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FINAL BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING
REPORT STUDY AREA 11 NTC ORLANDO FL
7/1/1996
ABB ENVIRONMENTAL

**BASE REALIGNMENT AND CLOSURE
ENVIRONMENTAL SITE-SCREENING REPORT**

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STUDY AREA 11

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

Unit Identification Code: N65928

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

Prepared by:

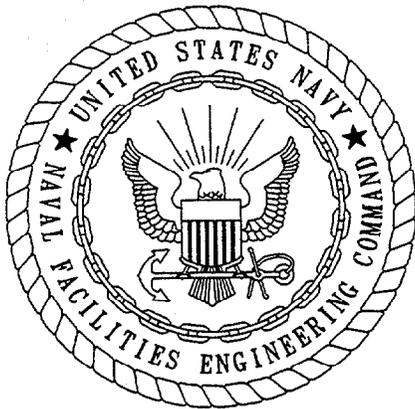
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July 1996



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: July 17, 1996

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

NAME AND TITLE OF CERTIFYING OFFICIAL: Mark Salvetti
Project Technical Lead

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
bls	below land surface
BRAC	Base Realignment and Closure
FID	flame ionization detector
mg/kg	milligrams per kilogram
NTC	Naval Training Center
OPT	Orlando Partnering Team

1.0 STUDY AREA 11, STORAGE WAREHOUSE, AREA C, BUILDING 148

This report contains information gathered as a result of site-screening activities conducted at Study Area 11. In the fall of 1995, after the review of site-screening results, the Orlando Partnering Team (OPT) determined that no further action was required at Study Area 11 and that the parcel was transferrable under the provisions of a Finding of Suitability to Lease or Finding of Suitability to Transfer, with the understanding that an abandoned 55-gallon drum containing paint residue in the brush near the northwest corner of Building 148 be removed and disposed of properly.

1.1 STUDY AREA 11, BACKGROUND AND CONDITIONS. Building 148, at Study Area 11, was the Cold Storage Warehouse for galley operations at Naval Training Center (NTC), Orlando. The facility is located at the end of Seabee Street in the western part of Area C (Figure 1). Building 148 is a one-story, 7,000-square-foot concrete block structure with a flat roof. The building was constructed in 1942 by the Air Force on previously undeveloped land. Lake Druid is approximately 200 feet north of the facility. A brush-covered slope extends north from the building toward the lake.

