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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT FOR STUDY AREA 50 NTC ORLANDO FL

6/1/1997

ABB ENVIRONMENTAL

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

STUDY AREA 50

NAVAL TRAINING CENTER ORLANDO, FLORIDA

UNIT IDENTIFICATION CODE: N65928
CONTRACT NO.: N62467-89-D-0317/107

JUNE 1997

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

PRINTED ON RECYCLED PAPER

BASE REALIGNMENT AND CLOSURE
ENVIRONMENTAL SITE SCREENING REPORT

STUDY AREA 50

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Unit Identification Code: N65928

Contract No.: N62467-89-D-0317/107

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June 1997

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/107 are complete and accurate and comply with all requirements of this contract.

DATE: June 6, 1997

NAME AND TITLE OF CERTIFYING OFFICIAL: John Kaiser
Task Order Manager

NAME AND TITLE OF CERTIFYING OFFICIAL: Richard Allen
Project Technical Lead

(DFAR 252.227-7036)

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Naval Training Center
Orlando, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
bls	below land surface
BRAC	Base Realignment and Closure
CLP	Contract Laboratory program
DQO	Data Quality Objective
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
mg/ℓ	milligrams per liter
μg/kg	micrograms per kilogram
μg/ℓ	micrograms per liter
QC	quality control
RBC	risk-based concentration
SA	study area
SCG	soil cleanup goals
TAL	target analyte list
TCL	target compound list
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank

1.0 STUDY AREA (SA) 50 - BUILDINGS 7189, 7178, 7249, 7174, 7179, 7182, AND THE RV STORAGE LOT

The site screening investigation at SA 50 at Naval Training Center, Orlando began in March 1996 and was completed in April 1996. Proposed field activities were presented in the Site Screening Plan, Former Air Force Sites, Addendum 2 (ABB Environmental Services, Inc. [ABB-ES], 1995a). The focus of the site screening investigation at SA 50 was to evaluate potential impact on environmental media from alleged releases of chemicals that were stored and used by the civil engineering department in this area.

1.1 SA 50, BACKGROUND AND CONDITIONS. SA 50 includes a large area in the central portion of McCoy Annex. This area includes Buildings 7189, 7178, 7249, 7174, 7179, 7182, and the RV Storage Lot (Figure 1). This area was used by the Civil Engineering Department of McCoy Annex. As such, storage of various chemicals would have occurred in this area, and several personnel indicate chemical spills (ABB-ES, 1995b). Buildings in this area include the following:

Building 7189 This building was used for storage of hydrogen and oxygen. The open yard in front of the building (to the southeast) was used to store several dumpsters. Firefighters reported that when a spill occurred (such as an oil spill), all spill materials would be disposed of in these dumpsters. Several items, such as fire extinguishers, were observed in these dumpsters. Also, firefighters were sometimes called to extinguish fires in the dumpsters. Locations to the west and south of this storehouse were included in site screening activities for SA 17.

Building 7178 This building was the former grounds maintenance building. Chemicals such as pesticides would have been stored here. Reportedly, chemicals may have been spilled in the building. Four soil borings and a monitoring well were installed in the fenced area surrounding Building 7178 as part of site screening activities for SA 17. A 110-gallon aboveground storage tank (AST) at Building 7178 has been removed and the area in the vicinity of the AST is scheduled for assessment in 1997 (ABB-ES, 1996).

Building 7249 Currently, this building is the liquor store. This building was the former power facility and was thus equipped with boilers at one time. Additionally, a building list from McCoy Air Force Base indicates that this building was originally used for Group Supply. A 110-gallon underground storage tank (UST) at Building 7249 is scheduled for removal and/or assessment in 1997 (ABB-ES, 1996).

Building 7174 This building was the former Electrical Equipment Shop. Electrical equipment, such as transformers, would have been stored here. It is currently the gasoline station, which is in the process of being decommissioned. A soil and groundwater investigation has been implemented at this location to evaluate petroleum contamination from leaking USTs. A contamination assessment report submitted on October 23, 1996. Several monitoring wells are present at the site.

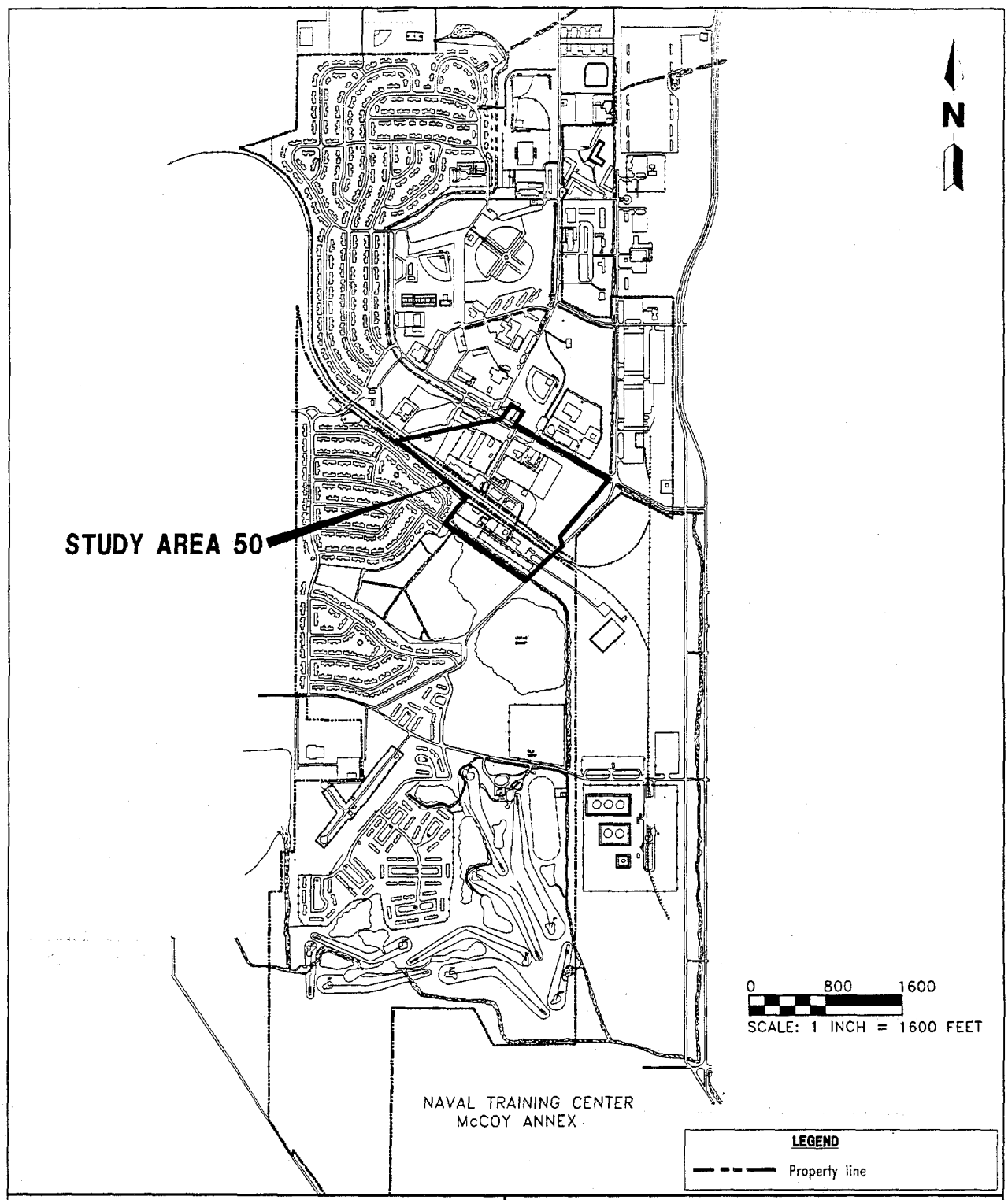

FIGURE 1
STUDY AREA LOCATION

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 50

NAVAL TRAINING CENTER ORLANDO, FLORIDA

Building 7179 The paved area to the southwest of this building was used for transformer storage. Several circular marks can be observed on the pavement; these are from the transformers. The paved area has been investigated as part of the Base Realignment and Closure (BRAC) site screening program as SA 18.

Building 7182 This was the old Civil Engineer's Building. This building would have been the location of the paint shop, the carpenter shop, and the public works maintenance area. This area was included in the BRAC site screening program as SA 18.

RV Storage Area This area was formerly the salvage yard. It is currently used for storage of recreational vehicles, cars, and other items. Locations to the north and east were investigated as part of the auto hobby shop (SA 19).

The objectives for the site screening activities were to evaluate the nature and extent of potential contamination at each building where site screening investigations have not been completed. Specific objectives were as follows:

Building 7189 evaluate potential impact to soil and groundwater from spilled chemicals or residue from fires in dumpsters

Building 7249 evaluate potential impact to soil and groundwater from the presence of boilers and possibly USTs at the former physical plant

Building 7174 as extensive evaluation and remediation has been initiated at this location with respect to petroleum contamination from leaking USTs associated with current site use as a gasoline station. Therefore, the purpose of site screening at this location was to evaluate potential impact to soil or groundwater from former site use as an electrical yard

RV Storage Area evaluate pote cial impact to soil or groundwater from former site use as a salvage yard

Investigative techniques for these areas included surface soil sampling, subsurface soil sampling, temporary monitoring well installation, and groundwater sampling.

1.2 SA 50, INVESTIGATION SUMMARY, SOIL AND GROUNDWATER SAMPLE COLLECTION. The objective of the site screening program for SA 50 was to evaluate potential environmental impact from past activities at each building within the SA. To accomplish this objective, soil and groundwater samples were collected from within, or area estimated to be downgradient from, potentially impacted areas and analyzed for various analytic parameters.

Soil and groundwater samples collected in the vicinity of each building are summarized in subsequent subsections; all soil and groundwater samples submitted for laboratory analysis were analyzed to support U.S. Environmental Protection Agency (USEPA) Level IV data quality objectives (DQOs). Groundwater samples collected from the SA were also analyzed for total suspended solids in accordance with USEPA Level II DQOs.

Subsurface soil samples were collected with a hand auger. Temporary wells were installed in the hand-augered soil borings. The borings were advanced 2 to 3 feet below the water table. Slotted 2-inch diameter polyvinyl chloride well screen was lowered into the boring, and a groundwater sample was collected. The well screen was then withdrawn and the boring backfilled with natural soil. The soil logs for all temporary monitoring wells are presented in Appendix A.

Table 1 presents a summary of the sampling and analysis program for SA 50.

Table 1
Summary of Sampling and Analysis Program, Study Area 50

BRAC Environmental Site Screening Report
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Orlando, Florida

	Building 7189	Building 7249	Building 7174	RV Storage Area
Surface Soil	2	[2]3	2	[3]6
Subsurface Soil	1	0	2	2
Temporary Well	2	2	0	2
Groundwater Sample[1]	2/2	2/2	2/0	2/2

[1] First number indicates total number of unfiltered water samples submitted for laboratory analysis. Second number indicates total number of filtered water samples submitted for target analyte list inorganic analysis.
[2] Number indicates total of 2 soil samples plus 1 duplicate.
[3] Number indicates total of 5 soil samples plus 1 duplicate.

1.2.1 Building 7189 At Building 7189, samples were collected from two surface soil locations (sample numbers 50B00301 and 50B00401), one subsurface soil location (50B00302 at 2.5 to 3.5 feet below land surface [bls]), and two groundwater locations (50G00301/50H00301 and 50G00401/50H00401). Both filtered and unfiltered groundwater samples were collected at each groundwater sampling location using the low-flow technique ("G" designates an unfiltered sample and "H" designates a filtered sample). Sample locations are shown on Figure 2. Two temporary monitoring wells were installed at locations OLD-50-03 and OLD-50-04.

Sample locations were biased toward the presumed groundwater flow direction to the south, and overland flow to the southwest, to a surface ditch. Soil and groundwater samples were submitted for full suite Contract Laboratory program (CLP) target compound list (TCL) and target analyte list (TAL) compound analysis. The filtered groundwater samples were submitted for laboratory analysis of CLP TAL inorganics.

No flame ionization detector (FID) hits were detected in soil samples. Appropriate quality control (QC) samples were collected and submitted for laboratory analysis.

1.2.2 Building 7249 At Building 7249, samples were collected from two surface soil locations (sample numbers 50B00501 and 50B00601) and from two groundwater locations (50G00501/50H00501 and 50G00601/50H00601), as shown on Figure 2. Two temporary monitoring wells were installed at locations OLD-50-05 and OLD-50-06. Both filtered and unfiltered groundwater samples were collected at each groundwater sampling location using the low-flow technique.

