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FINAL BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORTS STUDY AREA 27 NTC ORLANDO FL

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

SITE SCREENING INVESTIGATION STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

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

JUNE 1998

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29418

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

SITE SCREENING INVESTIGATION STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

Unit Identification Code: N65928

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

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June 1998

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, Harding Lawson Associates (formerly 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 22, 1998

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Task Order Manager

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(DFAR 252.227-7036)

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TABLE OF CONTENTS

Base Realignment and Closure
Environmental Site Screening Report
Study Area 27
Naval Training Center
Orlando, Florida

Chapter	Title	Page No.
1.0	INTRODUCTION	1-1
2.0	FIELD PROGRAM	2-1
2.1	SURFACE SOIL SAMPLING	2-5
2.1.1	Phase I	2-5
2.1.2	Phase II	2-5
2.2	SUBSURFACE SOIL SAMPLING	2-5
2.3	GROUNDWATER SAMPLING	2-6
3.0	RESULTS	3-1
3.1	SURFACE SOIL	3-1
3.1.1	Phase I	3-1
3.1.2	Phase II	3-5
3.2	SUBSURFACE SOIL	3-6
3.3	GROUNDWATER	3-6
4.0	CONCLUSIONS AND RECOMMENDATIONS	4-1

REFERENCES

APPENDICES

Appendix A: Summary of Positive Detections in Analytical Results
Appendix B: Summary of Analytical Results
Appendix C: Soil Removal at Study Area 27, Environmental Detachment, Charleston

LIST OF FIGURES

Base Realignment and Closure
Environmental Site Screening Report
Study Area 27
Naval Training Center
Orlando, Florida

Figure	Title	Page No.
1-1	Study Area Location	1-2
2-1	Sample Locations, Buildings 111, 2073, and 2010, Main Base, Phase I	2-2
2-2	Additional Surface Soil Sample Locations, Building 2073, Phase II	2-4
3-1	Sample Locations and Screening Results, Phase I	3-2
3-2	Sample Locations and Screening Results Exceeding Screening Criteria, Depth Range 0 to 1 Foot Below Land Surface, Phase II	3-3
3-3	Sample Locations and Screening Results Exceeding Screening Criteria, Depth Range 1 to 2 Feet Below Land Surface, Phase II	3-4
3-4	Generalized Area of PAHs Exceeding Florida Residential Soil Cleanup Goals, Building 2073, Phase II	3-7

LIST OF TABLES

Table	Title	Page No.
2-1	Summary of Sampling and Analysis Program Study Area 27	2-3
3-1	Comparison of Concentrations (in $\mu g/kg$) of Various PAHs Detected in Surface Soil Sample 27S00701 to SCGs and RBCs	3-5

GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
BEHP	bis(2-ethylhexyl)phthalate
bls	below land surface
CLP	Contract Laboratory program
DQO	data quality objective
EBS	environmental baseline survey
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
HLA	Harding Lawson Associates
mg/kg	milligrams per kilogram
μg/kg	micrograms per kilogram
OPT	Orlando Partnering Team
PAH	polyaromatic hydrocarbon
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

1.0 INTRODUCTION

The initial portion of the site screening investigation (hereafter referred to as Phase I) at Study Area (SA) 27 began on May 27, 1996, and was completed on May 31, 1996. Proposed field activities were presented in the *Site Screening Plan, Groups I through V Study Areas* (ABB Environmental Services, Inc. [ABB-ES], 1995). The focus of the site screening investigation in SA 27 was on the area surrounding Buildings 111, 2010 and 2073 at Main Base, including the retention pond north of Building 2073 (Figure 1-1). Previous studies on the history and use of the area indicated the use and storage of chemicals in and around Buildings 2010 and 2073; in addition, these studies also included allegations of dumping of liquid residual wastes (paint residues and cleaning solutions) into the retention pond.

Initial findings prompted additional sampling of surface soils at SA 27 (hereafter referred to as Phase II). These sampling episodes were completed on June 4 and July 23, 1997.

Building 111. Building 111, located at the Corrine Drive Gate entrance of the Main Base, is currently used as the Visitor's Pass Office. It is a single-story, octagonal, wooden structure, constructed in 1985, with a fenced parking lot. In 1945 the site was occupied by Building 2046, the Baggage Check Room, and a citrus grove that extended to the south and west. The adjoining area to the south and west is currently occupied by an electrical substation, irrigation well 15107, and an enclosed dog-training area.

Stormwater drainage, including parking lot runoff, flows from the site into a retention pond (approximately 5 feet below grade) directly south of the building; from there flow is directed to an outfall at Lake Baldwin. At the time of the environmental baseline survey (EBS), there was evidence of cleaning solvent and paint product disposal in the retention pond (ABB-ES, 1994).

Building 2010. Building 2010, located at the corner of Holland and Grace Hopper Streets at Main Base, currently functions as the administrative headquarters for Naval Training Center Security, the Base Emergency Command Center, Weapons Storage, and Police Dog Kennels. It is a 12,148 square-foot cinder block structure with a pitched roof. From 1945 to an unknown date, Building 2010 served as the Registration Building. Prior to that date, the site was undeveloped. Two 300-gallon steel aboveground storage tanks (ASTs) were located near the building; both ASTs contained No. 2 fuel oil and lacked secondary containment. Both tanks were removed in May 1997, and a clean closure was approved for both tanks by the Florida Department of Environmental Protection (FDEP) (Navy Public Works Center, Pensacola, 1997). In addition, there is a 250-gallon AST containing liquid propane gas that supplies an emergency generator unit near the northwest corner of the building. Reportedly, the building has an abandoned underground storage tank of unknown capacity (ABB-ES, 1994); however, ABB-ES (presently Harding Lawson Associates [HLA]) has found no visual evidence of the tank.

Cleaning compounds (such as acetone and disinfecting solutions), petroleum-based products, and insecticides were noted to have been used and stored in the building during the EBS (ABB-ES, 1994). No spills of these products are known to have occurred. Staining of unknown origin has been noted on a concrete pad

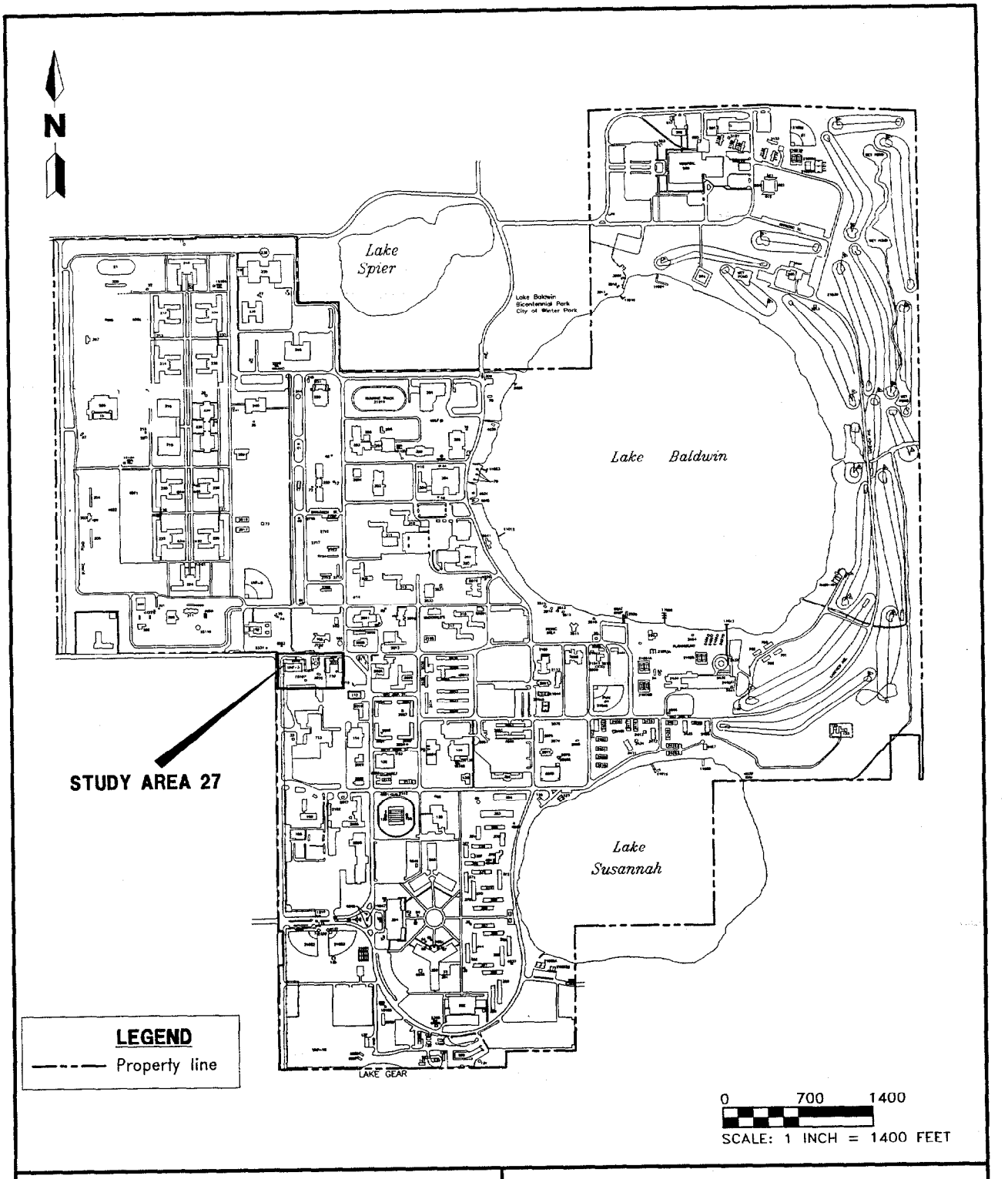

FIGURE 1-1
STUDY AREA LOCATION

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BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

outside an exterior doorway on the south side of the building. Detectable hydrocarbon odors and oil stains were observed in the boiler room during the EBS.

During the EBS, interior drains connected to the sewage distribution system were identified throughout the facility. Curbs and gutters direct stormwater to the retention pond located west of the building; from there the flow is directed east to the outfall at Lake Baldwin.

The discharge of raw sewage to the ground surface outside the eastern exterior wall of Building 2010 was noted as a recurring problem (ABB-ES, 1994). The problem has reportedly been corrected, and ABB-ES (presently HLA) found no visual evidence of the discharge.

Building 2073. Building 2073 (Armory/Hurricane Storage Locker) is located south of the Corrine Drive gate, near Building 111. It is currently used by the security command as a storage area for uniforms, hurricane gear, gun cleaning supplies (no solvents), and general cleaning supplies. It is a one-story, rectangular, concrete block structure, with a shingled gable roof that was constructed in 1943 as a latrine. Prior to Navy occupation, the Air Force used the building for storage of ammunition.

A flammable-storage locker is currently located on the south side of the building. There is evidence of minor stress to vegetation surrounding the locker. At the time of the EBS, there was a strong odor of pine cleaner on the ground of the northern side of the building where mop buckets of cleaning solution are routinely emptied. In this area the grass was absent, though it is not known if this was due to erosion or to harmful constituents in the waste water. A second area of stressed or absent vegetation has been noted on the south side of the building, east of the storage locker.

