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FINAL BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT STUDY AREA 21 NTC ORLANDO FL

8/1/1997

ABB ENVIRONMENTAL

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

STUDY AREA 21

NAVAL TRAINING CENTER ORLANDO, FLORIDA

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

AUGUST 1997

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

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BASE REALIGNMENT AND CLOSURE
ENVIRONMENTAL SITE SCREENING REPORT

STUDY AREA 21

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Unit Identification Code: N65928

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

Prepared by:

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Naval Facilities Engineering Command
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North Charleston, South Carolina 29418

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August 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: August 12, 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
CLP	Contract Laboratory program
DQO	data quality objective
FDEPG	Florida Department of Environmental Protection Groundwater Guidance
FID	flame ionization detector
μg/kg	micrograms per kilogram
μg/ℓ	micrograms per liter
mg/kg	milligrams per kilogram
PAH	polynuclear aromatic hydrocarbons
PWC	Public Works Center
RBC	risk-based concentration
SA	Study Area
SCG	soil cleanup goals
SVOC	semivolatile organic compound
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank

1.0 STUDY AREA 21, MAINTENANCE SHOP (BUILDING 7203)

This report contains information gathered as a result of site screening activities conducted at Study Area (SA) 21. Further details can be found in the Site Screening Plan (ABB Environmental Services, Inc. [ABB-ES], 1995).

1.1 STUDY AREA 21, BACKGROUND AND CONDITIONS. Building 7203 was constructed in 1955 and is a 3,200-square-foot concrete block structure currently used for maintenance and storage of equipment such as lawn mowers, tractors, and other grounds maintenance equipment (Figures 1 and 2). A flammable storage shed containing paint and 5-gallon gasoline containers is located at the northwestern corner of the property. On the northeastern corner of the property, there is an empty shed that was originally used for storing medical supplies. Later (but prior to 1981), it was used to store pesticides for the golf course.

A 560-gallon heating oil underground storage tank (UST) (1955 vintage) is located on the western side of the property. Stained soil, stressed vegetation, and a noticeable odor were noted around the fill cap to the UST.

A 300-gallon diesel fuel aboveground storage tank (AST) (installed in 1975) is located on the northeastern corner of the property adjacent to the empty storage shed. In 1993, a spill occurred that necessitated a cleanup and removal action.

Two possible spoil piles were observed against the northwest corner of Building 7203 and against the west side of the fenced area during the October 1994 site visit.

1.2 STUDY AREA 21, INVESTIGATION SUMMARY. Except where noted in the text, all samples collected at SA 21 were submitted for full suite Contract Laboratory program (CLP) target compound list and target analyte list analyses in accordance with U.S. Environmental Protection Agency (USEPA) Level IV data quality objectives (DQOs). In addition, all samples were analyzed for herbicides and total petroleum hydrocarbons.

Eight surface soil samples, one subsurface soil sample, and two groundwater samples were collected during the initial sampling activities in April and May 1995 at SA 21 in order to evaluate potential environmental effects associated with activities at Building 7203.

One surface soil sample was collected from each of the two spoil piles west of the fence and the northwest corner of Building 7203 (21S003 and 21S008). Four surface soil samples were also collected from within the fenced area north of Building 7203 (21S004, 21S005, 21S006, and 21S007). One soil boring with a monitoring well was completed in this area (OLD-21-01). A surface soil (21B00101) and subsurface soil sample (21B00102) were collected from depths of 0 to 1 foot below land surface (bls) and 6 to 8 feet bls from this soil boring. A groundwater sample was also collected from the monitoring well. No flame ionization detector (FID) deflections were noted during the surface soil sampling, drilling, and well installation. All of the above sampling was conducted in April and May of 1995.

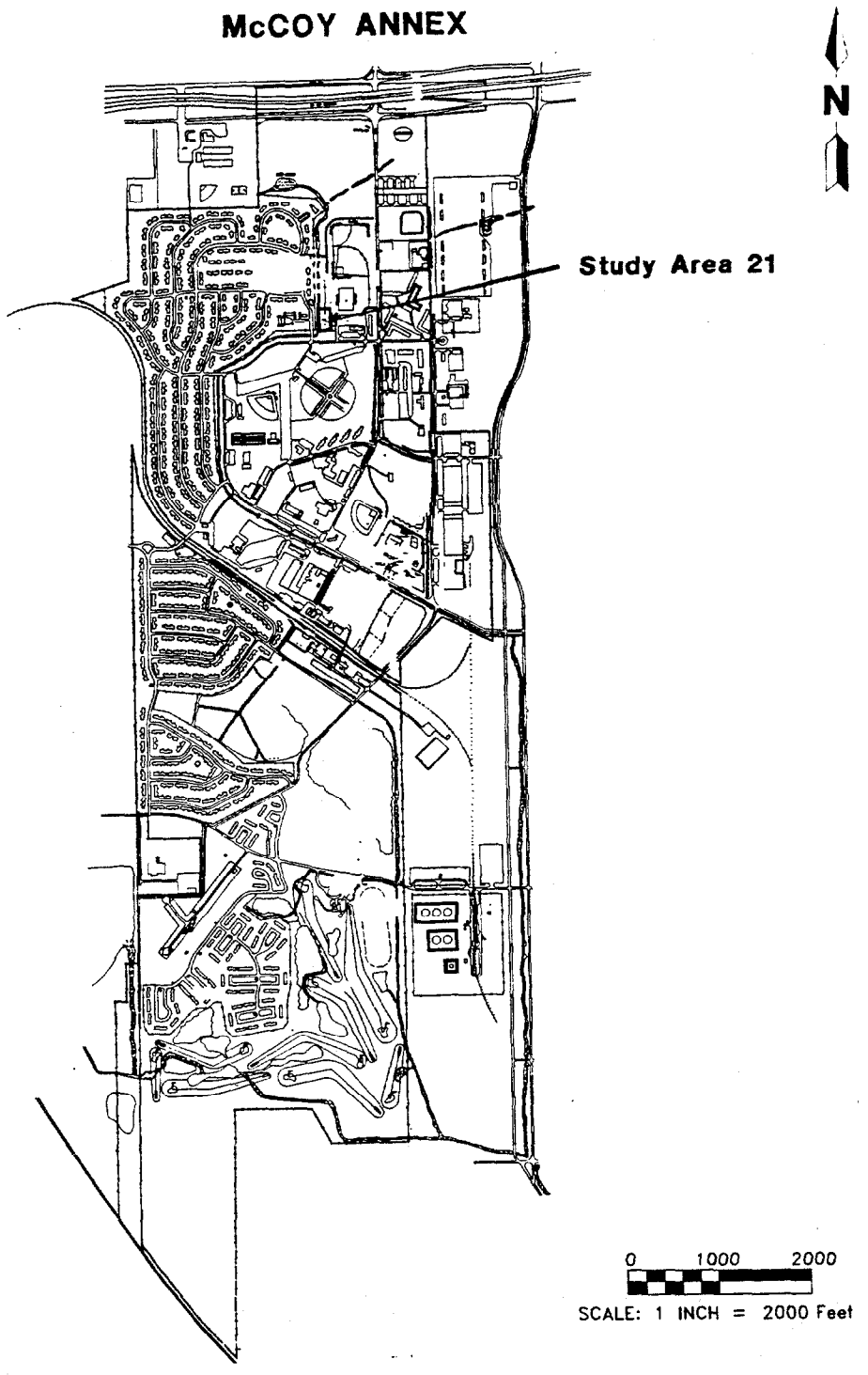

FIGURE 1
LOCATION OF STUDY AREA 21

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

NAVAL TRAINING CENTER ORLANDO, FLORIDA

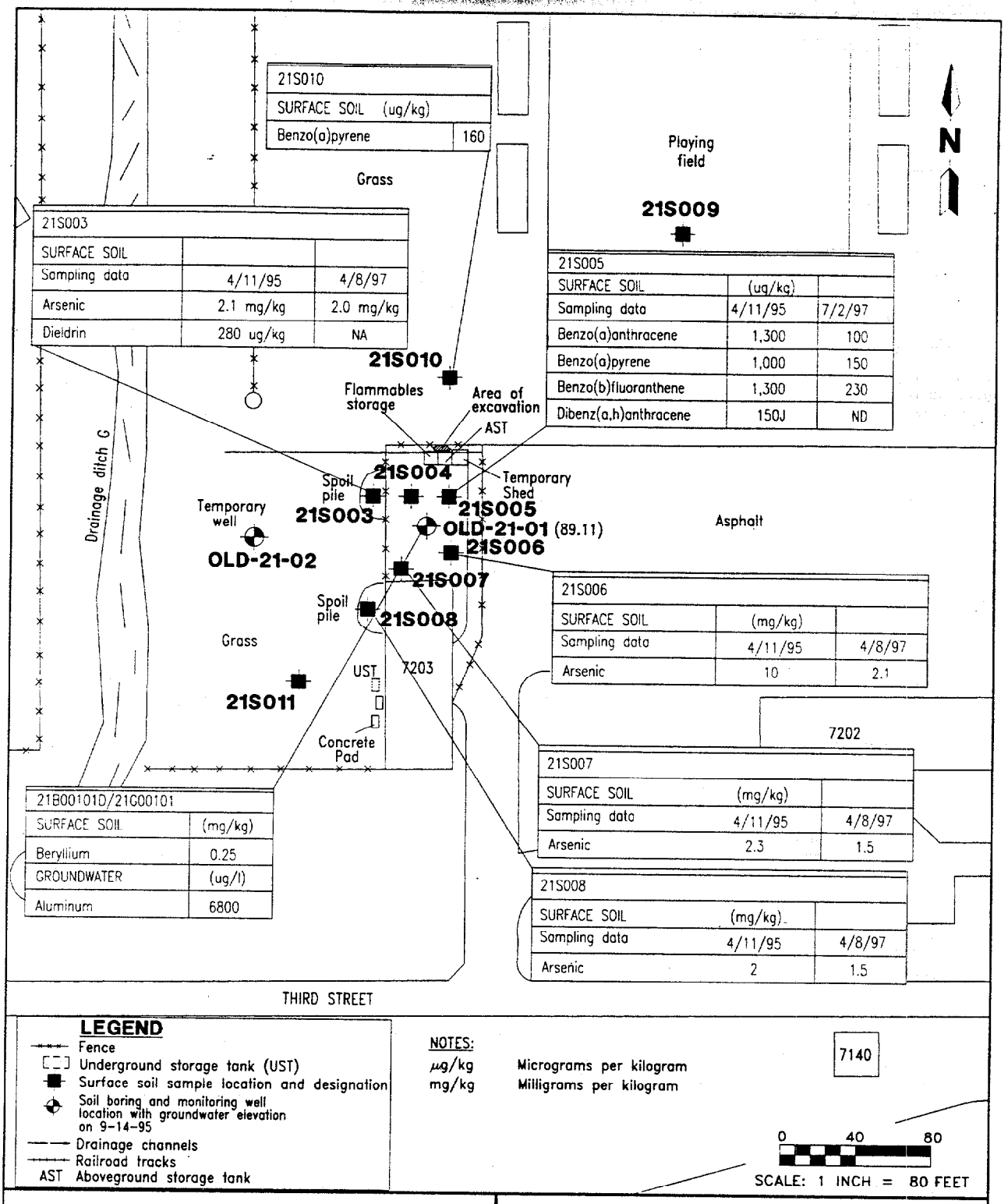

FIGURE 2
SURFACE SOIL, SOIL BORING AND MONITORING WELL LOCATIONS, MCCOY ANNEX BUILDING 7203, MAINTENANCE SHOP, STUDY AREA 21