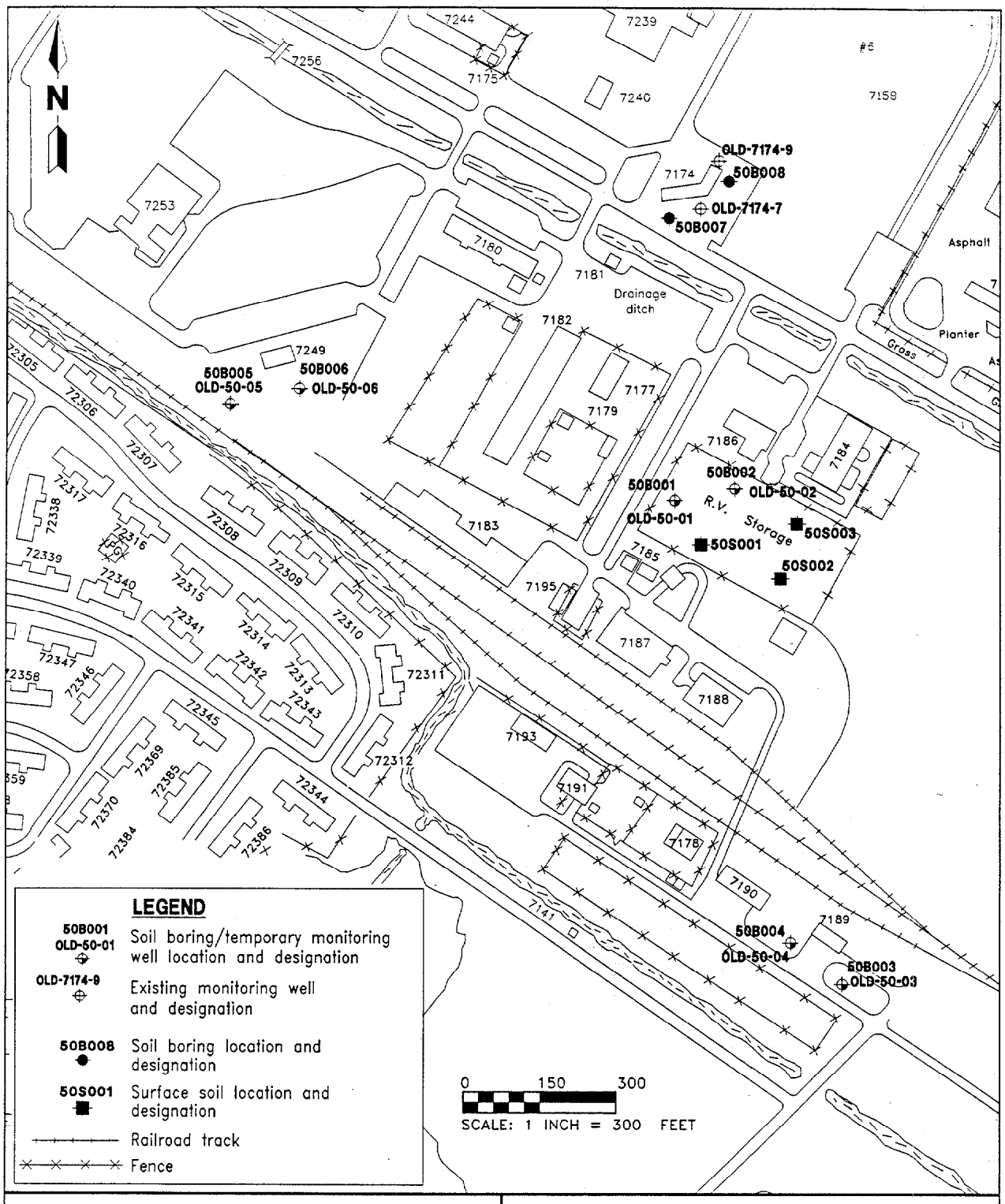

FIGURE 2
SAMPLE LOCATIONS, FORMER CIVIL ENGINEERING YARDS MCCOY ANNEX

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 50

NAVAL TRAINING CENTER ORLANDO, FLORIDA

The Site Screening Plan (ABB-ES, 1995a) stated that two subsurface soil samples were to be collected within each soil boring. These samples were not collected because groundwater was encountered in the borings at 1.5 feet bls.

Sample locations were biased toward the presumed groundwater flow direction to the south. Soil and groundwater samples were submitted for analysis of CLP TCL volatile organic compounds and semivolatile organic compounds and TAL inorganic compounds. The filtered groundwater samples were submitted for laboratory analysis of CLP TAL inorganics.

No FID hits were detected in soil samples. Appropriate QC samples were collected and submitted for laboratory analysis.

1.2.3 Building 7174 At Building 7174, samples were collected from two surface soil locations (sample numbers 50B00701 and 50B00801), two subsurface soil locations (50B00702 from 4 to 5 feet bls and 50B00802 from 3 to 4 feet bls), and two existing monitoring wells (OLD-7174-7 and OLD-7174-9, sample numbers 50G00701 and 50G00801, respectively), as shown on Figure 2. Only unfiltered groundwater samples were collected from the existing monitoring wells.

Soil sample locations were biased toward areas that were not disturbed during the remedial action for petroleum-contaminated soil at the building. Soil and groundwater samples were submitted for CLP TCL polychlorinated biphenyls and TAL compounds analyses.

No FID hits were detected at any of the surface soil sample locations. Appropriate QC samples were collected and submitted for laboratory analysis.

1.2.4 RV Storage Area At the RV Storage Area, samples were collected from five surface soil locations (sample numbers 50B00101, 50B00201, 50S00101, 50S00201, and 50S00301), two subsurface soil locations (50B00102 from 3 to 4 feet bls and 50B00202 from 4 to 5 feet bls), and two groundwater locations (50G00101/50H00101 and 50G00201/50H00201), as shown on Figure 2. Two temporary monitoring wells were installed at locations OLD-50-01 and OLD-50-02. Both a filtered and an unfiltered groundwater sample were collected at each groundwater sampling location using the low-flow technique.

Sample locations were biased toward the presumed groundwater flow direction to the north-northeast. Soil and groundwater samples were submitted for full suite CLP TCL and TAL compounds. The filtered groundwater samples were submitted for laboratory analysis of CLP TAL inorganics.

No FID hits were detected in soil samples. Appropriate QC samples were collected and submitted for laboratory analysis.

1.3 SA 50, RESULTS. Surface soil, subsurface soil, and groundwater analytical results are presented as Appendix B, which includes B-1, Summary of Positive Detections in Surface Soil Analytical Results; B-2, Summary of Positive Detections in Subsurface Soil Analytical Results; and B-3, Summary of Positive Detections in Groundwater Analytical Results. The entire analytical results for each medium are included as Appendix C. The surface and subsurface soil analytical results were evaluated by comparing concentrations to (1) their respective site-specific (McCoy Annex) soil background concentrations (for inorganic compounds, only); (2) Florida Department of Environmental Protection's

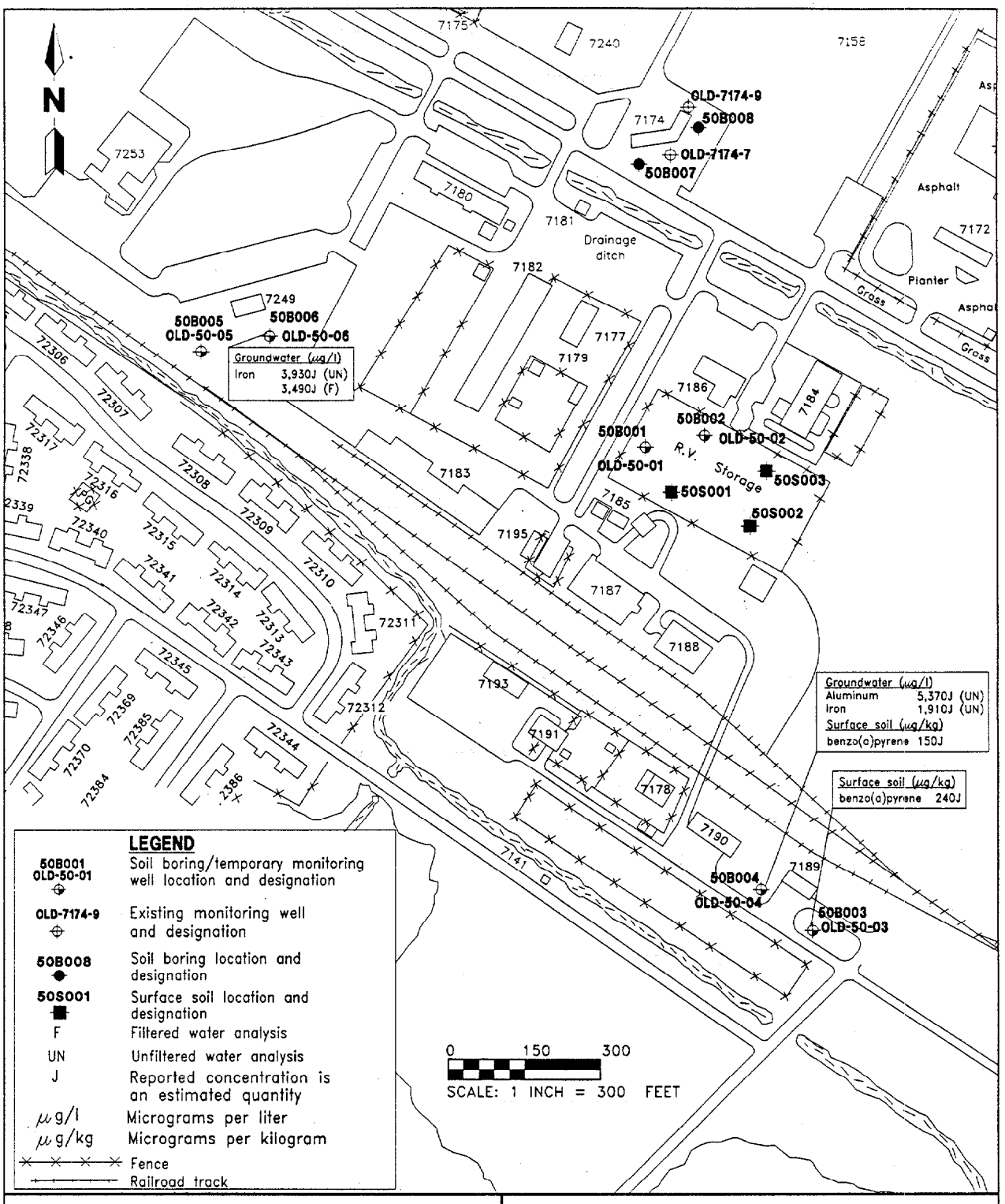

FIGURE 3
SAMPLE LOCATIONS AND SCREENING RESULTS FORMER CIVIL ENGINEERING YARDS MCCOY ANNEX

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 50

NAVAL TRAINING CENTER ORLANDO, FLORIDA

(FDEP's) soil cleanup goals (SCGs) for residential soil; and (3) USEPA Region III risk-based concentrations (RBCs). Groundwater analytical results were compared to (1) basewide groundwater background concentrations (for inorganic compounds, only); (2) FDEP's groundwater guidance concentrations; and (3) USEPA Region III RBCs. Following are the significant findings from this evaluation. Analytical results exceeding screening criteria are summarized on Figure 3.

1.3.1 Surface Soil Benzo(a)pyrene was the only compound detected at a concentration greater than screening criteria (SCG for residential soil of 100 micrograms per kilogram [μg/kg] and an RBC of 88 μg/kg for residential soil). Benzo(a)pyrene was detected at surface soil sample locations 50B00301 and 50B00401 at concentrations of 240 and 150 μg/kg, respectively. Both of these concentrations are estimated values ("J" qualifier). The surface soil sample locations are in the vicinity of Building 7189.

The concentrations of benzo(a)pyrene reported at these two sample locations only slightly exceed their respective screening criteria for residential soil and are less than their respective screening criteria for industrial soil (SCG for industrial soil of 500 μg/kg and an RBC of 780 μg/kg for industrial soil). Given that benzo(a)pyrene was detected in only two of nine soil samples, the relatively low concentrations detected would not represent a significant environmental concern for any current or future land use.

Leachability-based SCG values do not apply because no organic compounds were present in groundwater above FDEP Groundwater Guidance Concentrations (see below).

1.3.2 Subsurface Soil Compounds were not detected at concentrations exceeding screening criteria (USEPA RBCs) at any subsurface soil sample location. Leachability-based SCG values do not apply because no organic compounds were present in groundwater above FDEP Groundwater Guidance Concentrations (see below).

1.3.3 Groundwater Inorganics detected above their respective screening values include aluminum and iron. No organic compounds were detected above screening values.

Secondary standards have been established for Class G-I and G-II aquifers by the State of Florida, largely along Federal guidelines, to ensure that groundwater meets at least minimum criteria for taste, odor, and color, and does not pose a health risk.

