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NTC ORLANDO
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MINUTES FROM 7 MARCH 2001 RESTORATION ADVISORY BOARD MEETING NTC ORLANDO FL

3/7/2001

NAVFAC SOUTHERN

Meeting Summary
Restoration Advisory Board
Naval Training Center (NTC), Orlando
March 7, 2001

A meeting of the NTC Orlando Restoration Advisory Board (RAB) was held on March 7, 2001 in the City Commission Chambers, Winter Park City Hall. Attached to this meeting summary are:

Attachment A:	Meeting Agenda
Attachment B:	RAB Member Sign-in Sheet
Attachment C:	2001 RAB Attendance Record
Attachment D:	IRP Program Investigation Summary
Attachment E:	Community Mailing List Notice
Attachment F:	Community Sign-in Sheet

RAB members present at the meeting were:

David Grabka	Barbara Nwokike
Wayne Hansel	Thomas C. Nelson
Bruce Hossfield	Blanche Olson
Robert Mackey	Nancy Rodriguez
Nancy Maloney	Ann Williams

Other support personnel present at the meeting included:

Steve Tsangaris, CH2M Hill
Vickie Stitt, Tetra Tech NUS, Inc.

Welcome

Wayne Hansel, Co-Chairman of NTC RAB, opened the meeting at 7:06.

The meeting minutes from the November 2000 meeting were approved and accepted.

A motion was made to remove the members who have not been attending meetings.

The motion was seconded and approved. Members removed from the board are Hank Beers, Donald Fuller, Edwin Granberry, and Geraldine Wojeck. Kay Yeuell, who had not been attending meetings because of conflicting schedules, was present and requested to remain on the board. He will be able to attend future meetings.

Wayne Hansel presented the special topic for the evening - *The BRAC Business Plan*. Mr. Hansel summarized an update on active Operating Units and Study Areas. A copy of the presentation is attached.

The highlights of the discussions of various sites follow.

OU#3: A Plan of Action for installation of a funnel-and-gate with activated alumina is in preparation. This will absorb any arsenic before it can flow into the lake.

SA#39 and SA#40: The developer had originally designated SA 39 for offices and SA 40 residential. The decision was made to make SA 39 residential also thus the developer will clean the SA 39 soil to residential standards. A Memorandum of Agreement has been submitted to the Navy to remove the contaminated soil at SA 39 to the OU 1 landfill and backfill with 2 feet of clean soil. Clean soil excavated from other areas would be used as backfill.

OU2: Ninety-five percent of McCoy Annex has been transferred to date.

Question: Did you remove contaminated soil from the golf course on the annex?
No, the levels of arsenic were acceptable for non-residential use. Soil is going to be removed on the main base and transferred to the landfill. Two feet of new soil will be backfilled.

Question: Is 2 feet of fresh backfill sufficient to protect people in a park and play ground area?
Yes.

Question: Will the Veterans Administration (VA) build a tall building? (VA is planning to build a drug warehouse at OU 2)
That is not known at this time.

Question: Will there be further testing of the lake water and the fish?
Wayne Hansel stated that fish have not been tested by the Navy but may have been tested by some other agency. Experts have said that the fish should not be contaminated because solvents do not accumulate in fish. The contaminating solvents in surface water tend to evaporate into the air.

Bruce Hossfield suggested calling the city stormwater bureau for the findings of the city's annual testing of Lake Druid.

Question: Does Lake Susannah have arsenic in it because of the golf course?
No, Lake Baldwin does but not Lake Susannah.

Question: How deep was the soil tested at the golf course near Lake Baldwin? Since arsenic is a heavy metal, was it tested deeply enough?
Runoff into the lake was tested and high concentrations of contaminates were not found. Arsenic tends to build up in soil and sediment. Of course, if arsenic levels are high enough, they will leach into the surface water. Testing at the edge of the lake indicated that the arsenic levels are below standards.

A motion to adjourn the meeting was made and seconded and Wayne Hansel adjourned the meeting at 8:35.

BRAC
Business Plan

NTC ORLANDO

ENVIRONMENTAL ASSESSMENT SCOPE

INSTALLATION RESTORATION PROGRAM (IRP)