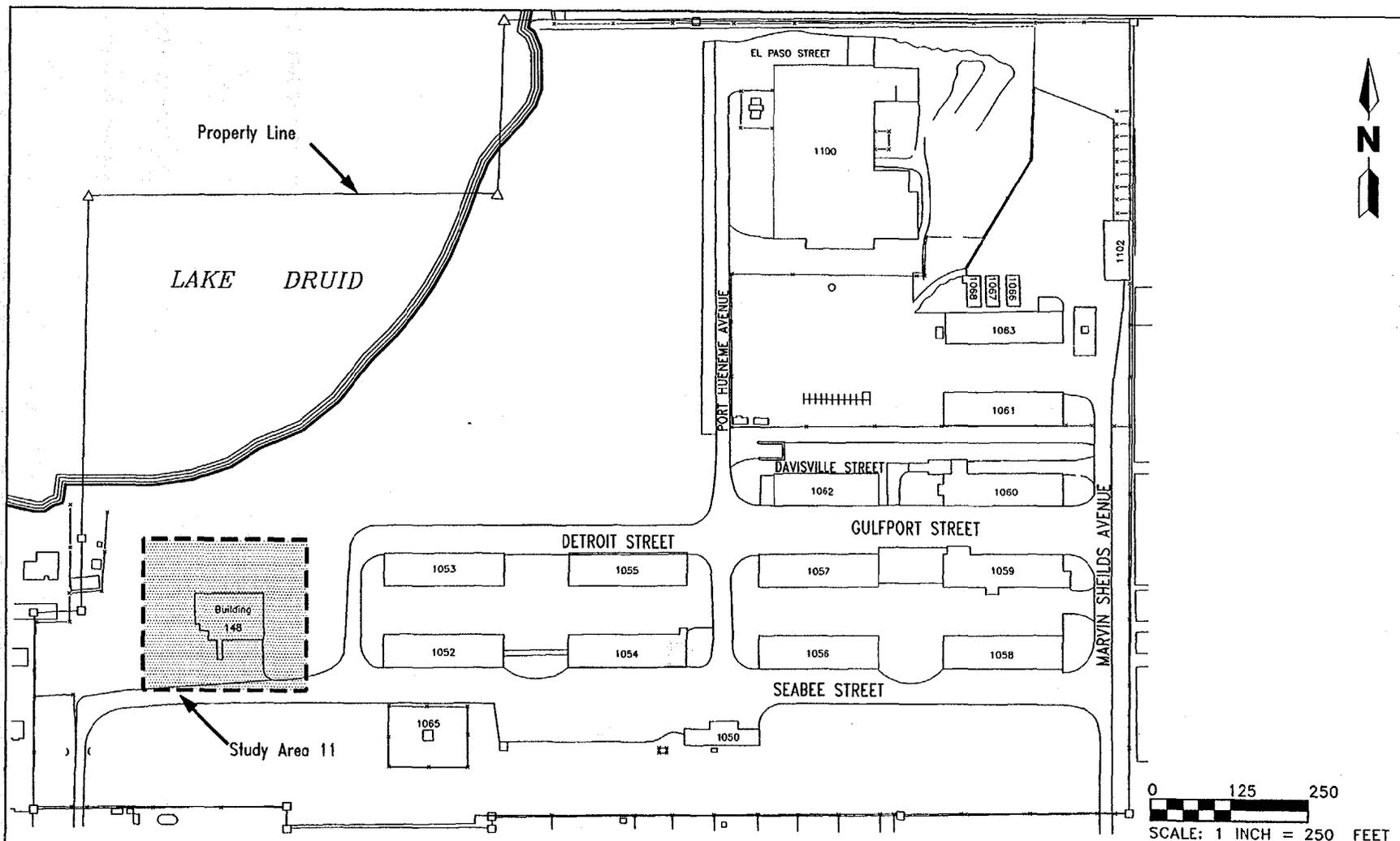
At the time of the Environmental Baseline Survey (ABB Environmental Services, Inc. [ABB-ES], 1994a), the facility stored and distributed all of the frozen or chilled food used by the galleys at NTC, Orlando. The building has served as a cold storage facility since 1969. From 1942 to 1969, the facility was used by the Air Force for supply storage of paints, oils, and photographic supplies.

An emergency generator system was located next to the northeast corner of the building (Figure 2). The system included a pad-mounted generator unit and a 100-gallon aboveground storage tank (AST) containing fuel oil. The emergency generator system, including the AST, has since been removed, leaving only the concrete pad.

Two potential areas of environmental concern are associated with this facility. A small area of oil-stained soil and stressed vegetation was observed at the north and south ends of the generator pad. A Tank Closure Assessment Report was completed under the Tank Management Plan (ABB-ES, 1994b) on January 4, 1996, with a recommendation for no further assessment. The Contamination Assessment Report was approved by the Florida Department of Environmental Protection on March 12, 1996.

The second area of concern is an abandoned 55-gallon drum containing dried paint residue, lying on its side in the brush directly north of the northwest corner of Building 148 (Figure 2).

1.2 STUDY AREA 11, INVESTIGATION SUMMARY. This site-screening program was performed to evaluate whether substances spilled or leached from the abandoned drum have resulted in surface soil, subsurface soil, or groundwater contamination. During field investigations, the drum was noted as uncovered and severely corroded, with no discernable product description or identification code. A hand-augered soil boring was advanced adjacent to and on the downslope side of the abandoned drum. The soil boring was terminated at a depth of approximately