Based on records reviews and interviews, there have been no known site activities that may have contributed to the observed exceedances of secondary standards for aluminum and iron in wells OLD-50-04 near Building 7189 and OLD-50-06 near Building 7249. The aluminum concentration in well OLD-50-04 was 5,370 micrograms per liter (μg/ℓ) versus a background screening concentration of 4,067 μg/ℓ. The iron concentrations in wells OLD-50-04 and -06 were 1,910 μg/ℓ and 3,930 μg/ℓ, respectively, versus a background screening concentration of 1,227 μg/ℓ. The filtered sample from OLD-50-04 reported aluminum and iron concentrations of 506 μg/ℓ and 187 μg/ℓ, respectively, indicating that suspended solids likely have contributed to the secondary standards exceedances at that location. The aluminum concentration in the filtered sample from well OLD-50-06 decreased 11

percent (to 3,490 $\mu g/\ell$) indicating that suspended solids may have played a minor role in contributing to the secondary standards exceedance. Surface and subsurface soil concentrations of these analytes did not exceed screening concentrations (residential RBCs or SCGs). The two groundwater samples with aluminum and iron exceeding background screening concentrations were somewhat turbid (19 and 41 nephelometric turbidity units) with total suspended solids of 209 and 40 milligrams per liter (mg/ℓ), respectively, suggesting that suspended solids may have contributed to the observed secondary standard exceedances.

Analytes exceeding Florida secondary standards should also be compared with RBCs for tapwater published by the USEPA, Region III. The tapwater guidance concentrations for aluminum and iron are 37,000 and 11,000 $\mu g/\ell$, respectively. There were no other TAL metals exceedances, and other groundwater parameters measured during sampling were within normal limits: pH was 4.7 to 6.9, temperature was 68.0 to 77.0 degrees Fahrenheit, conductivity was 190 to 210 micromhos per centimeter. ABB-ES concludes that the aluminum and iron exceeding secondary standards are naturally occurring, are not related to past site activities, and do not pose a risk to human health or the environment.

1.4 SA 50, CONCLUSIONS AND RECOMMENDATIONS. Two surface soil samples collected in the vicinity of Building 7189 reported concentrations of benzo(a)pyrene above the screening concentration for residential soil. These occurrences do not appear to represent a significant environmental concern because benzo(a)pyrene was only detected in two of nine soil samples, and the concentrations were relatively low.

Concentrations of iron and aluminum exceeded screening criteria in unfiltered samples from two wells in the vicinity of Buildings 7189 and 7249. Filtered groundwater samples from these locations did not exceed screening criteria with the exception of one sample from well OLD-50-06 in which iron (3,490 $\mu g/\ell$) was detected at a concentration greater than its screening criteria (background concentration of 1,227 $\mu g/\ell$ and FDEP groundwater guidance concentration of 300 $\mu g/\ell$). The isolated nature of this iron exceedance, coupled with the ubiquitous presence of iron in groundwater across Florida, indicates that the presence of iron in groundwater at OLD-50-06 does not represent a significant environmental concern. However, due to the aluminum and iron concentrations, future users of this property should be aware that the presence of these analytes at the measured concentrations may render the groundwater from the surficial aquifer objectionable as a potable or irrigation water source.

Based on information available and evaluation of site screening data for SA 50, ABB-ES recommends the following:

- a classification of 3/Lt Green and a restriction of land use to industrial or recreational use (nonresidential) and no requirement for further evaluation for Building 7189;

- a classification of 1/White and no requirement for further evaluations for the RV Storage Area;

- a classification of 7/Grey remains for Building 7249 because an assessment or removal of a 110-gallon UST is scheduled to occur in 1997 under the UST program, and there is no requirement for further evaluation for Building 7249 under the Installation Restoration program; and

- a classification of 2/Blue for Building 7174, and no requirement for further evaluation for Building 7174 under the Installation Restoration program because the release of petroleum-related materials is currently under investigation.

It should be noted that the buildings themselves were not evaluated as part of this screening investigation.

The undersigned members of the Base Realignment and Closure Cleanup team concur with the findings and recommendations of the site screening program for Study Area 50.

STUDY AREA 50	
Nancy Rodriguez	8/6/97
U.S. Environmental Protection Agency, Region IV	Date
John Mitchell	8/6/97
Florida Department of Environmental Protection	Date
Wayne Hansel	8/6/97
U.S. Department of the Navy	Date

REFERENCES

ABB Environmental Services, Inc. (ABB-ES). 1995a. Site Screening Plan, Former Air Force Site, Addendum 2, Naval Training Center, Orlando, Orlando, Florida: prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charleston, South Carolina (December).

ABB-ES. 1995b. Technical Memorandum, U.S. Air Force Records Search, Naval Training Center,Orlando, Orlando, Florida: prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (September).

ABB-ES. 1996. Base Realignment and Closure, Tank Management Plan, Naval Training Center, Orlando, Orlando, Florida: prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (April).

APPENDIX A

SOIL LOGS FOR TEMPORARY MONITORING WELLS

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-01 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/10/96	**Compltd:** 04/10/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:**	**Total dpth:** 6.25Ft.	**Dpth to** ∇ 4 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
					Dark brown fine SAND		SP		
					Gray fine SAND				
					Light brown fine SAND				
					Brown silty fine SAND		SM		∇
5									
					Dark gray silty fine SAND				
					Boring terminated at 6.25 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-02 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/10/96	**Compltd:** 04/10/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:**	**Total dpth:** 8.5Ft.	**Dpth to** ▽ 5.5 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
					Dark brown fine SAND		SP		
					Gray fine SAND				
					Light brown fine SAND				
					Brown silty fine SAND		SM		
5									
					Boring terminated at 8.5 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-03 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/08/96	**Compltd:** 04/08/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:** Porta FID II	**Total dpth:** 5Ft.	**Dpth to** ∇ 3 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
				0	Dark brown silty SAND, some wood debris		SM		
	50B00302 2.5-3.5' CLP			0	Tan fine SAND		SP		
5					Boring terminated at 5 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-04 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/08/96	**Compltd:** 04/08/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:** Porta FID II	**Total dpth:** 5Ft.	**Dpth to** ∇ 3 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
				0	Dark brown silty SAND		SM		
				0	Tan fine SAND		SP		∇
5					Boring terminated at 5 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-05 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/08/96	**Completd:** 04/08/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:** Porta FID II	**Total dpth:** 5Ft.	**Dpth to** ∇ 1.5 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
				0	Dark brown silty SAND		SM		
					Tan fine SAND		SP		∇
5					Boring terminated at 5 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

Project: BRAC NTC		**Well ID:** S.A. 50	**Boring ID:** OLD-50-06 (T)
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** ABB-ES		**Job No.:** 8519.10
Northing:	**Easting:**	**Date started:** 04/08/96	**Completd:** 04/08/96
Method: Hand Auger	**Casing dia.:** 3-1/2"	**Screened int.:** 5 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:** Porta FID II	**Total dpth:** 5Ft.	**Dpth to** ∇ 1.5 Ft.
ABB Rep.: WDO	**Well development date:** PVC		**Site:**

Depth Ft.	Laboratory Sample ID.	Sample	Recovery	Headspace (ppm)	Soil/Rock Description and comments	Lithologic symbol	Soil class.	Blows/6-in.	Well diag.
				0	Dark brown silty SAND		SM		
					Light brown fine SAND with silt		SP		∇
				0					
5					Boring terminated at 5 feet bgs				
10									

 ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX B

SUMMARY OF POSITIVE DETECTIONS ANALYTICAL RESULTS

B-1: Summary of Positive Detections in Surface Soil Analytical Results
B-2: Summary of Positive Detections in Subsurface Soil Analytical Results
B-3: Summary of Positive Detections in Groundwater Analytical Results

TABLE B-1

SUMMARY OF POSITIVE DETECTIONS IN SURFACE SOIL ANALYTICAL RESULTS

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		50B00101		50B00102		50B00201		50B00301	
Sampling Date									21-Mar-96		11-Apr-96		21-Mar-96		21-Mar-96	
Feet bls									0-1		0-1		0-1		0-1	
Volatile organics, ug/kg																
Benzene			1,400		22,000 c		200,000 c									
Ethylbenzene			1,400,000		7800000 n		200000000 n		4	J	1	J			2	J
Methylene chloride			16,000		85000 c		760000 c		2	J					1	J
Toluene			520,000		16,000,000 n		410,000,000 n		120	D			33		140	
Xylene (total)			13,000,000		160,000,000 n		1,000,000,000 n		15		6	J	5	J	11	
Semivolatile organics, ug/kg																
Acenaphthylene			670,000		2,300,000 n		61,000,000 n								85	J
Benzo(a)anthracene			1,400		880 c		7,800 c								170	J
Benzo(a)pyrene			100		88 c		780 c								**240**	**J**
Benzo(b)fluoranthene			1,400		880 c		7,800 c								250	J
Benzo(g,h,i)perylene			14,000		2,300,000 n		61,000,000 n								220	J
Benzo(k)fluoranthene			14,000		8,800 c		78,000 c								250	J
bis(2-Ethylhexyl)phthalate			48,000		46,000 c		410,000 c		40	J			140	J		
Chrysene			140,000		88,000 c		780,000 c								320	J
Di-n-butylphthalate			7,300,000		7,800,000 n		200,000,000 n									
Dibenz(a,h)anthracene			100		88 c		780 c								70	J
Fluoranthene			2,900,000		3,100,000 n		82,000,000 n								340	J
Indeno(1,2,3-cd)pyrene			1,400		880 c		7,800 c								190	J
Phenanthrene			1,700,000		2,300,000 n		61,000,000 n								150	J
Pyrene			2,200,000		2,300,000 n		61,000,000 n								440	
Pesticides/PCBs, ug/kg																
4,4'-DDE			3,000		1,900 c		17,000 c									
4,4'-DDT			3,100		1,900 c		17,000 c									

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		50B00101		50B00102		50B00201		50B00301	
Sampling Date									21-Mar-96		11-Apr-96		21-Mar-96		21-Mar-96	
Feet bls									0-1		0-1		0-1		0-1	
Inorganics, mg/kg																
Aluminum	4,870		75,000		78,000 n		1,000,000 n		2070		378	J	3890		3730	
Antimony			26		31 n		820 n		2.8	J						
Arsenic	1.9		0.8		0.43 c/23 n		3.8 c/610 n						0.64	B	0.7	J
Barium	21.6		5,200		5,500 n		140,000 n		3.8	J			9.3	J	6.2	B
Beryllium	0.46		0.2		0.15 c		1.3 c		0.04	B					0.08	B
Calcium	33,568		ND		1,000,000		1,000,000		14300	J	233	B	26900	J	13300	J
Chromium	7.7		290 [4]		390 [5] n		10,000 [5] n		3.8		0.94	B	6.3		4.9	
Copper	2.6		ND		3,100 n		82,000 n		0.94	B	1.1	B	1.5	B	2.8	B
Iron	843		ND		23,000 n		610,000 n		378		115		939		443	
Lead	21.3		500		400		400		5.6	J			8.3	J	11.6	J
Magnesium	381		ND		460,468		460,468		108	B			207	B	133	B
Manganese	10.8		370		1,800 n		47,000 n		2.1	B			4.7		9.8	
Mercury	0.05		23		23 n		610 n									
Nickel			1,500		1,600 n		41,000 n									
Potassium	210		ND		1,000,000		1,000,000				184	B				
Selenium	1.1		390		390 n		10,000 n				0.92	J			0.54	J
Vanadium	4.9		490		550 n		14,000 n		2.3	B	0.73	B	4	B	2.8	B
Zinc	4.6		23,000		23,000 n		610,000 n				6.6	J	32.2	J	8	J
General Chemistry, mg/kg																
Total Petroleum Hydrocarbons	ND		ND		ND		ND									

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		50B00401		50B00501		50B00502		50B00601	
Sampling Date									21-Mar-96		21-Mar-96		11-Apr-96		21-Mar-96	
Feet bls									0-1		0-1		0-1		0-1	
Volatile organics, ug/kg																
Benzene			1,400		22,000 c		200,000 c								2	J
Ethylbenzene			1,400,000		7800000 n		200000000 n		2	J	2	J			2	J
Methylene chloride			16,000		85000 c		760000 c		2	J	2	J			2	J
Toluene			520,000		16,000,000 n		410,000,000 n		190		110				92	D
Xylene (total)			13,000,000		160,000,000 n		1,000,000,000 n		10	J	6	J			10	J
Semivolatile organics, ug/kg																
Acenaphthylene			670,000		2,300,000 n		61,000,000 n									
Benzo(a)anthracene			1,400		880 c		7,800 c		120	J						
Benzo(a)pyrene			100		88 c		780 c		**150**	**J**						
Benzo(b)fluoranthene			1,400		880 c		7,800 c		140	J						
Benzo(g,h,i)perylene			14,000		2,300,000 n		61,000,000 n		130	J						
Benzo(k)fluoranthene			14,000		8,800 c		78,000 c		140	J						
bis(2-Ethylhexyl)phthalate			48,000		46,000 c		410,000 c									
Chrysene			140,000		88,000 c		780,000 c		180	J					42	J
Di-n-butylphthalate			7,300,000		7,800,000 n		200,000,000 n				61	J				
Dibenz(a,h)anthracene			100		88 c		780 c									
Fluoranthene			2,900,000		3,100,000 n		82,000,000 n		280	J					76	J
Indeno(1,2,3-cd)pyrene			1,400		880 c		7,800 c		110	J						
Phenanthrene			1,700,000		2,300,000 n		61,000,000 n		140	J					46	J
Pyrene			2,200,000		2,300,000 n		61,000,000 n		300	J					70	J
Pesticides/PCBs, ug/kg																
4,4'-DDE			3,000		1,900 c		17,000 c		36	J						
4,4'-DDT			3,100		1,900 c		17,000 c		43							