- *55 Study Areas*
- *4 Operable Units*

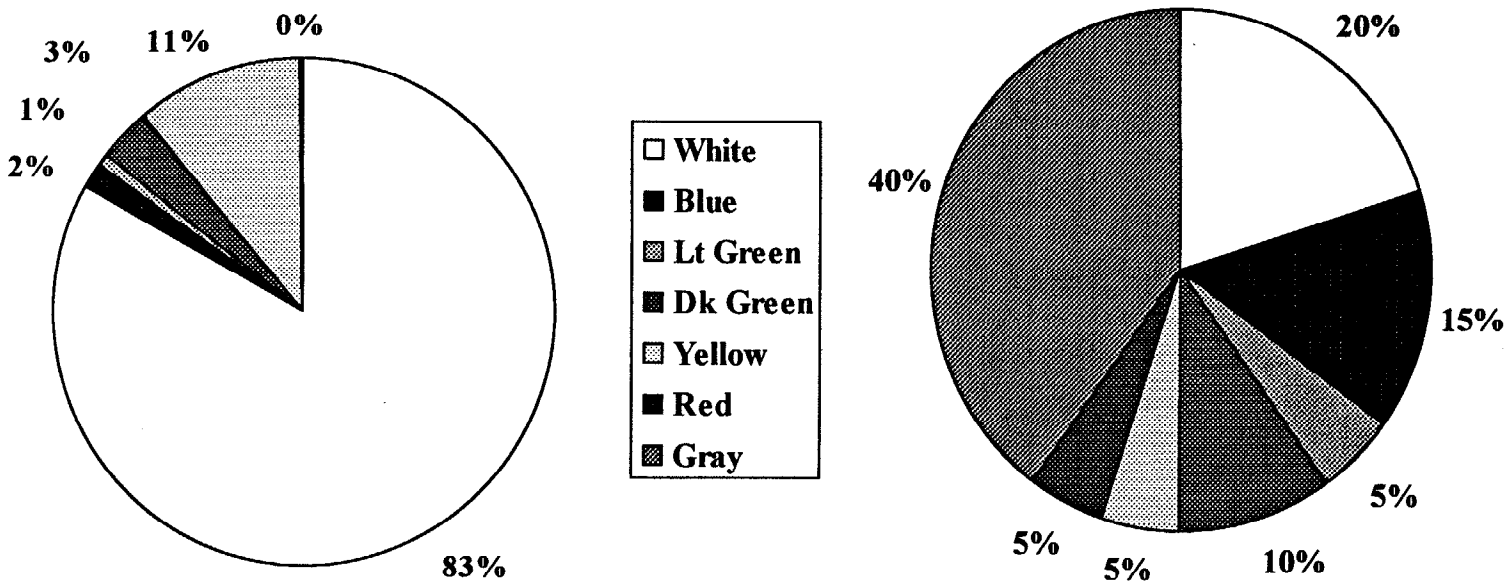
PETROLEUM PROGRAM

- *300+ Tank Removals*
- *70 Assessment*

OTHER COMPLIANCE WORK

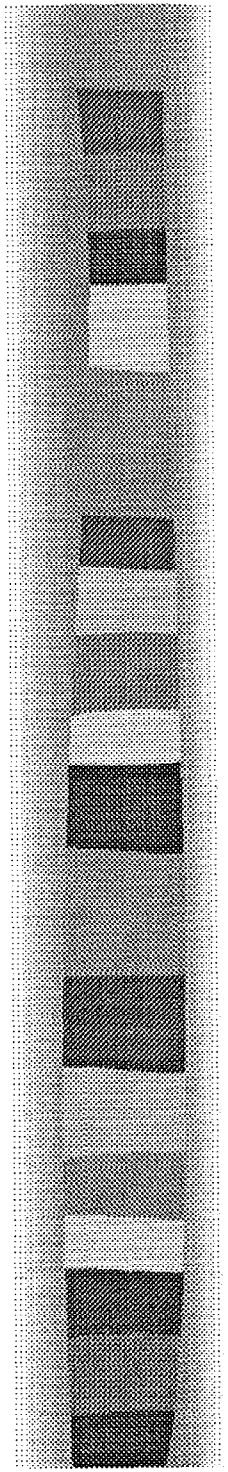
- *Asbestos (survey buildings and put findings in database)*
- *Lead Paint (survey housing and put findings in database)*

Environmental Condition of Property



2000

1994



IRP Status Main Base

- ***OU1 Main Base Landfill***
  - *Started year 3 of 3 year monitoring plan*
- ***OU3 Pesticide Areas***
  - *Interim ROD signed September 2000*
  - *Design and construct funnel and gate SA9*
  - *OPS determination 2002*
- ***SA 39 & 40 Soil***
  - *MOA with Developer to perform soil remediation*
- ***SA 36 & SA39 Groundwater***
  - *IRA to inject with vegetable oil completed.*
    OPS determination in 2002

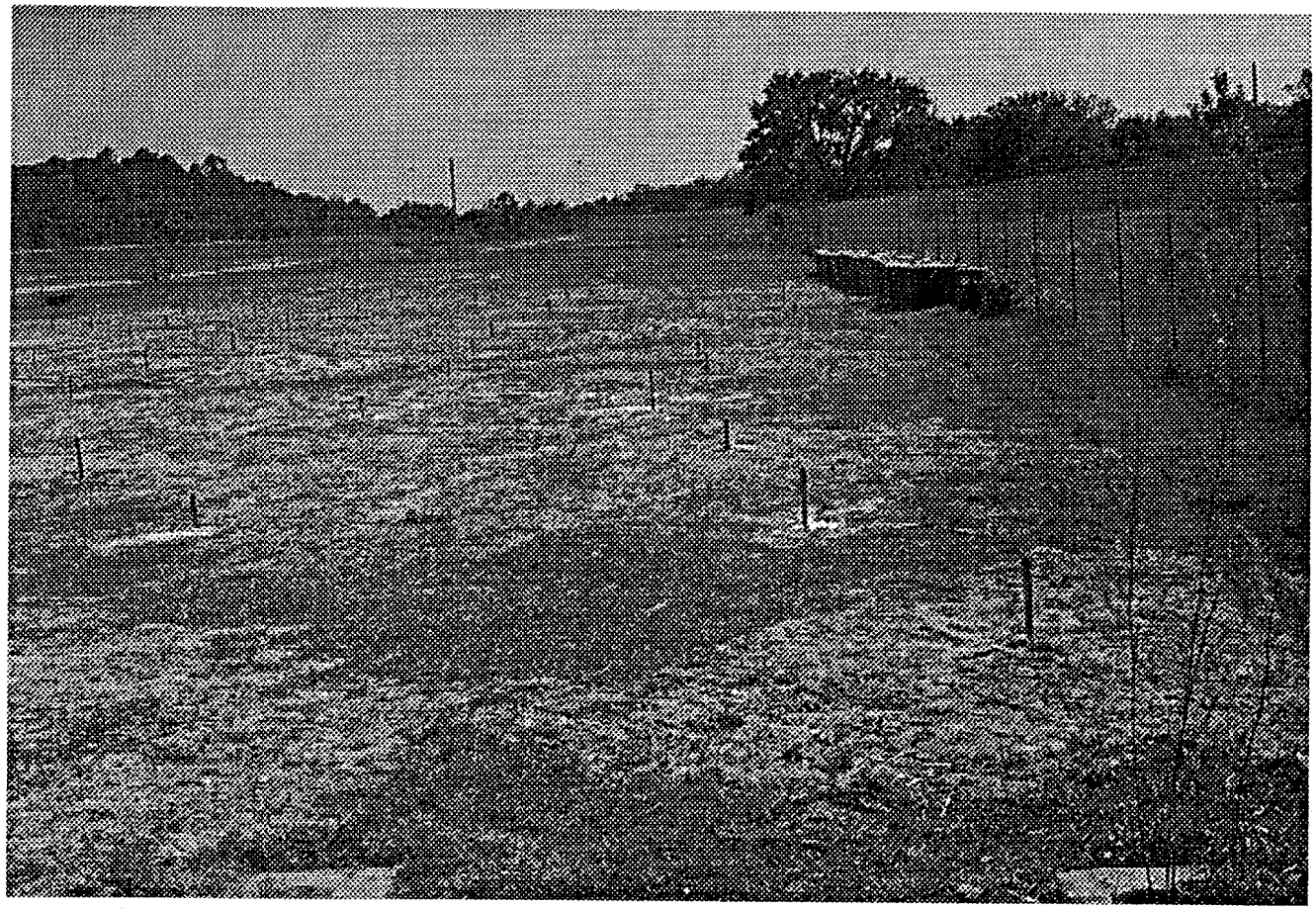
IRP Status McCoy Annex

- ***OU2 - McCoy Annex Landfill***
  - *Draft IR report out for review 3/14/00*
- ***SA 17 - VOC Plume***
  - *IRA for groundwater remediation Fentons injection completed*
  - *OPS determination 2002*
- ***SA 18 - Iron in groundwater***
  - *Monitoring*
- ***SA 52 - Pesticide Areas***
  - *Monitoring*