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

NAVAL TRAINING CENTER ORLANDO, FLORIDA

A soil boring and temporary monitoring well (OLD-21-02) was completed between SA 21 and Drainage Ditch G to the west. A surface soil sample (21B00201, 0 to 1 foot bls) and groundwater sample (21G00201) were collected at this location. No FID deflections were noted during the surface soil sampling and well installation. After the groundwater sample was collected, the polyvinyl chloride riser and well screen were removed, and the borehole was backfilled with soil cuttings and bentonite chips. All samples were submitted for full suite analyses including herbicides.

Appendix A presents the soil boring logs, monitoring well installation diagrams, and groundwater sample field data sheets.

The 300-gallon AST at the northern end of the study area was removed on October 17, 1996, by Public Works Center (PWC), Pensacola, Florida. The 560-gallon UST on the west side of the building was removed by PWC on November 15, 1996. Clean tank closures were recommended by PWC for both removals and approved by the Florida Department of Environmental Protection on April 11, 1997.

Resampling was completed at four surface soil locations (21S003, 21S006, 21S007, and 21S008) on April 8, 1997, to confirm exceedances of regulatory criteria for arsenic. Additional sampling occurred on July 2, 1997, due to exceedances for several polynuclear aromatic hydrocarbons (PAHs). One location (21S005) was resampled for PAHs only. In addition, three new locations (21S009, 21S010, and 21S011) were sampled for PAHs only. Samples were submitted for CLP analysis (arsenic and PAHs) in accordance with USEPA Level IV DQOs.

1.3 STUDY AREA 21, RESULTS. The results of site screening investigations at SA 21 are discussed below. Analytical results from the surface soil, subsurface soil, and groundwater collected from SA 21 are presented as Positive Hits Tables in Appendix B (Tables B-1 to B-3). A complete set of analytical results for these media is presented in Appendix C. Exceedances of background or (residential) regulatory guidance concentrations (shaded on the Positive Hits Tables) are displayed in chem-boxes near their respective explorations on Figure 2.

1.3.1 Surface Soil Compounds detected in surface soil samples included semivolatile organics (SVOCs), pesticides, and inorganics (Appendix B, Table B-1).

1.3.1.1 **Semivolatiles** SVOC detections consisted primarily of several PAH compounds at sample location 21S005. Detections consisted of acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo-(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)-fluoranthene and dibenz(a,h)anthracene concentrations, which at this location exceeded their respective residential risk-based concentrations (RBCs). Dibenz(a,h)anthracene and benzo(a)pyrene also exceeded their respective residential soil cleanup goals (SCGs). Only benzo(a)pyrene exceeded its industrial RBC. Resampling at this location on July 2, 1997, to confirm these PAH concentrations resulted in a benzo(a)pyrene exceedance (150 micrograms per kilogram [μg/kg]) of the residential SCG and RBC, although the industrial RBC (780 μg/kg) was not exceeded.

In summary, there were no SVOCs, upon resampling, that exceeded their industrial SCG and RBC values.

1.3.1.2 **Pesticides** Pesticide detections included 4,4-dichlorodiphenyl-dichloroethene, 4,4'-dichlorodiphenyltrichloroethane, alpha-Chlordane, gamma-Chlordane and Dieldrin. No pesticide detections exceeded their respective residential RBCs and SCGs, with the exception of Dieldrin in 21S003 at 280 μg/kg, which exceeded the residential RBC of 40 μg/kg and residential SCG of 70 μg/kg. However, the industrial SCG and RBC for Dieldrin (300 and 360 μg/kg, respectively) were not exceeded at this location.

1.3.1.3 **Inorganics** Inorganics detected above background screening concentrations during the initial sampling in April and May 1995 included arsenic, cadmium, copper, manganese, mercury, sodium, vanadium, and zinc. No inorganic detections exceeded their respective residential SCGs and RBCs, except for arsenic at four locations (21S003, 21S006, 21S007, and 21S008). At these locations, arsenic concentrations ranged from 2 to 10 milligrams per kilogram (mg/kg), exceeding the residential carcinogenic RBC and residential SCG. The arsenic concentration at 21S006 (10 mg/kg) also exceeded the industrial RBC for arsenic as a carcinogen. The beryllium concentration at 21B001 (field duplicate only) was 0.25 mg/kg, which slightly exceeded the residential RBC (0.15 mg/kg) but not the industrial RBC (1.3 mg/kg).

Due to Orlando Partnering Team concerns regarding arsenic concentrations, the four locations with elevated arsenic concentrations (listed above) were resampled on April 8, 1997, to confirm the previous results. The arsenic concentrations decreased by up to 80 percent at these four locations. The highest concentration of arsenic during the resampling occurred at location 21S006, with an arsenic concentration of 2.1 mg/kg versus 10 mg/kg during the 1995 sampling event. This is only slightly higher than the background screening concentration, which is 1.9 mg/kg.

1.3.2 Subsurface Soil Compounds detected in the single subsurface soil sample included a single organic compound and inorganics (Appendix B, Table B-2). Acetone was interpreted to be an artifact of the sampling and/or laboratory analytical process. Lead was the only inorganic analyte detected above background screening concentrations. There were no inorganic detections that exceeded regulatory guidance concentrations.

1.3.3 Groundwater Compounds detected in groundwater included only inorganics (Appendix B, Table B-3). No organic compounds were detected in groundwater. There were no inorganic detections that exceeded Florida Department of Environmental Protection Groundwater Guidance (FDEPG) values, except for aluminum in 21G001 at 6,800 micrograms per liter (μg/ℓ), which exceeded the background screening concentration of 4,067 μg/ℓ and FDEPG secondary standard of 200 μg/ℓ. The groundwater sample was quite turbid (101 nephelometric turbidity units), which may explain the somewhat elevated concentration of aluminum.

1.4 STUDY AREA 21, CONCLUSIONS AND RECOMMENDATIONS. Based on available information and site screening data, it is concluded that there may be evidence of minor environmental impacts from past use at SA 21.

Arsenic was detected at four locations at concentrations ranging from 2.1 to 10 mg/kg exceeding both carcinogenic residential RBCs and SCGs. One surface soil sample also exceeded the industrial carcinogenic RBC for arsenic. However, arsenic concentrations determined during resampling at these locations did not confirm earlier analytical results. Concentrations from resampling ranged from 1.5 to 2.1 mg/kg, the highest value only slightly exceeding the background screening value for arsenic (1.9 mg/kg).

PAH compounds were detected in 6 out of 11 surface soil samples, but residential RBCs were exceeded in only two locations. There were no exceedances of industrial SCGs or RBCs.

Although ABB-ES has concluded that elevated concentrations of certain inorganics in groundwater are due to sample turbidity and thus suspended solids, future users of this property should be aware that the presence of aluminum at the measured concentration may render the groundwater from the surficial aquifer objectionable as a potable or irrigation water source.

The intended reuse for SA 21 is recreational. The concentrations of arsenic, benzo(a)pyrene, and Dieldrin in surface soil render this site unsuitable for residential reuse. ABB-ES, therefore, recommends SA 21 be classified 3/Light Green and made eligible for transfer with no requirement for further evaluation, with the stipulation that a deed restriction be imposed that prohibits future residential reuse.

The undersigned members of the Base Realignment and Closure Team concur with the findings and recommendations of the preceding investigation.

STUDY AREA 21

Nancy Rodriguez U.S. Environmental Protection Agency, Region IV	9-18-97 Date
John Mitchell Florida Department of Environmental Protection	9-18-97 Date
Wayne Hansel U.S. Department of the Navy	9-18-97 Date

REFERENCE

ABB-ES. 1995. *Site Screening Plan, Groups I through V Study Areas and Miscellaneous Additional Sites, Naval Training Center, Orlando, Florida*. Prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina (September) (Final).

APPENDIX A

BORING LOGS, MONITORING WELL INSTALLATION DIAGRAMS, AND GROUNDWATER SAMPLE FIELD DATA SHEETS, STUDY AREA 21

Project: BRAC NTC, Group III Site Screening	**Well ID:** S.A. 21		**Boring ID:** OLD-21-01
Client: SOUTHDIVNAVFACENGCOM	**Contractor:** GEOTEK		**Job No.:** CTO-107
Drilling:	**Easting:**	**Date started:** 05/14/95	**Completd:** 05/14/95
Method: Hollow stem auger	**Casing dia.:** 6.25"	**Screened int.:** 10 ft.	**Protection level:** D
TOC elev.: Ft.	**Type of OVM.:** Porta FID	**Total dpth:** 14Ft.	**Dpth to** ▽ 7 Ft.
ABB Rep.: M. Hawes	**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.
	21B00101 21B00101D (0-1')				QUARTZ SAND: Dark brown, silty, fine, good to moderate rounding, trace organics		SM		
				0				2,1	
5			90%					2,2	
	21B00102 (6-8')			0				3,3	
			90%					4,12	▽
				0				8,18	
			85%					25,32	
10				0				8,12	
			85%					17,15	
				0	QUARTZ SAND: Tan, silty, fine, good to moderate rounding			3,6	
			85%					5,7	
15									

 ABB ENVIRONMENTAL SERVICES, INC.