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]	SCG for Residential Soil [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	50B00401		50B00501		50B00502		50B00601	
Sampling Date					21-Mar-96		21-Mar-96		11-Apr-96		21-Mar-96	
Feet bls					0-1		0-1		0-1		0-1	
Inorganics, mg/kg												
Aluminum	4,870	75,000	78,000 n	1,000,000 n	3960		888				4500	
Antimony		26	31 n	820 n								
Arsenic	1.9	0.8	0.43 c/23 n	3.8 c/610 n	0.61	B	0.68	B			0.77	B
Barium	21.6	5,200	5,500 n	140,000 n	7.7	J	1.9	J			4.5	J
Beryllium	0.46	0.2	0.15 c	1.3 c	0.12	B	0.04	B			0.04	B
Calcium	33,568	ND	1,000,000	1,000,000	57000	J	353	J			549	J
Chromium	7.7	290 [4]	390 [5] n	10,000 [5] n	6.4		2.1	B			4	
Copper	2.6	ND	3,100 n	82,000 n	4.9	B	2.8	B			3.2	B
Iron	843	ND	23,000 n	610,000 n	526		950				332	
Lead	21.3	500	400	400	17.9	J	3	J			27.2	J
Magnesium	381	ND	460,468	460,468	329	B	14.5	B			36.3	B
Manganese	10.8	370	1,800 n	47,000 n	29		1.2	B			3.3	B
Mercury	0.05	23	23 n	610 n							0.05	J
Nickel		1,500	1,600 n	41,000 n	4.1	B					2.3	B
Potassium	210	ND	1,000,000	1,000,000								
Selenium	1.1	390	390 n	10,000 n							0.84	J
Vanadium	4.9	490	550 n	14,000 n	6.5	B	1.7	B			3.6	B
Zinc	4.6	23,000	23,000 n	610,000 n	17	J					20.9	J
General Chemistry, mg/kg												
Total Petroleum Hydrocarbons	ND	ND	ND	ND					3.2			

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]	SCG for Residential Soil [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	50B00701	50B00801	50S00101	50S00201	50S00301
Sampling Date					10-Apr-96	11-Apr-96	21-Mar-96	21-Mar-96	21-Mar-96
Feet bls					0.5-1.5	0.5-1.5	0-1	0-1	0-1
Volatile organics, ug/kg									
Benzene		1,400	22,000 c	200,000 c				2 J	
Ethylbenzene		1,400,000	7800000 n	200000000 n			2 J	3 J	4 J
Methylene chloride		16,000	85000 c	760000 c			1 J	2 J	
Toluene		520,000	16,000,000 n	410,000,000 n			170	410 D	250
Xylene (total)		13,000,000	160,000,000 n	1,000,000,000 n			11	12	19 J
Semivolatile organics, ug/kg									
Acenaphthylene		670,000	2,300,000 n	61,000,000 n					
Benzo(a)anthracene		1,400	880 c	7,800 c					
Benzo(a)pyrene		100	88 c	780 c					
Benzo(b)fluoranthene		1,400	880 c	7,800 c					
Benzo(g,h,i)perylene		14,000	2,300,000 n	61,000,000 n					
Benzo(k)fluoranthene		14,000	8,800 c	78,000 c					
bis(2-Ethylhexyl)phthalate		48,000	46,000 c	410,000 c		450	46 J		
Chrysene		140,000	88,000 c	780,000 c					
Di-n-butylphthalate		7,300,000	7,800,000 n	200,000,000 n					
Dibenz(a,h)anthracene		100	88 c	780 c					
Fluoranthene		2,900,000	3,100,000 n	82,000,000 n					
Indeno(1,2,3-cd)pyrene		1,400	880 c	7,800 c					
Phenanthrene		1,700,000	2,300,000 n	61,000,000 n					
Pyrene		2,200,000	2,300,000 n	61,000,000 n					
Pesticides/PCBs, ug/kg									
4,4'-DDE		3,000	1,900 c	17,000 c					
4,4'-DDT		3,100	1,900 c	17,000 c					

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		SCG fc. Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		50B00701		50B00801		50S00101		50S00201		50S00301	
Sampling Date									10-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96		21-Mar-96	
Feet bls									0.5-1.5		0.5-1.5		0-1		0-1		0-1	
Inorganics, mg/kg																		
Aluminum	4,870		75,000		78,000 n		1,000,000 n		4350	J	3400	J	4320		496		495	
Antimony			26		31 n		820 n		4	B	2.7	B						
Arsenic	1.9		0.8		0.43 c/23 n		3.8 c/610 n						0.64	B				
Barium	21.6		5,200		5,500 n		140,000 n		8	J	3.8	J	8.2	J	3	J	2.8	J
Beryllium	0.46		0.2		0.15 c		1.3 c		0.04	B	0.09	B	0.06	B				
Calcium	33,568		ND		1,000,000		1,000,000		1900		6440		20000	J	561	J	459	J
Chromium	7.7		290 [4]		390 [5] n		10,000 [5] n		3.7		3.9		8		0.74	B	1	B
Copper	2.6		ND		3,100 n		82,000 n		2.5	B	2.4	B	0.87	B	0.64	B	0.64	B
Iron	843		ND		23,000 n		610,000 n		278	J	295	J	299		254		213	
Lead	21.3		500		400		400		3.2		5.2		9.7	J	3.1	J	1.4	J
Magnesium	381		ND		460,468		460,468		88.9	B	79.8	B	143	B	29	B	28.6	B
Manganese	10.8		370		1,800 n		47,000 n		1.7	B	1.4	B	3.2	B	0.78	B	0.54	B
Mercury	0.05		23		23 n		610 n				0.06	B						
Nickel			1,500		1,600 n		41,000 n		6.4	B			2.3	B				
Potassium	210		ND		1,000,000		1,000,000											
Selenium	1.1		390		390 n		10,000 n		1	J	1.2	J	0.78	J	0.61	J	0.59	J
Vanadium	4.9		490		550 n		14,000 n		2.5	B	1.9	B	3	B	0.4	B	0.37	B
Zinc	4.6		23,000		23,000 n		610,000 n		17.1	J	63.5	J	10.6	J				
General Chemistry, mg/kg																		
Total Petroleum Hydrocarbons	ND		ND		ND		ND											

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

NOTES:

[1] The background screening value is twice the average of detected concentrations for inorganic analytes.

[2] SCG = Soil Cleanup Goals for Florida (Florida Department of Environmental Protection memorandum, September 29, 1995). Arsenic value is as revised in Applicability of Soil Cleanup Goals for Florida (FDEP memorandum, January 19, 1996). Values indicated are from a residential scenario.
Chromium values are for Chromium VI. Leachability-based SCGs are not applicable because groundwater standards were not exceedeed.

[3] RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available, value is Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER directive 9355-4-12). For essential nutrients (calcium, magnesium, potassium) screening values were derived based on recommended daily allowances (RDAs).
RBC for acenaphthylene, benzo(g,h,i)perylene, and phenanthrene are not available, value is based on pyrene.

[4] Value is for Chromium VI. Value for Chromium III is 66,000 mg/kg.

[5] Value is for Chromium VI. Values for Chromium III are 78,000 n (residential) and 1,000,000 n (industrial).

n = noncarcinogenic effects.
c = carcinogenic effects.
ND = Not determined.
bls = below land surface.
PCB = polychlorinated biphenyl.
mg/kg = milligrams per kilogram.
ug/kg = micrograms per kilogram.
DDE = Dichlorodiphenyldichloroethene
DDT = Dichlorodiphenyltrichloroethane
FDEP = Florida Department of Environmental Protection
OSWER = Office of Solid Waste and Emergency Response.
USEPA = U.S. Environmental Protection Agency.
B = Reported concentration is between the instrument detection limit (IDL) and Contract Required Detection Limit (CRDL).
D = Indicates value was determined during a diluted reanalysis.
J = Reported concentration is an estimated quantity.
All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (ug/kg) soil dry weight.
Bold/shaded values indicate exceedance of regulatory guidance and background.
Blank space indicates analyte/compound was not detected at the reporting limit.

TABLE B-2

SUMMARY OF POSITIVE DETECTIONS IN SUBSURFACE SOIL ANALYTICAL RESULTS

Appendix B

Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		SCG [2] for Residential Soil		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		50B00102		50B00202		50B00302		50B00702		50B00802	
Sampling Date									11-Apr-96		11-Apr-96		8-Apr-96		10-Apr-96		11-Apr-96	
Feet bls									3-4		4-5		2.5-3.5		4-5		3-4	
Volatile organics, ug/kg																		
Ethylbenzene			NA		7,800,000 n		200,000,000 n		1	J			3	J				
Xylene (total)			NA		160,000,000 n		1,000,000,000 n		6	J	3	J	13					
Inorganics, mg/kg																		
Aluminum	11,130		NA		78,000 n		1,000,000 n		378	J	1130	J	447	J	293	J	542	J
Arsenic	2		NA		0.43 c/23 n		3.8 c/610 n				0.72	B			0.73	B		
Barium	11.3		NA		5,500 n		140,000 n				2.9	J					1.7	J
Calcium	321		NA		1,000,000		1,000,000		233	B	218	B	286	B	103	B	90.5	B
Chromium	11.3		NA		390 n		10,000 n		0.94	B	2	B	0.91	B			0.86	B
Copper	2.8		NA		3,100 n		82,000 n		1.1	B	3.7	B	1.3	B	1.2	B	1.8	B
Iron	829		NA		23,000		610,000		115		536	J	78.7	J			150	J
Lead	7		NA		400		400				2							
Magnesium	38.9		NA		460,468		460,468				33.1	B						
Manganese	0.69		NA		1,800 n		47,000 n				4		13				1.3	B
Mercury	0.12		NA		23 n		610 n				0.1	B	0.1	B			0.09	B
Selenium	1.4		NA		390 n		10,000 n		0.92	J					0.91	J	0.7	J
Vanadium	5.9		NA		550 n		14,000 n		0.73	B	1.3	B	0.48	B			0.45	B
Zinc	0.66		NA		23,000 n		610,000 n		6.6	J			8.6	J			16.2	J

Appendix B

Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results

Study Area 50

Naval Training Center, Orlando

Orlando, FL

NOTES:

[1] The background screening value is twice the average of detected concentrations for inorganic analytes.

[2] SCG = Soil Cleanup Goals for Florida (Florida Department of Environmental Protection memorandum, September 29, 1995). Leachability-based SCGs are not applicable because groundwater standards were not exceedeed.

[3] RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available, value is Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER directive 9355-4-12). For essential nutrients (calcium, magnesium) screening values were derived based on recommended daily allowances (RDAs).

n = noncarcinogenic effects.

c = carcinogenic effects.

NA = Not applicable.

bls = below land surface

mg/kg = milligrams per kilogram.

ug/kg = micrograms per kilogram.

OSWER = Office of Solid Waste and Emergency Response.

USEPA = U.S. Environmental Protection Agency.

B = Reported concentration is between the instrument detection limit (IDL) and Contract Required Detection Limit (CRDL).

J = Reported concentration is an estimated quantity.

All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (ug/kg) soil dry weight.

Bold/shaded values indicate exceedance of regulatory guidance and background.

Blank space indicates analyte/compound was not detected at the reporting limit.

