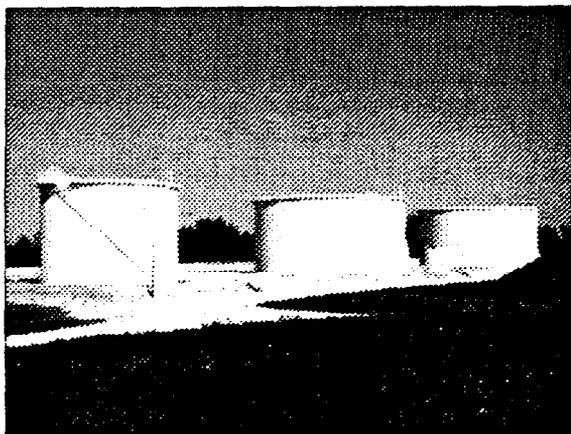
# Naval Air Station (NAS) Key West Trumbo Point Fuel Farm



## Project Status

A plan to address contamination at Trumbo Point Fuel Farm is under development by the Navy. It is known as a remedial action plan (RAP). The RAP will rely on data collected in detailed environmental studies and assessments at the site. These include:

- ✓ Contamination Assessments (summarized in the October 1996 Contamination Assessment Report)
  - ☐ Preliminary Report (July through October 1993)
  - ☐ Final Report (January through July 1996)
- ✓ Risk Evaluation Observation Visit (April 1997)
- ✓ Site Walkover and Sample Location Identification (December 1997)
- ✓ Underwater Survey and Fish Sampling (April 1998)



Fuel storage and distribution facilities at Trumbo Point Fuel Farm.

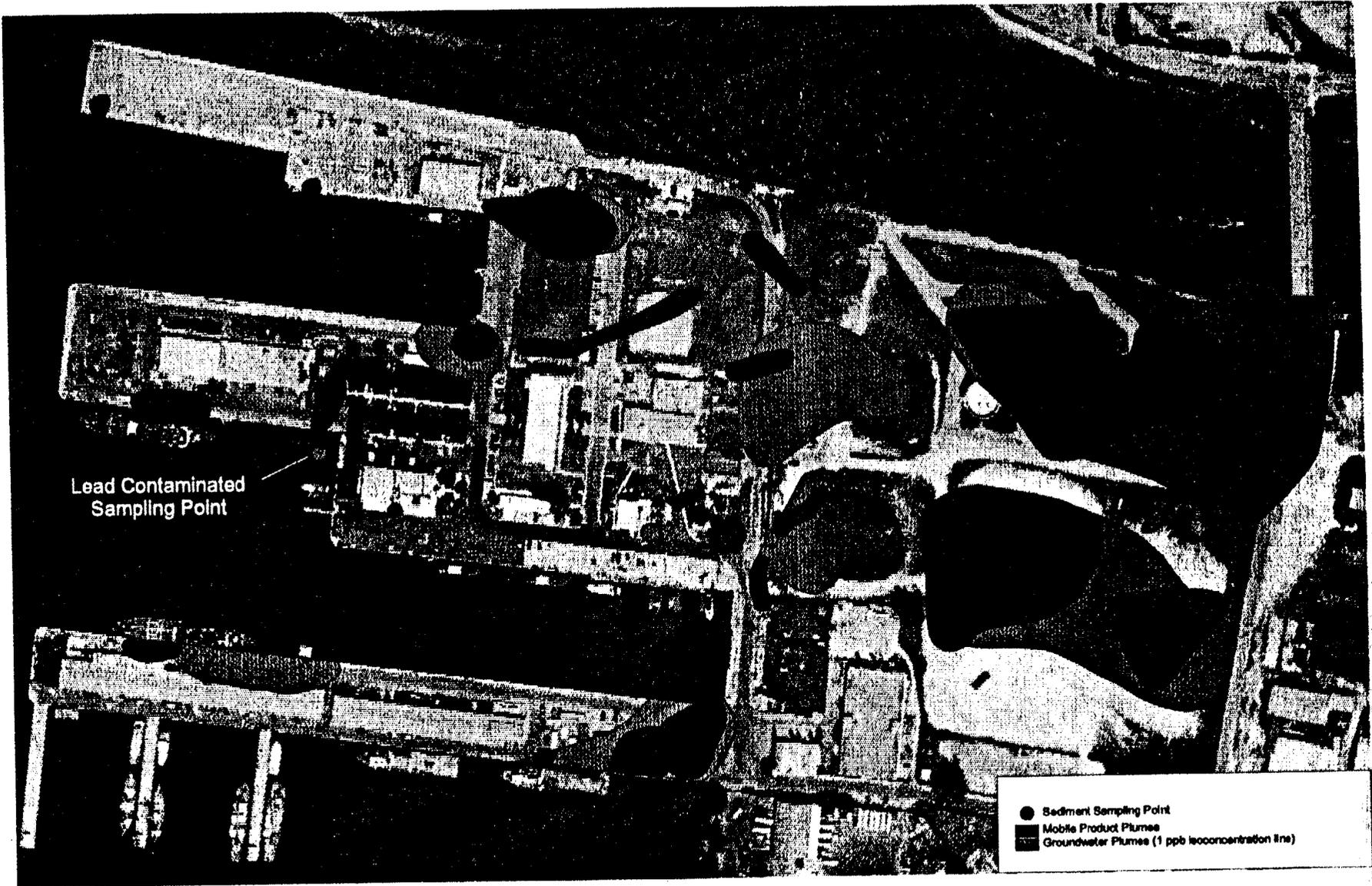
# **Naval Air Station (NAS) Key West Trumbo Point Fuel Farm**