A stormwater retention pond adjoins Building 2073 to the north. The EBS noted that wastewater from mop buckets and painting equipment was routinely washed into the retention pond (ABB-ES, 1994).

The objective for the site screening activities was to evaluate the chemicals present in environmental media due to past disposal and storage of oil and hazardous materials. To accomplish this objective, the following field activities were completed:

- surface soil sampling,
- subsurface soil sampling,
- temporary monitoring well installation, and
- groundwater sampling.

2.0 FIELD PROGRAM

The objective of the site screening program for SA 27 was to evaluate potential environmental impact from past activities, such as disposal and storage of oil and hazardous materials. To accomplish this objective, soil and groundwater samples were collected from within, or from areas estimated to be downgradient from, potentially impacted areas and analyzed for various analytic parameters. These field activities (referred to as Phase I) were conducted between May 27 and May 31, 1996. Concerns over the concentrations of some polynuclear aromatic hydrocarbons (PAHs) in one surface soil sample led to additional surface soil sampling (referred to as Phase II), which took place between June 4 and July 23, 1997.

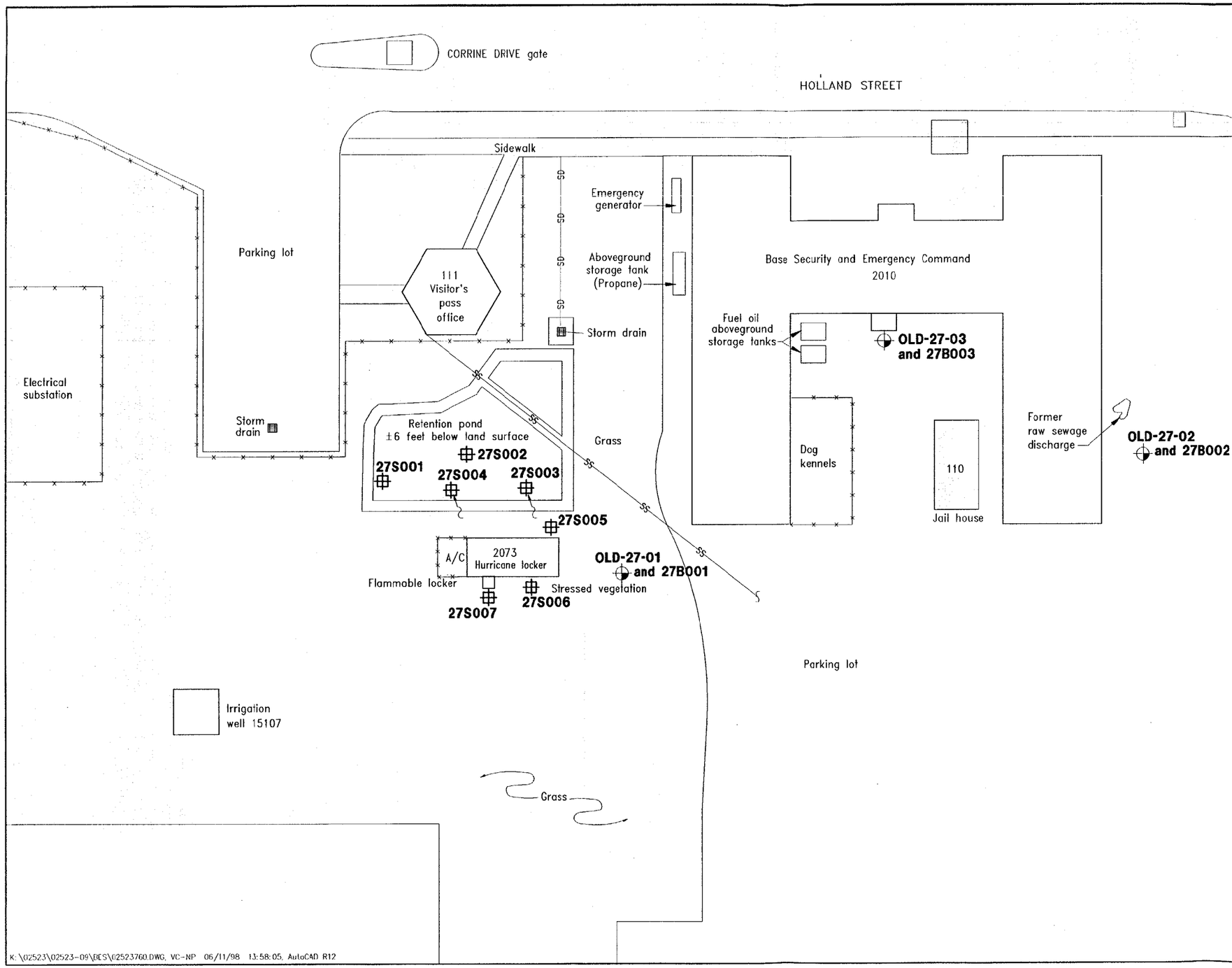
Soil and groundwater samples collected at SA 27 and submitted for laboratory analysis were analyzed to support U.S. Environmental Protection Agency (USEPA) Level IV data quality objectives (DQOs). Groundwater samples collected from the SA were also analyzed for total suspended solids in accordance with USEPA Level II DQOs.

Samples are identified by a six number/letter sample location code (e.g., 27S001) followed by a two-digit identifier code (e.g., 01 or 02). Samples taken at shallower depths have a smaller two-digit identifier code (e.g., 27S00101) than samples taken at deeper depths (e.g., 27S00102).

During Phase I, eight surface soil samples (27S00101 through 27S00701, and 27B00301) were collected; three subsurface soil samples (27B00101, 27B00201, and 27B00302) were collected with a hand auger; and three groundwater samples (27G00101/27H00101, 27G00201/27H00201, and 27G00301/27H00301) were taken at temporary monitoring wells installed at locations OLD-27-01, OLD-27-02, and OLD-27-03, respectively (Figure 2-1). The temporary monitoring 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. Both a filtered ("H" designation) and an unfiltered ("G" designation) groundwater sample were collected using the low-flow technique (ABB-ES, 1997). The well screen was then withdrawn and the boring backfilled with natural soil.

Soil and groundwater samples were submitted for Contract Laboratory Program (CLP) target compound list (TCL) volatile organic compounds, TCL semivolatile organic compounds, TCL pesticides and polychlorinated biphenyls, and target analyte list (TAL) inorganic compounds. The filtered samples were submitted for laboratory analysis of CLP TAL inorganics. Table 2-1 presents a summary of the sampling and analysis program for SA 27.

During Phase II, 42 additional surface soil samples were collected from 21 locations in the vicinity of sample location 27S007 to delineate and verify elevated concentrations of PAHs at that location. At each location, samples were collected from the depth interval of zero to one foot bls, and from one to two feet bls. These samples were submitted for analysis of PAHs only by USEPA Method 8310 (Figure 2-2).



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LEGEND

—×—×—	Fence
—~—	Surface drainage path
—SD—	Storm sewer
—SS—	Sanitary sewer
27S006	Existing surface soil sample location and designation
OLD-27-01	Soil boring/temporary monitoring well location
A/C	Air conditioning unit

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SCALE: 1 INCH = 40 FEET

FIGURE 2-1
SAMPLE LOCATIONS
BUILDINGS 111, 2073, AND 2010
MAIN BASE, PHASE I

BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

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Table 2-1
Summary of Sampling and Analysis Program
Study Area 27

Base Realignment and Closure
Environmental Site Screening Report
Study Area 27
Naval Training Center
Orlando, Florida

	Building 2073	Retention Pond	Building 2010
Surface Soil	[1]4	4	1
Subsurface Soil	1	0	[2]3
Temporary Well	1	0	2
Groundwater Sample[1]	1/1	0	[3]3/3

[1] Number indicates total of three soil samples plus one duplicate.
[2] Number indicates total of two soil samples plus one duplicate.
[3] 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.

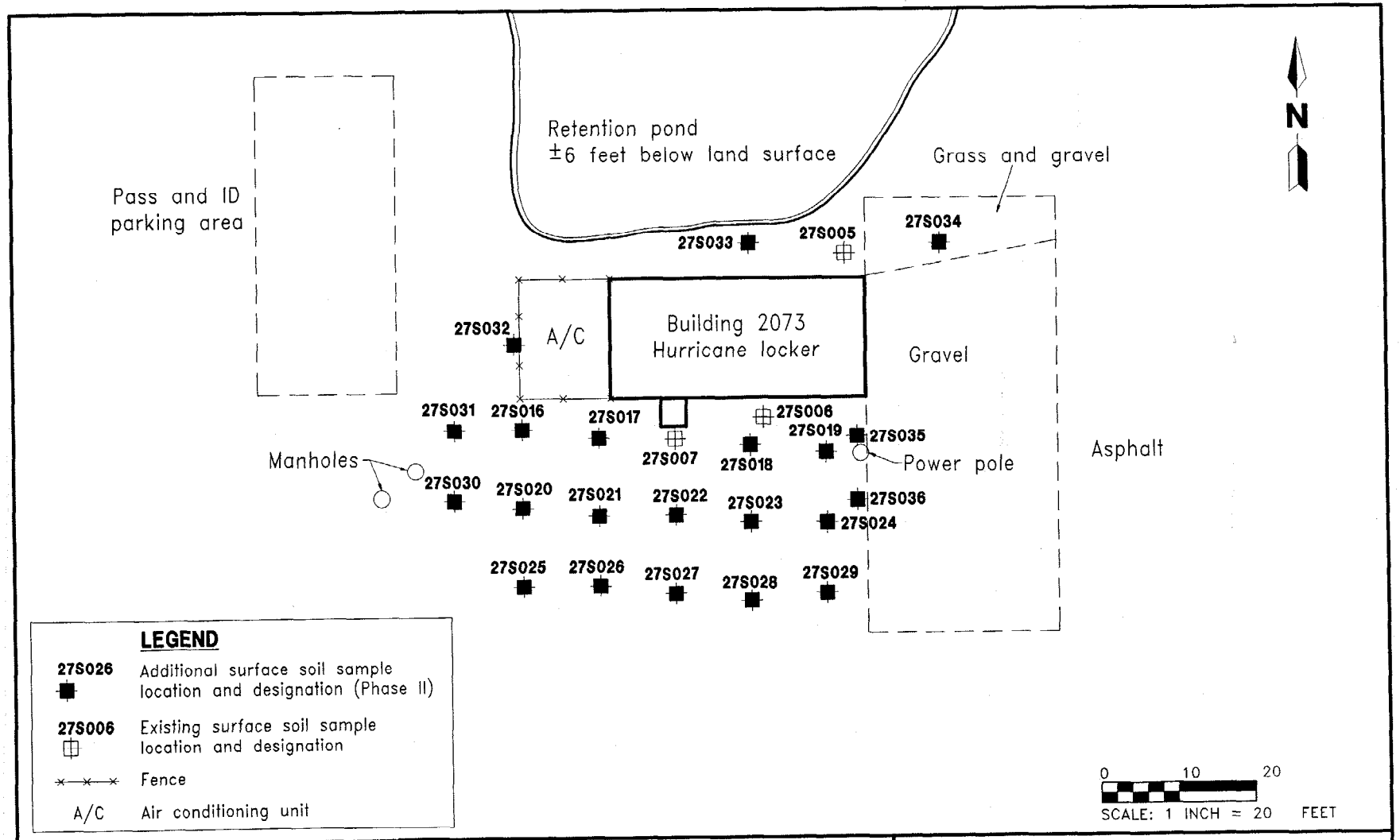

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FIGURE 2-2
ADDITIONAL SURFACE SOIL SAMPLE LOCATIONS
BUILDING 2073
MAIN BASE, PHASE II

BASE REALIGNMENT AND CLOSURE
ENVIRONMENTAL SITE SCREENING
REPORT, STUDY AREA 27

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ORLANDO, FLORIDA

2.1 SURFACE SOIL SAMPLING.

2.1.1 Phase I Three surface soil samples were collected in the vicinity of Building 2073. Sample 27S00701 was collected adjacent to the flammable-storage locker, which is located at the southwest corner of Building 2073. Sample 27S00601 was collected in the area of stressed vegetation located south of Building 2073. Sample 27S00501 was collected in another area of stressed vegetation adjacent to the outside water tap on the northeast corner of Building 2073.

