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MINUTES FROM 23 JANUARY 1997 RESTORATION ADVISORY BOARD MEETING NTC  
ORLANDO FL  
1/23/1997  
NAVFAC SOUTHERN

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**Meeting Summary  
Restoration Advisory Board  
Naval Training Center (NTC), Orlando  
January 23, 1997**

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A meeting of the NTC, Orlando Restoration Advisory Board (RAB) was held on January 23, 1997 in the City Commission Chambers, Winter Park City Hall. Attachments to this meeting summary are:

Attachment A:	Meeting Agenda
Attachment B:	Member Sign-in Sheet
Attachment C:	1997 RAB Attendance Record
Attachment D:	NTC, Orlando RAB Update (Information Repository copy only)
Attachment E:	Community Mailing List Notice
Attachment F:	Community Sign-In Sheet
Attachment G:	Media Release

RAB members present at the meeting were:

Penelope Felger	Thomas Nelson
Wayne Hansel	Blanche Olson
Bruce Hossfield	Nancy Rodriguez
Robert Mackey	Robert Underwood
Nancy Maloney	Lt. Gary Whipple (Navy RAB Co-Chair)
John Mitchell	Capt. Doug Yesensky
	Thomas Yost

Other Navy and support personnel present included:

Barbara Nwokike, Southern Division, Naval Facilities Engineering Command  
John Kaiser, ABB Environmental Services, Inc. (ABB-ES)  
Bill Kollar, ABB-ES  
Mac MacNeil, Bechtel Environmental, Inc.

Joanne Granberry attended in place of community RAB member Edwin Granberry.

Lt. Whipple, the Navy Co-Chair, welcomed the RAB and the community. Co-Chair Whipple called the meeting to order at 7:10 p.m. and noted that a quorum of RAB members was not present. Six members of the general public were also in attendance.

## RAB Administration

**November RAB Meeting Minutes:** The November RAB meeting minutes were approved without comment.

**RAB Meeting Attendance:** Co-Chair Whipple noted that there was no quorum at the last two meetings. He agreed to contact those members who missed several meetings in 1996 and encourage their attendance at future meetings.

**Upcoming Meeting Schedule:** The next RAB meeting was scheduled for Thursday, March 20, 1997. Co-Chair Whipple said he would confirm the availability of the Commission Chambers for that date.

**Public Notification of Meetings:** Co-Chair Whipple noted a memo from Bill Kollar of ABB Environmental Services (a Navy contractor) regarding RAB meeting publicity options. These included: public service announcements on public access cable Channel 9 and on local broadcast television and radio stations; the calendar column and similar community-oriented features in the *Sentinel* and other local newspapers; flyers in Winter Park and Orlando city offices; notices in area homeowner association newsletters or other communications; and flyers at local post offices and utility offices. Bruce Hossfield suggested contacting *The Community Paper*, a local publication. Co-Chair Whipple directed Mr. Kollar to use these options to publicize the March meeting.

**New RAB Business:** Co-Chair Whipple asked the members to recommend March agenda items.

**Postscript to RAB members:** An electronic clearinghouse has been established for RAB members from across the country to communicate and share information. Topics include RAB activities, DoD RAB guidance, environmental law, funding, and technical information on site cleanups. This electronic mailing list is moderated by Aimee Houghton at the San Francisco State University Urban Institute, (415) 904-7750. If you have access to electronic mail, you can join the clearinghouse by contacting "aimeeh@econet.apc.org." This is a free service. It was highlighted in the Final Report of the Federal Facilities Environmental Restoration Dialogue Committee (April 1996).

## BRAC Update/Upcoming Activities

Wayne Hansel provided an update on ongoing and upcoming fieldwork at NTC, Orlando. His report is summarized in Attachment D to this meeting summary. New information in Mr. Hansel's report is presented below:

*Main Base (RTC Area)* - Petroleum contamination assessments are underway for Buildings 200 (Fire Fighting School) and 218 (Recruit Training Command Galley #2). Well sampling results at Buildings 2720 and 2723 (Silk Screening Area) are below levels which require cleanup. The site will be recommended to the Orlando Partnering Team (OPT) for No Further Action (NFA).