## **Current Understanding of Contaminants**

Soil, groundwater, and surface water samples, and sediment samples from the sea bottom along the seawall and piers, were collected. The samples were analyzed at a laboratory to determine the nature and extent of petroleum-related contamination at the site. Lead was also found, and is possibly related to fuel storage and distribution operations at the site. Sampling point where lead was found and other areas of contamination are shown below.

See next page.

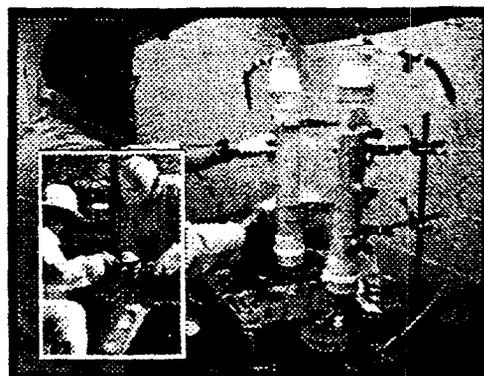


# Naval Air Station (NAS) Key West Trumbo Point Fuel Farm



## Risk Evaluation in Cleanup Planning

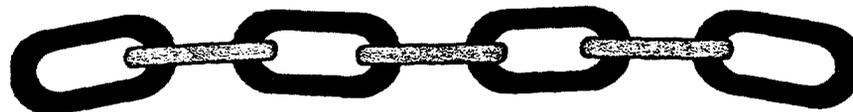
A risk evaluation is being conducted as part of the RAP to estimate current and potential future health effects from site contaminants to people and wildlife. These risk estimates will be used to determine the amount of contaminants that need to be cleaned up to protect human health and the environment. This "risk based" approach to environmental cleanup is guided by Florida Department of Environmental Protection (FDEP) regulations on fuel storage site cleanup. The risk evaluation is done in four phases:



*Sampling and analysis are important parts of the risk evaluation process.*

- ✓ data collection and evaluation,
- ✓ exposure assessment,
- ✓ toxicity assessment, and
- ✓ risk characterization and uncertainty analysis.

## Risk Assessment



Contamination (water and soil) + Receptor (humans) + Contact (eating/drinking) = Exposure

*One part of a risk assessment evaluates current or potential future human contact with contamination. All the "links" must be present for exposure to occur. The amount of exposure and the toxicity of the contaminant are then used to estimate potential health risks.*

# Naval Air Station (NAS) Key West Trumbo Point Fuel Farm



## Risk Evaluation Findings

### Human Health

The evaluation found no health risks to site workers, Navy or Coast Guard personnel, visitors, or people fishing at the Trumbo Point Fuel Farm. Some risks were found for workers using groundwater for hand washing. Groundwater beneath the site is not currently used for any purpose.