TABLE B-3

SUMMARY OF POSITIVE DETECTIONS IN GROUNDWATER ANALYTICAL RESULTS

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]	FDEPG	Primary FEDMCL	RBC [2] for Tap Water	50G00101	50H00101	50G00201	50H00201	50G00301	50H00301
Sampling Date					11-Apr-96	11-Apr-96	11-Apr-96	11-Apr-96	9-Apr-96	9-Apr-96
Volatile Organics, ug/L										
Chloromethane		2.7 [7]	ND	1.4 c		NA		NA	0.5 J	NA
Semivolatile Organics, ug/L										
bis(2-Ethylhexyl)phthalate		65	6	4.8 c		NA		NA		NA
Inorganics, ug/L										
Aluminum	4,067	200 [3]	ND	37,000 n	330 J		1920 J	1680 J	1540 J	1830 J
Arsenic	5	50 [5]	50 [8]	0.045 c/11 n				2.3 J		
Barium	31.4	2,000 [5]	2,000	2,600 n		3.6 J				
Calcium	36,830	ND	ND	1,000,000	33500	32900	30300	30700	41300	42500
Chromium	7.8	100 [5]	100 [10]	180 [9] n			3.3 B	3.5 B		
Copper	5.4	1,000 [3]	1300 [11]	1,500 n	4 B					
Iron	1,227	300 [3]	ND	11,000 n			120 J	105 J	204 J	248 J
Lead	4	15 [5]	15 [12]	15						
Magnesium	4,560	ND	ND	118,807	300 B	283 B	3770 B	3760 B	591 B	609 B
Manganese	17	50 [3]	ND	840 n						
Nickel		100 [5]	100	730 n						
Potassium	5,400	ND	ND	297,016						1520 B
Selenium	9.7	50 [5]	[illegible]	180 n		1.6 B	6.9	6.9		
Sodium	18,222	160,000 [5]	ND	396,022	1140 J	1310 J	1660 J	2040 J	1130 J	1490 BJ
Vanadium	20.6	49 [4]	ND	260 n	9 B	9 B	7.6 B	8.5 B	6.6 B	7.5 B
General chemistry, mg/L										
Total Suspended Solids	ND	ND	ND	ND	4	NA	63	NA	27	NA

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]	FDEPG	Primary FEDN L	RBC [2] for Tap Water	50G00401	50H00401	50G00501	50H00501	50G00601	50H00601
Sampling Date					9-Apr-96	9-Apr-96	9-Apr-96	9-Apr-96	9-Apr-96	9-Apr-96
Volatile Organics, ug/L										
Chloromethane		2.7 [7]	ND	1.4 c		NA		NA		NA
Semivolatile Organics, ug/L										
bis(2-Ethylhexyl)phthalate		65	6	4.8 c		NA		NA	1 J	NA
Inorganics, ug/L										
Aluminum	4,067	200 [3]	ND	37,000 n	**5370 J**	506 J	1260 J	407 J	2730 J	1690 J
Arsenic	5	50 [5]	50 [8]	0.045 c/11 n	1.3 B					
Barium	31.4	2,000 [5]	2,000	2,600 n			35.4 J	42.8 J	57.7 BJ	60.3 J
Calcium	36,830	ND	ND	1,000,000	44900	43500	35800	38200	24900	26200
Chromium	7.8	100 [5]	100 [10]	180 [9] n						
Copper	5.4	1,000 [3]	1300 [11]	1,500 n	3.4 J					
Iron	1,227	300 [3]	ND	11,000 n	**1910 J**	187 J	374 J	282 J	**3930 J**	**3490 J**
Lead	4	15 [5]	15 [12]	15	8.3 J				2.4 J	
Magnesium	4,560	ND	ND	118,807	567 B	418 B	3080 B	3080 B	4000 B	3910 B
Manganese	17	50 [3]	ND	840 n	8 J		26.5 J	24.2 J	35.2 J	36.1 J
Nickel		100 [5]	100	730 n					8.6 B	
Potassium	5,400	ND	ND	297,016					859 B	1270 B
Selenium	9.7	50 [5]	50	180 n						
Sodium	18,222	160,000 [5]	ND	396,022	810 J	972 J	2030 J	2500 J	3330 J	3480 BJ
Vanadium	20.6	49 [4]	ND	260 n	18.8 B	10.5 B	6 B	6.6 B	7.2 B	5 B
General chemistry, mg/L										
Total Suspended Solids	ND	ND	ND	ND	209	NA	16	NA	40	NA

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		FDEPG		Primary FEDMCL		RBC [2] for Tap Water		OLD-7174-7 50G00701		OLD-7174-9 50G00801	
Sampling Date									10-Apr-96		10-Apr-96	
Volatile Organics, ug/L												
Chloromethane			2.7 [7]		ND		1.4 c					
Semivolatile Organics, ug/L												
bis(2-Ethylhexyl)phthalate			65		6		4.8 c					
Inorganics, ug/L												
Aluminum	4,067		200 [3]		ND		37,000 n		270	J	1190	J
Arsenic	5		50 [5]		50 [8]		0.045 c/11 n					
Barium	31.4		2,000 [5]		2,000		2,600 n		37	J		
Calcium	36,830		ND		ND		1,000,000		21600		28300	
Chromium	7.8		100 [5]		100 [10]		180 [9] n					
Copper	5.4		1,000 [3]		1300 [11]		1,500 n		2.3	J		
Iron	1,227		300 [3]		ND		11,000 n		504	J		
Lead	4		15 [5]		15 [12]		15					
Magnesium	4,560		ND		ND		118,807		4440	B	1580	B
Manganese	17		50 [3]		ND		840 n		9.4	J	7.3	B
Nickel			100 [5]		100		730 n					
Potassium	5,400		ND		ND		297,016		2940	B		
Selenium	9.7		50 [5]		50		180 n		1.6	B	2.5	J
Sodium	18,222		160,000 [5]		ND		396,022		8400	J	2940	BJ
Vanadium	20.6		49 [4]		ND		260 n		10	B	11.3	B
General chemistry, mg/L												
Total Suspended Solids	ND		ND		ND		ND					

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

NOTES:

[1] Groundwater background screening value is twice the average of detected concentrations for inorganic analytes.
[2] RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available, value is treatment technology action limit for lead in drinking water distribution system identified in Drinking Water Standards and Health Advisories (USEPA, 1995). For essential nutrients (calcium, magnesium, potassium, and sodium) screening values were derived based on recommended daily allowances (RDAs).
[3] Secondary Standard.
[4] Systemic Toxicant
[5] Primary Standard
[6] Organoleptic
[7] Carcinogen
[8] MCL for arsenic is currently under review.
[9] Value shown is for Chromium VI and compounds. Value for Chromium III is 37,000 n.
[10] Value shown is for total Chromium.
[11] Value shown is the action level.
[12] Treatment technique requirement. Value shown is the action level, to be measured at the tap. Value shown is the value to recommend as a preliminary cleanup goal.

n = noncarcinogenic pathway
c = carcinogenic pathway
ND = Not determined.
NA = Not analyzed.
ID = identifier
USEPA = U.S. Environmental Protection Agency.
FDEPG = Florida Department of Environmental Protection, Groundwater Guidance Concentrations, June 1994.
FEDMCL= Federal Maximum Contaminant Levels, Primary Drinking Water Regulations and Health Advisories, October 1996.
B = Reported concentration is between the instrument detection limit (IDL) and the contract required detection limit (CRDL).
J = Reported concentration is an estimated quantity.
G = unfiltered groundwater sample.
H = filtered groundwater sample.
ug/l = micrograms per liter.
mg/l = miligrams per liter.
Bold/shaded numbers indicate exceedance of groundwater guidance and background.
Blank space indicates analyte/compound was not detected at the reporting limit.

APPENDIX C

SUMMARY OF ANALYTICAL RESULTS

C-1: Summary of Soil Analytical Results
C-2: Summary of Groundwater Analytical Results

TABLE C-1

SUMMARY OF SOIL ANALYTICAL RESULTS

Appendix C

Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00101				50B00102		50B00201		50B00202		50B00301				50B00302		50B00401		50B00501		50B00502	
Lab ID	MA538003		MA538003DL		MA714006		MA538007		MA714005		MA538008		MA538008R		MA668003		MA538009		MA538010		MA714002	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		21-Mar-96		11-Apr-96		21-Mar-96		21-Mar-96		8-Apr-96		21-Mar-96		21-Mar-96		11-Apr-96	
Volatile organics, ug/kg																						
1,1,1-Trichloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,1,2,2-Tetrachloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,1,2-Trichloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,1-Dichloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,1-Dichloroethene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,2-Dichloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,2-Dichloroethene (total)	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
1,2-Dichloropropane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
2-Butanone	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
2-Hexanone	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
4-Methyl-2-pentanone	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Acetone	21	U	11	DR	11	U	11	U	12	U	22	U	NA		12	U	12	U	19	U	NA	
Benzene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Bromodichloromethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Bromoform	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Bromomethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Carbon disulfide	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Carbon tetrachloride	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Chlorobenzene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Chloroethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Chloroform	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Chloromethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
cis-1,3-Dichloropropene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Dibromochloromethane	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Ethylbenzene	4	J	2	DR	1	J	11	U	12	U	2	J	NA		3	J	2	J	2	J	NA	
Methylene chloride	2	J	22	UR	11	U	11	U	12	U	1	J	NA		12	U	2	J	2	J	NA	
Styrene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Tetrachloroethene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Toluene	280	ER	120	D	11	U	33		12	U	140		NA		12	U	190		110		NA	
trans-1,3-Dichloropropene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Trichloroethene	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Vinyl chloride	11	U	22	UR	11	U	11	U	12	U	11	U	NA		12	U	12	U	12	U	NA	
Xylene (total)	15		10	DR	6	J	5	J	3	J	11		NA		13		10	J	6	J	NA	

Appendix C

Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00101		50B00102	50B00201	50B00202	50B00301		50B00302	50B00401	50B00501	50B00502
Lab ID	MA538003	MA538003DL	MA714006	MA538007	MA714005	MA538008	MA538008R	MA668003	MA538009	MA538010	MA714002
Sampling Date	21-Mar-96	21-Mar-96	11-Apr-96	21-Mar-96	11-Apr-96	21-Mar-96	21-Mar-96	8-Apr-96	21-Mar-96	21-Mar-96	11-Apr-96
Semivolatile organics, ug/kg											
1,2,4-Trichlorobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
1,2-Dichlorobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
1,3-Dichlorobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
1,4-Dichlorobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,2'-oxybis(1-Chloropropane)	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,4,5-Trichlorophenol	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
2,4,6-Trichlorophenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,4-Dichlorophenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,4-Dimethylphenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,4-Dinitrophenol	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
2,4-Dinitrotoluene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2,6-Dinitrotoluene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2-Chloronaphthalene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2-Chlorophenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2-Methylnaphthalene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2-Methylphenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
2-Nitroaniline	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
2-Nitrophenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
3,3'-Dichlorobenzidine	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
3-Nitroaniline	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
4,6-Dinitro-2-methylphenol	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
4-Bromophenyl-phenylether	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
4-Chloro-3-methylphenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
4-Chloroaniline	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
4-Chlorophenyl-phenylether	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
4-Methylphenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
4-Nitroaniline	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
4-Nitrophenol	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
Acenaphthene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Acenaphthylene	360 U	NA	380 U	360 U	390 U	85 J	73 JR	400 U	390 U	400 U	NA
Anthracene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Benzo(a)anthracene	360 U	NA	380 U	360 U	390 U	170 J	140 JR	400 U	120 J	400 U	NA
Benzo(a)pyrene	360 U	NA	380 U	360 U	390 U	240 J	220 JR	400 U	150 J	400 U	NA

Appendix C

Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00101		50B00102	50B00201	50B00202	50B00301		50B00302	50B00401	50B00501	50B00502
Lab ID	MA538003	MA538003DL	MA714006	MA538007	MA714005	MA538008	MA538008R	MA668003	MA538009	MA538010	MA714002
Sampling Date	21-Mar-96	21-Mar-96	11-Apr-96	21-Mar-96	11-Apr-96	21-Mar-96	21-Mar-96	8-Apr-96	21-Mar-96	21-Mar-96	11-Apr-96
Benzo(b)fluoranthene	360 U	NA	380 U	360 U	390 U	250 J	230 JR	400 U	140 J	400 U	NA
Benzo(g,h,i)perylene	360 U	NA	380 U	360 U	390 U	220 J	180 JR	400 U	130 J	400 U	NA
Benzo(k)fluoranthene	360 U	NA	380 U	360 U	390 U	250 J	240 JR	400 U	140 J	400 U	NA
bis(2-Chloroethoxy)methane	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
bis(2-Chloroethyl)ether	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
bis(2-Ethylhexyl)phthalate	40 J	NA	380 U	140 J	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Butylbenzylphthalate	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Carbazole	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Chrysene	360 U	NA	380 U	360 U	390 U	320 J	280 JR	400 U	180 J	400 U	NA
Di-n-butylphthalate	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	61 J	NA
Di-n-octylphthalate	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Dibenz(a,h)anthracene	360 U	NA	380 U	360 U	390 U	70 J	74 JR	400 U	390 U	400 U	NA
Dibenzofuran	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Diethylphthalate	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Dimethylphthalate	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Fluoranthene	360 U	NA	380 U	360 U	390 U	340 J	260 JR	400 U	280 J	400 U	NA
Fluorene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Hexachlorobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Hexachlorobutadiene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Hexachlorocyclopentadiene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Hexachloroethane	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Indeno(1,2,3-cd)pyrene	360 U	NA	380 U	360 U	390 U	190 J	170 JR	400 U	110 J	400 U	NA
Isophorone	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
N-Nitroso-di-n-propylamine	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
N-Nitrosodiphenylamine (1)	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Naphthalene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Nitrobenzene	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Pentachlorophenol	900 U	NA	960 U	900 U	970 U	920 U	920 UR	990 U	980 U	990 U	NA
Phenanthrene	360 U	NA	380 U	360 U	390 U	150 J	120 JR	400 U	140 J	400 U	NA
Phenol	360 U	NA	380 U	360 U	390 U	370 U	370 UR	400 U	390 U	400 U	NA
Pyrene	360 U	NA	380 U	360 U	390 U	440	390 R	400 U	300 J	400 U	NA
Pesticides/PCBs, ug/kg											
4,4'-DDD	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
4,4'-DDE	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	36 J	NA	NA