IRP Status McCoy Annex

McCoy Annex Landfill

IRP Status McCoy Annex

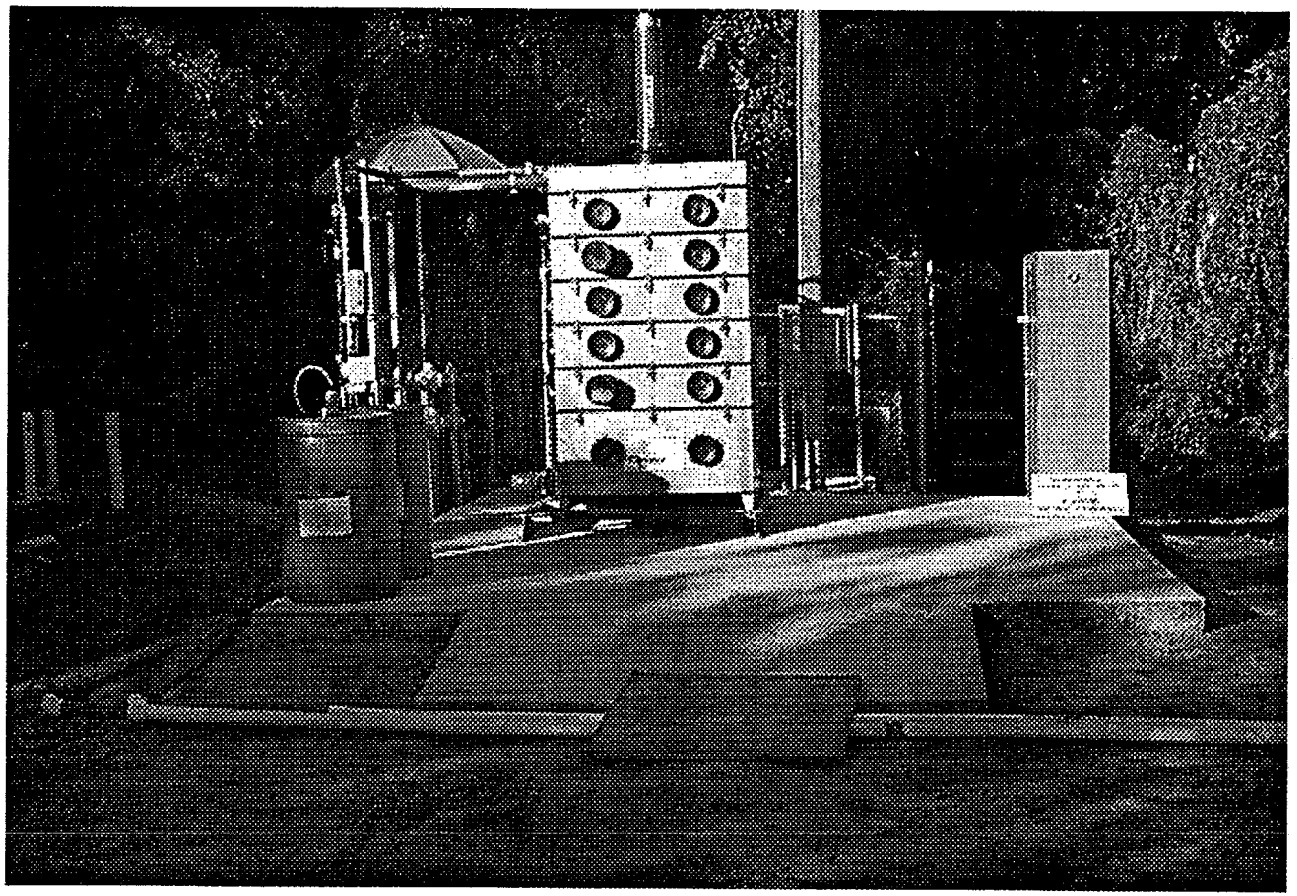


SA 17 Fentons Site

IRP Area C

- ***OU4 Laundry***
  - *Design and construction of source remove Summer of 2001*
  - *OPS determination 2002*