*Main Base Landfill (Operable Unit [OU] 1)* - The final Remedial Investigation/Feasibility Study (RI/FS) report was received by the OPT on January 22.

*Main Base New Sites* - Study areas 39 and 40 (former U.S. Air Force sites) have been evaluated for polyaromatic hydrocarbons (PAH), a class of chemicals typically associated with petroleum products. ABB will follow up with a risk assessment. PAH study is pending for Building 27 (Visitor's Pass Office and Security Building)

*Area C* - ABB has completed a report on potential cleanup options for the Base Laundry and associated areas (OU 4). The OPT has reviewed the report and selected in-well stripping (for groundwater) and natural attenuation (for sediment) for the interim cleanup. ABB is working on the system design.

*Herndon Annex* - The report on additional sampling of the benzene plume on the Greater Orlando Aviation Authority property is due in February. Benzene and PCE (a contaminant associated with solvents) have been detected between 50 and 60 feet below the surface.

*McCoy Annex Group III Sites* - The OPT has reviewed technical memoranda on site screening activities for study areas 46, 47, 49, 51, and 53 (all former U.S. Air Force sites) and approved these sites for NFAs. Resampling at study area 48 (the former auto hobby shop) has been completed. The site will be recommended for NFA based on results. Report on pesticide contamination at study area 52 (a former laboratory) is pending.

*Petroleum Tank Program* - 114 Tank Closure Assessment Reports have been completed. 92 were clean closures. Petroleum contamination assessment reports are needed for the other 22 tank sites where petroleum releases occurred. 13 of these reports have been prepared by ABB (two of which recommend NFAs for soil contamination), and nine are in progress. Assessments of 14 oil/water separators (tanks which trap oil and grease) are also required. Several of these studies are underway.

32 storage tank removals started in October and November. Contamination assessments are needed at four of these sites, and results of groundwater sampling are pending. 30 more tanks are scheduled for removal in February and March.

*Property Transfer* - Status changes since the November RAB meeting include: Findings of Suitability for Transfer (FOST) for the Fairwinds Credit Union and the recreational complex (both on the Main Base) were made available for public comment in December (1996) and January; Environmental Baseline Survey for the proposed French School property on the Main Base signed by the Commanding Officer, Southern Division and sent to real estate department.

Mr. Hansel closed his report by noting that a table summarizing all FOST and Finding of Suitability for Lease (FOSL) activity is now included in RAB member mailout packages. This is in response to increased interest in property issues as the transfer process accelerates.

## **RAB Comments and Questions on the BRAC Update (questions and answers paraphrased)**

*How are FOSTs and FOSLs processed?* Once completed, these documents go through the Navy's Southern Division, Naval Facilities Engineering Command organization for approval. They then go to Naval Facilities headquarters in Washington D.C. for final approval, and back down through Southern Division and ultimately to NTC for execution.

### **Special Topic No. 1: Community Redevelopment Agency Briefing**

Herbert Smetheram, Executive Director of the City of Orlando's Community Redevelopment Agency (CRA) presented an overview of the agency's responsibilities and activities. Mr. Smetheram reviewed the CRA's organizational structure, noting the agency reports to the city council and mayor. Maps from the CRA's reuse plan for the four NTC properties (Main Base, Herndon Annex, McCoy Annex, Area C) were presented. A map illustrating the city's requested closure schedule for Main Base parcels was also shown, and the overall NTC closure schedule was discussed.

Mr. Smetheram then discussed Economic Development Conveyance (EDC), the federally-mandated process for assessing property values at closing military facilities like NTC. Mr. Smetheram stated that EDC is also designed to ensure that property assessments at these facilities reflect realistic market values while supporting job creation. The process for estimating costs of typical reuse requirements such as building demolition and roadway improvements was then discussed. A representative property appraisal summary sheet (for Buildings 383 and 384, the Staff Bachelor's Enlisted Quarters) was also presented. A single-room occupancy motel is planned for this site. Mr. Smetheram concluded this portion of his briefing by noting some lessons learned by the CRA during reuse planning. Chief among them are that the property transfer process moves more slowly and costs are higher than expected. He also noted that many NTC facilities have limited reuse potential. The Staff BEQ is a notable exception with its significant potential for reuse and an appraised market value of approximately \$2.5 million. Building deterioration as properties await transfer is also a concern.