Appendix C

Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00101		50B00102	50B00201	50B00202	50B00301		50B00302	50B00401	50B00501	50B00502
Lab ID	MA538003	MA538003DL	MA714006	MA538007	MA714005	MA538008	MA538008R	MA668003	MA538009	MA538010	MA714002
Sampling Date	21-Mar-96	21-Mar-96	11-Apr-96	21-Mar-96	11-Apr-96	21-Mar-96	21-Mar-96	8-Apr-96	21-Mar-96	21-Mar-96	11-Apr-96
4,4'-DDT	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	43	NA	NA
Aldrin	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
alpha-BHC	1.8 U	NA	2 UJ	1.8 U	2 UJ	9.4 U	NA	2 UJ	5 U	NA	NA
alpha-Chlordane	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Aroclor-1016	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
Aroclor-1221	72 U	NA	77 U	73 U	78 U	370 U	NA	80 U	200 U	NA	NA
Aroclor-1232	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
Aroclor-1242	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
Aroclor-1248	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
Aroclor-1254	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
Aroclor-1260	35 U	NA	38 U	36 U	38 U	180 U	NA	39 U	97 U	NA	NA
beta-BHC	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
delta-BHC	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Dieldrin	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
Endosulfan I	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Endosulfan II	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
Endosulfan sulfate	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
Endrin	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
Endrin aldehyde	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
Endrin ketone	3.5 U	NA	3.8 U	3.6 U	3.8 U	18 U	NA	3.9 U	9.7 U	NA	NA
gamma-BHC (Lindane)	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
gamma-Chlordane	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Heptachlor	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Heptachlor epoxide	1.8 U	NA	2 U	1.8 U	2 U	9.4 U	NA	2 U	5 U	NA	NA
Methoxychlor	18 U	NA	20 UJ	18 U	20 UJ	94 U	NA	20 UJ	50 U	NA	NA
Toxaphene	180 U	NA	200 U	180 U	200 U	940 U	NA	200 U	500 U	NA	NA
Inorganics, mg/kg											
Aluminum	2070	NA	378 J	3890	1130 J	3730	NA	447 J	3960	888	NA
Antimony	2.8 J	NA	2.5 U	2.4 UJ	2.5 U	2.4 UJ	NA	2.6 U	2.6 UJ	2.6 UJ	NA
Arsenic	0.28 U	NA	0.3 U	0.64 B	0.72 B	0.7 J	NA	0.31 U	0.61 B	0.68 B	NA
Barium	3.8 J	NA	1.3 U	9.3 J	2.9 J	6.2 B	NA	1.5 U	7.7 J	1.9 J	NA
Beryllium	0.04 B	NA	0.03 U	0.03 U	0.03 U	0.08 B	NA	0.04 U	0.12 B	0.04 B	NA
Cadmium	0.39 U	NA	0.42 U	0.39 U	0.42 U	0.4 U	NA	0.43 U	0.42 U	0.43 U	NA
Calcium	14300 J	NA	233 B	26900 J	218 B	13300 J	NA	286 B	57000 J	353 J	NA

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Table C-1. Summary of Soil Analytical Results
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Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00101		50B00101		50B00102		50B00201		50B00202		50B00301		50B00301		50B00302		50B00401		50B00501		50B00502	
Lab ID	MA538003		MA538003DL		MA714006		MA538007		MA714005		MA538008		MA538008R		MA668003		MA538009		MA538010		MA714002	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		21-Mar-96		11-Apr-96		21-Mar-96		21-Mar-96		8-Apr-96		21-Mar-96		21-Mar-96		11-Apr-96	
Chromium	3.8		NA		0.94	B	6.3		2	B	4.9		NA		0.91	B	6.4		2.1	B	NA	
Cobalt	0.32	UJ	NA		0.35	UJ	0.33	UJ	0.35	UJ	0.33	UJ	NA		0.36	UJ	0.35	UJ	0.36	UJ	NA	
Copper	0.94	B	NA		1.1	B	1.5	B	3.7	B	2.8	B	NA		1.3	B	4.9	B	2.8	B	NA	
Iron	378		NA		115		939		536	J	443		NA		78.7	J	526		950		NA	
Lead	5.6	J	NA		0.68	U	8.3	J	2		11.6	J	NA		0.94	U	17.9	J	3	J	NA	
Magnesium	108	B	NA		17.1	U	207	B	33.1	B	133	B	NA		14.3	U	329	B	14.5	B	NA	
Manganese	2.1	B	NA		0.85	U	4.7		4		9.8		NA		13		29		1.2	B	NA	
Mercury	0.04	UJ	NA		0.06	U	0.03	UJ	0.1	B	0.07	UJ	NA		0.1	B	0.07	UJ	0.04	UJ	NA	
Nickel	1.7	U	NA		1.8	U	1.7	U	1.8	U	1.7	U	NA		1.8	U	4.1	B	1.8	U	NA	
Potassium	165	U	NA		184	B	167	U	179	U	169	U	NA		183	U	180	U	183	U	NA	
Selenium	0.28	U	NA		0.92	J	0.28	U	0.31	U	0.54	J	NA		0.31	U	0.31	U	0.31	U	NA	
Silver	0.47	U	NA		0.51	UR	0.48	U	0.51	U	0.49	U	NA		0.52	UR	0.52	U	0.53	U	NA	
Sodium	26.1	U	NA		41.4	U	24.3	U	32.2	U	21.3	U	NA		33.5	U	39.3	U	19.9	U	NA	
Thallium	0.18	U	NA		0.2	UJ	0.19	U	0.2	UJ	0.19	U	NA		0.21	UJ	0.2	U	0.21	U	NA	
Vanadium	2.3	B	NA		0.73	B	4	B	1.3	B	2.8	B	NA		0.48	B	6.5	B	1.7	B	NA	
Zinc	4.1	U	NA		6.6	J	32.2	J	19.5	UJ	8	J	NA		8.6	J	17	J	2.2	U	NA	
General Chemistry, mg/L																						
Total Petroleum Hydrocarbons	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		3.2	

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Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00601				50B00602		50B00701		50B00702		50B00801		50B00802		50S00101		50S00201				50S00301	
Lab ID	MA538011		MA538011DL		MA714001		MA696001		MA696002		MA714003		MA714004		MA538004		MA538005		MA538005DL		MA538006	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		10-Apr-96		10-Apr-96		11-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96		21-Mar-96		21-Mar-96	
Volatile organics, ug/kg																						
1,1,1-Trichloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,1,2,2-Tetrachloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,1,2-Trichloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,1-Dichloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,1-Dichloroethene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,2-Dichloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,2-Dichloroethene (total)	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
1,2-Dichloropropane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
2-Butanone	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
2-Hexanone	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
4-Methyl-2-pentanone	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Acetone	15	U	14	DR	NA		NA		NA		NA		NA		11	U	21	U	32	DR	24	U
Benzene	2	J	18	UR	NA		NA		NA		NA		NA		11	U	2	J	22	UR	22	U
Bromodichloromethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Bromoform	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Bromomethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Carbon disulfide	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	3	DR	22	U
Carbon tetrachloride	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Chlorobenzene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Chloroethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Chloroform	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Chloromethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
cis-1,3-Dichloropropene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Dibromochloromethane	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Ethylbenzene	2	J	18	UR	NA		NA		NA		NA		NA		2	J	3	J	4	DR	4	J
Methylene chloride	2	J	18	UR	NA		NA		NA		NA		NA		1	J	2	J	3	DR	22	U
Styrene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Tetrachloroethene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Toluene	250	ER	92	D	NA		NA		NA		NA		NA		170		310	ER	410	D	250	
trans-1,3-Dichloropropene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Trichloroethene	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Vinyl chloride	12	U	18	UR	NA		NA		NA		NA		NA		11	U	11	U	22	UR	22	U
Xylene (total)	10	J	8	DR	NA		NA		NA		NA		NA		11		12		17	DR	19	J

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Table C-1. Summary of Soil Analytical Results
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Naval Training Center, Orlando
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Sample ID	50B00601		50B00601		50B00602		50B00701		50B00702		50B00801		50B00802		50S00101		50S00201		50S00201		50S00301	
Lab ID	MA538011		MA538011DL		MA714001		MA696001		MA696002		MA714003		MA714004		MA538004		MA538005		MA538005DL		MA538006	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		10-Apr-96		10-Apr-96		11-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96		21-Mar-96		21-Mar-96	
Semivolatile organics, ug/kg																						
1,2,4-Trichlorobenzene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
1,2-Dichlorobenzene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
1,3-Dichlorobenzene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
1,4-Dichlorobenzene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,2'-oxybis(1-Chloropropane)	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,4,5-Trichlorophenol	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
2,4,6-Trichlorophenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,4-Dichlorophenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,4-Dimethylphenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,4-Dinitrophenol	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
2,4-Dinitrotoluene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2,6-Dinitrotoluene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2-Chloronaphthalene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2-Chlorophenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2-Methylnaphthalene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2-Methylphenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
2-Nitroaniline	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
2-Nitrophenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
3,3'-Dichlorobenzidine	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
3-Nitroaniline	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
4,6-Dinitro-2-methylphenol	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
4-Bromophenyl-phenylether	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
4-Chloro-3-methylphenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
4-Chloroaniline	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
4-Chlorophenyl-phenylether	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
4-Methylphenol	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
4-Nitroaniline	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
4-Nitrophenol	1000	U	NA		NA		920	U	920	U	950	U	950	U	920	U	920	U	NA		920	U
Acenaphthene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
Acenaphthylene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
Anthracene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
Benzo(a)anthracene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U
Benzo(a)pyrene	400	U	NA		NA		370	U	370	U	380	U	380	U	370	U	370	U	NA		370	U

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Table C-1. Summary of Soil Analytical Results
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Naval Training Center, Orlando
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Sample ID	50B00601		50B00602	50B00701		50B00702		50B00801		50B00802		50S00101		50S00201		50S00301	
Lab ID	MA538011	MA538011DL	MA714001	MA696001		MA696002		MA714003		MA714004		MA538004		MA538005	MA538005DL	MA538006	
Sampling Date	21-Mar-96	21-Mar-96	11-Apr-96	10-Apr-96		10-Apr-96		11-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96	21-Mar-96	21-Mar-96	
Benzo(b)fluoranthene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Benzo(g,h,i)perylene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Benzo(k)fluoranthene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
bis(2-Chloroethoxy)methane	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
bis(2-Chloroethyl)ether	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
bis(2-Ethylhexyl)phthalate	400	U	NA	NA	370	U	370	U	450		380	U	46	J	370	U	NA	370	U
Butylbenzylphthalate	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Carbazole	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Chrysene	42	J	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Di-n-butylphthalate	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Di-n-octylphthalate	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Dibenz(a,h)anthracene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Dibenzofuran	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Diethylphthalate	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Dimethylphthalate	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Fluoranthene	76	J	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Fluorene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Hexachlorobenzene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Hexachlorobutadiene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Hexachlorocyclopentadiene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Hexachloroethane	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Indeno(1,2,3-cd)pyrene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Isophorone	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
N-Nitroso-di-n-propylamine	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
N-Nitrosodiphenylamine (1)	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Naphthalene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Nitrobenzene	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Pentachlorophenol	1000	U	NA	NA	920	U	920	U	950	U	950	U	920	U	920	U	NA	920	U
Phenanthrene	46	J	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Phenol	400	U	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Pyrene	70	J	NA	NA	370	U	370	U	380	U	380	U	370	U	370	U	NA	370	U
Pesticides/PCBs, ug/kg																			
4,4'-DDD	NA		NA	NA	3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA	3.6	U
4,4'-DDE	NA		NA	NA	3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA	3.6	U

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Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00601		50B00601		50B00602		50B00701		50B00702		50B00801		50B00802		50S00101		50S00201		50S00201		50S00301	
Lab ID	MA538011		MA538011DL		MA714001		MA696001		MA696002		MA714003		MA714004		MA538004		MA538005		MA538005DL		MA538006	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		10-Apr-96		10-Apr-96		11-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96		21-Mar-96		21-Mar-96	
4,4'-DDT	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Aldrin	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
alpha-BHC	NA		NA		NA		1.9	UJ	1.9	UJ	1.9	UJ	1.9	UJ	1.9	U	1.9	U	NA		1.9	U
alpha-Chlordane	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Aroclor-1016	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
Aroclor-1221	NA		NA		NA		74	U	74	U	76	U	76	U	74	U	74	U	NA		74	U
Aroclor-1232	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
Aroclor-1242	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
Aroclor-1248	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
Aroclor-1254	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
Aroclor-1260	NA		NA		NA		37	U	37	U	37	U	37	U	36	U	36	U	NA		36	U
beta-BHC	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
delta-BHC	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Dieldrin	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Endosulfan I	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Endosulfan II	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Endosulfan sulfate	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Endrin	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Endrin aldehyde	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
Endrin ketone	NA		NA		NA		3.7	U	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	NA		3.6	U
gamma-BHC (Lindane)	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
gamma-Chlordane	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Heptachlor	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Heptachlor epoxide	NA		NA		NA		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	NA		1.9	U
Methoxychlor	NA		NA		NA		19	UJ	19	UJ	19	UJ	19	UJ	19	U	19	U	NA		19	U
Toxaphene	NA		NA		NA		190	U	190	U	190	U	190	U	190	U	190	U	NA		190	U
Inorganics, mg/kg																						
Aluminum	4500		NA		NA		4350	J	293	J	3400	J	542	J	4320		496		NA		495	
Antimony	2.6	UJ	NA		NA		4	B	2.4	U	2.7	B	2.5	U	2.4	UJ	2.4	UJ	NA		2.4	UJ
Arsenic	0.77	B	NA		NA		0.29	U	0.73	B	0.3	U	0.3	U	0.64	B	0.29	U	NA		0.29	U
Barium	4.5	J	NA		NA		8	J	2	U	3.8	J	1.7	J	8.2	J	3	J	NA		2.8	J
Beryllium	0.04	B	NA		NA		0.04	B	0.03	U	0.09	B	0.03	U	0.06	B	0.03	U	NA		0.03	U
Cadmium	0.43	U	NA		NA		0.4	U	0.4	U	0.41	U	0.41	U	0.39	U	0.4	U	NA		0.39	U
Calcium	549	J	NA		NA		1900		103	B	6440		90.5	B	20000	J	561	J	NA		459	J