IRP Area C

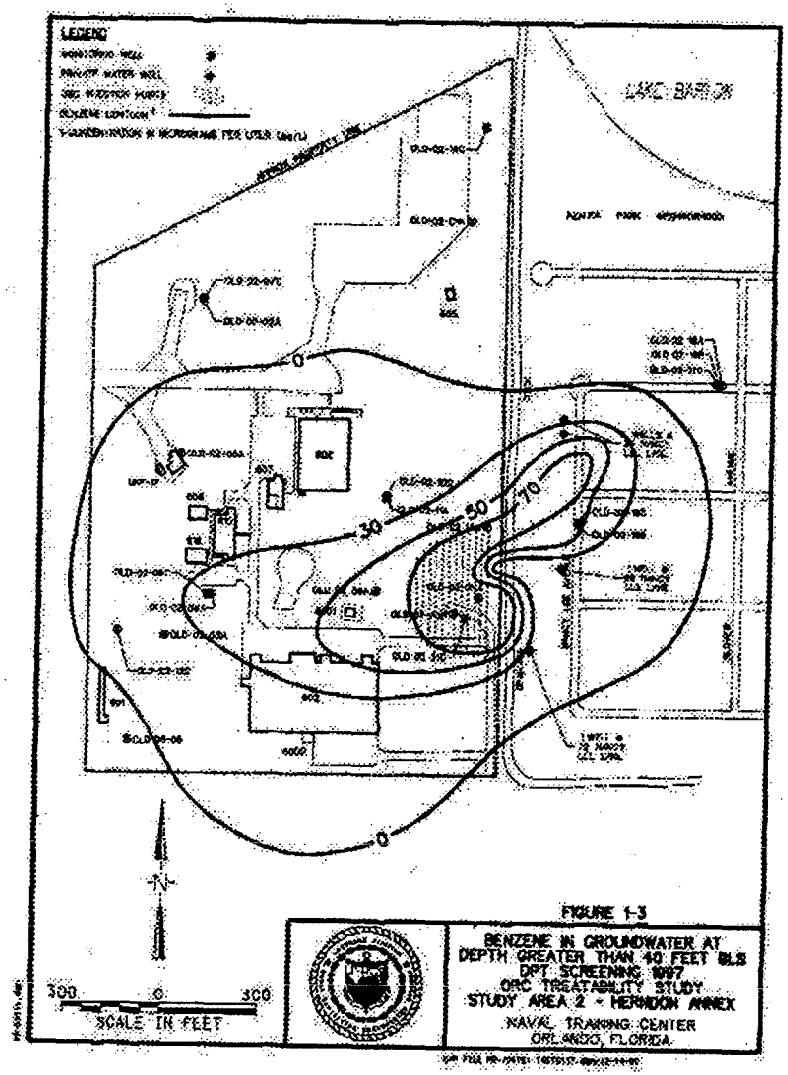


OU 4 Interception Well

IRP Herndon Annex

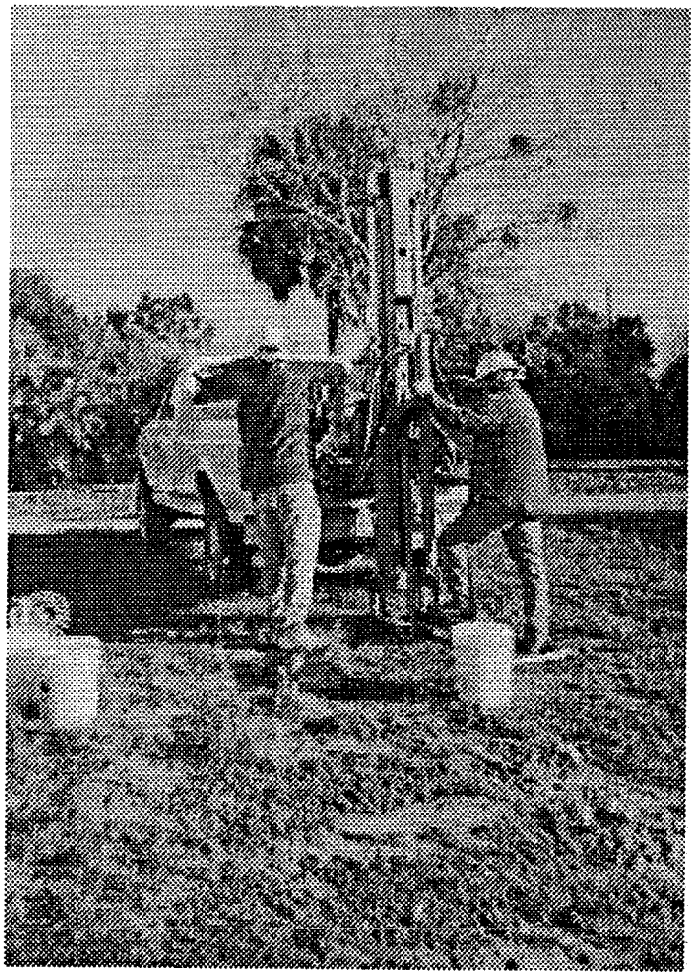
- ***Study Area 2***
  - *Benzene plume excluded from FAA conveyance*
    - ➲ *ORC injection completed*
    - ➲ *OPS determination 2002*
- ***Landfill***
  - *Land use and groundwater restrictions*

IRP Herndon Annex



Benzene Plume

IRP Herndon Annex



ORC
Injection

Tank Program

All tanks had been removed in 1999

- ***Main Base***
  - ***Seven active tank sites***
  - ***Two new tanks discovered during demolition removal scheduled for March 2001***
- ***McCoy Annex***
  - ***Five active tank sites***

PROPERTY TRANSFERS

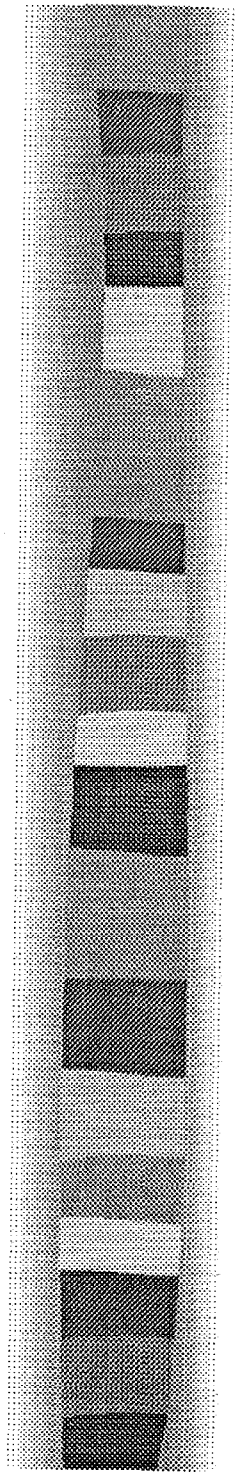
- **Main Base**
  - SA 39 and 40 soil (30 acres, 2001)
  - SA 36, 39 and OU3 groundwater (12 acres, 2002)

- **McCoy Annex**
  - OU 2 (140 acres, 2001)
  - SA 17,18 & 52 (10 acres, 2002)
  - OU 2 Plume area (50 acres, 2002)

PROPERTY TRANSFERS

- **Herndon Annex**
  - Plume area (8 acres, 2002)
- **Area C**
  - Transfer to V.A. (45 acres, 2001)

Questions and Comments



PROPERTY TRANSFERS

- Naval Hospital (45 acres)
- Customs (3.3 acres)
- Florida DOC (5 acres)
- Orange County Schools (5 acres)
- Capehart Housing (214 acres)
- Credit Union (1.5 acres)
- Army Reserves (22 acres)
- Army Air National Guard (15.5 acres)

PROPERTY TRANSFERS

- Department of Interior (50 acres)
- Economic Development Conveyance (1050 acres)
- GOAA Herndon (38 acres)
- GOAA McCoy Annex (48 acres)
- Com Center Herndon Annex (6.8 acres)
- Economic Development Conveyance (93 acres)

BRAC BUSINESS PLAN

- **Major Issues**
  - Institutional Controls
  - Secondary Standards
- **Schedule**

ATTACHMENT A

AGENDA

NTC, Orlando Restoration Advisory Board Meeting
March 7, 2001, 7:00 p.m.