GROUNDWATER SAMPLE FIELD DATA

Project: NTC-ORLANDO
Point of Interest: OCD-21-01
Project Number: 8545.10
Date: 5-30-95
Sample Location ID: 21G00101
Time: Start: 1300 End: 1500
Signature of Sampler: S. Mulcahy for R. BURNS

Water Level/Well Data

Well Depth 13.02 Ft. — X Measured / ___ Historical

X Top of Well / ___ Top of Protective Casing / ___ ___

Well Riser Stick-up (from ground) — Ft.

Protective Casing/Well Difference — Ft.

Protective Casing ___ Ft.

Depth to Water 6.62 Ft.

Well Material: X PVC / ___ SS / ___

Well Locked?: X Yes / ___ No

Well Dia. X 2 inch / ___ 4 inch / ___ 6 inch / ___

Water Level Equip. Used: X Elect. Cond. Probe / ___ Float Activated / ___ Press. Transducer / ___

Height of Water Column 6.4 Ft. X (X .16 Gal/Ft. (2 in.) / ___ .65 Gal/Ft. (4 in.) / ___ 1.5 Gal/Ft. (6 in.) / ___ Gal/Ft. (___ in.)) = 1.02 Gal/Vol; 5 Total Gal Purged

Well Integrity:	Yes	No
Prot. Casing Secure	X	
Concrete Collar Intact	X	
Other	X	

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
X	X	Peristaltic Pump	
		Submersible Pump	
		Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	

Decontamination Fluids Used:

(✓ All That Apply at Location)
- ___ Methanol (100%)
- ___ 25% Methanol/75% ASTM Type II water
- X Deionized Water
- X Liquinox Solution
- ___ Hexane
- ___ HNO_3/D.I. Water Solution
- X Potable Water
- ___ None

Field Analysis Data

Ambient Air VOC Ø ppm Well Mouth Ø ppm

Field Data Collected: ___ In-line / X In Container

Sample Observations: X Turbid / ___ Clear / ___ Cloudy / ___ Colored / ___ Odor

Purge Data	@ 10 Gal.	@ 17 Gal.	@ 24 Gal.	@ 31 Gal.	@ 38 Gal. UT
Temperature, Deg. C/F	80.4	80.6	81.3	81.1	79.7
pH, units	5.5	5.0	5.0	5.0	5.0
Specific Conductivity (umhos/cm. @ 25 Deg. C.)	145	130	120	111	120
Oxidation - Reduction, +/- mv	-	-	-	-	-
Dissolved Oxygen, ppm	-	-	-	-	-
TURBIDITY	>200	>200	>200	102	98.8

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Field Filtered	Preservation Method	Volume Required	✓ If Sample Collected	Sample Bottle IDs
VOA		HCL			21 / G / 001 / 01
SVOA		4°C			
Pest/PCB		4°C			
Inorganics		HNO_3			
Explosives		4°C			
TPH		H_2SO_4			
TOC		H_2SO_4			
Nitrate		H_2SO_4			

Notes: COLLECTED SAMPLES FOR FULL SUITE CLP TCL/TAL ANALYSIS.

GROUNDWATER SAMPLE FIELD DATA

Project: NTC-ORLANDO
Point of Interest: OLD-21-02
Project Number: 8545.10
Date: 5-17-95
Sample Location ID: 21G00201
Time: Start: 1800 End: 1830
Signature of Sampler: G. Mall FOR S. GRIETINS

Water Level/Well Data

Well Depth 10 Ft. ✓ Measured ___ Historical
X Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) — Ft.
Protective Casing/Well Difference — Ft.
Protective Casing ___ Ft.

Depth to Water NA Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes X No
Well Dia. X 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: X Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column NA Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = NA Gal/Vol; 8 Total Gal Purged

Well Integrity: *	Yes	No
Prot. Casing Secure		X
Concrete Collar Intact		X
Other		X

* TEMPORARY WELL

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
X	X	Peristaltic Pump	NA
		Submersible Pump	
		Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
X Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
X Potable Water
___ None

Field Analysis Data

Ambient Air VOC Ø ppm Well Mouth Ø ppm
Field Data Collected ___ In-line X In Container
Sample Observations: ___ Turbid ___ Colored ___ Clear ___ Odor X Cloudy

Purge Data	@ 9 Lit	@ 16.5 Lit	@ 24 Lit	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	32.0	32.0	31.0		
pH, units	4.55	4.59	4.60		
Specific Conductivity (umhos/cm. @ 25 Deg. C.)	52	48	48		
Oxidation - Reduction, +/- mv	—	—	—		
Dissolved Oxygen, ppm	—	—	—		
TURBIDITY	7200	42.8	13.62		

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Field Filtered	Preservation Method	Volume Required	✓ If Sample Collected	Sample Bottle IDs
VOA		HCL			21 / G / 002 / 01
SVOA		4°C			
Pest/PCB		4°C			
Inorganics		HNO_3			
Explosives		4°C			
TPH		H_2SO_4			
TOC		H_2SO_4			
Nitrate		H_2SO_4			

Notes: COLLECT SAMPLES FOR FULL SUITE OLD TCL/TAL ANALYSIS

APPENDIX B

SUMMARY OF POSITIVE DETECTIONS, SOIL AND GROUNDWATER SAMPLES, STUDY AREA 21

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

TABLE B-1

Summary of Positive Detections in Surface Soil

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21B00101	21B00101D	21B00201	21S00301	21S00302	21S00401	21S00501
Sampling Date					5/14/95	5/14/95	5/17/95	4/11/95	4/8/97	4/11/95	4/11/95
Feet bls					0-1	0-1	0-1	0-1	0-1	0-1	0-1
Volatile Organics, ug/kg											
Methylene chloride		16,000	85,000	760,000 c	4 J		3 J		NA		
Semivolatile Organics, ug/kg											
Acenaphthene		2,800,000	4,700,000 n	120,000,000 n					NA		290 J
Anthracene		20,000,000	23,000,000 n	610,000,000 n					NA		340 J
Benzo(a)anthracene		1,400	880 c	7,800 c		89 J			NA		[redacted]
Benzo(a)pyrene		100	88 c	780 c					NA		[redacted]
Benzo(b)fluoranthene		1,400	880 c	7,800 c					NA		[redacted]
Benzo(g,h,i)perylene		14,000	2,300,000 n	61,000,000 n	130 J	120 J			NA		480
Benzo(k)fluoranthene		14,000	8,800 c	78,000 c					NA		1,100
Carbazole		42,000	32,000 c	290,000 c					NA		260 J
Chrysene		140,000	88,000 c	780,000 c		130 J			NA		1,400
Di-n-butylphthalate		7,300,000	7,800,000 n	200,000,000					NA		
Dibenz(a,h)anthracene		100	88 c	780 c					NA		[redacted] J
Fluoranthene		2,900,000	3,100,000 n	82,000,000 n	100 J	120 J			NA		2,500
Fluorene		2,400,000	3,100,000 n	82,000,000 n					NA		230 J
Indeno(1,2,3-cd)pyrene		1,400	880 c	7,800 c					NA		530
Phenanthrene		1,700,000	2,300,000 n	61,000,000 n					NA		1,800
Pyrene		2,200,000	2,300,000 n	61,000,000 n	170 J	170 J			NA		1,600
Pesticides/PCBs, ug/kg											
4,4'-DDE		3,000	1,900 c	17,000 c				34 J	NA	1.6 J	
4,4'-DDT		3,100	1,900 c	17,000 c				27 J	NA		
alpha-Chlordane		800	490 c	4,400 c	38	50 J		110	NA	0.89 J	46
Dieldrin		70	40 c	360 c	15 J	13 J		[redacted]	NA	2.1 J	
gamma-Chlordane		800	490 c	4,400 c	44	53 J		79	NA	0.59 J	52 N

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21B00101	21B00101D	21B00201	21S00301	21S00302	21S00401	21S00501
Sampling Date					5/14/95	5/14/95	5/17/95	4/11/95	4/8/97	4/11/95	4/11/95
Feet bls					0-1	0-1	0-1	0-1	0-1	0-1	0-1
Inorganics, mg/kg											
Aluminum	4,870	75,000	78,000 n	1,000,000 n	1,080	2,250	571	1,340 J	NA	504 J	917 J
Arsenic	1.9	0.8	0.43 c/23 n	3.8 c/610 n	0.96 B	1.1 J		[redacted]	[redacted]		0.75 B
Barium	21.6	5,200	5,500 n	140,000 n	6.3 J	38.2 J	1.3 J	3.2 J	NA	8 J	5.6 J
Beryllium	0.46	0.2	0.15	1.3		[redacted] B		0.03 B	NA	0.04 B	
Cadmium	ND	37	39 n	1,000 n	0.91 B	1.2 B			NA		
Calcium	33,568	ND	1,000,000	1,000,000	10,000	70,300	114 B	2,490 J	NA	1,890 J	7,880 J
Chromium	7.7	290	390 n	10,000 n	3.8	4.5	1.3 B	4.1 J	NA	1.4 J	4 J
Copper	2.6	ND	3,100 n	82,000 n	6	3.9 B		5.6	NA	1.3 B	5.2 B
Iron	843	ND	23,000 n	610,000 n	864	1,400	46.6	257 J	NA		648 J
Lead	21.3	500	400	400	23.7 J	25.4 J	2.1 J	6.7	NA	1.5 J	10.2
Magnesium	381	ND	460,468	460,468	208 B	1,660	17.8 B	75.9 J	NA	323 J	188 J
Manganese	10.8	370	1,800 n	47,000 n	10.4	75.2	0.51 B	6.7 J	NA	8.1 J	10.2 J
Mercury	0.05	23	23 n	610 n	0.06	0.05 B	0.04 B	0.04	NA		0.11
Potassium	210	ND	1,000,000	1,000,000		407 B			NA		
Silver	1.1	ND	390 n	10,000 n	1.9 B	0.8 B			NA		
Sodium	ND	ND	100,000	1,000,000	7.6 B	75.7 B		6.6 B	NA	4.8 B	
Vanadium	4.9	490	550 n	14,000 n	2.7 B	3.8 B	0.68 B		NA		1.6 B
Zinc	4.6	23,000	23,000 n	610,000 n	21.6	18	1.7 B	6.5 J	NA	4.4 J	33 J
General chemistry, mg/kg											
Total Petroleum Hydrocarbons	ND	ND	ND	ND	39.2	35.7	NA	46.1	NA	37.2	41.9