**FIGURE 1
LOCATION OF STUDY AREA 11
AREA C**



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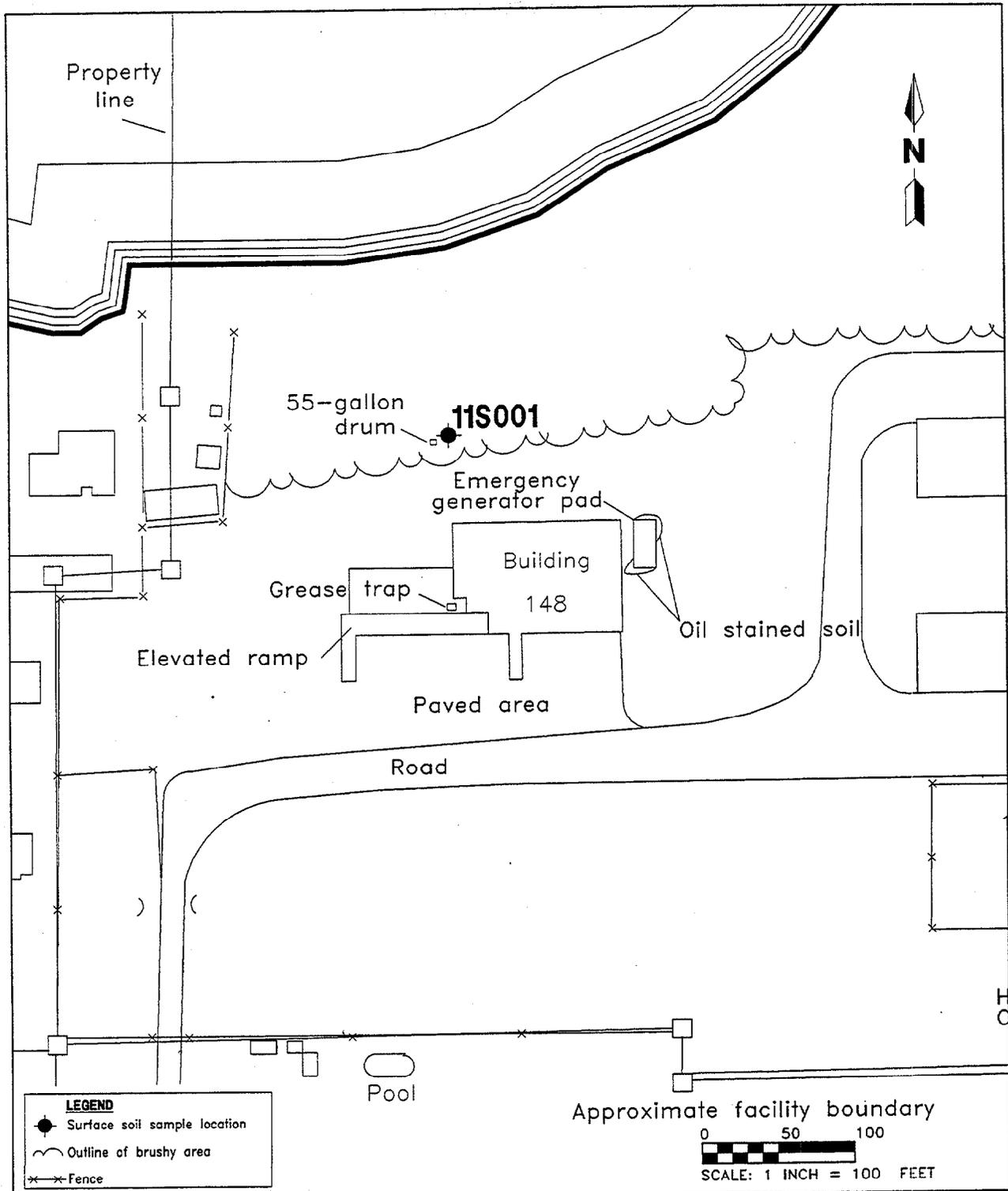