Mr. Smetheram then addressed specific plans for reuse. He noted that the Capehart Housing complex at McCoy Annex will be transferred to the city in February, with the Navy receiving \$1.8 million. A developer has been selected to rehabilitate 600 housing units on the site at a cost of \$30-35 thousand per unit. The developer will pay market value for the Capehart site. The rehabilitated units are defined as affordable housing (\$50-70 thousand per unit) and will not be subsidized housing. Smetheram noted that the housing development at McCoy, and other proposed residential development at NTC, will be planned and constructed to be compatible with existing land uses. Mr. Smetheram estimated the total cost to develop NTC at \$40-50 million, based on a recently conducted professional audit.

**RAB Questions/Comments on Special Topic No. 1:** (questions and answers paraphrased)

*A RAB member asked what the green areas on the Main Base reuse map represented. The green color coding represents areas planned for recreational use and open space.*

*What infrastructure improvements are planned to support the housing development at McCoy Annex? A retail shopping area and recreational facilities are planned for that area. A supermarket is located 1-1.5 miles from the site and would be accessible to residents.*

*What is the status of property transfer at Area C? The Navy has declined an offer by the city for a negotiated sale of the property, and other transfer options are being considered.*

**Special Topic No. 2: Investigation Results and Interim Cleanup Plan for OU 4**

Co-Chair Whipple briefed the RAB on activities at OU 4 (the former Base Laundry). He explained that the recently completed Focused Feasibility Investigation was prompted in part by community concerns about contaminant releases into nearby Lake Druid, and that the planned cleanup is an interim step designed to address those releases. Co-Chair Whipple stressed that risk assessment work showed that contamination at OU 4 posed no immediate risks to public health. Other highlights of the briefing included:

- Site Location, Past Uses, and Geology
- Contaminant Concentrations and Movement
- Cleanup Alternatives Evaluated
- Investigation History/Role of OPT
- Investigation Findings
- Alternative Evaluation Process
- Preferred Alternatives
  - In-Well Stripping (groundwater)
  - Natural Attenuation/monitoring (sediments)

Co-Chair Whipple explained the in-well stripping process, stating that groundwater is pumped into the well where contaminants volatilize (turn into gases) and are treated. The harmless off-gas is then vented into the air. He summarized the advantages of the in-well stripping alternative as follows: design flexibility; works faster than traditional pump and treat systems; treats the groundwater in place; and maintains the integrity of the water-supply aquifer underlying the site. Co-Chair Whipple concluded by noting the next steps in the interim cleanup at OU 4. First, the design will be completed and the equipment purchased. The system will then be installed and cleanup will begin, followed by an RI/FS to fully assess the site and develop a permanent cleanup plan if needed. If the RI/FS results indicate that soil contamination is within the acceptable range under State of Florida law, the property will be considered suitable for transfer.

**RAB Questions/Comments on Special Topic No. 2:**

***What are the contaminant levels in Lake Druid?*** John Mitchell of the Florida Department of Environmental Protection responded that levels of PCE and TCE (chlorinated solvents used in drycleaning) and vinyl chloride (a breakdown product of PCE and TCE) are slightly above State limits for surface water.

***What size area will one in-well stripping system treat?*** The precise area that can be treated by one well depends largely on site-specific conditions, but is approximately 50 square yards. It is estimated that two wells will be installed at OU 4.

***Will NTC operations continue at OU 4 while the cleanup is in progress?*** Yes, the Defense Reutilization and Marketing Office at the site will remain open.