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21S00502	21S00601	21S00602	21S00701	21S00702	21S00801	21S00802
Sampling Date					7/2/97	4/11/95	4/8/97	4/11/95	4/8/97	4/11/95	4/8/97
Feet bls					0-1	0-1	0-1	0-1	0-1	0-1	0-1
Volatile Organics, ug/kg											
Methylene chloride		16,000	85,000	760,000 c	NA		NA		NA		NA
Semivolatile Organics, ug/kg											
Acenaphthene		2,800,000	4,700,000 n	120,000,000 n			NA		NA		NA
Anthracene		20,000,000	23,000,000 n	610,000,000 n			NA		NA		NA
Benzo(a)anthracene		1,400	880 c	7,800 c	100		NA		NA		NA
Benzo(a)pyrene		100	88 c	780 c	150		NA		NA		NA
Benzo(b)fluoranthene		1,400	880 c	7,800 c	230		NA		NA		NA
Benzo(g,h,i)perylene		14,000	2,300,000 n	61,000,000 n	120		NA		NA		NA
Benzo(k)fluoranthene		14,000	8,800 c	78,000 c	70		NA		NA		NA
Carbazole		42,000	32,000 c	290,000 c			NA		NA		NA
Chrysene		140,000	88,000 c	780,000 c			NA		NA		NA
Di-n-butylphthalate		7,300,000	7,800,000 n	200,000,000	NA		NA	440	NA		NA
Dibenz(a,h)anthracene		100	88 c	780 c			NA		NA		NA
Fluoranthene		2,900,000	3,100,000 n	82,000,000 n	250		NA		NA		NA
Fluorene		2,400,000	3,100,000 n	82,000,000 n			NA		NA		NA
Indeno(1,2,3-cd)pyrene		1,400	880 c	7,800 c	140		NA		NA		NA
Phenanthrene		1,700,000	2,300,000 n	61,000,000 n			NA		NA		NA
Pyrene		2,200,000	2,300,000 n	61,000,000 n			NA		NA		NA
Pesticides/PCBs, ug/kg											
4,4'-DDE		3,000	1,900 c	17,000 c	NA	160 D	NA	4.4	NA	42.0	NA
4,4'-DDT		3,100	1,900 c	17,000 c	NA	61 D	NA		NA	41.0	NA
alpha-Chlordane		800	490 c	4,400 c	NA	6.6	NA	36 D	NA	4.9 J	NA
Dieldrin		70	40 c	360 c	NA		NA	8.6	NA		NA
gamma-Chlordane		800	490 c	4,400 c	NA	6.1 J	NA	37 D	NA	2.6 J	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21S00502	21S00601	21S00602	21S00701	21S00702	21S00801	21S00802
Sampling Date					7/2/97	4/11/95	4/8/97	4/11/95	4/8/97	4/11/95	4/8/97
Feet bls					0-1	0-1	0-1	0-1	0-1	0-1	0-1
Inorganics, mg/kg											
Aluminum	4,870	75,000	78,000 n	1,000,000 n	NA	1,450 J	NA	1,040 J	NA	4290.0 J	NA
Arsenic	1.9	0.8	0.43 c/23 n	3.8 c/610 n	NA	[redacted]	[redacted]	[redacted]	1.5	2 B	1.5
Barium	21.6	5,200	5,500 n	140,000 n	NA	8 J	NA	20.8 J	NA	21.1 J	NA
Beryllium	0.46	0.2	0.15	1.3	NA		NA		NA	0.1 B	NA
Cadmium	ND	37	39 n	1,000 n	NA		NA	2.1	NA		NA
Calcium	33,568	ND	1,000,000	1,000,000	NA	7,000 J	NA	2,030 J	NA	2110.0 J	NA
Chromium	7.7	290	390 n	10,000 n	NA	3 J	NA	2.6 J	NA	7.0 J	NA
Copper	2.6	ND	3,100 n	82,000 n	NA	3 B	NA	50.3	NA	2.8 B	NA
Iron	843	ND	23,000 n	610,000 n	NA	159 J	NA	647 J	NA	2470.0 J	NA
Lead	21.3	500	400	400	NA	9.9 J	NA	9	NA	18.0	NA
Magnesium	381	ND	460,468	460,468	NA	142 J	NA	195 J	NA	162.0 J	NA
Manganese	10.8	370	1,800 n	47,000 n	NA	3.4 J	NA	5.5 J	NA	30.0 J	NA
Mercury	0.05	23	23 n	610 n	NA	0.04	NA	0.11	NA	0.1	NA
Potassium	210	ND	1,000,000	1,000,000	NA		NA		NA	150.0 B	NA
Silver	1.1	ND	390 n	10,000 n	NA		NA		NA		NA
Sodium	ND	ND	100,000	1,000,000	NA	4.5 B	NA		NA	17.0 B	NA
Vanadium	4.9	490	550 n	14,000 n	NA	1.5 B	NA	1.4 B	NA	7.0 B	NA
Zinc	4.6	23,000	23,000 n	610,000 n	NA	5.6 J	NA	26.8 J	NA	29.4 J	NA
General chemistry, mg/kg											
Total Petroleum Hydrocarbons	ND	ND	ND	ND	NA	48.8	NA	152	NA	23.6	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21S00901	21S01001	21S01101
Sampling Date					7/2/97	7/2/97	7/2/97
Feet bls					0-1	0-1	0-1
Volatile Organics, ug/kg							
Methylene chloride		16,000	85,000	760,000 c	NA	NA	NA
Semivolatile Organics, ug/kg							
Acenaphthene		2,800,000	4,700,000 n	120,000,000 n		970	
Anthracene		20,000,000	23,000,000 n	610,000,000 n		460	
Benzo(a)anthracene		1,400	880 c	7,800 c		140	
Benzo(a)pyrene		100	88 c	780 c	7.3	160	5.3
Benzo(b)fluoranthene		1,400	880 c	7,800 c	12	220	7.1
Benzo(g,h,i)perylene		14,000	2,300,000 n	61,000,000 n	9	120	
Benzo(k)fluoranthene		14,000	8,800 c	78,000 c	4	78	
Carbazole		42,000	32,000 c	290,000 c			
Chrysene		140,000	88,000 c	780,000 c			
Di-n-butylphthalate		7,300,000	7,800,000 n	200,000,000	NA	NA	NA
Dibenz(a,h)anthracene		100	88 c	780 c			
Fluoranthene		2,900,000	3,100,000 n	82,000,000 n	11	280	
Fluorene		2,400,000	3,100,000 n	82,000,000 n		470	
Indeno(1,2,3-cd)pyrene		1,400	880 c	7,800 c	7.4	140	
Phenanthrene		1,700,000	2,300,000 n	61,000,000 n		600	
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	NA	NA	NA
4,4'-DDT		3,100	1,900 c	17,000 c	NA	NA	NA
alpha-Chlordane		800	490 c	4,400 c	NA	NA	NA
Dieldrin		70	40 c	360 c	NA	NA	NA
gamma-Chlordane		800	490 c	4,400 c	NA	NA	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]	SCG [2]	RBC [3] for Residential Soil	RBC [3] for Industrial Soil	21S00901	21S01001	21S01101
Sampling Date					7/2/97	7/2/97	7/2/97
Feet bls					0-1	0-1	0-1
Inorganics, mg/kg							
Aluminum	4,870	75,000	78,000 n	1,000,000 n	NA	NA	NA
Arsenic	1.9	0.8	0.43 c/23 n	3.8 c/610 n	NA	NA	NA
Barium	21.6	5,200	5,500 n	140,000 n	NA	NA	NA
Beryllium	0.46	0.2	0.15	1.3	NA	NA	NA
Cadmium	ND	37	39 n	1,000 n	NA	NA	NA
Calcium	33,568	ND	1,000,000	1,000,000	NA	NA	NA
Chromium	7.7	290	390 n	10,000 n	NA	NA	NA
Copper	2.6	ND	3,100 n	82,000 n	NA	NA	NA
Iron	843	ND	23,000 n	610,000 n	NA	NA	NA
Lead	21.3	500	400	400	NA	NA	NA
Magnesium	381	ND	460,468	460,468	NA	NA	NA
Manganese	10.8	370	1,800 n	47,000 n	NA	NA	NA
Mercury	0.05	23	23 n	610 n	NA	NA	NA
Potassium	210	ND	1,000,000	1,000,000	NA	NA	NA
Silver	1.1	ND	390 n	10,000 n	NA	NA	NA
Sodium	ND	ND	100,000	1,000,000	NA	NA	NA
Vanadium	4.9	490	550 n	14,000 n	NA	NA	NA
Zinc	4.6	23,000	23,000 n	610,000 n	NA	NA	NA
General chemistry, mg/kg							
Total Petroleum Hydrocarbons	ND	ND	ND	ND	NA	NA	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 21

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).
Values indicated are from a residential scenario. Chromium values are for Chromium VI.
[3] RBC = Risk-Based Concentration Table, USEPA Region III, March 1997, 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, and sodium) screening values were derived based on recommended daily allowances (RDAs).
RBC for benzo(g,h,i)perylene and phenanthrene are not available, value is based on pyrene.
RBC for alpha and gamma-chlordane are based on chlordane.

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

TABLE B-2

Summary of Positive Detections in Subsurface Soil

Appendix B

Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Identifier	Background [1]		SCG [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		21B00102	
Sampling Date									5/14/95	
Feet bls									6	
Volatile Organics, ug/kg										
Acetone			ND		7,800,000 n		200,000,000 n		24	
Inorganics, mg/kg										
Aluminum	11,130		ND		78,000 n		1,000,000 n		2,550	
Arsenic	2.0		ND		0.43 c/23 n		3.8 c/610 n		0.62	J
Barium	11.3		ND		5,500		140,000 n		4.5	J
Calcium	321		ND		1,000,000		1,000,000		259	B
Chromium	11.3		ND		390 n		10,000 n		5	
Iron	829		ND		23,000 n		610,000 n		37.9	
Lead	7.0		ND		400		400		12.3	J
Magnesium	38.9		ND		460,468		460,468		21.1	B
Manganese	0.69		ND		1,800 n		47,000 n		0.51	B
Mercury	0.12		ND		23 n		610 n		0.05	B
Vanadium	5.9		ND		550 n		14,000 n		1.7	B
General chemistry, mg/kg										
Total Petroleum Hydrocarbons	ND		ND		ND		ND		45	

Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 21

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). Values indicated are from a residential scenario. Chromium values are for Chromium VI.
[3] RBC = Risk-Based Concentration Table, USEPA Region III, May 1997, 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 pathway
c = carcinogenic pathway
ND = Not determined.
bls = below land surface
USEPA = U.S. Environmental Protection Agency.
ug/kg = micrograms per kilogram.
J = Reported concentration is an estimated quantity.
mg/kg = milligrams per kilogram.
B = Reported concentration is between the instrument detection limit (IDL) and Contract Required Detection Limit (CRDL).
OSWER = Office of Solid Waste and Emergency Response.