Appendix C

Table C-1. Summary of Soil Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50B00601		50B00601		50B00602		50B00701		50B00702		50B00801		50B00802		50S00101		50S00201		50S00201		50S00301	
Lab ID	MA538011		MA538011DL		MA714001		MA696001		MA696002		MA714003		MA714004		MA538004		MA538005		MA538005DL		MA538006	
Sampling Date	21-Mar-96		21-Mar-96		11-Apr-96		10-Apr-96		10-Apr-96		11-Apr-96		11-Apr-96		21-Mar-96		21-Mar-96		21-Mar-96		21-Mar-96	
Chromium	4		NA		NA		3.7		0.49	U	3.9		0.86	B	8		0.74	B	NA		1	B
Cobalt	0.36	U	NA		NA		0.33	UJ	0.33	UJ	0.34	UJ	0.34	UJ	0.33	UJ	0.33	UJ	NA		0.33	U
Copper	3.2	B	NA		NA		2.5	B	1.2	B	2.4	B	1.8	B	0.87	B	0.64	B	NA		0.64	B
Iron	332		NA		NA		278	J	40.3	U	295	J	150	J	299		254		NA		213	
Lead	27.2	J	NA		NA		3.2		0.52	U	5.2		1.5	U	9.7	J	3.1	J	NA		1.4	J
Magnesium	36.3	B	NA		NA		88.9	B	13.9	U	79.8	B	18.2	U	143	B	29	B	NA		28.6	B
Manganese	3.3	B	NA		NA		1.7	B	0.56	U	1.4	B	1.3	B	3.2	B	0.78	B	NA		0.54	B
Mercury	0.05	J	NA		NA		0.05	U	0.05	U	0.06	B	0.09	B	0.04	UJ	0.04	UJ	NA		0.04	UJ
Nickel	2.3	B	NA		NA		6.4	B	1.7	U	1.7	U	1.8	U	2.3	B	1.7	U	NA		1.7	U
Potassium	184	U	NA		NA		171	U	171	U	174	U	175	U	168	U	169	U	NA		168	U
Selenium	0.84	J	NA		NA		1	J	0.91	J	1.2	J	0.7	J	0.78	J	0.61	J	NA		0.59	J
Silver	0.53	U	NA		NA		0.49	UR	0.49	UR	0.5	UR	0.5	UR	0.48	U	0.48	U	NA		0.48	U
Sodium	25.4	U	NA		NA		49.7	U	23	U	32.7	U	25.5	U	28.3	U	17.6	U	NA		18.3	U
Thallium	0.21	U	NA		NA		0.19	UJ	0.19	UJ	0.2	UJ	0.2	UJ	0.19	U	0.19	U	NA		0.19	U
Vanadium	3.6	B	NA		NA		2.5	B	0.36	U	1.9	B	0.45	B	3	B	0.4	B	NA		0.37	B
Zinc	20.9	J	NA		NA		17.1	J	5.9	U	63.5	J	16.2	J	10.6	J	3.6	U	NA		3.5	U
General Chemistry, mg/L																						
Total Petroleum Hydrocarbons	NA		NA		2.2	U	NA		NA		NA		NA		NA		NA		NA		NA	

TABLE C-2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00101		50H00101		50G00201		50H00201		50G00301		50H00301		50G00401		50H00401		50G00501		50H00501	
Lab ID	MA715004		MA715005		MA715002		MA715001		MA675002		MA675003		MA675004		MA675005		MA675006		MA675007	
Sampling Date	11-Apr-96		11-Apr-96		11-Apr-96		11-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96	
Volatile organics, ug/L																				
1,1,1-Trichloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,1,2,2-Tetrachloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,1,2-Trichloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,1-Dichloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,1-Dichloroethene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,2-Dibromo-3-chloropropane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,2-Dibromoethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,2-Dichloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,2-Dichloropropane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
2-Butanone	5	UR	NA		5	UR	NA		5	UR	NA		5	UR	NA		5	UR	NA	
2-Hexanone	5	U	NA		5	U	NA		5	U	NA		5	U	NA		5	U	NA	
4-Methyl-2-pentanone	5	U	NA		5	U	NA		5	U	NA		5	U	NA		5	U	NA	
Acetone	2	R	NA		2	R	NA		5	R	NA		2	R	NA		2	R	NA	
Benzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Bromochloromethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Bromodichloromethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Bromoform	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Bromomethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Carbon disulfide	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Carbon tetrachloride	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Chlorobenzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Chloroethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Chloroform	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Chloromethane	1	U	NA		1	U	NA		0.5	J	NA		1	U	NA		1	U	NA	
cis-1,2-Dichloroethene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
cis-1,3-Dichloropropene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Dibromochloromethane	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Ethylbenzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Methylene chloride	2	U	NA		2	U	NA		2	U	NA		2	U	NA		2	U	NA	
Styrene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Tetrachloroethene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Toluene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
trans-1,2-Dichloroethene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00101		50H00101		50G00201		50H00201		50G00301		50H00301		50G00401		50H00401		50G00501		50H00501	
Lab ID	MA715004		MA715005		MA715002		MA715001		MA675002		MA675003		MA675004		MA675005		MA675006		MA675007	
Sampling Date	11-Apr-96		11-Apr-96		11-Apr-96		11-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96	
trans-1,3-Dichloropropene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Trichloroethene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Vinyl chloride	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Xylene (total)	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
Semivolatile organics, ug/L																				
1,2,4-Trichlorobenzene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
1,2-Dichlorobenzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,3-Dichlorobenzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
1,4-Dichlorobenzene	1	U	NA		1	U	NA		1	U	NA		1	U	NA		1	U	NA	
2,2'-oxybis(1-Chloropropane)	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2,4,5-Trichlorophenol	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
2,4,6-Trichlorophenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2,4-Dichlorophenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2,4-Dimethylphenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2,4-Dinitrophenol	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
2,4-Dinitrotoluene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2,6-Dinitrotoluene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2-Chloronaphthalene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2-Chlorophenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2-Methylnaphthalene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2-Methylphenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
2-Nitroaniline	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
2-Nitrophenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
3,3'-Dichlorobenzidine	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
3-Nitroaniline	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
4,6-Dinitro-2-methylphenol	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
4-Bromophenyl-phenylether	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
4-Chloro-3-methylphenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
4-Chloroaniline	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
4-Chlorophenyl-phenylether	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
4-Methylphenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
4-Nitroaniline	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
4-Nitrophenol	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
Acenaphthene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00101		50H00101		50G00201		50H00201		50G00301		50H00301		50G00401		50H00401		50G00501		50H00501	
Lab ID	MA715004		MA715005		MA715002		MA715001		MA675002		MA675003		MA675004		MA675005		MA675006		MA675007	
Sampling Date	11-Apr-96		11-Apr-96		11-Apr-96		11-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96	
Acenaphthylene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Anthracene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Benzo(a)anthracene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Benzo(a)pyrene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Benzo(b)fluoranthene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Benzo(g,h,i)perylene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Benzo(k)fluoranthene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
bis(2-Chloroethoxy)methane	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
bis(2-Chloroethyl)ether	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
bis(2-Ethylhexyl)phthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Butylbenzylphthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Carbazole	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Chrysene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Di-n-butylphthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Di-n-octylphthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Dibenz(a,h)anthracene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Dibenzofuran	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Diethylphthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Dimethylphthalate	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Fluoranthene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Fluorene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Hexachlorobenzene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Hexachlorobutadiene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Hexachlorocyclopentadiene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Hexachloroethane	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Indeno(1,2,3-cd)pyrene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Isophorone	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
N-Nitroso-di-n-propylamine	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
N-Nitrosodiphenylamine (1)	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Naphthalene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Nitrobenzene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Pentachlorophenol	25	U	NA		25	U	NA		25	U	NA		25	U	NA		25	U	NA	
Phenanthrene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Phenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00101		50H00101		50G00201		50H00201		50G00301		50H00301		50G00401		50H00401		50G00501		50H00501	
Lab ID	MA715004		MA715005		MA715002		MA715001		MA675002		MA675003		MA675004		MA675005		MA675006		MA675007	
Sampling Date	11-Apr-96		11-Apr-96		11-Apr-96		11-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96	
Pyrene	10	U	NA		10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Pesticides/PCBs, ug/L																				
4,4'-DDD	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
4,4'-DDE	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
4,4'-DDT	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Aldrin	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
alpha-BHC	0.05	UJ	NA		0.05	UJ	NA		0.05	UJ	NA		0.05	UJ	NA		NA		NA	
alpha-Chlordane	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Aroclor-1016	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1221	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1232	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1242	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1248	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1254	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
Aroclor-1260	0.5	U	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA		NA		NA	
beta-BHC	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
delta-BHC	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Dieldrin	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Endosulfan I	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Endosulfan II	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Endosulfan sulfate	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Endrin	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Endrin aldehyde	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
Endrin ketone	0.1	U	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA		NA		NA	
gamma-BHC (Lindane)	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
gamma-Chlordane	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Heptachlor	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Heptachlor epoxide	0.05	U	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA		NA		NA	
Methoxychlor	0.5	UJ	NA		0.5	UJ	NA		0.5	UJ	NA		0.5	UJ	NA		NA		NA	
Toxaphene	5	U	NA		5	U	NA		5	U	NA		5	U	NA		NA		NA	
Inorganics, ug/L																				
Aluminum	330	J	259	U	1920	J	1680	J	1540	J	1830	J	5370	J	506	J	1260	J	407	J
Antimony	1.1	UR	1.5	R	1.3	R	1.5	R	1.1	U	2.2	U	1.1	U	2.8	U	1.7	U	2.5	U
Arsenic	1.3	UJ	1.3	UJ	1.3	UJ	2.3	J	1.3	U	2.6	U	1.3	B	1.3	U	1.3	U	1.3	U