***Will the hard pan geology at the site effect the in-well stripping process?*** 24-hour pumping tests conducted at the site showed that the hard pan will have minimal impact on maintaining the groundwater extraction flow required for the in-well stripping system to operate effectively. Bruce Hossfield of the CRA added that city's Environmental Services Bureau is working with the Navy on the NTC cleanup and will monitor operations at OU 4.

The business portion of the meeting concluded at 8:35 p.m., and the meeting was adjourned by Co-Chair Whipple. The floor was then opened for comments and questions from the community. No comments were forthcoming and the meeting was adjourned.

**Attachment A**

**AGENDA**

***NTC, Orlando Restoration Advisory Board Meeting  
January 23, 1997***

Welcome/Opening Comments	RAB Co-Chairs
RAB Administration	RAB Co-Chairs
RAB New Business	RAB Members
BRAC Update	Wayne Hansel BRAC Environmental Coordinator
<u>November Special Topic Feedback</u>	RAB Members
Environmental Justice	
<u>Special Topic</u>	
Operable Unit 4: Investigation Status and Cleanup Technologies	Orlando Partnering Team
Close RAB Business	
Community Comments and Questions	

PRINT NAME CLEARLY
Blanche Olson
JOANNE GRANBERRY (Mrs. Edwin)
THOMAS E. YOST <del>Yost</del>
Thomas C. Nelson
Bob Mackey
Robert Woodward
A. Yessensky BTO
Mary K. Jones
John Miller
Barbara K. Kell
Wanda Hansel
Nancy Maloney

**NTC, ORLANDO RAB SIGN-IN SHEET**

January 23, 1997

**PRINT NAME CLEARLY**

PENELOPE FELGER



**Attachment D**

**(Information Repository Copy only)**

## ***ENVIRONMENTAL MEETING***

### **Restoration Advisory Board Naval Training Center, Orlando**

The Naval Training Center's Restoration Board (RAB) will hold its regular meeting to discuss environmental studies currently underway on the base.

**When: 7:00 - 9:00 P.M.  
Thursday, January 23, 1997**

**Where: Winter Park City Hall  
City Commission Chamber-Second Floor  
401 Park Avenue South  
Winter Park, Florida**

A map showing the meeting location is on the reverse side of this flyer. Community members are encouraged to attend the RAB meeting. The special topic at the meeting will be a briefing on the investigation and interim cleanup plans for Operable Unit 4 (the Base Laundry).

An open floor period will be held after RAB business has been completed to address any community comments or concerns. Documents on the environmental program at NTC, Orlando, including summaries of prior RAB meetings, are available for public review at the Orange County Library, 101 East Central Avenue, Orlando. They are located in the Information Repository in the Social Sciences Department (Aisle 27) on the second floor.

#### ***Questions?***

**Call Lt. Gary Whipple at 646-4735  
or  
Diane Silkwood at 856-3484.**

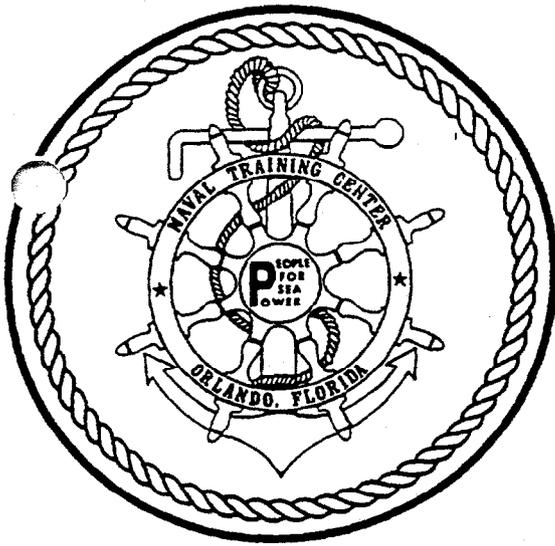
Attachment F

NAVAL TRAINING CENTER, ORLANDO RESTORATION ADVISORY BOARD MEETING  
 WINTER PARK CITY HALL COMMISSION CHAMBERS, January 23, 1997  
 SIGN-IN SHEET (please print clearly)