Four surface soil samples were collected in the vicinity of the retention pond to evaluate what, if any, contamination had resulted from the alleged disposal of cleaning and painting materials or other chemicals into the pond. The pond does not appear to often contain water nor was there water present at the time of sampling; therefore, no water samples were collected. Sample 27S00101 was collected at the stormwater influent location, at the west side of the retention pond. Samples 27S00301 and 27S00401 were collected at two locations where overland flow drains into the retention pond. Sample 27S00201 was collected in the center of the pond.

One surface soil sample (27B00301) was collected from the surface interval of soil boring 27B003, which is located near a doorway where staining had been noted in the courtyard of Building 2010. No flame ionization detector (FID) hits were detected at any of the surface soil sample locations. Appropriate quality control (QC) samples were collected and submitted for laboratory analysis.

2.1.2 Phase II Following the determination that there were elevated concentrations of several PAHs in surface soil sample 27S00701, 42 surface soil samples were collected at 21 locations at a (nominal) 10-foot grid spacing in the vicinity of sample 27S00701. Half of the additional samples were collected in the interval 0 to 1 feet below land surface (bls), and the remainder were collected from 1 to 2 feet bls. The purpose for these additional samples was to delineate concentrations of PAHs in this area to determine the lateral and vertical extent of the affected area.

2.2 SUBSURFACE SOIL SAMPLING.

Three soil borings were completed at SA 27. Borings were located downgradient of areas of potential concern, based on the presumed groundwater flow direction to the east-southeast. One subsurface soil sample was collected from each boring. The sampling interval for each boring corresponded to the interval directly above the water table. No FID hits were detected during soil boring completion activities. Appropriate QC samples were collected and submitted for laboratory analysis.

One boring, 27B001, was installed at the east end of Building 2073, which was presumed to be downgradient of all areas of concern at the building. A subsurface soil sample, 27B00101, was collected from the interval 8 to 10 feet bls for laboratory analysis.

A second boring, 27B002, was installed near the southeast corner of Building 2010, presumed to be downgradient of the SA. A subsurface soil sample, 27B00201, was collected from the interval 8 to 10 feet bls for laboratory analysis.

A third boring, 27B003, was installed near the doorway on the interior courtyard of Building 2010, near evidence of staining on the doorstep. A subsurface soil sample, 27B00302, was collected from the interval 6 to 7 feet bls for laboratory analysis.

2.3 GROUNDWATER SAMPLING. A temporary monitoring well was installed in each soil boring. Following equilibrium and purging of each well, a filtered and an unfiltered groundwater sample were collected from each location using the low-flow technique. Sample identifiers are 27G00101/27H00101, 27G00201/27H00201, and 27G00301/27H00301 ("G" designates unfiltered sample and "H" designates filtered sample). Appropriate QC samples were collected and submitted for laboratory analysis.

3.0 RESULTS

Analytical results for all media sampled are presented as Appendix A, which includes Table A-1, Summary of Positive Detections in Surface Soil Analytical Results, Phase I; Table A-2, Summary of Positive Detections in Surface Soil Analytical Results, Phase II; Table A-3, Summary of Positive Detections in Subsurface Soil Analytical Results; and Table A-4, Summary of Positive Detections in Groundwater Analytical Results. Complete analytical results for each medium are included as Appendix B.

The surface and subsurface soil analytical results were evaluated by comparing their respective concentrations to (1) basewide soil background concentrations (for inorganic compounds, only); (2) FDEP's soil cleanup goals (SCGs) for residential and industrial 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. Comparison to leachability-based SCG values is unnecessary because no organic compounds were present in groundwater above FDEP groundwater guidance concentrations. Following are the significant findings from this evaluation. Analytical results exceeding screening criteria are summarized on Figure 3-1 (Phase I) and Figures 3-2 and 3-3 (Phase II).

3.1 SURFACE SOIL.

3.1.1 Phase I Bis(2-ethylhexyl)phthalate (BEHP), benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and arsenic were detected at concentrations above their respective screening values in at least one sample location (Figure 3-1).

Bis(2-ethylhexyl)phthalate. BEHP was detected in one surface soil sample, 27S00101, at a concentration (87,000 micrograms per kilogram [μg/kg]) that is above the SCG and RBC for residential soil (48,000 and 46,000 μg/kg, respectively). This concentration is below its respective SCG and RBC for industrial soil (110,000 and 410,000 μg/kg, respectively). This sample was collected at the influent to the stormwater retention pond and was the only sample where BEHP was detected at a concentration exceeding its respective screening criteria. The detection of BEHP at the sample location near the influent pipe to the retention pond may represent the presence of foreign material, such as plastic in the sample medium. As this was the only detection of BEHP above its screening criteria in the retention pond, this detection does not represent a significant source of environmental contamination.

Benzo(a)pyrene, Benzo(b)fluoranthene, and Dibenz(a,h)anthracene. Benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene were detected in one surface soil sample and its duplicate (27S00701 and 27S00701D). Table 3-1 shows the concentrations of these PAHs detected in surface soil samples and duplicate, and compares the concentrations to SCGs and RBCs for residential and industrial soil.

The concentrations of benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)-anthracene in sample 27S00701 exceed their respective SCG and RBC for residential