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00101		50H00101		50G00201		50H00201		50G00301		50H00301		50G00401		50H00401		50G00501		50H00501	
Lab ID	MA715004		MA715005		MA715002		MA715001		MA675002		MA675003		MA675004		MA675005		MA675006		MA675007	
Sampling Date	11-Apr-96		11-Apr-96		11-Apr-96		11-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96		9-Apr-96	
Barium	5.6	U	3.6	J	7.5	U	5.7	U	10.4	U	17.8	U	24	U	18	U	35.4	J	42.8	J
Beryllium	0.15	U	0.15	U	0.15	U	0.15	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	U	1.8	UJ	1.8	UJ	1.8	UJ
Calcium	33500		32900		30300		30700		41300		42500		44900		43500		35800		38200	
Chromium	2.2	U	2.2	U	3.3	B	3.5	B	2.2	U	2.2	U	7	U	2.2	U	2.8	U	2.2	U
Cobalt	1.5	U	1.5	U	1.5	U	2	U	1.5	U	1.5	U	1.5	U	2.5	U	1.5	U	1.5	U
Copper	4	B	2	U	2	U	2	U	2	U	2	UJ	3.4	J	2	UJ	2	UJ	2	UJ
Iron	46.5	U	39.4	U	120	J	105	J	204	J	248	J	1910	J	187	J	374	J	282	J
Lead	1.2	U	1.2	U	1.2	U	1.2	U	1.2	UJ	1.2	UJ	8.3	J	1.2	UJ	1.2	UJ	1.2	UJ
Magnesium	300	B	283	B	3770	B	3760	B	591	B	609	B	567	B	418	B	3080	B	3080	B
Manganese	2.8	U	2.5	U	3.3	U	3.3	U	0.76	U	1.6	U	8	J	0.91	U	26.5	J	24.2	J
Mercury	0.07	UJ	0.07	UJ	0.07		0.07	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Nickel	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U	7.7	U
Potassium	767	U	767	U	767	U	767	U	767	U	1520	B	767	U	767	U	767	U	767	U
Selenium	1.3	U	1.6	B	6.9		6.9		1.3	U	1.3	U	1.3	UJ	1.3	U	1.3	U	1.3	U
Silver	2.2	UR	2.2	UR	2.2	UR	2.2	UR	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ
Sodium	1140	J	1310	J	1660	J	2040	J	1130	J	1490	BJ	810	J	972	J	2030	J	2500	J
Thallium	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U	0.86	U
Vanadium	9	B	9	B	7.6	B	8.5	B	6.6	B	7.5	B	18.8	B	10.5	B	6	B	6.6	B
Zinc	4.2	U	5.5	U	3.3	U	4.8	U	5.1	U	4.2	U	9	U	3.4	U	2.7	U	3.6	U
General Chemistry, mg/L																				
Total Suspended Solids	4		NA		63		NA		27		NA		209		NA		16		NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00601		50H00601		50G00701		50G00801	
Lab ID	MA675008		MA675009		MA695001		MA695002	
Sampling Date	9-Apr-96		9-Apr-96		10-Apr-96		10-Apr-96	
Volatile organics, ug/L								
1,1,1-Trichloroethane	1	U	NA		NA		NA	
1,1,2,2-Tetrachloroethane	1	U	NA		NA		NA	
1,1,2-Trichloroethane	1	U	NA		NA		NA	
1,1-Dichloroethane	1	U	NA		NA		NA	
1,1-Dichloroethene	1	U	NA		NA		NA	
1,2-Dibromo-3-chloropropane	1	U	NA		NA		NA	
1,2-Dibromoethane	1	U	NA		NA		NA	
1,2-Dichloroethane	1	U	NA		NA		NA	
1,2-Dichloropropane	1	U	NA		NA		NA	
2-Butanone	5	UR	NA		NA		NA	
2-Hexanone	5	U	NA		NA		NA	
4-Methyl-2-pentanone	5	U	NA		NA		NA	
Acetone	4	R	NA		NA		NA	
Benzene	1	U	NA		NA		NA	
Bromochloromethane	1	U	NA		NA		NA	
Bromodichloromethane	1	U	NA		NA		NA	
Bromoform	1	U	NA		NA		NA	
Bromomethane	1	U	NA		NA		NA	
Carbon disulfide	1	U	NA		NA		NA	
Carbon tetrachloride	1	U	NA		NA		NA	
Chlorobenzene	1	U	NA		NA		NA	
Chloroethane	1	U	NA		NA		NA	
Chloroform	1	U	NA		NA		NA	
Chloromethane	1	U	NA		NA		NA	
cis-1,2-Dichloroethene	1	U	NA		NA		NA	
cis-1,3-Dichloropropene	1	U	NA		NA		NA	
Dibromochloromethane	1	U	NA		NA		NA	
Ethylbenzene	1	U	NA		NA		NA	
Methylene chloride	2	U	NA		NA		NA	
Styrene	1	U	NA		NA		NA	
Tetrachloroethene	1	U	NA		NA		NA	
Toluene	1	U	NA		NA		NA	
trans-1,2-Dichloroethene	1	U	NA		NA		NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00601		50H00601		50G00701		50G00801	
Lab ID	MA675008		MA675009		MA695001		MA695002	
Sampling Date	9-Apr-96		9-Apr-96		10-Apr-96		10-Apr-96	
trans-1,3-Dichloropropene	1	U	NA		NA		NA	
Trichloroethene	1	U	NA		NA		NA	
Vinyl chloride	1	U	NA		NA		NA	
Xylene (total)	1	U	NA		NA		NA	
Semivolatile organics, ug/L								
1,2,4-Trichlorobenzene	10	U	NA		NA		NA	
1,2-Dichlorobenzene	1	U	NA		NA		NA	
1,3-Dichlorobenzene	1	U	NA		NA		NA	
1,4-Dichlorobenzene	1	U	NA		NA		NA	
2,2'-oxybis(1-Chloropropane)	10	U	NA		NA		NA	
2,4,5-Trichlorophenol	25	U	NA		NA		NA	
2,4,6-Trichlorophenol	10	U	NA		NA		NA	
2,4-Dichlorophenol	10	U	NA		NA		NA	
2,4-Dimethylphenol	10	U	NA		NA		NA	
2,4-Dinitrophenol	25	U	NA		NA		NA	
2,4-Dinitrotoluene	10	U	NA		NA		NA	
2,6-Dinitrotoluene	10	U	NA		NA		NA	
2-Chloronaphthalene	10	U	NA		NA		NA	
2-Chlorophenol	10	U	NA		NA		NA	
2-Methylnaphthalene	10	U	NA		NA		NA	
2-Methylphenol	10	U	NA		NA		NA	
2-Nitroaniline	25	U	NA		NA		NA	
2-Nitrophenol	10	U	NA		NA		NA	
3,3'-Dichlorobenzidine	10	U	NA		NA		NA	
3-Nitroaniline	25	U	NA		NA		NA	
4,6-Dinitro-2-methylphenol	25	U	NA		NA		NA	
4-Bromophenyl-phenylether	10	U	NA		NA		NA	
4-Chloro-3-methylphenol	10	U	NA		NA		NA	
4-Chloroaniline	10	U	NA		NA		NA	
4-Chlorophenyl-phenylether	10	U	NA		NA		NA	
4-Methylphenol	10	U	NA		NA		NA	
4-Nitroaniline	25	U	NA		NA		NA	
4-Nitrophenol	25	U	NA		NA		NA	
Acenaphthene	10	U	NA		NA		NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00601		50H00601		50G00701		50G00801	
Lab ID	MA675008		MA675009		MA695001		MA695002	
Sampling Date	9-Apr-96		9-Apr-96		10-Apr-96		10-Apr-96	
Acenaphthylene	10	U	NA		NA		NA	
Anthracene	10	U	NA		NA		NA	
Benzo(a)anthracene	10	U	NA		NA		NA	
Benzo(a)pyrene	10	U	NA		NA		NA	
Benzo(b)fluoranthene	10	U	NA		NA		NA	
Benzo(g,h,i)perylene	10	U	NA		NA		NA	
Benzo(k)fluoranthene	10	U	NA		NA		NA	
bis(2-Chloroethoxy)methane	10	U	NA		NA		NA	
bis(2-Chloroethyl)ether	10	U	NA		NA		NA	
bis(2-Ethylhexyl)phthalate	1	J	NA		NA		NA	
Butylbenzylphthalate	10	U	NA		NA		NA	
Carbazole	10	U	NA		NA		NA	
Chrysene	10	U	NA		NA		NA	
Di-n-butylphthalate	10	U	NA		NA		NA	
Di-n-octylphthalate	10	U	NA		NA		NA	
Dibenz(a,h)anthracene	10	U	NA		NA		NA	
Dibenzofuran	10	U	NA		NA		NA	
Diethylphthalate	10	U	NA		NA		NA	
Dimethylphthalate	10	U	NA		NA		NA	
Fluoranthene	10	U	NA		NA		NA	
Fluorene	10	U	NA		NA		NA	
Hexachlorobenzene	10	U	NA		NA		NA	
Hexachlorobutadiene	10	U	NA		NA		NA	
Hexachlorocyclopentadiene	10	U	NA		NA		NA	
Hexachloroethane	10	U	NA		NA		NA	
Indeno(1,2,3-cd)pyrene	10	U	NA		NA		NA	
Isophorone	10	U	NA		NA		NA	
N-Nitroso-di-n-propylamine	10	U	NA		NA		NA	
N-Nitrosodiphenylamine (1)	10	U	NA		NA		NA	
Naphthalene	10	U	NA		NA		NA	
Nitrobenzene	10	U	NA		NA		NA	
Pentachlorophenol	25	U	NA		NA		NA	
Phenanthrene	10	U	NA		NA		NA	
Phenol	10	U	NA		NA		NA	

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00601		50H00601		50G00701		50G00801	
Lab ID	MA675008		MA675009		MA695001		MA695002	
Sampling Date	9-Apr-96		9-Apr-96		10-Apr-96		10-Apr-96	
Pyrene	10	U	NA		NA		NA	
Pesticides/PCBs, ug/L								
4,4'-DDD	NA		NA		0.1	U	0.1	U
4,4'-DDE	NA		NA		0.1	U	0.1	U
4,4'-DDT	NA		NA		0.1	U	0.1	U
Aldrin	NA		NA		0.05	U	0.05	U
alpha-BHC	NA		NA		0.05	UJ	0.05	UJ
alpha-Chlordane	NA		NA		0.05	U	0.05	U
Aroclor-1016	NA		NA		0.5	U	0.5	U
Aroclor-1221	NA		NA		0.5	U	0.5	U
Aroclor-1232	NA		NA		0.5	U	0.5	U
Aroclor-1242	NA		NA		0.5	U	0.5	U
Aroclor-1248	NA		NA		0.5	U	0.5	U
Aroclor-1254	NA		NA		0.5	U	0.5	U
Aroclor-1260	NA		NA		0.5	U	0.5	U
beta-BHC	NA		NA		0.05	U	0.05	U
delta-BHC	NA		NA		0.05	U	0.05	U
Dieldrin	NA		NA		0.1	U	0.1	U
Endosulfan I	NA		NA		0.05	U	0.05	U
Endosulfan II	NA		NA		0.1	U	0.1	U
Endosulfan sulfate	NA		NA		0.1	U	0.1	U
Endrin	NA		NA		0.1	U	0.1	U
Endrin aldehyde	NA		NA		0.1	U	0.1	U
Endrin ketone	NA		NA		0.1	U	0.1	U
gamma-BHC (Lindane)	NA		NA		0.05	U	0.05	U
gamma-Chlordane	NA		NA		0.05	U	0.05	U
Heptachlor	NA		NA		0.05	U	0.05	U
Heptachlor epoxide	NA		NA		0.05	U	0.05	U
Methoxychlor	NA		NA		0.5	UJ	0.5	UJ
Toxaphene	NA		NA		5	U	5	U
Inorganics, ug/L								
Aluminum	2730	J	1690	J	270	J	1190	J
Antimony	1.1	U	3.3	U	1.3	U	1.1	U
Arsenic	1.3	U	1.3	U	1.3	U	1.3	U

Appendix C

Table C-2. Summary of Groundwater Analytical Results
Study Area 50

Naval Training Center, Orlando
Orlando, FL

Sample ID	50G00601		50H00601		50G00701		50G00801	
Lab ID	MA675008		MA675009		MA695001		MA695002	
Sampling Date	9-Apr-96		9-Apr-96		10-Apr-96		10-Apr-96	
Barium	57.7	BJ	60.3	J	37	J	24.1	U
Beryllium	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
Calcium	24900		26200		21600		28300	
Chromium	4.2	U	2.2	U	2.2	U	2.2	U
Cobalt	1.5	U	3	U	1.5	U	1.5	U
Copper	2	UJ	2	UJ	2.3	J	2	UJ
Iron	3930	J	3490	J	504	J	85.6	U
Lead	2.4	J	1.2	UJ	1.2	UJ	1.2	UJ
Magnesium	4000	B	3910	B	4440	B	1580	B
Manganese	35.2	J	36.1	J	9.4	J	7.3	B
Mercury	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Nickel	8.6	B	7.7	U	7.7	U	7.7	U
Potassium	859	B	1270	B	2940	B	767	U
Selenium	1.3	UJ	1.3	UJ	1.6	B	2.5	J
Silver	2.2	UJ	2.2	UJ	2.2	UJ	2.2	UJ
Sodium	3330	J	3480	BJ	8400	J	2940	BJ
Thallium	0.86	U	0.86	U	0.86	U	0.86	U
Vanadium	7.2	B	5	B	10	B	11.3	B
Zinc	5.5	U	6	U	2.5	U	4.5	U
General Chemistry, mg/L								
Total Suspended Solids	40		NA		NA		NA	

Notes for Analytical Results Tables
Study Area 50

Naval Training Center, Orlando
Orlando Florida

NA = Identified parameter not analyzed.
Sample ID = Sample Identifier
Lab ID = Laboratory identifier

Units:

mg/kg milligram per kilogram
ug/kg microgram per kilogram
mg/L milligram per liter
ug/L microgram per liter

The following standard validation qualifiers have the following definitions:

U The analyte/compound was analyzed for but was not detected above the reported sample quantitation limit
The number preceding the U qualifier is the reported sample quantitation limit.

J The analyte/compound was positively identified and the associated numerical value is an estimated concentration of the analyte/compound in the sample.

B The inorganic analyte was positively identified and the associated numerical value is an estimated concentration because the detection was below the contract required detection limit (CRDL) and above the instrument detection limit.

UJ The analyte/compound was not detected above the reported sample quantitation limit.
The reported quantitation limit, however, is approximate and may or may not represent the actual limit of quantitation necessary to accurately measure the analyte/compound in the sample.

R The sample results are rejected during data validation because of serious deficiencies in meeting quality control criteria.

E The reported value for the compound exceeds the linear calibration range for that compound. Therefore, the sample have been reanalyzed at an appropriate dilution (sample identifiers ending in DL).

D The reported value for the compound has been quantified at a secondary dilution factor. This value typically is used in favor of E qualified values. When this applies, the E qualifier are flagged ER;
D qualified values that are rejected in favor of the original results are flagged DR.