Bold/shaded values indicate exceedance of regulatory guidance and background.
All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (ug/kg) soil dry weight.

TABLE B-3

Summary of Positive Detections in Groundwater

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results, Study Area 21

Naval Training Center, Orlando
Orlando, FL

Well ID					OLD-21-01		OLD-21-02		OLD-21-02	
Identifier	Background [1]	FDEPG	FEDMCL	RBC [2] for Tap Water	21G00101		21G00201		21G00201D	
Sampling Date					5/30/95		5/17/95		5/17/95	
Inorganics, ug/L										
Aluminum	4,067	200 [3]	ND	37,000 n	6,800		1,380		1,060	
Antimony	4.1	6 [5]	6	15 n	5.1	B				
Barium	31.4	2,000 [5]	2,000	2,600 n	24	J	16	B	15.3	B
Beryllium	ND	4 [5]	4	0.016 c	0.22	J				
Calcium	36,830	ND	ND	1,000,000	12,300		4,260	B	4,290	B
Chromium	7.8	100 [5]	100	180 n	5.5	B				
Iron	1,227	300 [3]	ND	11,000 n	696		85.8	B	79.4	B
Lead	4.0	15 [5]	15	15	2.1	B				
Magnesium	4,560	ND	ND	118,807	1,220	B	665	B	660	B
Manganese	17	50 [3]	ND	840 n	12.5	B				
Potassium	5,400	ND	ND	297,016	4,080	J	2,490	B	2,360	B
Silver	ND	100 [3]	ND	180 n			2.8	B		
Sodium	18,222	160,000 [5]	ND	396,022	4,780	B	1,300	B	1,370	B
Vanadium	20.6	49 [4]	ND	260 n	11	B				
Zinc	4	5,000 [3]	ND	11,000 n	3.5	B				
General chemistry, mg/L										
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND		3.4		2.3	
Total Suspended Solids	ND	ND	ND	ND	NA		13		8	

Appendix B

Table B-3. Summary of Positive Detections in Groundwater Analytical Results, Study Area 21

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, March 1997, 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] Action level
n = noncarcinogenic pathway
c = carcinogenic pathway
ND = Not determined.
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.
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 LABORATORY ANALYTICAL RESULTS, SOIL AND GROUNDWATER SAMPLES, STUDY AREA 21

C-1: Summary of Surface Soil Analytical Results
C-2: Summary of Subsurface Soil Analytical Results
C-3: Summary of Groundwater Analytical Results

TABLE C-1

Summary of Surface Soil Analytical Results

Appendix C

Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00101		21B00101D		21B00201		21S00301		21S00302		21S00401		21S00501		21S00601			21S00602	
Lab ID	G7562001		G7562002		G7608004		G7316010		C7D140110001		G7316011		G7316012		G7316013		G7316013DL	C7D140110002	
Sampling Date	14-May-95		14-May-95		17-May-95		11-Apr-95		8-Apr-97		11-Apr-95		11-Apr-95		11-Apr-95		11-Apr-95	8-Apr-97	
Volatile organics, ug/kg																			
1,1,1-Trichloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,1,2,2-Tetrachloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,1,2-Trichloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,1-Dichloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,1-Dichloroethene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,2-Dichloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,2-Dichloroethene (total)	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
1,2-Dichloropropane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
2-Butanone	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
2-Hexanone	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
4-Methyl-2-pentanone	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Acetone	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Benzene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Bromodichloromethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Bromoform	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Bromomethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Carbon disulfide	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Carbon tetrachloride	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Chlorobenzene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Chloroethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Chloroform	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Chloromethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
cis-1,3-Dichloropropene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Dibromochloromethane	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Ethylbenzene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Methylene chloride	4	J	13	U	3	J	11	U	NA		11	U	10	U	11	U	NA	NA	
Styrene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Tetrachloroethene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Toluene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
trans-1,3-Dichloropropene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Trichloroethene	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Vinyl chloride	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	
Xylene (total)	11	U	13	U	10	U	11	U	NA		11	U	10	U	11	U	NA	NA	

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Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00101		21B00101D		21B00201		21S00301		21S00302		21S00401		21S00501		21S00601		21S00601		21S00602	
Lab ID	G7562001		G7562002		G7608004		G7316010		C7D140110001		G7316011		G7316012		G7316013		G7316013DL		C7D140110002	
Sampling Date	14-May-95		14-May-95		17-May-95		11-Apr-95		8-Apr-97		11-Apr-95		11-Apr-95		11-Apr-95		11-Apr-95		8-Apr-97	
Semivolatile organics, ug/kg																				
1,2,4-Trichlorobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
1,2-Dichlorobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
1,3-Dichlorobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
1,4-Dichlorobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,2'-oxybis(1-Chloropropane)	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,4,5-Trichlorophenol	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
2,4,6-Trichlorophenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,4-Dichlorophenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,4-Dimethylphenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,4-Dinitrophenol	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
2,4-Dinitrotoluene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2,6-Dinitrotoluene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2-Chloronaphthalene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2-Chlorophenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2-Methylnaphthalene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2-Methylphenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
2-Nitroaniline	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
2-Nitrophenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
3,3'-Dichlorobenzidine	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
3-Nitroaniline	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
4,6-Dinitro-2-methylphenol	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
4-Bromophenyl-phenylether	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
4-Chloro-3-methylphenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
4-Chloroaniline	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
4-Chlorophenyl-phenylether	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
4-Methylphenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
4-Nitroaniline	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
4-Nitrophenol	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
Acenaphthene	350	U	350	U	370	U	370	U	NA		350	U	290	J	370	U	NA		NA	
Acenaphthylene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Anthracene	350	U	350	U	370	U	370	U	NA		350	U	340	J	370	U	NA		NA	
Benzo(a)anthracene	350	U	89	J	370	U	370	U	NA		350	U	1300		370	U	NA		NA	
Benzo(a)pyrene	350	U	350	U	370	U	370	U	NA		350	U	1000		370	U	NA		NA	

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

Sample ID	21B00101		21B00101D		21B00201		21S00301		21S00302		21S00401		21S00501		21S00601		21S00601		21S00602	
Lab ID	G7562001		G7562002		G7608004		G7316010		C7D140110001		G7316011		G7316012		G7316013		G7316013DL		C7D140110002	
Sampling Date	14-May-95		14-May-95		17-May-95		11-Apr-95		8-Apr-97		11-Apr-95		11-Apr-95		11-Apr-95		11-Apr-95		8-Apr-97	
Benzo(b)fluoranthene	350	U	350	U	370	U	370	U	NA		350	U	1300		370	U	NA		NA	
Benzo(g,h,i)perylene	130	J	120	J	370	U	370	U	NA		350	U	480		370	U	NA		NA	
Benzo(k)fluoranthene	350	U	350	U	370	U	370	U	NA		350	U	1100		370	U	NA		NA	
bis(2-Chloroethoxy)methane	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
bis(2-Chloroethyl)ether	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
bis(2-Ethylhexyl)phthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Butylbenzylphthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Carbazole	350	U	350	U	370	U	370	U	NA		350	U	260	J	370	U	NA		NA	
Chrysene	350	U	130	J	370	U	370	U	NA		350	U	1400		370	U	NA		NA	
Di-n-butylphthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Di-n-octylphthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Dibenz(a,h)anthracene	350	U	350	U	370	U	370	U	NA		350	U	150	J	370	U	NA		NA	
Dibenzofuran	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Diethylphthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Dimethylphthalate	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Fluoranthene	100	J	120	J	370	U	370	U	NA		350	U	2500		370	U	NA		NA	
Fluorene	350	U	350	U	370	U	370	U	NA		350	U	230	J	370	U	NA		NA	
Hexachlorobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Hexachlorobutadiene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Hexachlorocyclopentadiene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Hexachloroethane	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Indeno(1,2,3-cd)pyrene	350	U	350	U	370	U	370	U	NA		350	U	530		370	U	NA		NA	
Isophorone	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
N-Nitroso-di-n-propylamine	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
N-Nitrosodiphenylamine (1)	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Naphthalene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Nitrobenzene	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Pentachlorophenol	880	U	880	U	940	U	940	U	NA		890	U	870	U	940	U	NA		NA	
Phenanthrene	350	U	350	U	370	U	370	U	NA		350	U	1800		370	U	NA		NA	
Phenol	350	U	350	U	370	U	370	U	NA		350	U	350	U	370	U	NA		NA	
Pyrene	170	J	170	J	370	U	370	U	NA		350	U	1600		370	U	NA		NA	
Pesticides/PCBs, ug/kg																				
4,4'-DDD	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
4,4'-DDE	17	U	35	U	4.1	U	34	J	NA		1.6	J	34	U	170	E	160	D	NA	