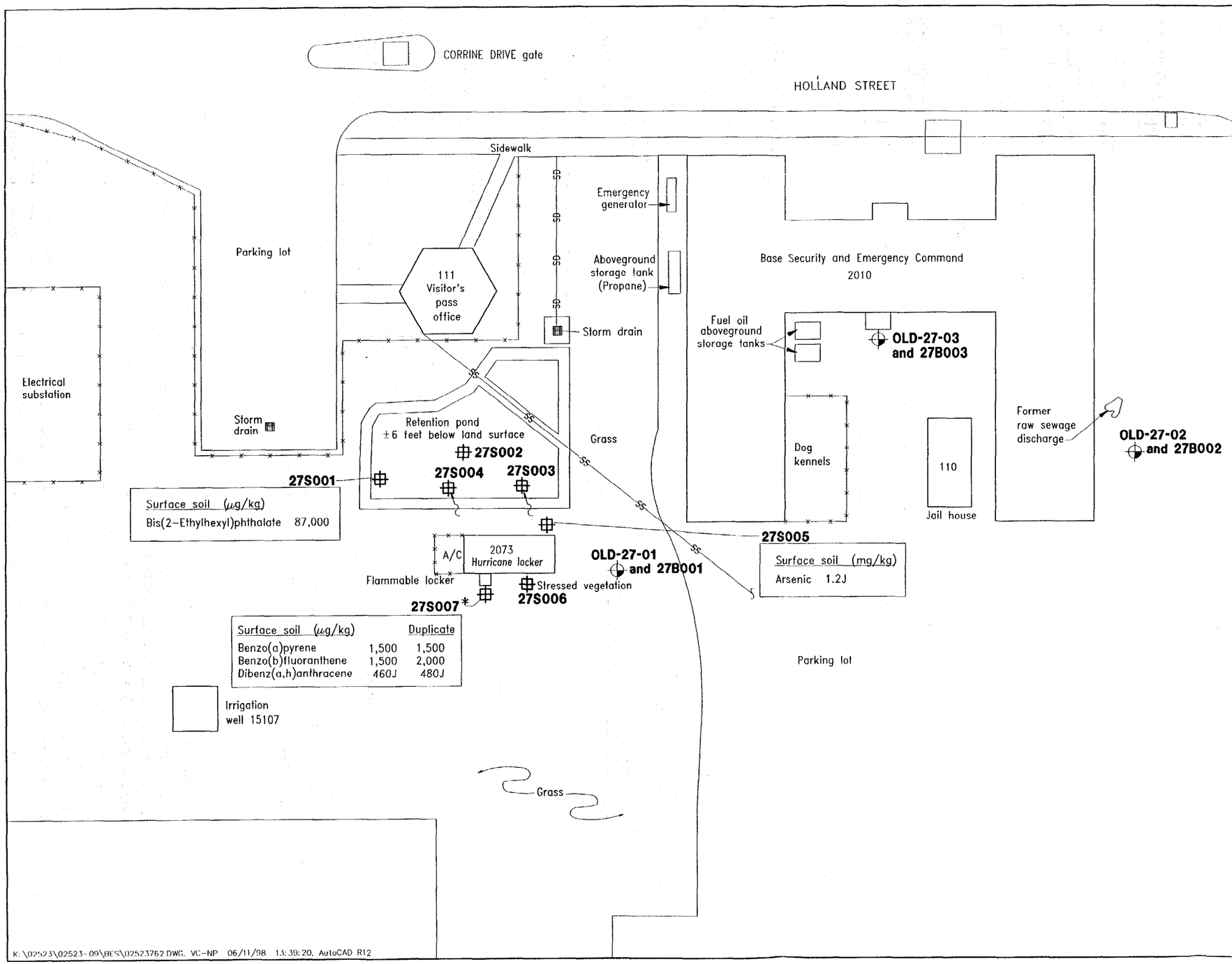

FIGURE 3-1
SAMPLE LOCATIONS AND SCREENING RESULTS BUILDINGS 111, 2073, AND 2010 MAIN BASE, PHASE I

BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

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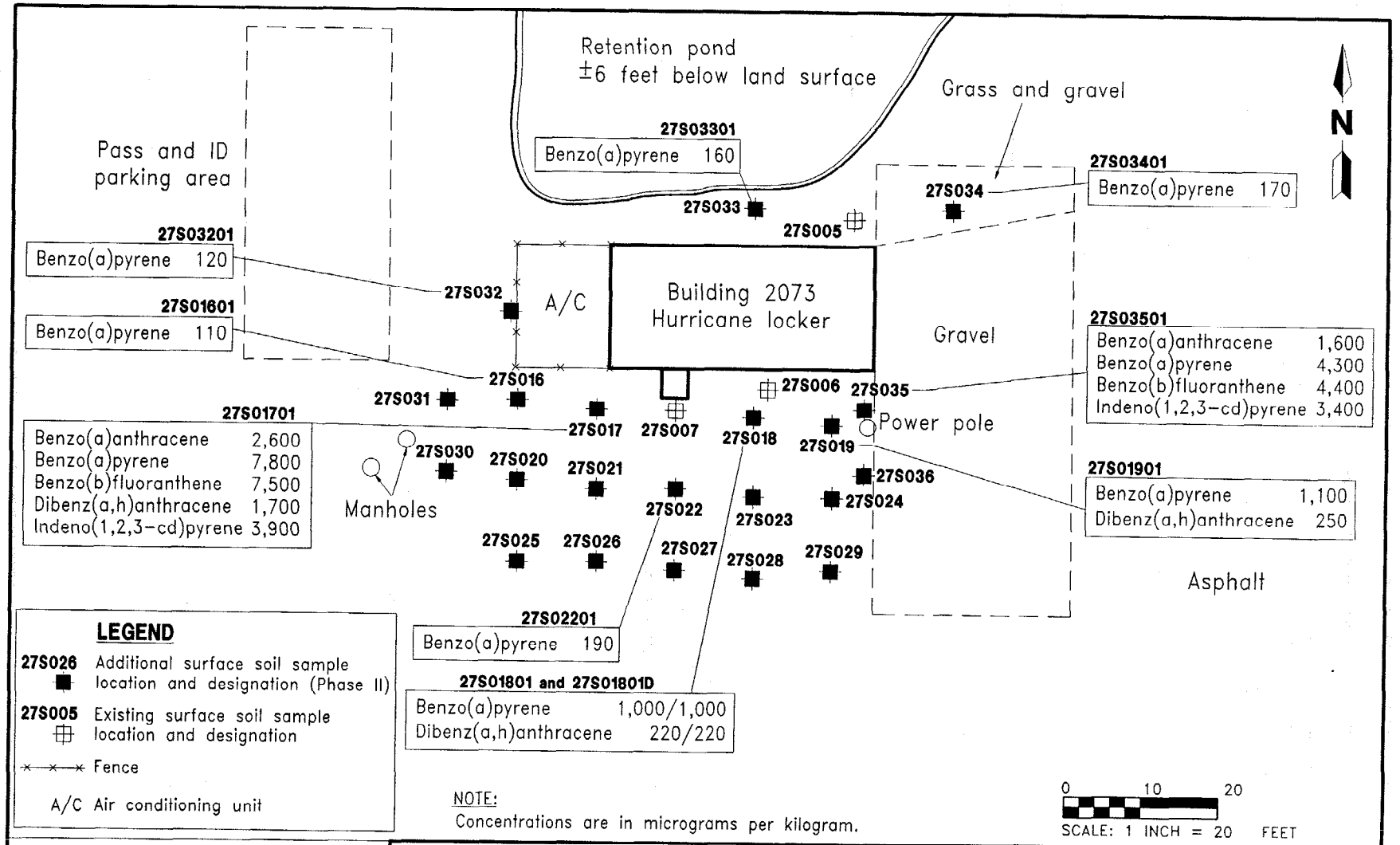

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FIGURE 3-2
SAMPLE LOCATIONS AND SCREENING RESULTS EXCEEDING SCREENING CRITERIA, DEPTH RANGE 0 TO 1 FOOT BELOW LAND SURFACE BUILDING 2073, MAIN BASE, PHASE II

BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

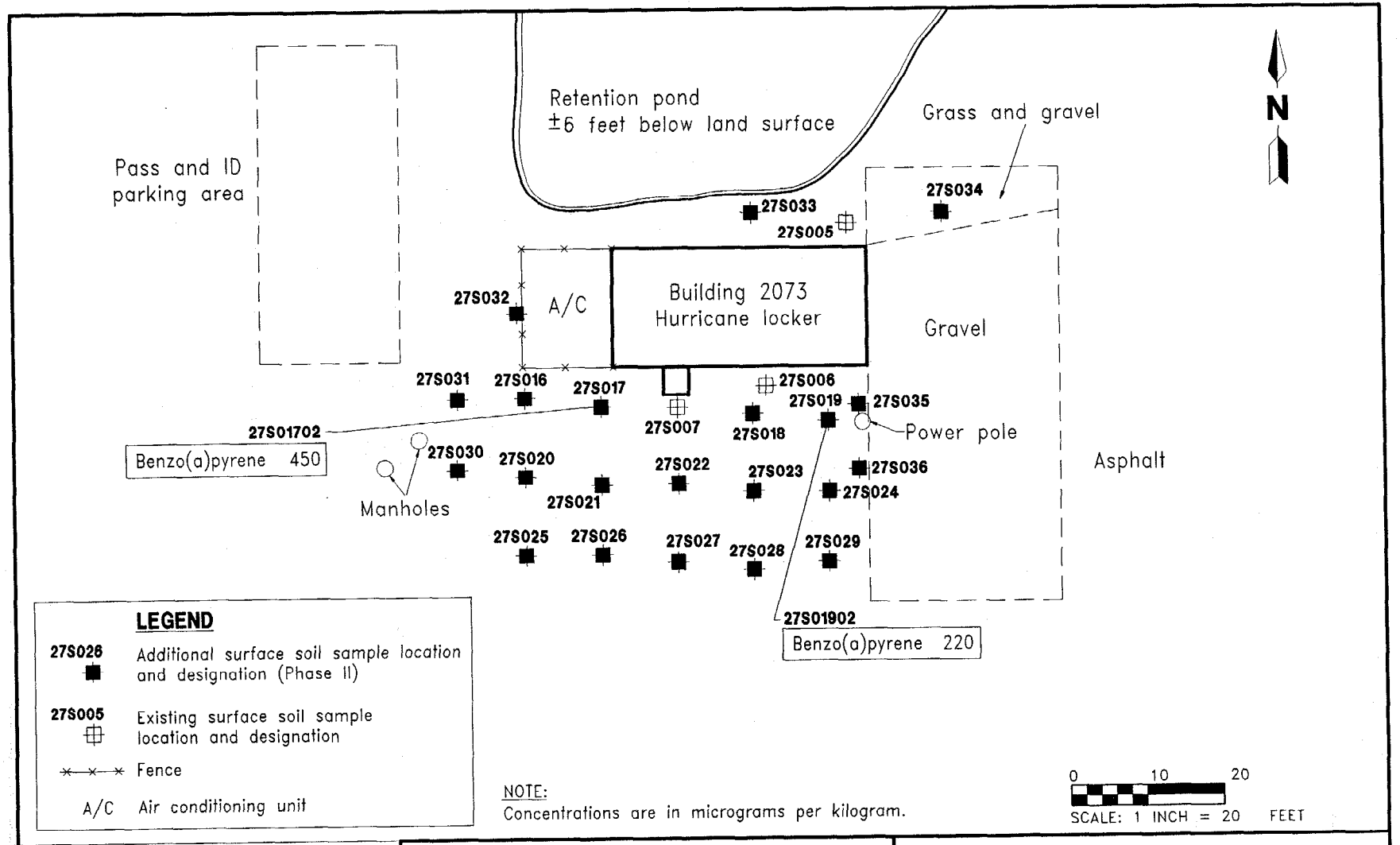

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FIGURE 3-3
SAMPLE LOCATIONS AND SCREENING RESULTS EXCEEDING SCREENING CRITERIA, DEPTH RANGE 1 TO 2 FEET BELOW LAND SURFACE BUILDING 2073, MAIN BASE, PHASE II

BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

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Table 3-1
Comparison of Concentrations (in μg/kg) of Various PAHs Detected in Surface Soil Sample 27S00701 to SCGs and RBCs

Base Realignment and Closure
Environmental Site Screening Report
Study Area 27
Naval Training Center
Orlando, Florida

Compound	Concentration	Concentration in Duplicate Sample	SCG for Residential Soil	SCG for Industrial Soil	RBC for Residential Soil	RBC for Industrial Soil
Benzo(a)pyrene	1,500	1,500	100	500	88 C	780 C
Benzo(b)fluoranthene	1,500	2,000	1,400	5,000	880 C	7,800 C
Dibenz(a,h)anthracene	460 J	480 J	100	500	88 C	780 C

Notes: μg/kg = micrograms per kilogram.
PAH = polynuclear aromatic hydrocarbon.
SCG = Florida Department of Environmental Protection Soil Cleanup Goal, January 1996.
RBC = U.S. Environmental Protection Agency, Region III risk-based concentrations, May 1996.
C = carcinogenic effects.
J = estimated concentration.

soil. The concentrations of benzo(b)fluoranthene and dibenz(a,h)anthracene do not exceed their respective SCG and RBC for industrial soil. The concentration of benzo(a)pyrene exceeds its respective SCG and RBC for industrial soil.

This sample, 27S00701, was collected in the vicinity of the flammable-storage locker.

Arsenic. Arsenic was detected in one surface soil sample, 27S00501, at a concentration of 1.2 milligrams per kilogram (mg/kg), slightly exceeding the background screening value for arsenic of 1.0 mg/kg. This sample was collected within an area of presumably stressed vegetation near the northeast corner of Building 2073 and was the only sample where arsenic was detected at a concentration exceeding its respective screening criteria.

3.1.2 Phase II Forty-two surface soil samples were collected at 21 locations on a (nominal) 10-foot grid in the vicinity of surface soil sample (27S00701) taken at sample location 27S007 to determine the lateral and vertical extent of the affected area. Half of the additional samples were collected in the interval 0 to 1 foot bls, and the remainder were collected from 1 to 2 feet bls. Figures 3-2 and 3-3 show the locations of these samples.

The analytical results of the sampling are presented as a table of positive detections in Appendix A, Table A-2. Ten samples (nine locations) in the depth range of 0 to 1 foot bls have exceedances of residential SCGs for one or more PAHs, which include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Seven of the sample locations are located along the south side of Building 2073 within 10 or 20 feet of sample 27S00701 (Figure 3-2). The other two sample locations are near the north wall of Building 2073.

Two samples in the depth range of 1 to 2 feet bls have exceedances of residential SCGs for benzo(a)pyrene. They are located 10 feet west and 20 feet east of surface soil sample (27S00701) taken at sample location 27S007 (Figure 3-3).

Figure 3-4 delineates the area in which elevated PAHs occur. The total area of PAHs exceeding residential SCGs for the depth interval 0 to 1 foot bls is approximately 1000 square feet. The total area of PAHs exceeding residential SCGs for the depth interval 1 to 2 feet is approximately 225 square feet. Thus, the total volume of affected soil based on these results is approximately 1225 cubic feet, or 45 cubic yards.

3.2 SUBSURFACE SOIL. Compounds were not detected at concentrations exceeding screening criteria (USEPA RBCs) at any subsurface soil sample location.

3.3 GROUNDWATER. Compounds were not detected at concentrations exceeding Federal maximum contaminant levels or Florida's groundwater guidance concentrations at any groundwater sample location.