Welcome/Opening Comments	Navy Co-Chair Mr. Wayne Hansel
RAB Administration And New Business	RAB Co-Chairs
BRAC Update	Wayne Hansel, BRAC Environmental Coordinator

Special Topic: BRAC BUSINESS PLAN - 2001

Feedback on November meeting: RAB Members

- Main Base Redevelopment

Close RAB Business

Community Comments and Questions

ATTACHMENT B

NTC, ORLANDO RAB MEMBER SIGN-IN SHEET

March 7, 2001

PRINT name clearly
Bob Mackey
Nancy Maloney
[illegible] Williams
Tom [illegible]
DAVID GRAFKA
[illegible]
Bruce Hossfeld
[illegible]
Blanche Olson

ATTACHMENT C

Revised 01/28/00

Attachment C - 2001 RAB Attendance

RAB Member Name	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Penelope Felger - Community												
W. Hansel - U.S. Navy, Southern Division			X									
Bruce Hossfield - City of Orlando			X									
Phillip Jaffe - Community												
Robert Mackey - Community			X									
Nancy Maloney - Community			X									
D. Grabka - FL Dept. of Env. Protection			X									
Thomas Nelson - Community			X									
Blanche Olson - Community			X									
N. Rodriguez - U.S. Env. Protection Agency			X									
Ann Williams - Community			X									
Kay Yeuell - Community			Exc.									

X = attended meeting
exc. = excused absence
O = resigned

ATTACHMENT D

Installation Restoration Program Non-UST/AST Investigation Summary*

Base Realignment and Closure, Naval Training Center, Orlando

Site Screening SAs/Operable Units for Main Base (MB), McCoy Annex (MA), Area "C" (AC), and Herndon Annex (HA)

SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
8	MB	5/Yellow	2134	Greenskeeper Storage	Likelihood of petroleum and pesticide spills	Arsenic in surface soil and groundwater at Greenskeeper Storage caused SA to be designated OU 3 (See listing for OU 3 (page 5). IRA (soil removal) completed 9/97 with 50 tons of soil excavated and backfilled with clean soil. See OU 3 for additional information.
9	MB	5/Yellow	UNF-14	Former Pesticide/ Herbicide Storage	Pesticide and herbicide releases may have occurred during operation of facility	Chlordane and arsenic in surface soil and pesticides in groundwater will require further study; with SA 8 (Greenskeeper Storage Area) has been designated OU 3. See OU 3 for additional information.
36	MB	7/Gray 7/Gray	2121 2122	PW Lumber Storage PW Shops	Soil staining from an oil spill, drum storage area Suspect past and present storage and disposal of paints and solvents, solvents, and questionable oil collection practices	Field work began 6/97 and included a soil gas survey. Groundwater sampled 10/97, resulting in TCE detection of 19 µg/l in well OLD-36-06. 5 additional wells installed and sampled 6/98 to characterize TCE plume. TCE detected at 250 µg/l in well OLD-36-09 (screened 35 ft bls). 3 more monitoring wells were installed, including 2 deep wells to top of Hawthorn. No chlorinated solvents were detected in samples from the deep wells. A (draft) site screening report summarizing investigation activities was issued 4/99 recommending soil removals and additional groundwater evaluation.. TtNUS mobilized in 4/00 to perform the first phase of the site investigation There were no exceedances in soil but TCE up to 180 ppb was measured in the groundwater. Additional groundwater monitoring wells were installed the week of 8/14/00. Minor exceedances were identified in both the upgradient (PCE = 13 ppb) and downgradient (TCE = 7.7/6.9 ppb) wells. ***CH2M Hill submitted a Work Plan for an enhanced bioremediation IRA at the site in 11/00, and the Work Plan was approved in December 2000. CH2M HILL completed injector and monitoring well installation and vegetable oil injection activities in 01/01. The first round of groundwater monitoring is scheduled for March 2000.***
39[5]	MB	6/Red	4060 4067 15109 UNF-10	Loading Platform (Bldg. 137) Loading Platform (Bldg. 137) Irrigation Well Open Area (west of Nuclear Power School)	Potential landfilling in this area Potential landfilling in this area In close proximity to the old coal storage area, out-of-service well onsite Unknown nature of coal staging area, west side of property allegedly used as a landfill	Initial site screening studies completed 4/96, followed by supplemental soil and groundwater studies. Lab results indicate exceedances in surface soil for benzo(a)pyrene and arsenic. Groundwater had exceedances for PCE. Groundwater recommendations include a groundwater use restriction for surficial aquifer, completion of a risk assessment, and continued monitoring of selected wells. Probabilistic risk assessment results were presented to OPT 1/98 and indicated less than 10^{-6} risk. The future reuse of property has recently changed to nonresidential, so soil now meets State criteria. Final site screening report was approved 4/99. Fieldwork to further evaluate PCE groundwater plume began 7/99 and was completed 10/99. Of 28 samples collected, 13 contained PCE concentrations above the GCTL of 3 µg/l with a maximum of 94 µg/l. An additional well cluster was installed 3/00; a draft report was issued 5/5/00. The final Site Investigation Report was issued 8/11/00. A final work plan for IRA implementation was distributed to the OPT in 10/00. ***CH2M HILL completed injection activities in December 2000. The first round of post injection sampling was completed in February 2001. The Construction Documentation Report for the IRA will be submitted to the OPT in March 2000.***