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Table C-1. Summary of Surface Soil Analytical Results
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Naval Training Center, Orlando
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Sample ID	21B00101		21B00101D		21B00201		21S00301		21S00302		21S00401		21S00501		21S00601		21S00601		21S00602	
Lab ID	G7562001		G7562002		G7608004		G7316010		C7D140110001		G7316011		G7316012		G7316013		G7316013DL		C7D140110002	
Sampling Date	14-May-95		14-May-95		17-May-95		11-Apr-95		8-Apr-97		11-Apr-95		11-Apr-95		11-Apr-95		11-Apr-95		8-Apr-97	
4,4'-DDT	17	U	35	U	4.1	U	27	J	NA		3.5	U	34	U	65	E	61	D	NA	
Aldrin	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
alpha-BHC	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
alpha-Chlordane	38		50	J	2.1	U	110		NA		0.89	J	46		6.6		7.1	D	NA	
Aroclor-1016	170	U	350	U	41	U	340	U	NA		35	U	340	U	35	U	180	U	NA	
Aroclor-1221	350	U	710	U	83	U	700	U	NA		71	U	680	U	71	U	360	U	NA	
Aroclor-1232	170	U	350	U	41	U	340	U	NA		35	U	340	U	35	U	180	U	NA	
Aroclor-1242	170	U	350	U	41	U	340	U	NA		35	U	340	U	35	U	180	U	NA	
Aroclor-1248	170	U	350	U	41	U	340	U	NA		35	U	340	U	35	U	180	U	NA	
Aroclor-1254	170	U	350	U	41	U	340	U	NA		35	U	680	U	35	U	180	U	NA	
Aroclor-1260	170	U	350	U	41	U	340	U	NA		35	U	680	U	35	U	180	U	NA	
beta-BHC	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
delta-BHC	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
Dieldrin	15	J	13	J	4.1	U	280		NA		2.1	J	34	U	3.5	U	18	U	NA	
Endosulfan I	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
Endosulfan II	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
Endosulfan sulfate	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
Endrin	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
Endrin aldehyde	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
Endrin ketone	17	U	35	U	4.1	U	34	U	NA		3.5	U	34	U	3.5	U	18	U	NA	
gamma-BHC (Lindane)	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
gamma-Chlordane	44		53	J	2.1	U	79		NA		0.59	J	52	NJ	6.1	J	6.4	D	NA	
Heptachlor	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
Heptachlor epoxide	8.9	U	18	U	2.1	U	18	U	NA		1.8	U	17	U	1.8	U	9	U	NA	
Methoxychlor	89	U	180	U	21	U	180	U	NA		18	U	170	U	18	U	90	U	NA	
Toxaphene	890	U	1800	U	210	U	1800	U	NA		180	U	1700	U	180	U	900	U	NA	
Herbicides, ug/kg																				
2,4,5-T	11	U	11	U	12	U	0.2	U	NA		0.2	U	0.2	U	0.2	U	NA		NA	
2,4,5-TP (Silvex)	11	U	11	U	12	U	0.1	U	NA		0.1	U	0.1	U	0.1	U	NA		NA	
2,4-D	53	U	53	U	62	U	0.5	U	NA		0.5	U	0.5	U	0.5	U	NA		NA	
2,4-DB	53	U	53	U	120	U	NA		NA		NA		NA		NA		NA		NA	
2,4-DP (Dichloroprop)	53	U	53	U	62	U	NA		NA		NA		NA		NA		NA		NA	
Dalapon	110	U	110	U	120	U	NA		NA		NA		NA		NA		NA		NA	
Dicamba	11	U	11	U	12	U	NA		NA		NA		NA		NA		NA		NA	

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Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
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Sample ID	21B00101		21B00101D		21B00201		21S00301		21S00302		21S00401		21S00501		21S00601			21S00602	
Lab ID	G7562001		G7562002		G7608004		G7316010		C7D140110001		G7316011		G7316012		G7316013		G7316013DL	C7D140110002	
Sampling Date	14-May-95		14-May-95		17-May-95		11-Apr-95		8-Apr-97		11-Apr-95		11-Apr-95		11-Apr-95		11-Apr-95	8-Apr-97	
Dinoseb	11	U	11	U	12	U	NA		NA		NA		NA		NA		NA	NA	
MCPA	5300	U	11000	U	6200	U	NA		NA		NA		NA		NA		NA	NA	
MCPP	5300	U	5300	U	6200	U	NA		NA		NA		NA		NA		NA	NA	
Inorganics, mg/kg																			
Aluminum	1080		2250		571		1340	J	NA		504	J	917	J	1450	J	NA	NA	
Antimony	6.3	UJ	7.9	UJ	6.1	UJ	6.1	U	NA		6.2	U	6.1	U	6.3	U	NA	NA	
Arsenic	0.96	B	1.1	J	0.39	U	2.1		2		0.4	U	0.75	B	10		NA	2.1	
Barium	6.3	J	38.2	J	1.3	J	3.2	J	NA		8	J	5.6	J	8	J	NA	NA	
Beryllium	0.02	UJ	0.25	B	0.02	UJ	0.03	B	NA		0.04	B	0.02	U	0.02	U	NA	NA	
Cadmium	0.91	B	1.2	B	0.64	U	0.64	U	NA		0.65	U	0.64	U	0.66	U	NA	NA	
Calcium	10000		70300		114	B	2490	J	NA		1890	J	7880	J	7000	J	NA	NA	
Chromium	3.8		4.5		1.3	B	4.1	J	NA		1.4	J	4	J	3	J	NA	NA	
Cobalt	0.62	U	0.77	U	0.6	U	0.6	U	NA		0.61	U	0.6	U	0.62	U	NA	NA	
Copper	6		3.9	B	0.72	U	5.6		NA		1.3	B	5.2	B	3	B	NA	NA	
Iron	864		1400		46.6		257	J	NA		81.5	U	648	J	159	J	NA	NA	
Lead	23.7	J	25.4	J	2.1	J	6.7		NA		1.5	J	10.2		9.9	J	NA	NA	
Magnesium	208	B	1660		17.8	B	75.9	J	NA		323	J	188	J	142	J	NA	NA	
Manganese	10.4		75.2		0.51	B	6.7	J	NA		8.1	J	10.2	J	3.4	J	NA	NA	
Mercury	0.06		0.05	B	0.04	B	0.04		NA		0.02	U	0.11		0.04		NA	NA	
Nickel	3	U	3.8	U	2.9	U	2.9	U	NA		3	U	2.9	U	3	U	NA	NA	
Potassium	94.2	U	407	B	92	U	91.5	U	NA		92.9	U	92.1	U	95	U	NA	NA	
Selenium	0.49	U	0.61	UJ	0.48	U	0.47	U	NA		0.48	U	0.48	U	0.49	U	NA	NA	
Silver	1.9	B	0.8	B	0.54	U	0.57	U	NA		0.54	U	0.54	U	0.56	U	NA	NA	
Sodium	7.6	B	75.7	B	3.5	U	6.6	B	NA		4.8	B	3.5	U	4.5	B	NA	NA	
Thallium	0.38	U	0.48	U	0.38	U	0.37	U	NA		0.38	U	0.38	U	0.39	U	NA	NA	
Vanadium	2.7	B	3.8	B	0.68	B	0.52	U	NA		0.52	U	1.6	B	1.5	B	NA	NA	
Zinc	21.6		18		1.7	B	6.5	J	NA		4.4	J	33	J	5.6	J	NA	NA	
General Chemistry, mg/kg																			
Total Petroleum Hydrocarbons	39.2		35.7		NA		46.1		NA		37.2		41.9		48.8		NA	NA	

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Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
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Sample ID	21S00701		21S00702	21S00801		21S00802	21S00502	21S00901	21S01001	21S01101
Lab ID	G7316014	G7316014DL	C7D140110003	G7316015		C7D140110004	RD694001	RD694002	RD694003	RD694004
Sampling Date	11-Apr-95	11-Apr-95	8-Apr-97	11-Apr-95		8-Apr-97	7/2/97	7/2/97	7/2/97	7/2/97
Volatile organics, ug/kg										
1,1,1-Trichloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,1-Dichloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,1-Dichloroethene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,2-Dichloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
1,2-Dichloropropane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
2-Butanone	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
2-Hexanone	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Acetone	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Benzene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Bromodichloromethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Bromoform	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Bromomethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Carbon disulfide	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Carbon tetrachloride	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Chlorobenzene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Chloroethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Chloroform	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Chloromethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Dibromochloromethane	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Ethylbenzene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Methylene chloride	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Styrene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Tetrachloroethene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Toluene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Trichloroethene	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Vinyl chloride	10 U	NA	NA	11	U	NA	NA	NA	NA	NA
Xylene (total)	10 U	NA	NA	11	U	NA	NA	NA	NA	NA

Appendix C

Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21S00701		21S00702	21S00801	21S00802	21S00502	21S00901	21S01001	21S01101
Lab ID	G7316014	G7316014DL	C7D140110003	G7316015	C7D140110004	RD694001	RD694002	RD694003	RD694004
Sampling Date	11-Apr-95	11-Apr-95	8-Apr-97	11-Apr-95	8-Apr-97	7/2/97	7/2/97	7/2/97	7/2/97
Semivolatile organics, ug/kg									
1,2,4-Trichlorobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,2'-oxybis(1-Chloropropane)	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,4-Dichlorophenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,4-Dimethylphenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,4-Dinitrophenol	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2-Chloronaphthalene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2-Chlorophenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2-Methylnaphthalene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2-Methylphenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
2-Nitroaniline	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
2-Nitrophenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
3-Nitroaniline	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
4-Chloroaniline	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
4-Methylphenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
4-Nitroaniline	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
4-Nitrophenol	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
Acenaphthene	350 U	NA	NA	350 U	NA	720 U	74 U	970	73 U
Acenaphthylene	350 U	NA	NA	350 U	NA	720 U	74 U	720 U	73 U
Anthracene	350 U	NA	NA	350 U	NA	72 U	7.4 U	460	7.3 U
Benzo(a)anthracene	350 U	NA	NA	350 U	NA	100	7.4 U	140	7.3 U
Benzo(a)pyrene	350 U	NA	NA	350 U	NA	150	7.3	160	5.3

Appendix C

Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21S00701		21S00702	21S00801	21S00802	21S00502	21S00901	21S01001	21S01101
Lab ID	G7316014	G7316014DL	C7D140110003	G7316015	C7D140110004	RD694001	RD694002	RD694003	RD694004
Sampling Date	11-Apr-95	11-Apr-95	8-Apr-97	11-Apr-95	8-Apr-97	7/2/97	7/2/97	7/2/97	7/2/97
Benzo(b)fluoranthene	350 U	NA	NA	350 U	NA	230	12	220	7.1
Benzo(g,h,i)perylene	350 U	NA	NA	350 U	NA	120	9	120	7.3 U
Benzo(k)fluoranthene	350 U	NA	NA	350 U	NA	70	4	78	3.6 U
bis(2-Chloroethoxy)methane	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Butylbenzylphthalate	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Carbazole	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Chrysene	350 U	NA	NA	350 U	NA	720 U	74 U	720 U	73 U
Di-n-butylphthalate	440	NA	NA	350 U	NA	NA	NA	NA	NA
Di-n-octylphthalate	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	350 U	NA	NA	350 U	NA	72 U	7.4 U	72 U	7.3 U
Dibenzofuran	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Diethylphthalate	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Dimethylphthalate	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Fluoranthene	350 U	NA	NA	350 U	NA	250	11	280	7.3 U
Fluorene	350 U	NA	NA	350 U	NA	360 U	37 U	470	36 U
Hexachlorobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Hexachlorobutadiene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Hexachloroethane	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	350 U	NA	NA	350 U	NA	140	7.4	140	7.3 U
Isophorone	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine (1)	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Naphthalene	350 U	NA	NA	350 U	NA	720 U	74 U	720 U	73 U
Nitrobenzene	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Pentachlorophenol	870 U	NA	NA	890 U	NA	NA	NA	NA	NA
Phenanthrene	350 U	NA	NA	350 U	NA	360 U	37 U	600	36 U
Phenol	350 U	NA	NA	350 U	NA	NA	NA	NA	NA
Pyrene	350 U	NA	NA	350 U	NA	720 U	74 U	720 U	73 U
Pesticides/PCBs, ug/kg									
4,4'-DDD	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
4,4'-DDE	4.4	17 U	NA	42	NA	NA	NA	NA	NA