NAME	ADDRESS (please include zip code)	TELEPHONE NO. (day/evening)	AFFILIATION (if any)	Would you like to be added to our mailing list?
LARRY MATTSON	600 W. ROBINSON ST ORLANDO 32802	420-6607	Peoples Gas system	Yes
Lisa/Milton Olen	102 Humlin Ct. N. Longwood, FL 32750-4014	332-5104	WP Observer	No
Rick Baird	OCEPD 2002 E. Michigan St Orl, FL 32806	836-7400	Orange County	already on
OSCAR McNEIL	KNOXVILLE, TN	423-220-2745	BECA TEL	No
Kay M. Genell	1381 College Pt WP 32789	407-644-7658	MoA A	Yes
Thomas [unclear]			RIFIS	1/11

Attachment G

**CONTACT:** Lieutenant Bob Mehal  
Public Affairs Officer  
(407) 646-4430



**FOR IMMEDIATE RELEASE:**

**ENVIRONMENTAL STUDIES AT NAVAL TRAINING CENTER (NTC) ORLANDO  
SUBJECT OF CITIZEN ADVISORY BOARD MEETING**

Orlando ... The Restoration Advisory Board of the Naval Training Center, Orlando will meet on January 23, 1997 to discuss ongoing environmental investigations and other related work at the base. A briefing on activities at the former Base Laundry site (Operable Unit 4) will also be on the agenda. Interested citizens are invited to attend the meeting, which will be held in the Commission Chambers at Winter Park City Hall (2nd floor), 401 Park Avenue South in Winter Park from 7 to 9 p.m. The public will be invited to provide comments and ask questions at the close of the meeting. For further information, please call Lieutenant Gary Whipple at (407) 646-4735 or Lieutenant Bob Mehal at (407) 646-4430.

The Restoration Advisory Board is a made up of community members, U.S. Navy representatives, and state and federal agency personnel. The board provides advice to NTC Orlando regarding environmental cleanup activities. The group also serves as means for the community and the Navy to exchange ideas on the base's environmental program.

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01/16/97

## NTC ORLANDO RAB UPDATE 1/23/97

### FIELDWORK

#### Main Base (RTC Area)

- Sites 8 and 9 have been made OU3 and require Interim Remedial Action (IRA) for soils followed by a Remedial Investigation (RI) for groundwater( 97 Budget). Draft Reports have been completed for Study Area 43, Skeet and Pistol Ranges, and Study Area 44, Former Missile Maintenance Area and Silk Screening Area. The Report for these sites was reviewed in April and additional investigation was directed at sites 43 and 44. TCLP for lead at Skeet and Pistol Ranges results were below action levels and they have been recommended for NFA. Test pitting at Silk Screening Area has been completed and only construction rubble was found. This site also recommended for NFA. Well sample data was below action levels and Study area will be proposed for NFA.
- Petroleum contamination has been discovered at bldgs 200 and 218. Contamination assessments at bldgs 218 and 200 are being completed.

#### Main Base (OU1)

- The Draft RI/FS Report was received in late March and is being reviewed. The OPT has agreed that the cover is adequate as long as the area is restricted to recreational use and that an additional cluster of intermediate and deep wells is needed to better determine background levels in the deeper aquifers. Data from the sampling of the new wells have been received and the OPT is reviewing the data. The final report should be completed in December. Final Report was received Jan. 22, 1997.

#### Main Base (Other sites)

- Fieldwork in SW Corner was completed in May and a Draft Tech Memo for sites 39, 40 and 45 has been discussed. The OPT has agreed that not further actions are required at study area 45, and that additional soil samples are needed at study areas 39 and 40. Study Area 39, 40 and 27 will be assessed for PAH contamination. PAH assessment at SA 39 and 40 has been completed and ABB will do risk assessment. Sampling of SA 27 still pending.