FIGURE 2
SURFACE SOIL SAMPLE LOCATION
BUILDING 148, COLD STORAGE WAREHOUSE
AREA C, STUDY AREA 11



**BASE REALIGNMENT AND
 CLOSURE ENVIRONMENTAL SITE
 SCREENING REPORT**

**NAVAL TRAINING CENTER
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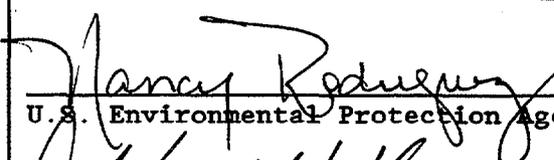
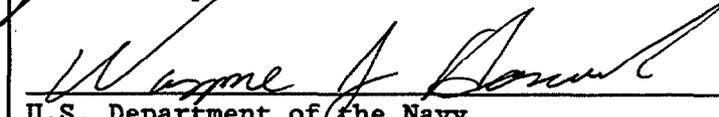
4 feet below land surface (bls). Soil cuttings from the boring were continuously screened for volatile organic compounds with a flame ionization detector (FID). One surface soil sample, 11B00101, was collected from the soil boring at a depth of zero to 1 foot bls. No FID deflections, odors, stained soils, or other indications of contamination were observed in the excavated soil profile; therefore, no additional samples were collected for laboratory analysis. The single sample was submitted for full suite Contract Laboratory program target compound list and target analyte list analysis in accordance with U.S. Environmental Protection Agency Level IV data quality objectives.

1.3 STUDY AREA 11, RESULTS. A summary of positive detections in soil is presented in Appendix A. A complete set of soil analytical results is presented in Appendix B.

The concentration of aluminum in soil (2,710 milligrams per kilogram [mg/kg]), was slightly above the background screening level of 2,088 mg/kg, but well below the respective Florida soil cleanup goal and residential risk-based concentration values. Remaining results for the surface soil sample collected in the vicinity of the abandoned drum did not indicate concentrations of any other inorganics above the background screening levels. No organic compounds were detected in the soil sample.

1.4 STUDY AREA 11, CONCLUSIONS AND RECOMMENDATIONS. Based upon field observations and measurements and results of analytical tests on soil, it is unlikely that soil or groundwater at Study Area 11 have been affected by contaminants from the abandoned drum. The drum and its contents will be removed and disposed of by NTC, Orlando personnel. ABB-ES recommends a reclassification of the Study Area 11 from 7/Gray to 2/Blue and a finding of suitability to transfer.

The undersigned members of the OPT concur with the findings of the preceding investigation.

<u>STUDY AREA 11</u>	
 _____ U.S. Environmental Protection Agency, Region IV	<u>7/24/96</u> _____ Date
 _____ Florida Department of Environmental Protection	<u>7/24/96</u> _____ Date
 _____ U.S. Department of the Navy	<u>7/24/96</u> _____ Date

REFERENCES

ABB Environmental Services, Inc. (ABB-ES), 1994a, Final Draft Environmental Baseline Survey (EBS) Report, NTC, Orlando, Florida: prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), Charleston, South Carolina.

ABB-ES, 1994b, NTC, Orlando Tank Management Plan: prepared for SOUTHNAVFACENGCOM, Charleston, South Carolina, January.

APPENDIX A

SUMMARY OF DETECTIONS IN SOIL ANALYTICAL RESULTS

**Table A-1
Summary of Detections in Surface Soil
Analytical Results, Study Area 11**

BRAC Environmental Site-Screening Report
Naval Training Center
Orlando, Florida

Lab Identifier:	Background ¹ Screening	SCG ²	RBC ³ for Residential Soil	11S00101
Collection Date:				02/25/95
Inorganic Analytes (mg/kg)				
Aluminum	2,088	75,000	78,000 n	2,710
Arsenic	1.0	0.8	0.43 c/23 n	0.78 B
Barium	8.7	5,200	5,500	6.1 B
Calcium	25,295	ND	1,000,000	420 B
Chromium	4.6	290	390 n	2.7
Copper	4.1	ND	3,100 n	1.4 B
Iron	712	ND	23,000 n	421
Lead	14.5	500	400	3.9
Magnesium	328	ND	460,468	70 B
Manganese	8.1	370	1,800 n	3 B
Vanadium	3.1	490	550 n	1.5 B
Zinc	17.2	23,000	23,000 n	3 B

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

² SCG = Soil Cleanup Goals for Florida (Florida Department of Environmental Protection (FDEP) memorandum, September 29, 1995). Arsenic value is as revised in Applicability of Soil Cleanup Goals in Florida (FDEP memorandum, January 19, 1996). Values indicated are from a residential scenario.