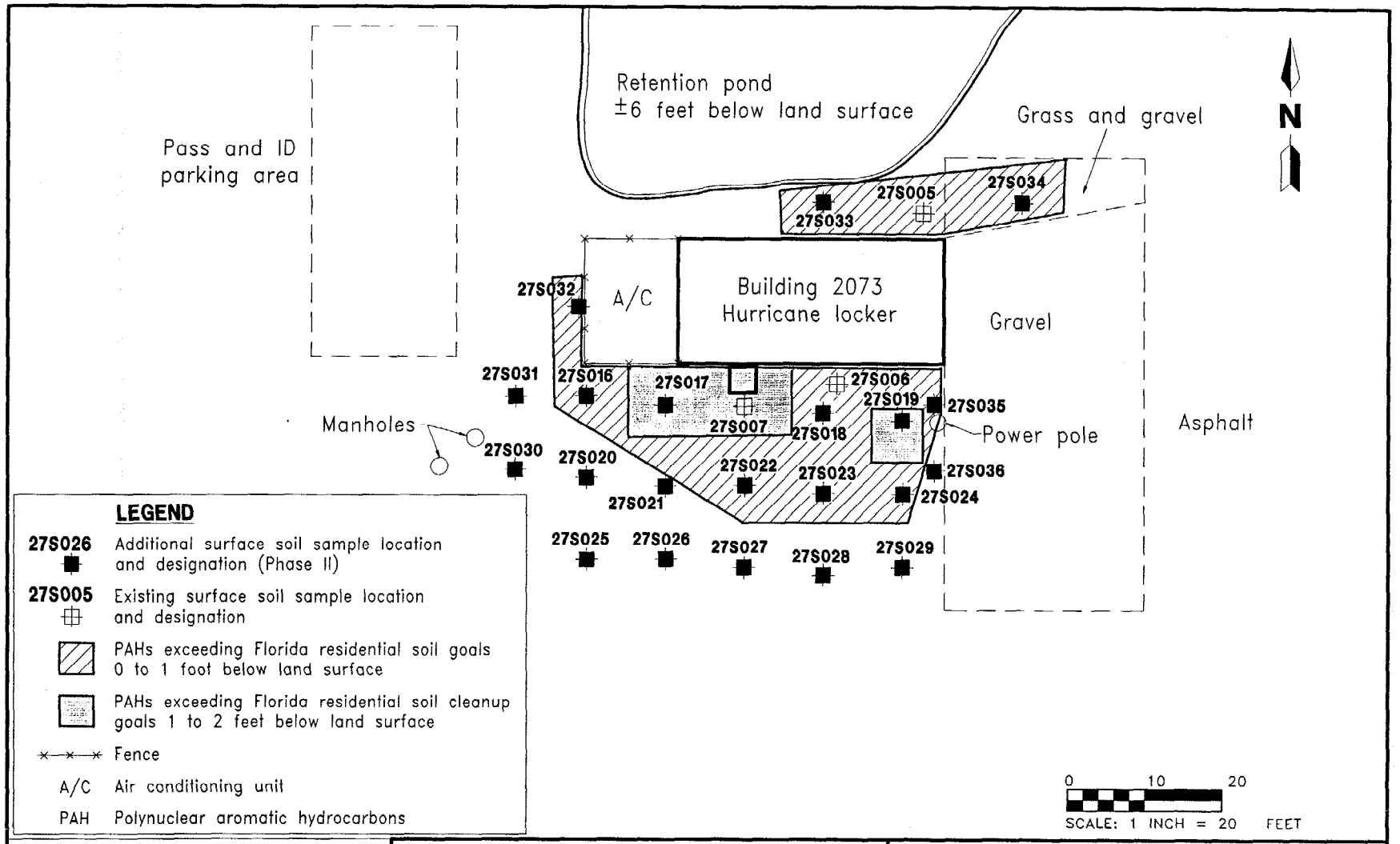

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FIGURE 3-4
GENERALIZED AREA OF PAHs EXCEEDING FLORIDA RESIDENTIAL SOIL CLEANUP GOALS BUILDING 2073, MAIN BASE, PHASE II

BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT, STUDY AREA 27

NAVAL TRAINING CENTER ORLANDO, FLORIDA

4.0 CONCLUSIONS AND RECOMMENDATIONS

Groundwater and subsurface soil samples collected at SA 27 did not contain concentrations of analytes greater than screening criteria.

During Phase I, two surface soil samples, one in the vicinity of the influent to the retention pond and one near an area of stressed vegetation northeast of Building 2073, reported concentrations of BEHP and arsenic (respectively) above screening criteria. However, these occurrences do not appear to represent a significant environmental concern, as BEHP may be attributed to the presence of foreign material, such as plastic, near the sample location, and arsenic was reported at a concentration only slightly above the background screening value.

One surface soil sample collected during Phase I in the vicinity of the flammable-storage locker adjacent to Building 2073 reported concentrations of three PAHs greater than their respective screening criteria values. This finding led to additional surface soil sampling and analysis (PAHs only) in the vicinity of surface sample 27S00701 resulting in the delineation of the area with PAH concentrations exceeding Florida residential SCGs. HLA (formerly ABB-ES) has determined that these PAH concentrations occur within an area of approximately 1000 square feet (Figure 3-4).

When the results presented on Figures 3-2, 3-3 and 3-4 and Table A-2 became available, the Orlando Partnering Team (OPT) determined that a soil removal within the area defined on Figure 3-4 would be necessary to protect human health and the environment. The soil removal and verification sampling was completed by the Navy's Environmental Detachment, Charleston, during the week of April 13, 1998. Twenty-one confirmation samples on the walls and floor of the excavation were submitted for laboratory analysis by USEPA Method 8270, and there were no detections of any PAHs above the Florida residential SCGs. The excavated area was brought back to the original grade with clean fill by April 21, 1998. The Environmental Detachment's report is included as Appendix C. Completion of the surface soil removal has allayed any concern regarding contaminants in the environmental media at SA 27.

Based on information available and evaluation of site screening data for this SA, HLA recommends the following:

- a classification of 1/White for Building 111 because it is an area where no storage, release, or disposal of hazardous substances or petroleum products has occurred;

- a classification of 4/Dark Green for Building 2073 because hazardous substances or petroleum products were stored within the flammable-storage locker, which resulted in a release and/or migration of those substances; however, all remedial actions necessary to protect human health and the environment have been taken; and

- a classification of 2/Blue for Building 2010 because 2 ASTs present at the building were removed in June 1997, resulting in a clean closure.

With the soil removal and backfilling with clean soil, SA 27 is suitable for transfer with no requirement for further evaluation.

The undersigned members of the OPT concur with the findings and recommendations of the site screening at SA 27.

STUDY AREA 27

U.S. Environmental Protection Agency, Region IV	Date 6/23/98
Florida Department of Environmental Protection	Date 7/1/98
U.S. Department of the Navy	Date 6/23/98

REFERENCES

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APPENDIX A

SUMMARY OF POSITIVE DETECTIONS IN ANALYTICAL RESULTS

Table A-1: Summary of Positive Detections in Surface Soil Analytical Results, Phase I
Table A-2: Summary of Positive Detections in Surface Soil Analytical Results, Phase II
Table A-3: Summary of Positive Detections in Subsurface Soil Analytical Results
Table A-4: Summary of Positive Detections in Groundwater Analytical Results

TABLE A-1

Summary of Positive Detections in Surface Soil Analytical Results, Phase I

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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		27S00101		27S00201		27S00301		27B00301	
Sampling Date									5/30/96		5/30/96		5/30/96		5/29/96	
Feet bls									0-1		0-1		0-1		0-1	
Volatile organics, ug/kg																
Ethylbenzene			1,400,000		7800000 n		200000000 n		2	J					2	J
Methylene chloride			16,000		85000 c		760000 c									
Toluene			520,000		16,000,000 n		410,000,000 n		11				6	J	35	
Xylene (total)			13,000,000		160,000,000 n		1000,000,000 n		9	J	2	J	3	J	10	J
Semivolatile organics, ug/kg																
Acenaphthylene			670,000		2,300,000 n		61,000,000 n									
Anthracene			20,000,000		23,000,000 n		610000000 n									
Benzo(a)anthracene			1,400		880 c		7,800 c		40	J					42	J
Benzo(a)pyrene			100		88 c		780 c		55	J					70	J
Benzo(b)fluoranthene			1,400		880 c		7,800 c		89	J					94	J
Benzo(g,h,i)perylene			14,000		2300000 n		61,000,000 n		120	J					74	J
Benzo(k)fluoranthene			14,000		8,800 c		78,000 c		56	J					81	J
bis(2-Ethylhexyl)phthalate			48,000		46,000 c		410,000 c		87000	D	82	J	140	J	40	J
Chrysene			140,000		88,000 c		780,000 c		70	J					87	J
Di-n-butylphthalate			7,300,000		7,800,000 n		200,000,000 n		250	J			36	J		
Dibenz(a,h)anthracene			100		88 c		780 c									
Fluoranthene			2,900,000		3,100,000 n		82,000,000 n		120	J					69	J
Indeno(1,2,3-cd)pyrene			1,400		880 c		7,800 c		74	J					58	J
Phenanthrene			1,700,000		2,300,000 n		61,000,000 n									
Pyrene			2,200,000		2,300,000 n		61,000,000 n		110	J					76	J

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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		27S00101		27S00201		27S00301		27B00301	
Sampling Date									5/30/96		5/30/96		5/30/96		5/29/96	
Feet bls									0-1		0-1		0-1		0-1	
Pesticides/PCBs, ug/kg																
4,4'-DDE			3,000		1,900 c		17,000 c								4.1	
4,4'-DDT			3,100		1,900 c		17,000 c								18	
alpha-Chlordane			800		490 c		4,400 c								1.3	J
gamma-Chlordane			800		490 c		4,400 c								1.9	J
Inorganics, mg/kg																
Aluminum	2,088		75,000		78,000 n		1,000,000 n		1530	J	1330	J	1490	J	1170	J
Arsenic	1		0.8		0.43 c/23 n		3.8 c/610 n		0.45	BJ	0.47	B			0.63	B
Barium	8.7		5,200		5,500 n		140,000 n								23.5	B
Beryllium	0.09		0.2		0.15 c		1.3 c								0.03	B
Cadmium	0.98		37		39 n		1,000 n									
Calcium	25,295		ND		1,000,000		1,000,000		12100		428	B	844	B	1160	
Chromium	4.6		290		390 [4] n		10,000 [4] n		4.2						3.1	
Copper	4.1		ND		3,100 n		82,000 n		9.1		1.5	B	2.9	B	5.4	
Iron	712		ND		23,000 n		610,000 n		702		258		427		478	
Lead	14.5		500		400		400		10.8							
Magnesium	328		ND		460,468		460,468		152	B	34.5	B	52.2	B	61.8	B
Manganese	8.1		370		1,800 n		47,000 n		14.1				5.4		19.1	
Mercury	0.07		23		23 n		610 n						0.06	B	0.12	
Nickel	4.4		1,500		1,600 n		41,000 n		2.5	B						
Vanadium	3.1		490		550 n		14,000 n		3.7	B	0.93	B	1.1	B	1.1	B
Zinc	17.2		23,000		23,000 n		610,000 n		75.8						18.1	

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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		27S00401	
Sampling Date									5/30/96	
Feet bls									0-1	
Volatile organics, ug/kg										
Ethylbenzene			1,400,000		7800000 n		200000000 n			
Methylene chloride			16,000		85000 c		760000 c			
Toluene			520,000		16,000,000 n		410,000,000 n		4	J
Xylene (total)			13,000,000		160,000,000 n		1000,000,000 n		3	J
Semivolatile organics, ug/kg										
Acenaphthylene			670,000		2,300,000 n		61,000,000 n			
Anthracene			20,000,000		23,000,000 n		610000000 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		2300000 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			
Chrysene			140,000		88,000 c		780,000 c			
Di-n-butylphthalate			7,300,000		7,800,000 n		200,000,000 n		42	J
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			