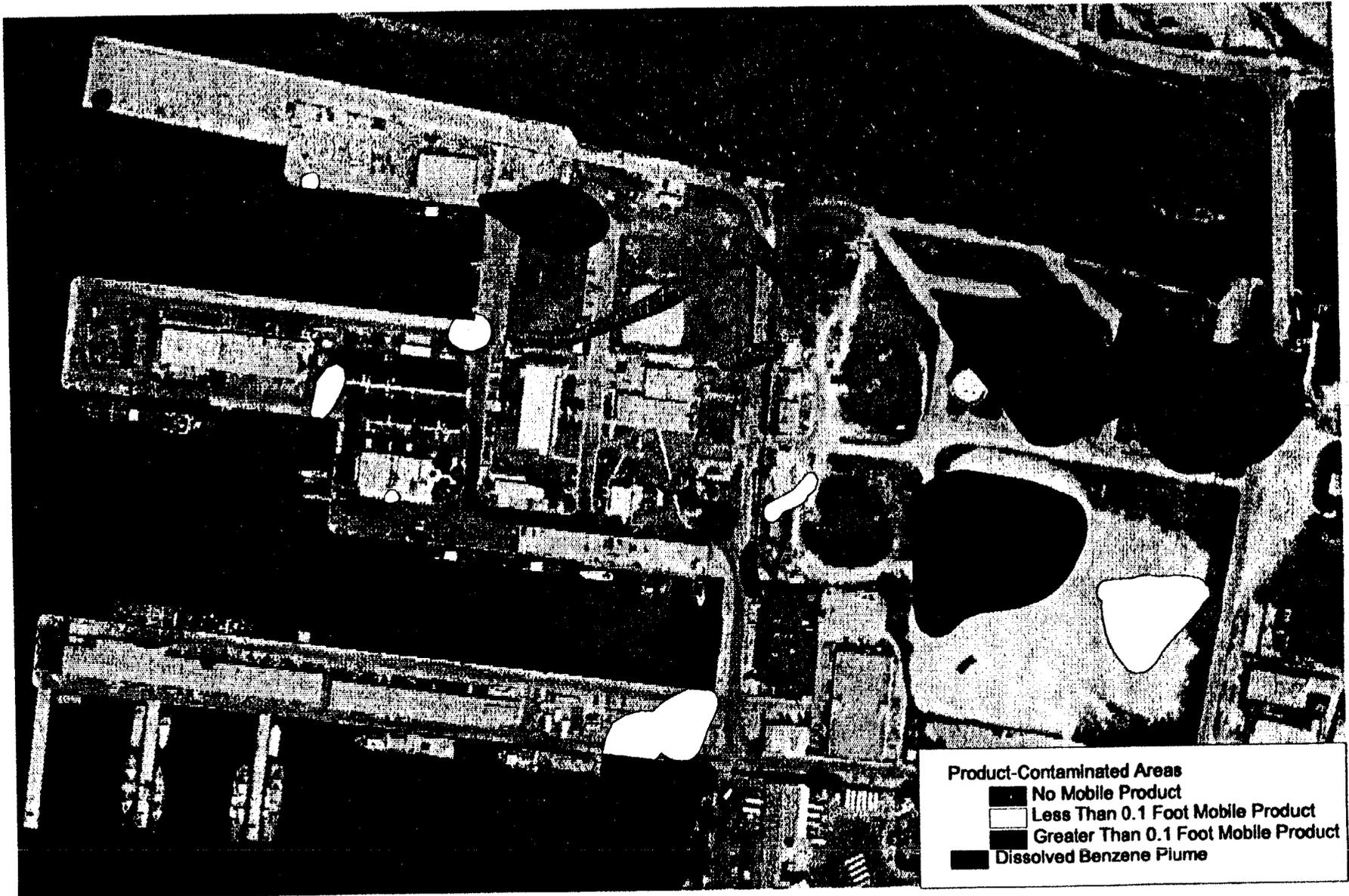
### Ecological

The evaluation found no risks to birds or fish in the Trumbo Point Fuel Farm area. Some contaminants were detected in sediment, but in amounts typical for areas used for boating and with urban surface water in Florida. One single location was identified for further study and possible lead removal from sediment.

These findings were then used to:

- ✓ identify areas of contamination needing to be addressed to protect human health,
- ✓ evaluate potential cleanup options, and
- ✓ develop the cleanup recommendations in the RAP.

See next page.



# Naval Air Station (NAS) Key West Trumbo Point Fuel Farm



## Cleanup Recommendations

The RAP will present recommended cleanup actions and other measures to address contamination at Trumbo Point Fuel Farm. These actions will be based on site-specific risk evaluation findings and FDEP risk-based standards that are protective of human health and the environment.



## What's Next?



The Navy will send the draft RAP to FDEP for review shortly. FDEP will make comments on the document. These comments will be addressed and the RAP will be finalized. The plan for cleaning up the site will be shared with the community at that time. The actual site work at Trumbo Point Fuel Farm will follow.

## Questions or Comments?

We'd like to know what you think. If you have any questions or comments on the material presented tonight, please contact:

**Jim Simmens**  
NAS Key West  
(305) 293-2881

**Byas Glover**  
Naval Facilities Engineering Command  
(843) 820-5651