³ RBC = Risk-Based Concentration Table, U.S. Environmental Protection Agency 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 (Office of Solid Waste and Emergency Response directive 9355-4-12). For essential nutrients (calcium, magnesium, potassium, and sodium) screening values were derived based on recommended daily allowances.

Notes: BRAC = Base Realignment and Closure.
mg/kg = milligram per kilogram.
n = noncarcinogenic effects.
B = reported concentration is between the instrument detection limit and the contract-required detection limit.
ND = not determined.
All inorganic results expressed in mg/kg soil dry weight.

APPENDIX B
SUMMARY OF ANALYTICAL RESULTS

Definition of Data Qualifiers

Naval Training Center
Orlando, Florida

Qualifier	Definition
U	Compound analyzed for but not detected at or below the reporting limit.
J	Reported concentration is an estimated quantity.
R	Data were rejected during data validation. unusable.
B (inorganics)	Reported concentration is between the instrument detection limit and the contract-required detection limit.
E	Estimated value; concentration is outside the instrument calibration range.
D	Value was determined from sample dilution.
P	Indicates greater than 25 percent difference between concentrations from original and confirmatory GC column.
NA	Not analyzed.
NJ	Presumptive evidence for the presence of the material at an estimated value.

Appendix B-1
 Summary of Soil Analytical Results
 Target Compound List Volatile Organics

Study Area 11
 Naval Training Center, Orlando
 Orlando, Florida

Sample ID	11B00101	
Lab ID	G6955016	
Collection Date	2/25/95	
Volatile Organics, ug/kg		
1,1,1-Trichloroethane	10	U
1,1,2,2-Tetrachloroethane	10	U
1,1,2-Trichloroethane	10	U
1,1-Dichloroethane	10	U
1,1-Dichloroethene	10	U
1,2-Dichloroethane	10	U
1,2-Dichloroethene (total)	10	U
1,2-Dichloropropane	10	U
2-Butanone	10	U
2-Hexanone	10	U
4-Methyl-2-pentanone	10	U
Acetone	10	U
Benzene	10	U
Bromodichloromethane	10	U
Bromoform	10	U
Bromomethane	10	U
Carbon disulfide	10	U
Carbon tetrachloride	10	U
Chlorobenzene	10	U
Chloroethane	10	U
Chloroform	10	U
Chloromethane	10	U
cis-1,3-Dichloropropene	10	U
Dibromochloromethane	10	U
Ethylbenzene	10	U
Methylene chloride	10	U
Styrene	10	U
Tetrachloroethene	10	U
Toluene	10	U
trans-1,3-Dichloropropene	10	U
Trichloroethene	10	U
Vinyl chloride	10	U
Xylene (total)	10	U

Appendix B-2
 Summary of Soil Analytical Results
 Target Compound List Semivolatile Organics

Study Area 11
 Naval Training Center, Orlando
 Orlando, Florida

Sample ID	11B00101
Lab ID	G6955016
Collection Date	2/25/95
Benzo(b)fluoranthene	350 U
Benzo(g,h,i)perylene	350 U
Benzo(k)fluoranthene	350 U
bis(2-Chloroethoxy)methane	350 U
bis(2-Chloroethyl)ether	350 U
bis(2-Ethylhexyl)phthalate	350 U
Butylbenzylphthalate	350 U
Carbazole	350 U
Chrysene	350 U
Di-n-butylphthalate	350 U
Di-n-octylphthalate	350 U
Dibenz(a,h)anthracene	350 U
Dibenzofuran	350 U
Diethylphthalate	350 U
Dimethylphthalate	350 U
Fluoranthene	350 U
Fluorene	350 U
Hexachlorobenzene	350 U
Hexachlorobutadiene	350 U
Hexachlorocyclopentadiene	350 U
Hexachloroethane	350 U
Indeno(1,2,3-cd)pyrene	350 U
Isophorone	350 U
N-Nitroso-di-n-propylamine	350 U
N-Nitrosodiphenylamine (1)	350 U
Naphthalene	350 U
Nitrobenzene	350 U
Pentachlorophenol	350 U
Phenanthrene	350 U
Phenol	350 U
Pyrene	350 U