*Changes for this revision are ***bolded and italicized***

See notes, glossary, and BRAC color codes at end of table

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SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
40[5]	MB	7/Gray	21022	Softball Field	In close proximity to the bottle landfill (UNF-6) to the south, may be additional landfilling activities here.	Site screening studies were completed 4/96. Lab results indicate minor exceedances in surface soil from benzo(a)pyrene (200J mg/kg) and arsenic (1.1 mg/kg); groundwater had minor exceedances for gross beta (31.8 pCi/l). Additional field studies to characterize PAHs/arsenic in surface soils took place between 12/96 and 9/97. A fact sheet was prepared for the public. IRA soil removal activities were completed 5/99. The soil removal completion report was received 8/19/99. The site screening report was issued 11/4/99. The results indicate arsenic is still present at levels slightly above the FL screening level. TtNUS mobilized in 4/00,6/00, and 8/00 to perform additional delineation of arsenic in soil above the SCTL. Soil tilling was performed by EEG (formerly DET) in August 2000 but subsequent sampling by TtNUS showed that minor but widespread arsenic exceedances remain in the ball fields area. CH2M Hill is scheduled to retill the soil and TtNUS will perform the confirmation sampling.
		7/Gray	21023	Softball Field	In close proximity to the bottle landfill (UNF-6) to the southwest, may be additional landfilling activities here.	
		7/Gray	UNF-6	Bottle Landfill	Landfill with unknown contents.	
OU 3	MB	5/Yellow	2134	Greenskeeper Storage	Confirmed arsenic in surface soils. An interim remedial action (IRA) took place in 9/97, resulting in 50 tons of soil being excavated and backfilled with clean soil.	Soil samples had elevated levels of arsenic (up to 577 mg/kg) vs. a background screening level of 1 mg/kg. Groundwater had elevated levels of arsenic (up to 425 µg/l vs. 50 µg/l MCL). The Final RI/FS report was submitted June 1999. Groundwater samples were collected 3/99 and 8/99 and additional soil removal actions were completed 4/99. The removal actions will reduce the risk posed by soil contamination, as well as reduce the source of groundwater contamination. Groundwater results suggest that contamination has been significantly reduced since 1997. The Proposed Plan for OU3 was issued 7/1/99. The public comment period on the Proposed Plan was from 7/1/99 to 8/1/99. The draft ROD was issued 10/18/99. Comments have been issued by FDEP and EPA. Comments were incorporated into a draft interim ROD, which was issued 4/25/00. A bench-scale treatability study to remove arsenic from the OU 3 groundwater is underway. Activated alumina has proven effective in removing the arsenic. ***A proposal to install a funnel & gate pilot study using the activated alumina is in preparation.***
OU 3	MB	5/Yellow	UNF-14	Former Pesticide and herbicide Storage	Pesticide and herbicide releases may have occurred during operation of facility. An interim remedial action (IRA took place in 9/97, resulting in 3,000 tons of soil being excavated and backfilled with clean soil.	Chlordane up to 2900 mg/kg vs. screening value of 490 mg/kg. A PRE was conducted indicating no ecological risk, but human health risk was higher than $1x10^{-6}$. The site, along with the Greenskeeper Storage Area (SA 8), has been designated OU 3. See preceding summary (Greenskeeper Storage).
16	MA	1/White	7168	Maintenance Yard	Potential release from an oil-water separator	Field work for Group III Sites took place from 3/13/95 to 6/5/95. The (draft) Group III report was submitted to the Navy 12/15/95. There were significant detections of PAHs in four surface soil samples which slightly exceeded SCGs for some PAH compounds. Mineral spirits were present as free product in a well adjacent to an oil-water separator in the northern corner of the site. Oil-water separator transferred to NTC TMP 10/96. Surface and subsurface soil samples were collected from 13 locations, and sediment samples from 5 locations in accordance with PAH workplan. Surface soil and sediment samples were collected from the ditches on the north and west perimeters of the site 8/99. Analytical results indicate minor exceedances of screening criteria in several samples, with one sample also exceeding nonresidential criteria. These results were summarized in a letter dated 11/16/99, recommending surface soil remediation. HLA sent
		2/Blue	7171	Army Motor Transportation	Potential releases of petroleum releases from motor pool operations	
		1/White	7172	Army Battery Shop	Stained soil associated with used battery storage, possible release of sulfuric acid from inside	

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SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
						volume estimates to the Navy on 1/26/00, which included 5 surface soil locations. The Navy conducted a soil removal in 3/00. ***Final SRR submitted to the FDEP on 9/28/00. Confirmatory sampling indicates that PAH concentrations still exceed SCTLs in the ditches to the south and east of the site.***
17	MA	7/Gray 7/Gray 7/Gray 6/Red	7178 7191 7193 7190	Training Material Storage DPDO Warehouse Army Maintenance Office Army Motor pool and drum storage area adjacent to 7190	Evidence of paint dumped down the drains of adjacent wash rack. Ground staining and paint dumping evident Hazardous waste drum storage and alleged burial Site used as a motor pool and vehicle storage compound.	Screening studies for SA 17 indicate: Surface soils had exceedances of several PAHs in several samples. Chlorinated solvents in groundwater exceeding MCLs. Groundwater studies indicate at least two source areas for chlorinated solvents and a plume measuring 200 feet wide by 400 feet long extending to the Hawthorn Group at 60 feet bls in the source areas and approximately 30 feet bls throughout the remainder of plume. The final site screening report was approved 4/99. An IRA soil removal was completed 5/99, and studies to further evaluate the chlorinated solvent plume in groundwater were completed 4/00; report ***was issued 5/00.*** CH2M HILL submitted a work plan to the OPT on 9/26/00 to implement an in-situ chemical oxidation IRA at the site using Fenton Reagent. Injection point installation activities were completed in October 2000. Reagent injection began in November 2000, ***and was completed in January 2001. Post injection sampling events were completed in February 2001, and receipt of data is pending.***
18	MA	7/Gray	7182	Housing Office	hazardous materials including paint, solvents, compressed gases and petroleum products stored there	Analytical results for SA 18 indicate surface soil detections of PAHs at one location exceeded Florida SCTLs. In addition, chlorinated solvents were detected in a monitoring well associated with a tank removal. DET completed soil removal activities 5/99. Groundwater was resampled 5/99. Chlorinated solvents were not detected > GCTLs. Iron and aluminum, however, were > GCTLs. The soil removal completion report was received 8/19/99, and the site screening report was submitted in final form to the OPT for their review on 8/26/99. Secondary standards exceedances are holding up regulatory approval for no further action. . TtNUS resampled groundwater on 10/25/00 ***and the results confirmed the previous Fe and Al exceedances.***
52	MA	5/Yellow	Former Building 7261	Former Entomology Lab	Potential pesticide contamination due to past use of building.	Site screening investigations were completed 5/96, confirming soil and groundwater samples with pesticides above screening levels. IRA (soil removal) completed 9/97 with 1,300 tons of soil excavated and backfilled with clean soil. Three monitoring wells were installed after the IRA. The well at the location of the most contaminated soil has dieldrin above the MCL. OPT recommended groundwater restriction and quarterly groundwater monitoring. The recent sampling data (7/99 and 10/99) indicate dieldrin exceedances of 0.027 to 0.081µg/l vs. the Florida GCTL of 0.005 µg/l. Final report, recommending continued groundwater monitoring and institutional controls, was approved by FDEP 5/99. The final Decision Document was issued 4/00. The Color Code will be changed to 4/Dk Grn and groundwater will continue to be monitored until FL criterion for dieldrin is achieved. TtNUS issued the 7/00 sample results 10/00. The final Decision Document was issued 4/00. The FDEP approval letter was issued in 7/00. ***Well OLD-52-13 which has the dieldrin exceedance will be overdeveloped and resampled.***