Appendix C

Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21S00701		21S00702	21S00801	21S00802	21S00502	21S00901	21S01001	21S01101
Lab ID	G7316014	G7316014DL	C7D140110003	G7316015	C7D140110004	RD694001	RD694002	RD694003	RD694004
Sampling Date	11-Apr-95	11-Apr-95	8-Apr-97	11-Apr-95	8-Apr-97	7/2/97	7/2/97	7/2/97	7/2/97
4,4'-DDT	3.4 U	17 U	NA	41	NA	NA	NA	NA	NA
Aldrin	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
alpha-BHC	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
alpha-Chlordane	34 E	36 D	NA	4.9 J	NA	NA	NA	NA	NA
Aroclor-1016	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
Aroclor-1221	70 U	350 U	NA	180 U	NA	NA	NA	NA	NA
Aroclor-1232	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
Aroclor-1242	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
Aroclor-1248	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
Aroclor-1254	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
Aroclor-1260	34 U	170 U	NA	88 U	NA	NA	NA	NA	NA
beta-BHC	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
delta-BHC	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
Dieldrin	8.6	13 D	NA	8.8 U	NA	NA	NA	NA	NA
Endosulfan I	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
Endosulfan II	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
Endosulfan sulfate	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
Endrin	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
Endrin aldehyde	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
Endrin ketone	3.4 U	17 U	NA	8.8 U	NA	NA	NA	NA	NA
gamma-BHC (Lindane)	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
gamma-Chlordane	35 E	37 D	NA	2.6 J	NA	NA	NA	NA	NA
Heptachlor	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
Heptachlor epoxide	1.8 U	8.9 U	NA	4.5 U	NA	NA	NA	NA	NA
Methoxychlor	18 U	89 U	NA	45 U	NA	NA	NA	NA	NA
Toxaphene	180 U	890 U	NA	450 U	NA	NA	NA	NA	NA
Herbicides, ug/kg									
2,4,5-T	0.2 U	NA	NA	0.2 U	NA	NA	NA	NA	NA
2,4,5-TP (Silvex)	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	NA
2,4-D	0.5 U	NA	NA	0.5 U	NA	NA	NA	NA	NA
2,4-DB	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DP (Dichloroprop)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dalapon	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dicamba	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix C

Table C-1. Summary of Surface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21S00701		21S00702	21S00801	21S00802	21S00502	21S00901	21S01001	21S01101
Lab ID	G7316014	G7316014DL	C7D140110003	G7316015	C7D140110004	RD694001	RD694002	RD694003	RD694004
Sampling Date	11-Apr-95	11-Apr-95	8-Apr-97	11-Apr-95	8-Apr-97	7/2/97	7/2/97	7/2/97	7/2/97
Dinoseb	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MCPP	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics, mg/kg									
Aluminum	1040 J	NA	NA	4290 J	NA	NA	NA	NA	NA
Antimony	6.2 U	NA	NA	6.3 U	NA	NA	NA	NA	NA
Arsenic	2.3	NA	1.5	2 B	1.5	NA	NA	NA	NA
Barium	20.8 J	NA	NA	21.1 J	NA	NA	NA	NA	NA
Beryllium	0.02 U	NA	NA	0.08 B	NA	NA	NA	NA	NA
Cadmium	2.1	NA	NA	0.66 U	NA	NA	NA	NA	NA
Calcium	2030 J	NA	NA	2110 J	NA	NA	NA	NA	NA
Chromium	2.6 J	NA	NA	7 J	NA	NA	NA	NA	NA
Cobalt	0.61 U	NA	NA	0.61 U	NA	NA	NA	NA	NA
Copper	50.3	NA	NA	2.8 B	NA	NA	NA	NA	NA
Iron	647 J	NA	NA	2470 J	NA	NA	NA	NA	NA
Lead	9	NA	NA	18	NA	NA	NA	NA	NA
Magnesium	195 J	NA	NA	162 J	NA	NA	NA	NA	NA
Manganese	5.5 J	NA	NA	30 J	NA	NA	NA	NA	NA
Mercury	0.11	NA	NA	0.07	NA	NA	NA	NA	NA
Nickel	3 U	NA	NA	3 U	NA	NA	NA	NA	NA
Potassium	93.5 U	NA	NA	150 B	NA	NA	NA	NA	NA
Selenium	0.48 U	NA	NA	0.48 U	NA	NA	NA	NA	NA
Silver	0.55 U	NA	NA	0.94 U	NA	NA	NA	NA	NA
Sodium	3.6 U	NA	NA	17 B	NA	NA	NA	NA	NA
Thallium	0.38 U	NA	NA	0.38 U	NA	NA	NA	NA	NA
Vanadium	1.4 B	NA	NA	7 B	NA	NA	NA	NA	NA
Zinc	26.8 J	NA	NA	29.4 J	NA	NA	NA	NA	NA
General Chemistry, mg/kg									
Total Petroleum Hydrocarbons	152	NA	NA	23.6	NA	NA	NA	NA	NA

TABLE C-2

Summary of Subsurface Soil Analytical Results

Appendix C

Table C-2. Summary of Subsurface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00102	
Lab ID	G7562003	
Sampling Date	14-May-95	
Volatile organics, ug/kg		
1,1,1-Trichloroethane	12	U
1,1,2,2-Tetrachloroethane	12	U
1,1,2-Trichloroethane	12	U
1,1-Dichloroethane	12	U
1,1-Dichloroethene	12	U
1,2-Dichloroethane	12	U
1,2-Dichloroethene (total)	12	U
1,2-Dichloropropane	12	U
2-Butanone	12	U
2-Hexanone	12	U
4-Methyl-2-pentanone	12	U
Acetone	24	
Benzene	12	U
Bromodichloromethane	12	U
Bromoform	12	U
Bromomethane	12	U
Carbon disulfide	12	U
Carbon tetrachloride	12	U
Chlorobenzene	12	U
Chloroethane	12	U
Chloroform	12	U
Chloromethane	12	U
cis-1,3-Dichloropropene	12	U
Dibromochloromethane	12	U
Ethylbenzene	12	U
Methylene chloride	12	U
Styrene	12	U
Tetrachloroethene	12	U
Toluene	12	U
trans-1,3-Dichloropropene	12	U
Trichloroethene	12	U
Vinyl chloride	12	U
Xylene (total)	12	U
Semivolatile organics, ug/kg		
1,2,4-Trichlorobenzene	420	U
1,2-Dichlorobenzene	420	U
1,3-Dichlorobenzene	420	U
1,4-Dichlorobenzene	420	U
2,2'-oxybis(1-Chloropropane)	420	U
2,4,5-Trichlorophenol	1000	U
2,4,6-Trichlorophenol	420	U
2,4-Dichlorophenol	420	U
2,4-Dimethylphenol	420	U
2,4-Dinitrophenol	1000	U
2,4-Dinitrotoluene	420	U
2,6-Dinitrotoluene	420	U
2-Chloronaphthalene	420	U
2-Chlorophenol	420	U
2-Methylnaphthalene	420	U
2-Methylphenol	420	U

Appendix C

Table C-2. Summary of Subsurface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00102	
Lab ID	G7562003	
Sampling Date	14-May-95	
2-Nitroaniline	1000	U
2-Nitrophenol	420	U
3,3'-Dichlorobenzidine	420	U
3-Nitroaniline	1000	U
4,6-Dinitro-2-methylphenol	1000	U
4-Bromophenyl-phenylether	420	U
4-Chloro-3-methylphenol	420	U
4-Chloroaniline	420	U
4-Chlorophenyl-phenylether	420	U
4-Methylphenol	420	U
4-Nitroaniline	1000	U
4-Nitrophenol	1000	U
Acenaphthene	420	U
Acenaphthylene	420	U
Anthracene	420	U
Benzo(a)anthracene	420	U
Benzo(a)pyrene	420	U
Benzo(b)fluoranthene	420	U
Benzo(g,h,i)perylene	420	U
Benzo(k)fluoranthene	420	U
bis(2-Chloroethoxy)methane	420	U
bis(2-Chloroethyl)ether	420	U
bis(2-Ethylhexyl)phthalate	420	U
Butylbenzylphthalate	420	U
Carbazole	420	U
Chrysene	420	U
Di-n-butylphthalate	420	U
Di-n-octylphthalate	420	U
Dibenz(a,h)anthracene	420	U
Dibenzofuran	420	U
Diethylphthalate	420	U
Dimethylphthalate	420	U
Fluoranthene	420	U
Fluorene	420	U
Hexachlorobenzene	420	U
Hexachlorobutadiene	420	U
Hexachlorocyclopentadiene	420	U
Hexachloroethane	420	U
Indeno(1,2,3-cd)pyrene	420	U
Isophorone	420	U
N-Nitroso-di-n-propylamine	420	U
N-Nitrosodiphenylamine (1)	420	U
Naphthalene	420	U
Nitrobenzene	420	U
Pentachlorophenol	1000	U
Phenanthrene	420	U
Phenol	420	U
Pyrene	420	U