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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		27S00401	
Sampling Date									5/30/96	
Feet bls									0-1	
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			
alpha-Chlordane			800		490 c		4,400 c			
gamma-Chlordane			800		490 c		4,400 c			
Inorganics, mg/kg										
Aluminum	2,088		75,000		78,000 n		1,000,000 n		1530	J
Arsenic	1		0.8		0.43 c/23 n		3.8 c/610 n			
Barium	8.7		5,200		5,500 n		140,000 n			
Beryllium	0.09		0.2		0.15 c		1.3 c			
Cadmium	0.98		37		39 n		1,000 n			
Calcium	25,295		ND		1,000,000		1,000,000		213	B
Chromium	4.6		290		390 [4] n		10,000 [4] n			
Copper	4.1		ND		3,100 n		82,000 n		1.1	B
Iron	712		ND		23,000 n		610,000 n		280	
Lead	14.5		500		400		400			
Magnesium	328		ND		460,468		460,468		31.8	B
Manganese	8.1		370		1,800 n		47,000 n			
Mercury	0.07		23		23 n		610 n		0.05	B
Nickel	4.4		1,500		1,600 n		41,000 n			
Vanadium	3.1		490		550 n		14,000 n		0.91	B
Zinc	17.2		23,000		23,000 n		610,000 n			

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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	27S00501	27S00601	27S00701	27S00701D
Sampling Date					5/30/96	5/30/96	5/30/96	5/30/96
Feet bls					0-1	0-1	0-1	0-1
Volatile organics, ug/kg								
Ethylbenzene		1,400,000	7800000 n	200000000 n		1 J	2 J	2 J
Methylene chloride		16,000	85000 c	760000 c		1 J		
Toluene		520,000	16,000,000 n	410,000,000 n	6 J	8 J	14	18
Xylene (total)		13,000,000	160,000,000 n	1000,000,000 n	3 J	3 J	7 J	7 J
Semivolatile organics, ug/kg								
Acenaphthylene		670,000	2,300,000 n	61,000,000 n			230 J	300 J
Anthracene		20,000,000	23,000,000 n	610000000 n			89 J	110 J
Benzo(a)anthracene		1,400	880 c	7,800 c	79 J		1100	1200
Benzo(a)pyrene		100	88 c	780 c	120 J		1500	1500
Benzo(b)fluoranthene		1,400	880 c	7,800 c	130 J		1500	2000
Benzo(g,h,i)perylene		14,000	2300000 n	61,000,000 n	110 J		1400	1400
Benzo(k)fluoranthene		14,000	8,800 c	78,000 c	120 J		1800	1600
bis(2-Ethylhexyl)phthalate		48,000	46,000 c	410,000 c	220 J			100 J
Chrysene		140,000	88,000 c	780,000 c	140 J		2500	2700
Di-n-butylphthalate		7,300,000	7,800,000 n	200,000,000 n	37 J	40 J		
Dibenz(a,h)anthracene		100	88 c	780 c			460 J	480 J
Fluoranthene		2,900,000	3,100,000 n	82,000,000 n	120 J		3100	3400
Indeno(1,2,3-cd)pyrene		1,400	880 c	7,800 c	94 J		1200	1200
Phenanthrene		1,700,000	2,300,000 n	61,000,000 n			980	960
Pyrene		2,200,000	2,300,000 n	61,000,000 n	120 J		3400	3700

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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	27S00501		27S00601		27S00701		27S00701D	
Sampling Date					5/30/96		5/30/96		5/30/96		5/30/96	
Feet bls					0-1		0-1		0-1		0-1	
Pesticides/PCBs, ug/kg												
4,4'-DDE		3,000	1,900 c	17,000 c	3.9							
4,4'-DDT		3,100	1,900 c	17,000 c	18				68		71	
alpha-Chlordane		800	490 c	4,400 c	1.5	J						
gamma-Chlordane		800	490 c	4,400 c	2.1	J						
Inorganics, mg/kg												
Aluminum	2,088	75,000	78,000 n	1,000,000 n	1300	J	1420	J	1590	J	1680	E
Arsenic	1	0.8	0.43 c/23 n	3.8 c/610 n	1.2	J	0.62	B	0.91	B	0.98	B
Barium	8.7	5,200	5,500 n	140,000 n	136							
Beryllium	0.09	0.2	0.15 c	1.3 c								
Cadmium	0.98	37	39 n	1,000 n	0.49	B						
Calcium	25,295	ND	1,000,000	1,000,000	3590		1850		2680		3130	
Chromium	4.6	290	390 [4] n	10,000 [4] n	4.3				3.9		3.5	
Copper	4.1	ND	3,100 n	82,000 n	11.5		2.4	B	19.8		18.4	
Iron	712	ND	23,000 n	610,000 n	479		410		571		652	
Lead	14.5	500	400	400	35.9				22.4		22.5	
Magnesium	328	ND	460,468	460,468	119	B	54	B	105	B	147	B
Manganese	8.1	370	1,800 n	47,000 n	20.2		14.1		24.9		27.2	
Mercury	0.07	23	23 n	610 n	0.66		0.04	B	0.1		0.11	
Nickel	4.4	1,500	1,600 n	41,000 n								
Vanadium	3.1	490	550 n	14,000 n	1	B	0.82	B	1.2	B	1.1	B
Zinc	17.2	23,000	23,000 n	610,000 n	99.4				25.3		26.8	

Table A-1
Summary of Positive Detections in Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

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.

[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). Surrogate values (pyrene) were used for acenaphthylene. RBC for benzo(g,h,i)perylene and phenanthrene are not available, value is based on pyrene.

[4] Values shown represent values for Chromium VI. Values for Chromium III are 78,000 n (residential soil) and 1,000,000 n (industrial soil).

n = noncarcinogenic effects.
c = carcinogenic effects.
ND = Not determined.
bls = below land surface
FDEP = Florida Department of Environmental Protection.
PCB = polychlorinated biphenyl.
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).
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 A-2

Summary of Positive Detections in Surface Soil Analytical Results, Phase II

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S01601		27S01602		27S01701		27S01702		27S01801	
Sampling Date							6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Sampling Depth, feet bls							0-1		1-2		0-1		1-2		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n							9.8		32	
Benzo(a)anthracene	1,400		880	c	7,800	c	39		21		2600		180		360	
Benzo(a)pyrene	100		88	c	780	c	110		50		7800		450		1000	D
Benzo(b)fluoranthene	1,400		880	c	7,800	c	90		41		7500	D	400	D	840	D
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	110		51		6600		420		950	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	38		18		2100		130		390	D
Chrysene	140,000		88,000	c	780,000	c	300		140		7800		1200		3100	
Dibenz(a,h)anthracene	100		88	c	780	c	25		10		1700		80		220	
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	66		34		2400		200		1200	D
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	81		36		3900		280	D	730	D
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n									360	
Pyrene	2,200,000		2,300,000	n	61,000,000	n					2600		200		1000	

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S01801D		27S01802		27S01901		27S01902		27S02001	
Sampling Date							6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Sampling Depth, feet bls							0-1		1-2		0-1		1-2		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n	30				23					
Benzo(a)anthracene	1,400		880	c	7,800	c	340				400		80			
Benzo(a)pyrene	100		88	c	780	c	1000	D	9.9		1100	D	220		8.6	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	830	D	8.5		900	D	200	D	10	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	920		10		1200	D	250		10	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	390	D	3.9		410	D	87		4.3	
Chrysene	140,000		88,000	c	780,000	c	3000				3100		800			
Dibenz(a,h)anthracene	100		88	c	780	c	220				250		64			
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	1200	D	11		900	D	150		9	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	740	D	7.6		800	D	79		12	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n	350				200					
Pyrene	2,200,000		2,300,000	n	61,000,000	n	1000				820		130			

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S02002		27S02101		27S02101D		27S02102		27S02201	
Sampling Date							6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Sampling Depth, feet bls							1-2		0-1		0-1		1-2		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c			16		26		14		77	
Benzo(a)pyrene	100		88	c	780	c	12		40		60		29		190	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	12		36		54		24		150	D
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	13		45		67		29		180	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	4.9		15		23		10		65	
Chrysene	140,000		88,000	c	780,000	c			97		160		86		690	
Dibenz(a,h)anthracene	100		88	c	780	c			13		18				70	
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	9.6		31		49		28		190	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	14		43		50		21		130	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n									59	
Pyrene	2,200,000		2,300,000	n	61,000,000	n									180	

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S02202		27S02301		27S02302		27S02401		27S02501	
Sampling Date							6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Sampling Depth, feet bls							1-2		0-1		1-2		0-1		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c			33				28			
Benzo(a)pyrene	100		88	c	780	c	6.8		90		12		81		15	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	5.6		81		11		78		21	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n			81		15		100		18	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c			36		4.8		34		8	
Chrysene	140,000		88,000	c	780,000	c			290				240			
Dibenz(a,h)anthracene	100		88	c	780	c			26				27			
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	7.1		100		12		87		17	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c			110		14		97		20	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n										
Pyrene	2,200,000		2,300,000	n	61,000,000	n			100		11		80			

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S02601		27S02701		27S02702		27S02702D		27S02801	
Sampling Date							6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Sampling Depth, feet bls							0-1		0-1		1-2		1-2		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c										
Benzo(a)pyrene	100		88	c	780	c	3.5		7.6		12		13		7	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	5.2		13		17		18		10	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n			8.6		12		13		7.2	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c			4.8		6.8		6.5		4	
Chrysene	140,000		88,000	c	780,000	c										
Dibenz(a,h)anthracene	100		88	c	780	c										
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n			11		16		14		10	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	8.5		13		17		15		11	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n										
Pyrene	2,200,000		2,300,000	n	61,000,000	n										

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S02802		27S03001		27S03002		27S03101		27S03101D	
Sampling Date							6/4/97		7/23/97		7/23/97		7/23/97		7/23/97	
Sampling Depth, feet bls							1-2		0-1		1-2		0-1		0-1	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c			9.7				8.4		8.4	
Benzo(a)pyrene	100		88	c	780	c	11		28		7.8		28		26	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	22		36		9		33		29	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	12		28				26		26	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	7.2		13				10		8.7	
Chrysene	140,000		88,000	c	780,000	c										
Dibenz(a,h)anthracene	100		88	c	780	c			10				8.5		20	
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	12		22		7.3		15		19	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	19		34		8		29		30	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n										
Pyrene	2,200,000		2,300,000	n	61,000,000	n										

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S03102		27S03201		27S03202		27S03301		27S03302	
Sampling Date							7/23/97		7/23/97		7/23/97		7/23/97		7/23/97	
Sampling Depth, feet bls							1-2		0-1		1-2		0-1		1-2	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c									19	
Benzo(a)pyrene	100		88	c	780	c	23		120		5.5		160		55	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	25		140		6.5		180		64	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	21						120		53	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	7.5		43				57		23	
Chrysene	140,000		88,000	c	780,000	c										
Dibenz(a,h)anthracene	100		88	c	780	c	7.1								22	
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	12						86		51	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	21								64	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n										
Pyrene	2,200,000		2,300,000	n	61,000,000	n										