*Changes for this revision are ***bolded and italicized***
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54	MA	5/Yellow		Background surface soil sample locations	PAHs in surface soil above the Florida SCGs were detected in surface soil during the background sampling investigation	Additional sampling and analysis with immunoassay (IA) following the background investigation confirmed the widespread presence of PAHs at sample locations ORS009 and ORS016. The final SA 54 report was submitted 8/99 and approved by FDEP. A work plan to identify the extent of PAH contamination has been prepared by Tetra Tech. Field work took place in 9/99, confirming PAH contamination. PAHs along the road near sample ORS009 are attributed to the road and vehicular traffic; PAHs at sample ORS016 were delineated 4/00. TtNUS mobilized in 4/00, 6/00, and 12/00 ***and the extent of contamination is now defined.***
OU 2	MA	6/Red 6/Red 6/Red 6/Red	7355 7354 7353 7356	McCoy Annex Golf Course Greenskeepers Storage Golf Course Club House Lawn Equipment Storage	OU 2 is a 99-acre landfill operated by the Air Force from 1960 until 1972 when the Navy took over the property. The Navy closed the landfill in 1978. A 9-hole golf course was constructed over the site, which is drained by a series of canals and retention ponds that discharge to Boggy Creek and Boggy Creek Swamp to the south. It is estimated that over 1,000,000 cubic yards of waste were disposed in the landfill, and that the waste included paints and other solvents, asbestos, transformers, hospital wastes, low-level radiological waste, scrap metal, demolition debris, and yard waste.	Tetra Tech NUS performed the first phase of RI fieldwork 5/97 to 11/97. This work consisted of geophysical surveys; a soil gas survey; sampling of surface soil, surface water, and sediment; groundwater screening with DPT; and cone penetrometer testing to evaluate aquifer stratigraphy. Additional fieldwork began 2/98 with additional geophysics to define the western landfill boundary. Piezometers and stream gauges were installed 3/98 to 4/98 to determine flow directions of groundwater and the connection with ponds, canals, and ditches. A DPT program was performed to delineate groundwater contamination, and subsequently monitoring wells were installed and groundwater sampled and analyzed. Groundwater was found at four locations around the landfill boundary to be contaminated with chlorinated solvents and fuel components. Soil over the landfill had exceedances of benzo(a)pyrene and arsenic. All of the media (surface soil, sediments, surface water, and groundwater) had radiological exceedances (gross alpha/gross beta) but the rad sources may be naturally-occurring. Resampling of selected MWs and surface water/sediment locations began 6/99 and was completed 9/99. The draft final RI report, incorporating comments and the resampling data, was issued 3/00. A DPT program to locate the source of PCE/TCE in the landfill was performed the week of 9/18/00. TCE, benzene and vinyl chloride were detected above GCTLs. ***The final RI Report will be issued in March 2001.***
2	HA	1/White 4/Dk Grn	6001	Septic Tank/Leachfield. Herndon landfill(s)	Exact contents of septic tank and drain field unknown (see "Other Areas" notes below for Herndon Annex Landfill). Potential contamination from unknown landfilled materials.	Field screening of the deep wells installed east of Building 606 and south of Building 610 indicate benzene concentrations of 21 and 32 µg/l, possibly related to former landfills at Herndon Annex. Additional field investigations indicate a probable off site benzene source. This land parcel was leased to the City of Orlando 12/96. Sampling of surface water in Lake Barton indicate PCE at concentrations below surface water standards. Offsite screening east of the parcel to determine the extent of benzene plume was completed 12/97. Two confirmation monitoring well clusters were installed 12/97. One deep well at intersection of Nancy Lee Ave. and Bobby St. detected benzene at 53 µg/l. Other confirmation wells in the two clusters did not have contaminants at concentrations of concern. HLA installed two additional wells to further evaluate the benzene plume. HLA final report (5/99) recommends groundwater use advisory to residents in affected area, an evaluation of remedial options, quarterly monitoring of selected wells, and transfer of parcel to Tank Management Program. Report was approved by FDEP and USEPA 6/99. Quarterly sampling began 7/99 and results showed a 15-50% decrease in benzene. The Focused Feasibility Report

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See notes, glossary, and BRAC color codes at end of table