#### Area C (Group II, Area "C").

- OU4, Laundry site - ABB was given notice to proceed with IRA investigation and design on March 11, 1996. Fieldwork to determine extent of contamination between the lake and laundry has been completed. ABB has been directed to install a recovery well and do a pump test. This is the last piece of information needed before the OPT can select a remediation technology to use at this site. Well test has been completed. ABB is working on focused feasibility study. The OPT has reviewed the

draft and has directed ABB to consider additional technologies such as air sparging to treat the plume. In-well sparging was selected for RA. ABB is working on design.

#### Herndon Annex

- ABB has completed additional fieldwork and is working on draft of report. PCE and benzene were detected at about 50-60 ft. below surface. Report on CPT testing is due in Feb.

#### McCoy Annex

- McCoy - SA 48 - resample. Retesting completed and Study Area will be proposed for NFA.
- McCoy - SA 52 - delineate pesticides and posted site with signs. Waiting for Report.
- SA 46, 47, 49, 51, and 53. Have been approved as NFAs.

#### Petroleum Tanks

- 114 TCARs have been processed
  - 92 were clean closures
  - 22 require Contamination Assessments + 14 oil/water separators to be assessed.
    - 6 - NFAs
    - 2 - Soil IRAs (soil was clean and NFA is likely)
    - 5 - RAPs
    - 9 - in progress
- 32 tank removed in October and November. Four contaminated site that require assessments were found. We are waiting for groundwater samples. PWC is removing another 30 tanks in February and March.

PROPERTY TRANSFERS as of 1/18/96

PARCEL	LEASE/TRANSFER TO	STATUS
Building 325 Galley	Transfer to Customs	FOST and EBS sent to Washington <b>24 MAR 95.</b>
Herndon Annex	Lease to Redevelopment Agency (Request received at SOUTH DIV Sept. 25, 1995)	FOSL signed by SOUTH DIV CO. Sent to Real-estate March 1995.
Naval Hospital Complex	Transfer to V.A	EBS completed May 95 sent to Washington <b>26 October 1995.</b>
Bldgs. 235, 236, 238	Lease to Redevelopment Agency	EBS Started Jan. 30, 1995. Sent to FDEP/EPA for review on Apr. 28. Received FDEP comments Oct. 3, 1995. FO SL completed Oct.19. <b>Signed by SOUTH DIV CO 10/23/95 &amp; sent to Real-estate.</b>
Bldgs. 310, 311	Lease to Redevelopment Agency	EBS Started Jan. 30, 1995. Sent to FDEP/EPA for review on Apr. 28. Received FDEP comments Oct. 3, 1995. Received EPA comments June 23. <b>Signed by SOUTH DIV CO 01/12/96</b>
Building 305	Lease to Redevelopment Agency	EBS Started Feb. 27, 1995. Sent to FDEP/EPA for review on 28 Apr. Received FDEP comments Oct. 3. Received EPA comments Sept 21. <b>Signed by SOUTH DIV CO 01/12/96</b>
McCoy Capehart Housing	Transfer to Redevelopment Agency	EBS Started Feb. 27, 1995. FDEP/EPA comments received and being incorporated. <b>Waiting on EIS ROD.</b>
Bldgs. 253, 255	Lease to Redevelopment Agency	EBS Started Mar. 20, 1995. Sent to FDEP/EPA for review on 28 Apr. FDEP/EPA comments received Oct. 3 and are being incorporated. <b>Signed by SOUTH DIV CO 10/23/95 &amp; sent to Real-estate.</b>
French School (21 Facilities) Bldg 102, Bldg 105	Lease to Redevelopment Agency	EBS Started Mar. 20, 1995. Sent to FDEP/EPA for review on 25 May. Received FDEP comments 9/25/95 & EPA comments 01/12/96. <b>WILL be signed by SOUTH DIV CO &amp; sent to Real-estate next week.</b>
21028, 21001A, 21005B, & 21012 Ballfields & Courts	Transfer to Orange County School Board (Request to lease received at SOUTH DIV Sept.25, 1995)	EBS Started Mar. 20, 1995. Sent to FDEP/EPA for review on Apr. 28. Received FDEP and EPA comments Sept. 7, 1995. FO SL completed. <b>Signed by SOUTH DIV CO 10/23/95 &amp; sent to Real-estate.</b>
Bldg. 7236, 7241	Lease to Redevelopment Agency (Request received at SOUTH DIV Sept.25, 1995)	EBS started June 5, 1995. Sent To FDEP/EPA for review June 30, 1995. FO SL completed. <b>Signed by SOUTH DIV CO 10/23/95 &amp; sent to Real-estate.</b>
McCoy Parks Area	Lease to Redevelopment Agency	EBS started June 5, 1995. FO SL is at SOUTH DIV being reviewed.
RTC North Area Bldg 252	Lease to Redevelopment Agency	EBS started April, 1996. FO SL is at SOUTH DIV being reviewed.
GOAA McCoy Parcel	Lease to Redevelopment Agency	EBS started September 7, 1995.
Service School Command	Lease to Redevelopment Agency	EBS started May 1996
Main Base Golf Course	Transfer to Redevelopment Agency	EBS started May 1996