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S03401		27S03402		27S03501		27S03502		27S03502D	
Sampling Date							7/23/97		7/23/97		7/23/97		7/23/97		7/23/97	
Sampling Depth, feet bls							0-1		1-2		0-1		1-2		1-2	
Polyaromatic Hydrocarbons, ug/kg																
Acenaphthylene	670,000		2,300,000	n	61,000,000	n										
Anthracene	20,000,000		23,000,000	n	610,000,000	n										
Benzo(a)anthracene	1,400		880	c	7,800	c	72				1600		17		25	
Benzo(a)pyrene	100		88	c	780	c	170		12		4300		53		73	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	210		15		4400		56		77	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	180		11		3000		56		70	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	84		5.5		1500		19		27	
Chrysene	140,000		88,000	c	780,000	c										
Dibenz(a,h)anthracene	100		88	c	780	c	59						15		20	
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	190		12		2600		39		47	
Fluorene	2,400,000		3,100,000	n	82,000,000	n										
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	220		13		3400		59		82	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n										
Pyrene	2,200,000		2,300,000	n	61,000,000	n										

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	SCG for Residential Soil [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27S03601	
Sampling Date							7/23/97	
Sampling Depth, feet bls							0-1	
Polyaromatic Hydrocarbons, ug/kg								
Acenaphthylene	670,000		2,300,000	n	61,000,000	n		
Anthracene	20,000,000		23,000,000	n	610,000,000	n		
Benzo(a)anthracene	1,400		880	c	7,800	c		
Benzo(a)pyrene	100		88	c	780	c	18	
Benzo(b)fluoranthene	1,400		880	c	7,800	c	21	
Benzo(g,h,i)perylene	14,000		2,300,000	n	61,000,000	n	15	
Benzo(k)fluoranthene	14,000		8,800	c	78,000	c	7.3	
Chrysene	140,000		88,000	c	780,000	c		
Dibenz(a,h)anthracene	100		88	c	780	c		
Fluoranthene	2,900,000		3,100,000	n	82,000,000	n	17	
Fluorene	2,400,000		3,100,000	n	82,000,000	n		
Indeno(1,2,3-cd)pyrene	1,400		880	c	7,800	c	18	
Phenanthrene	1,700,000		2,300,000	n	61,000,000	n		
Pyrene	2,200,000		2,300,000	n	61,000,000	n		

Table A-2
Summary of Positive Detections in Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

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.

[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). Surrogate values (pyrene) were used for acenaphthylene. RBC for benzo(g,h,i)perylene and phenanthrene are not available, value is based on pyrene.

[4] Values shown represent values for Chromium VI. Values for Chromium III are 78,000 n (residential soil) and 1,000,000 n (industrial soil).

n = noncarcinogenic effects.
c = carcinogenic effects.
ND = Not determined.
bls = below land surface
FDEP = Florida Department of Environmental Protection.
PCB = polychlorinated biphenyl.
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).
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 A-3

Summary of Positive Detections in Subsurface Soil Analytical Results

Table A-3
Summary of Positive Detections in Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Identifier	Background Screening [1]		Residential SCG [2]		RBC [3] for Residential Soil		RBC [3] for Industrial Soil		27B00101		27B00201		27B00302		27B00302D	
Sampling Date									5/29/96		5/29/96		5/29/96		5/29/96	
Feet bls									8-10		8-10		6-7		6-7	
Volatile organics, ug/kg																
Acetone			NA		7,800,000 n		200,000,000 n		1100	D						
Toluene			NA		16,000,000 n		410,000,000 n		17		6	J	6	J	8	J
Xylene (total)			NA		160,000,000 n		1000,000,000 n		4	J	3	J	2	J	3	J
Semivolatile organics, ug/kg																
bis(2-Ethylhexyl)phthalate			NA		46,000 c		410,000 c						570			
Pesticides/PCBs, ug/kg																
4,4'-DDE			NA		2,700 c		76,000 c						25		24	
4,4'-DDT			NA		1,900 c		17,000 c						30		25	
alpha-Chlordane			NA		490 c		4,400 c						7.2		7.3	
gamma-Chlordane			NA		490 c		4,400 c						5.1		5.3	
Inorganics, mg/kg																
Aluminum	2,119		NA		78,000 n		1,000,000 n		1230	J	675	J	250	J	265	J
Antimony			NA		31 n		820 n		3.2	B						
Arsenic	1.1		NA		0.43 c/23 n		3.8 c/610 n				0.53	B				
Beryllium			NA		0.15 c		1.3 c		0.04	B						
Calcium	115		NA		1,000,000		1,000,000		369	B	132	B				
Chromium	3.7		NA		390 n		10,000 n		7.7		4.1					
Iron	264		NA		23,000 n		610,000 n		256		159				61.5	
Magnesium	32.8		NA		460,468		460,468		29.2	B	8.4	B	8	B	9.8	B
Mercury			NA		23 n		610 n		0.04	B						
Nickel			NA		1,600 n		41,000 n		2.9	B						
Vanadium	3.4		NA		550 n		14,000 n		1.9	B	1.1	B	0.44	B		

Table A-3
Summary of Positive Detections in Subsurface Soil Analytical Results
Study Area 27

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 Soil cleanup goals are not applicable at this study area because groundwater standards were not exceeded.

[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.
PCB = polychlorinated biphenyl.
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.
D = dilution series.
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 A-4

Summary of Positive Detections in Groundwater Analytical Results

Table A-4
Summary of Positive Detections in Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	Background [1] Screening		FDEPG		Primary FEDMCL		RBC [2] for Tap Water		27G00101		27H00101		27G00201		27H00201	
Sampling Date									5/30/96		5/30/96		5/31/96		5/31/96	
Semivolatile Organics, ug/L																
bis(2-Ethylhexyl)phthalate			6 [6]		6		4.8 c		3	J	NA				NA	
Di-n-butylphthalate			700 [4]		ND		3,700 n		1	J	NA				NA	
Inorganics, ug/L																
Aluminum	4,067		200 [3]		ND		37,000 n		186	B	103	B	89.1	B	99.3	B
Antimony	4.1		6 [5]		6		15 n									
Barium	31.4		2,000 [5]		2,000		2,600 n						14.7	B	12.7	B
Calcium	36,830		ND		ND		1,000,000		13700		13700		33800		34100	
Chromium	7.8		100 [5]		100 [8]		180 [9] n		4.2	B	2.3	B	4.7	B		
Copper	5.4		1,000 [3]		1,300 [7]		1,500 n								2.8	J
Iron	1,227		300 [3]		ND		11,000 n		58.1	B			53.6	B		
Lead	4		15 [5]		15 [10]		15						2	BJ	1.2	J
Magnesium	4,560		ND		ND		118,807		1,410	B	1,540	B	2,720	B	2,760	B
Manganese	17		50 [3]		ND		840 n		2.2	B	2.2	B	3	B	2.1	B
Mercury	0.12		2 [5]		2		11 c									
Potassium	5,400		ND		ND		297,016		1,220	B	1,210	B	872	B		
Selenium	9.7		50 [5]		50		180 n									
Sodium	18,222		160,000 [5]		ND		396,022		1,160	BJ	1,270	BJ	2,090	BJ	2,220	BJ
Vanadium	20.6		49 [4]		ND		260 n		7	B	5	B	5	B	3	B
General Chemistry, mg/L																
Total Suspended Solids	ND		ND		ND		ND		ND		NA				NA	

Table A-4
Summary of Positive Detections in Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	Background [1] Screening	FDEPG	Primary FEDMCL	RBC [2] for Tap Water	27G00201D	27H00201D	27G00301	27H00301
Sampling Date					5/31/96	5/31/96	5/31/96	5/31/96
Semivolatile Organics, ug/L								
bis(2-Ethylhexyl)phthalate		6 [6]	6	4.8 c		NA		NA
Di-n-butylphthalate		700 [4]	ND	3,700 n		NA		NA
Inorganics, ug/L								
Aluminum	4,067	200 [3]	ND	37,000 n	104 B	72.9 B	2260	3160
Antimony	4.1	6 [5]	6	15 n			2.1 B	
Barium	31.4	2,000 [5]	2,000	2,600 n			24 B	27.9 B
Calcium	36,830	ND	ND	1,000,000	33800	33900	69600	69800
Chromium	7.8	100 [5]	100 [8]	180 [9] n	3.6 B	4.2 B	7.2 B	8.3 B
Copper	5.4	1,000 [3]	1,300 [7]	1,500 n			9.2 J	
Iron	1,227	300 [3]	ND	11,000 n			171	137
Lead	4	15 [5]	15 [10]	15	2.3 BJ	1.4 BJ	2.7 J	2 BJ
Magnesium	4,560	ND	ND	118,807	2,730 B	2,740 B	3,460 B	3,480 B
Manganese	17	50 [3]	ND	840 n	2.3 B	2.2 B	1.4 B	1.1 B
Mercury	0.12	2 [5]	2	11 c				0 B
Potassium	5,400	ND	ND	297,016	1,520 B		3,930 B	3,850 B
Selenium	9.7	50 [5]	50	180 n			2 B	2 B
Sodium	18,222	160,000 [5]	ND	396,022	2,110 BJ	2,120 BJ	2,710 BJ	2,800 BJ
Vanadium	20.6	49 [4]	ND	260 n	5 B	4 B	5 B	5 B
General Chemistry, mg/L								
Total Suspended Solids	ND	ND	ND	ND		NA	104	NA

Table A-4
Summary of Positive Detections in Groundwater Analytical Results
Study Area 27

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] Value is preliminary action level.

[8] Value shown is for total chromium compounds.

[9] Value shown is for Chromium VI. Value for Chromium III is 37,000 n.

[10] 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 effects.
c = carcinogenic effects.
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, February 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 water sample.
H = filtered water 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 B

SUMMARY OF ANALYTICAL RESULTS

Table B-1: Summary of Surface Soil Analytical Results, Phase I
Table B-2: Summary of Surface Soil Analytical Results, Phase II
Table B-3: Summary of Subsurface Soil Analytical Results
Table B-4: Summary of Groundwater Analytical Results

TABLE B-1

Summary of Surface Soil Analytical Results, Phase I

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101		27S00201	27S00301	27S00401	27S00501	27S00601	27S00701	27S00701D
Lab ID	MB014001	MB014001DL	MB014002	MB014003	MB014004	MB014005	MB014006	MB014007	MB014008
Sampling Date	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96
Volatile organics, ug/kg									
1,1,1-Trichloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,1,2-Trichloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,1-Dichloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,1-Dichloroethene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,2-Dichloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
1,2-Dichloropropane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
2-Butanone	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
2-Hexanone	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
4-Methyl-2-pentanone	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Acetone	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Benzene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Bromodichloromethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Bromoform	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Bromomethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Carbon disulfide	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Carbon tetrachloride	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Chlorobenzene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Chloroethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Chloroform	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Chloromethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Dibromochloromethane	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Ethylbenzene	2 J	NA	10 U	11 U	10 U	11 U	1 J	2 J	2 J
Methylene chloride	11 U	NA	10 U	11 U	10 U	11 U	1 J	10 U	10 U
Styrene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U
Tetrachloroethene	11 U	NA	10 U	11 U	10 U	11 U	10 U	10 U	10 U