Appendix C

Table C-2. Summary of Subsurface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00102	
Lab ID	G7562003	
Sampling Date	14-May-95	
Pesticides/PCBs, ug/kg		
4,4'-DDD	4.6	U
4,4'-DDE	4.6	U
4,4'-DDT	4.6	U
Aldrin	2.4	U
alpha-BHC	2.4	U
alpha-Chlordane	2.4	U
Aroclor-1016	46	U
Aroclor-1221	94	U
Aroclor-1232	46	U
Aroclor-1242	46	U
Aroclor-1248	46	U
Aroclor-1254	46	U
Aroclor-1260	46	U
beta-BHC	2.4	U
delta-BHC	2.4	U
Dieldrin	4.6	U
Endosulfan I	2.4	U
Endosulfan II	4.6	U
Endosulfan sulfate	4.6	U
Endrin	4.6	U
Endrin aldehyde	4.6	U
Endrin ketone	4.6	U
gamma-BHC (Lindane)	2.4	U
gamma-Chlordane	2.4	U
Heptachlor	2.4	U
Heptachlor epoxide	2.4	U
Methoxychlor	24	U
Toxaphene	240	U
Herbicides, ug/kg		
2,4,5-T	14	U
2,4,5-TP (Silvex)	14	U
2,4-D	70	U
2,4-DB	140	U
2,4-DP (Dichloroprop)	70	U
Dalapon	140	U
Dicamba	14	U
Dinoseb	28	U
MCPA	7000	U
MCPP	7000	U

Appendix C

Table C-2. Summary of Subsurface Soil Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21B00102	
Lab ID	G7562003	
Sampling Date	14-May-95	
Inorganics, mg/kg		
Aluminum	2550	
Antimony	7.3	UJ
Arsenic	0.62	J
Barium	4.5	J
Beryllium	0.02	UJ
Cadmium	0.77	U
Calcium	259	B
Chromium	5	
Cobalt	0.72	U
Copper	0.44	U
Iron	37.9	
Lead	12.3	J
Magnesium	21.1	B
Manganese	0.51	B
Mercury	0.05	B
Nickel	3.5	U
Potassium	110	U
Selenium	0.57	U
Silver	0.65	U
Sodium	4.2	U
Thallium	0.45	U
Vanadium	1.7	B
Zinc	0.7	U
General Chemistry, mg/kg		
Total Petroleum Hydrocarbons	45	

TABLE C-3

Summary of Groundwater Analytical Results

Appendix C

Table C-3. Summary of Groundwater Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21G00101		21G00201		21G00201D	
Lab ID	G7705005		G7607001		G7607002	
Sampling Date	30-May-95		17-May-95		17-May-95	
Volatile organics, ug/L						
1,1,1-Trichloroethane	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	1	U	1	U	1	U
1,1,2-Trichloroethane	1	U	1	U	1	U
1,1-Dichloroethane	1	U	1	U	1	U
1,1-Dichloroethene	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	1	U	1	U	1	U
1,2-Dibromoethane	1	U	1	U	1	U
1,2-Dichloroethane	1	U	1	U	1	U
1,2-Dichloropropane	1	U	1	U	1	U
2-Butanone	5	U	5	UR	5	UR
2-Hexanone	5	U	5	U	5	U
4-Methyl-2-pentanone	5	U	5	U	5	U
Acetone	15	U	5	UR	5	UR
Benzene	1	U	1	U	1	U
Bromochloromethane	1	U	1	U	1	U
Bromodichloromethane	1	U	1	U	1	U
Bromoform	1	U	1	U	1	U
Bromomethane	1	U	1	U	1	U
Carbon disulfide	1	U	1	U	1	U
Carbon tetrachloride	1	U	1	U	1	U
Chlorobenzene	1	U	1	U	1	U
Chloroethane	1	U	1	U	1	U
Chloroform	1	U	1	U	1	U
Chloromethane	1	U	1	U	1	U
cis-1,2-Dichloroethene	1	U	1	U	1	U
cis-1,3-Dichloropropene	1	U	1	U	1	U
Dibromochloromethane	1	U	1	U	1	U
Ethylbenzene	1	U	1	U	1	U
Methylene chloride	2	U	2	UJ	2	UJ
Styrene	1	U	1	U	1	U
Tetrachloroethene	1	U	1	U	1	U
Toluene	1	U	1	U	1	U
trans-1,2-Dichloroethene	1	U	1	U	1	U
trans-1,3-Dichloropropene	1	U	1	U	1	U
Trichloroethene	1	U	1	U	1	U
Vinyl chloride	1	U	1	U	1	U
Xylene (total)	1	U	1	U	1	U
Semivolatile organics, ug/L						
1,2,4-Trichlorobenzene	10	U	10	U	10	U
1,2-Dichlorobenzene	1	U	1	U	1	U
1,3-Dichlorobenzene	1	U	1	U	1	U
1,4-Dichlorobenzene	1	U	1	U	1	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U	25	U
2,4,6-Trichlorophenol	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U
2,4-Dinitrophenol	25	UJ	25	UJ	25	U
2,4-Dinitrotoluene	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U

Appendix C

Table C-3. Summary of Groundwater Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21G00101		21G00201		21G00201D	
Lab ID	G7705005		G7607001		G7607002	
Sampling Date	30-May-95		17-May-95		17-May-95	
2-Chloronaphthalene	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U
2-Nitroaniline	25	U	25	U	25	U
2-Nitrophenol	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U
3-Nitroaniline	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U	25	U
4-Bromophenyl-phenylether	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U
4-Nitroaniline	25	U	25	U	25	U
4-Nitrophenol	25	U	25	U	25	U
Acenaphthene	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U
Benzo(a)pyrene	0.2	U	0.2	U	0.2	U
Benzo(b)fluoranthene	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U
bis(2-Chloroethoxy)methane	10	U	10	U	10	U
bis(2-Chloroethyl)ether	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	1	U	1	U	1	U
Butylbenzylphthalate	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U
Di-n-butylphthalate	10	U	10	U	10	U
Di-n-octylphthalate	10	U	10	U	10	U
Dibenz(a,h)anthracene	10	U	10	U	10	U
Dibenzofuran	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U
Dimethylphthalate	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U
Hexachlorobenzene	1	U	1	U	1	U
Hexachlorobutadiene	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U
Pentachlorophenol	1	U	1	U	1	U
Phenanthrene	10	U	10	U	10	U
Phenol	10	U	10	U	10	U

Appendix C

Table C-3. Summary of Groundwater Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21G00101		21G00201		21G00201D	
Lab ID	G7705005		G7607001		G7607002	
Sampling Date	30-May-95		17-May-95		17-May-95	
Pyrene	10	U	10	U	10	U
Pesticides/PCBs, ug/L						
4,4'-DDD	0.1	UJ	0.1	UJ	0.1	UJ
4,4'-DDE	0.1	UJ	0.1	UJ	0.1	UJ
4,4'-DDT	0.1	UJ	0.1	UJ	0.1	UJ
Aldrin	0.05	UJ	0.05	UJ	0.05	UJ
alpha-BHC	0.05	UJ	0.05	UJ	0.05	UJ
alpha-Chlordane	0.05	UJ	0.05	UJ	0.05	UJ
Aroclor-1016	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1221	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1232	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1242	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1248	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1254	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1260	0.5	UJ	0.5	UJ	0.5	UJ
beta-BHC	0.05	UJ	0.05	UJ	0.05	UJ
delta-BHC	0.05	UJ	0.05	UJ	0.05	UJ
Dieldrin	0.1	UJ	0.1	UJ	0.1	UJ
Endosulfan I	0.05	UJ	0.05	UJ	0.05	UJ
Endosulfan II	0.1	UJ	0.1	UJ	0.1	UJ
Endosulfan sulfate	0.1	UJ	0.1	UJ	0.1	UJ
Endrin	0.1	UJ	0.1	UJ	0.1	UJ
Endrin aldehyde	0.1	UJ	0.1	UJ	0.1	UJ
Endrin ketone	0.1	UJ	0.1	UJ	0.1	UJ
gamma-BHC (Lindane)	0.05	UJ	0.05	UJ	0.05	UJ
gamma-Chlordane	0.05	UJ	0.05	UJ	0.05	UJ
Heptachlor	0.05	UJ	0.05	UJ	0.05	UJ
Heptachlor epoxide	0.05	UJ	0.05	UJ	0.05	UJ
Methoxychlor	0.5	UJ	0.5	UJ	0.5	UJ
Toxaphene	5	UJ	5	UJ	5	UJ
Herbicides, ug/L						
2,4,5-T	0.5	U	2	U	2	U
2,4,5-TP (Silvex)	0.5	U	1.7	U	1.7	U
2,4-D	2.5	U	12	U	12	U
2,4-DB	2.5	U	9.1	U	9.1	U
Dalapon	5	U	58	U	58	U
Dicamba	0.5	U	2.7	U	2.7	U
Dichlorprop	2.5	U	6.5	U	6.5	U
Dinoseb	0.5	U	0.7	U	0.7	U
MCPA	250	U	2500	U	2500	U
MCPP	250	U	2000	U	2000	U
Inorganics, ug/L						
Aluminum	6800		1380		1060	
Antimony	5.1	B	2.5	U	2.5	U
Arsenic	1.9	UJ	1.9	U	1.9	U
Barium	24	J	16	B	15.3	B
Beryllium	0.22	J	0.1	U	0.1	U
Cadmium	3.1	U	3.1	U	3.1	U
Calcium	12300		4260	B	4290	B
Chromium	5.5	B	4.8	U	5.3	U
Cobalt	2.9	UJ	2.9	U	2.9	U

Appendix C

Table C-3. Summary of Groundwater Analytical Results
Study Area 21

Naval Training Center, Orlando
Orlando, FL

Sample ID	21G00101		21G00201		21G00201D	
Lab ID	G7705005		G7607001		G7607002	
Sampling Date	30-May-95		17-May-95		17-May-95	
Copper	4.1	U	1.4	U	1.4	U
Iron	696		85.8	B	79.4	B
Lead	2.1	B	1.5	U	1.5	U
Magnesium	1220	B	665	B	660	B
Manganese	12.5	B	3.5	U	3.9	U
Mercury	0.12	U	0.12	U	0.12	U
Nickel	14.2	U	14.2	U	14.2	U
Potassium	4080	J	2490	B	2360	B
Selenium	2.3	U	2.3	U	2.3	UJ
Silver	2.6	U	2.8	B	2.6	U
Sodium	4780	B	1300	B	1370	B
Thallium	1.8	U	1.8	U	1.8	U
Vanadium	11	B	2.5	U	4.3	U
Zinc	3.5	B	3	U	3	U
General Chemistry, mg/L						
Total Petroleum Hydrocarbons	1	U	3.4		2.3	
Total Suspended Solids	NA		13		8	

Notes for Analytical Results Tables
Study Area 21

Naval Training Center, Orlando
Orlando Florida

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

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.