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SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
						and Natural Attenuation Monitoring Workplan were issued as final documents on 11/17/99. A revised draft Decision Document was issued 1/00. ***In accordance with the DD, ORC injection to increase the rate of benzene degradation is scheduled for December 2000.***
12	AC	5/Yellow	1061, 1063	DRMO warehouses and salvage yard.		Transferred to OU 4, below.
13	AC	5/Yellow	1100, 1101	NTC laundry and old heating plant		Transferred to OU 4, below.
14	AC	5/Yellow	1102	Disposal, salvage and scrap building		Transferred to OU 4, below.
OU 4	AC	5/Yellow	1063 and 1061	DRMO Warehouses and salvage yard, Laundry Drycleaners, Disposal Salvage Scrap Building	Former hazardous waste handling and storage area, spills are suspected and a former production well is on-site.	SAs 12, 13 and 14 have been grouped together and designated as OU 4. Soil and groundwater have elevated levels of PCE, TCE, and cis-DCE.. Most of the highest VOC concentrations were found beneath the laundry building. Antimony was also detected in several wells at concentrations up to 16 □g/l vs. a Florida MCL of 6 □g/l. The RI report was issued for final review on 4/4/00. The draft OU 4 Feasibility Study (FS) was issued in January 1999. This document evaluated various alternatives for remediation of the entire Operable Unit. Regulator comments to the draft FS have been received, and the Navy is in the process of responding to these comments. The Navy has implemented a treatability study to evaluate in situ chemical oxidation using potassium permanganate as a remediation technology for the VOC source area. The study began in February '00, and was completed in 7/00. The results of the study indicate the technology will be effective in reducing contaminant levels Upgrade of the groundwater treatment system at the site continues. Pump testing at the site was completed in 7/00. The treatment system upgrade will utilize the existing UVB wells as recovery wells, and will be retrofitted with a shallow tray air stripper. Treated effluent will be discharged to the City of Orlando sanitary sewer system. ***System startup is planned for 11/00.*** The U. of Georgia is performing bench scale studies seeking groundwater additives that will accelerate contaminant reduction.
Other Areas						
ACM		7/Gray	2713	Administration Building		
ACM		7/Gray	2651	Recycling Center		
ACM		7/Gray	2450	Demolished		
ACM/LBP		1/White		Capehart Housing	Currently designated as 1/White.	ACM and LBP surveys completed in 9/95.

*Changes for this revision are ***bolded and italicized***
See notes, glossary, and BRAC color codes at end of table

NOTES

[1] Subject to change based on evolving evidence or knowledge.
[2] This area is in the southern portion of the Main Base golf course, near the small arms ammunition bunkers.
[3] This area also includes Building 208, the USS Bluejacket. The primary responsibility for this facility, however, lies within the UST program.
[4] Upon installation of additional monitoring wells and analysis of groundwater, a decision will be made regarding additional investigator requirements at this landfill.
[5] Sites discovered and/or reported in "Technical Memorandum, U.S. Air Force Records Search, September 1995" (HLA), and which will be investigated in accordance with work plan entitled "Site Screening Plan, Air Force Sites, Addendum 2," November 1995.
[6] Sites previously considered, but which will be investigated in accordance with work plan entitled "Site Screening Plan, Groups I through V SAs and Miscellaneous Additional Sites," Addendum 1, October 1995.

Regulatory Limits and Guidelines for Analytical Parameters:
- Groundwater - Maximum Contamination Limits (MCL), Federal and State promulgated
- Surface Water - FDEP Surface Water Quality Criteria (SWQC) Classes I through IV
- Soils - Risk Based Concentrations (RBC) from EPA Region III, Target Action Levels from FDEP (Screening guidelines only)
- Sediments - FDEP Sediment Quality Guidelines (SQG)
  - No Observable Effects Level (NOEL)
  - Probable Effects Level (PEL)
  - (Screening Guidelines Only)

GLOSSARY

AST = aboveground storage tank
BEHP = bis(2-ethylhexyl)phthalate
BTEX = benzene, toluene, ethylbenzene, and xylenes
DCE = dichloroethene
DDE = dichlorodiphenyldichloroethene
DPT = direct-push technology
EOD = explosive ordnance disposal
FS = feasibility study
FSDWS = Florida secondary drinking water standard
GCTL = (Florida) groundwater cleanup target level
GOAA = Greater Orlando Aviation Authority
HLA = Harding Lawson Associates, Inc. (Formerly ABB Environmental Services, Inc.)
IRA = interim remedial action
J = estimated
MCL = maximum contaminant level
mg/kg = milligrams per kilogram (parts per million)
Mn = manganese
Na = sodium
ND = not detected
NFA = no further action
OPT = Orlando Partnering Team
OU = operable unit
PAH = polynuclear aromatic hydrocarbon
PCE = perchloroethylene, or tetrachloroethene
pCi/l = picocuries per liter
PEL = probable effects level
PRE = preliminary risk evaluation
RAD = radiological parameter
RCRA = Resource Conservation and Recovery Act
RI = remedial investigation
SCTL = (Florida) soil cleanup target level
TCE = trichloroethene
TCLP = toxicity characteristic leachate procedure
TMP = tank management plan
TRPH = total recoverable petroleum hydrocarbons
TSS = total suspended solids
µg/kg = micrograms per kilogram (parts per billion)
µg/l = micrograms per liter (parts per billion)
UST = underground storage tank
UXO = unexploded ordnance

BRAC COLOR CODES

1/White. Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)
2/Blue. Areas where only release or disposal of petroleum products has occurred (but no release, disposal or migration from adjacent areas has occurred)
3/Lt Grn. Areas where release and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action
4/Dk Grn. Areas where release and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken
5/Yellow. Areas where release and/or migration of hazardous substances has occurred, removal and/or remedial actions are under way, but all required response actions have not yet been taken
6/Red. Areas where release, disposal and/or migration of hazardous substances has occurred, but required response actions have not yet been implemented
7/Gray. Areas that have not been evaluated or require additional evaluation

*Changes for this revision are ***bolded and italicized***
See notes, glossary, and BRAC color codes at end of table

ATTACHMENT E

Environmental Meeting - Public Invited

Restoration Advisory Board
Naval Training Center, Orlando

The Naval Training Center's Restoration Advisory Board (RAB) will hold its regular meeting concerning ongoing environmental studies and cleanup at NTC.

When: **7:00 - 9:00 P.M.**
Wednesday, March 7, 2001

Where: **Winter Park City Hall**
City Commission Chamber - second floor
401 Park Avenue South
Winter Park, FL

The current status of all NTC environmental program sites will be presented. The special topic will be "BRAC BUSINESS PLAN - 2001" by Wayne Hansel. An open floor period for community comments or questions will follow the RAB business portion of the meeting.

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.

Need More Information?

Call Mr. Wayne Hansel at 895-6714

or

Penny Felger at 657-8276

ATTACHMENT F

NAVAL TRAINING CENTER, ORLANDO
RESTORATION ADVISORY BOARD MEETING
WINTER PARK CITY HALL COMMISSION CHAMBER MARCH 7, 2001

COMMUNITY 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?
Jeffrey L Birkeland	912 Densmore Drive Winter Park, FL 32792	407-325-1932 407-679-7731	Resident	
Mr. & Mrs Michael Long	5328 Dexter St Orlando fl. 32807	407-381-4416	Resident	Yes