Appendix B-2
 Summary of Soil Analytical Results
 Target Compound List Semivolatile Organics

Study Area 11
 Naval Training Center, Orlando
 Orlando, Florida

Sample_ID	11B00101
Lab_ID	G6955016
Collection Date	2/25/95
Semivolatile Organics, ug/kg	
1,2,4-Trichlorobenzene	350 U
1,2-Dichlorobenzene	350 U
1,3-Dichlorobenzene	350 U
1,4-Dichlorobenzene	350 U
2,2-oxybis(1-Chloropropane)	350 U
2,4,5-Trichlorophenol	870 U
2,4,6-Trichlorophenol	350 U
2,4-Dichlorophenol	350 U
2,4-Dimethylphenol	350 U
2,4-Dinitrophenol	870 U
2,4-Dinitrotoluene	350 U
2,6-Dinitrotoluene	350 U
2-Chloronaphthalene	350 U
2-Chlorophenol	350 U
2-Methylnaphthalene	350 U
2-Methylphenol	350 U
2-Nitroaniline	870 U
2-Nitrophenol	350 U
3,3'-Dichlorobenzidine	350 U
3-Nitroaniline	870 U
4,6-Dinitro-2-methylphenol	870 U
4-Bromophenyl-phenylether	350 U
4-Chloro-3-methylphenol	350 U
4-Chloroaniline	350 U
4-Chlorophenyl-phenylether	350 U
4-Methylphenol	350 U
4-Nitroaniline	870 U
4-Nitrophenol	870 U
Acenaphthene	350 U
Acenaphthylene	350 U
Anthracene	350 U
Benzo(a)anthracene	350 U
Benzo(a)pyrene	350 U

Appendix B-3
 Summary of Soil Analytical Results
 Target Compound List Pesticides and PCBs

Study Area 11
 Naval Training Center, Orlando
 Orlando, Florida

Sample_ID	11B00101
Lab_ID	G6955016
Collection Date	2/25/95
Pesticides/PCBs, ug/kg	
4,4'-DDD	3.4 U
4,4'-DDE	3.4 U
4,4'-DDT	3.4 U
Aldrin	1.8 U
alpha-BHC	1.8 U
alpha-Chlordane	1.8 U
Aroclor-1016	34 U
Aroclor-1221	70 U
Aroclor-1232	34 U
Aroclor-1242	34 U
Aroclor-1248	34 U
Aroclor-1254	34 U
Aroclor-1260	34 U
beta-BHC	1.8 U
delta-BHC	1.8 U
Dieldrin	3.4 U
Endosulfan I	1.8 U
Endosulfan II	3.4 U
Endosulfan sulfate	3.4 U
Endrin	3.4 U
Endrin aldehyde	3.4 U
Endrin ketone	3.4 U
gamma-BHC (Lindane)	1.8 U
gamma-Chlordane	1.8 U
Heptachlor	1.8 U
Heptachlor epoxide	1.8 U
Methoxychlor	18 U
Toxaphene	180 U

Appendix B-4
 Summary of Soil Analytical Results
 Target Analyte List Metals and General Chemistry

Study Area 11
 Naval Training Center, Orlando
 Orlando, Florida

Sample_ID	11B00101
Lab_ID	G6955016
Collection Date	2/25/95
Inorganics, mg/kg	
Aluminum	2710
Antimony	4.6 U
Arsenic	0.78 B
Barium	6.1 B
Beryllium	0.04 U
Cadmium	0.63 U
Calcium	420 B
Chromium	2.7
Cobalt	0.41 U
Copper	1.4 B
Iron	421
Lead	3.9
Magnesium	70 B
Manganese	3 B
Mercury	0.04 U
Nickel	2 U
Potassium	96.2 U
Selenium	0.46 U
Silver	0.55 U
Sodium	7.2 U
Thallium	0.37 U
Vanadium	1.5 B
Zinc	3 B
General chemistry	
pH (units)	NA
Total Petroleum Hydrocarbons, mg/k	NA