## REPORTS

Project Operations Plan	March 94
Environmental Baseline Survey	December 94
EBS for Transfer, Galley, Building 325	January 95
Background Sampling Plan	February 95
Site Screening Work Plans Group II and III	February 95
EBS for Lease of Herndon Annex	March 95
BRAC Cleanup Plan	March 95
EBS for Transfer of Naval Hospital Property to V.A.	May 95
Background Sampling Report	August 95
Technical Memorandum U.S. Air Force records Search	September 95
Site Screening Plan Groups I through V Study Areas	September 95
Final Group I Site Screening Report	November 1995
Draft Site Screening Report Group II	November 1995
FOSL for Bldg.305	December 1995
Draft Site Screening Report Group III	December 1995
Base Realignment and Closure	
Environmental Site-Screening Report	July 1996
South RTC FOSL	October 1996
Final OU1 RI/FS Report	January 1997
To FDEP and EPA for review:	
Final OU2 Work Plans	January 1997

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# Focused Feasibility Study at Operable Unit 4

## Naval Training Center, Orlando

Presented to the Restoration Advisory Board

*January 23, 1997*



# Site Background

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- Location of Area C and OU 4
- Environmental setting (dense vegetation, wetlands, Lake Druid)
- Activities past and present
  - Defense Reutilization and Marketing Office (DRMO)
  - Laundry



# Investigation History

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- Orlando Partnering Team's (OPT) role
- Site screening (field program)
- Reason for Interim Remedial Action (IRA)
  - Exceedance of State surface water quality standards
- Focused Field Investigation (FFI)
  - Lake
  - Groundwater



# Investigation Findings

- Surface water
- Groundwater
- Soil
- Sediment
- Risk findings



# Cleanup Alternatives

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## ■ Groundwater

- Air Sparging
- Groundwater Extraction
- In-Well Stripping

## ■ Surface Water / Sediment

- Air Sparging
- Enhanced Bio and /or Natural Attenuation



# Focused Feasibility Study

## ■ Remedial Action Objective

- To gain control over the migration pathways of contamination concentrations that contribute to surface water exceedances in Lake Druid.
- Alternative Technology Generation



# Alternative Evaluation Process

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## ■ Nine CERCLA evaluation criteria

- Protection of Human Health and Environment
- Compliance with ARAR goals
- Reduction of Toxicity Mobility and Volume
- Consistent with Final Remedy
- Community Acceptability
- Regulatory acceptance Short and Long Term Effectiveness
- Cost
- Implementability



# Preferred Alternative

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- In-Well Stripping of Groundwater
- Basis For Selection
  - Consistant with final remedy
  - Overall Protection of Human Health and Environment
  - Reduces Toxicity and Volumn of Contaminates
  - Long Term effectiveness
  - Compliance with ARARs



# Preferred Alternative

- Natural Attenuation of Sediment
- Basis for Selection
  - Long Term Effectiveness
  - Consistant with Final Remedy
  - Implementability



# **Anticipated Schedule for IRA Implementation**

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- Design and Procure System
- Installation Activities
- Operation
- RI/FS Final Remediation Solution



# Questions and Comments

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