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101				27S00201		27S00301		27S00401		27S00501		27S00601		27S00701		27S00701D	
Lab ID	MB014001		MB014001DL		MB014002		MB014003		MB014004		MB014005		MB014006		MB014007		MB014008	
Sampling Date	30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96	
Toluene	11		NA		10	U	6	J	4	J	6	J	8	J	14		18	
trans-1,3-Dichloropropene	11	U	NA		10	U	11	U	10	U	11	U	10	U	10	U	10	U
Trichloroethene	11	U	NA		10	U	11	U	10	U	11	U	10	U	10	U	10	U
Vinyl chloride	11	U	NA		10	U	11	U	10	U	11	U	10	U	10	U	10	U
Xylene (total)	9	J	NA		2	J	3	J	3	J	3	J	3	J	7	J	7	J
Semivolatile organics, ug/kg																		
1,2,4-Trichlorobenzene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
1,2-Dichlorobenzene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
1,3-Dichlorobenzene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
1,4-Dichlorobenzene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,2'-oxybis(1-Chloropropane)	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,4,5-Trichlorophenol	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
2,4,6-Trichlorophenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,4-Dichlorophenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,4-Dimethylphenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,4-Dinitrophenol	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
2,4-Dinitrotoluene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2,6-Dinitrotoluene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2-Chloronaphthalene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2-Chlorophenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2-Methylnaphthalene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2-Methylphenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
2-Nitroaniline	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
2-Nitrophenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
3,3'-Dichlorobenzidine	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
3-Nitroaniline	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
4-Bromophenyl-phenylether	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
4-Chloro-3-methylphenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101		27S00201	27S00301	27S00401	27S00501	27S00601	27S00701	27S00701D
Lab ID	MB014001	MB014001DL	MB014002	MB014003	MB014004	MB014005	MB014006	MB014007	MB014008
Sampling Date	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96
4-Chloroaniline	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
4-Chlorophenyl-phenylether	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
4-Methylphenol	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
4-Nitroaniline	900 U	36000 UR	880 U	890 U	870 U	900 U	870 U	1700 U	1700 U
4-Nitrophenol	900 U	36000 UR	880 U	890 U	870 U	900 U	870 U	1700 U	1700 U
Acenaphthene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Acenaphthylene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	230 J	300 J
Anthracene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	89 J	110 J
Benzo(a)anthracene	40 J	14000 UR	350 U	350 U	350 U	79 J	350 U	1100	1200
Benzo(a)pyrene	55 J	14000 UR	350 U	350 U	350 U	120 J	350 U	1500	1500
Benzo(b)fluoranthene	89 J	14000 UR	350 U	350 U	350 U	130 J	350 U	1500	2000
Benzo(g,h,i)perylene	120 J	14000 UR	350 U	350 U	350 U	110 J	350 U	1400	1400
Benzo(k)fluoranthene	56 J	14000 UR	350 U	350 U	350 U	120 J	350 U	1800	1600
bis(2-Chloroethoxy)methane	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
bis(2-Chloroethyl)ether	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
bis(2-Ethylhexyl)phthalate	37000 ER	87000 D	82 J	140 J	350 U	220 J	350 U	690 U	100 J
Butylbenzylphthalate	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Carbazole	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Chrysene	70 J	14000 UR	350 U	350 U	350 U	140 J	350 U	2500	2700
Di-n-butylphthalate	250 J	14000 UR	350 U	36 J	42 J	37 J	40 J	690 U	690 U
Di-n-octylphthalate	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Dibenz(a,h)anthracene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	460 J	480 J
Dibenzofuran	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Diethylphthalate	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Dimethylphthalate	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Fluoranthene	120 J	14000 UR	350 U	350 U	350 U	120 J	350 U	3100	3400
Fluorene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Hexachlorobenzene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U
Hexachlorobutadiene	360 U	14000 UR	350 U	350 U	350 U	360 U	350 U	690 U	690 U

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101				27S00201		27S00301		27S00401		27S00501		27S00601		27S00701		27S00701D	
Lab ID	MB014001		MB014001DL		MB014002		MB014003		MB014004		MB014005		MB014006		MB014007		MB014008	
Sampling Date	30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96	
Hexachlorocyclopentadiene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Hexachloroethane	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Indeno(1,2,3-cd)pyrene	74	J	14000	UR	350	U	350	U	350	U	94	J	350	U	1200		1200	
Isophorone	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
N-Nitroso-di-n-propylamine	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
N-Nitrosodiphenylamine (1)	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Naphthalene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Nitrobenzene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Pentachlorophenol	900	U	36000	UR	880	U	890	U	870	U	900	U	870	U	1700	U	1700	U
Phenanthrene	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	980		960	
Phenol	360	U	14000	UR	350	U	350	U	350	U	360	U	350	U	690	U	690	U
Pyrene	110	J	14000	UR	350	U	350	U	350	U	120	J	350	U	3400		3700	

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101		27S00201	27S00301	27S00401	27S00501	27S00601	27S00701	27S00701D
Lab ID	MB014001	MB014001DL	MB014002	MB014003	MB014004	MB014005	MB014006	MB014007	MB014008
Sampling Date	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96	30-May-96
Pesticides/PCBs, ug/kg									
4,4'-DDD	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
4,4'-DDE	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.9	3.4 U	34 U	34 U
4,4'-DDT	3.6 U	NA	3.5 U	3.5 U	3.4 U	18	3.4 U	68	71
Aldrin	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
alpha-BHC	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
alpha-Chlordane	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.5 J	1.8 U	18 U	18 U
Aroclor-1016	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
Aroclor-1221	73 U	NA	71 U	71 U	70 U	72 U	70 U	700 U	700 U
Aroclor-1232	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
Aroclor-1242	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
Aroclor-1248	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
Aroclor-1254	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
Aroclor-1260	36 U	NA	35 U	35 U	34 U	35 U	34 U	340 U	340 U
beta-BHC	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
delta-BHC	1.8 UJ	NA	1.8 UJ	1.8 UJ	1.8 UJ	1.8 UJ	1.8 UJ	18 UJ	18 UJ
Dieldrin	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
Endosulfan I	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
Endosulfan II	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
Endosulfan sulfate	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
Endrin	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
Endrin aldehyde	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
Endrin ketone	3.6 U	NA	3.5 U	3.5 U	3.4 U	3.5 U	3.4 U	34 U	34 U
gamma-BHC (Lindane)	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
gamma-Chlordane	1.8 U	NA	1.8 U	1.8 U	1.8 U	2.1 J	1.8 U	18 U	18 U
Heptachlor	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
Heptachlor epoxide	1.8 U	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	18 U	18 U
Methoxychlor	18 UJ	NA	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	180 UJ	180 UJ
Toxaphene	180 U	NA	180 U	180 U	180 U	180 U	180 U	1800 U	1800 U

Table B-1
Summary of Surface Soil Analytical Results
Initial Sampling, Phase I
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S00101		27S00101		27S00201		27S00301		27S00401		27S00501		27S00601		27S00701		27S00701D	
Lab ID	MB014001		MB014001DL		MB014002		MB014003		MB014004		MB014005		MB014006		MB014007		MB014008	
Sampling Date	30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96		30-May-96	
Inorganics, mg/kg																		
Aluminum	1530	J	NA		1330	J	1490	J	1530	J	1300	J	1420	J	1590	J	1680	
Antimony	2.4	U	NA		2.3	U	2.3	U	2.3	U	2.3	U	2.3	U	2.3	U	2.3	U
Arsenic	0.45	BJ	NA		0.47	B	0.41	UJ	0.4	U	1.2	J	0.62	B	0.91	B	0.98	B
Barium	5.1	U	NA		2.7	U	5.1	U	2.3	U	136		3.8	U	6.1	U	5.9	U
Beryllium	0.03	U	NA		0.03	U	0.03	U	0.03	U	0.03	U	0.03	U	0.03	U	0.03	U
Cadmium	0.39	U	NA		0.38	U	0.38	U	0.38	U	0.49	B	0.37	U	0.37	U	0.37	U
Calcium	12100		NA		428	B	844	B	213	B	3590		1850		2680		3130	
Chromium	4.2		NA		2	U	2.2	U	1.7	U	4.3		1.6	U	3.9		3.5	
Cobalt	0.33	U	NA		0.32	U	0.32	U	0.31	U	0.32	U	0.31	U	0.31	U	0.31	U
Copper	9.1		NA		1.5	B	2.9	B	1.1	B	11.5		2.4	B	19.8		18.4	
Iron	702		NA		258		427		280		479		410		571		652	
Lead	10.8		NA		2.5	U	4.4	U	1	U	35.9		2.4	U	22.4		22.5	
Magnesium	152	B	NA		34.5	B	52.2	B	31.8	B	119	B	54	B	105	B	147	B
Manganese	14.1		NA		2.2	U	5.4		1.1	U	20.2		14.1		24.9		27.2	
Mercury	0.04	U	NA		0.03	U	0.06	B	0.05	B	0.66		0.04	B	0.1		0.11	
Nickel	2.5	B	NA		1.6	U	1.6	U	1.6	U	1.7	U	1.6	U	1.6	U	1.6	U
Potassium	167	U	NA		162	U	163	U	160	U	165	U	159	U	159	U	159	U
Selenium	0.29	U	NA		0.28	U	0.28	U	0.27	U	0.28	U	0.27	U	0.27	U	0.27	U
Silver	0.48	UR	NA		0.47	UR	0.47	UR	0.46	UR	0.47	UR	0.46	UR	0.46	UR	0.46	UR
Sodium	51.1	U	NA		27.8	U	27.9	U	21	U	29.1	U	20.9	U	25.1	U	31.4	U
Thallium	0.19	UJ	NA		0.18	UJ	0.18	UJ	0.18	UJ	0.19	U	0.18	U	0.18	U	0.18	U
Vanadium	3.7	B	NA		0.93	B	1.1	B	0.91	B	1	B	0.82	B	1.2	B	1.1	B
Zinc	75.8		NA		9.5	U	12.5	U	2.9	U	99.4		3.3	U	25.3		26.8	

TABLE B-2

Summary of Surface Soil Analytical Results, Phase II

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S01601		27S01602		27S01701		27S01702		27S01801		27S01801D		27S01802		27S01901		27S01902	
Lab ID	RD529001		RD529002		RD529003		RD529004		RD529005		RD529006		RD529007		RD529008		RD529009	
Sampling Date	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Depth bls (ft)	0-1'		1-2'		0-1'		1-2'		0-1'		0-1'		1-2'		0-1'		1-2'	
Acenaphthene	70	U	70	U	1400	U	69	U	70	U	70	U	69	U	70	U	68	U
Acenaphthylene	70	U	70	U	1400	U	69	U	70	U	70	U	69	U	70	U	68	U
Anthracene	7	U	7	U	140	U	9.8		32		30		6.9	U	23		6.8	U
Benzo(a)anthracene	39		21		2600		180		360		340		6.9	U	400		80	
Benzo(a)pyrene	110		50		7800		450		1000	D	1000	D	9.9		1100	D	220	
Benzo(b)fluoranthene	90		41		7500	D	400	D	840	D	830	D	8.5		900	D	200	D
Benzo(g,h,i)perylene	110		51		6600		420		950		920		10		1200	D	250	
Benzo(k)fluoranthene	38		18		2100		130		390	D	390	D	3.9		410	D	87	
Chrysene	300		140		7800		1200		3100		3000		69	U	3100		800	
Dibenzo(a,h)anthracene	25		10		1700		80		220		220		6.9	U	250		64	
Fluoranthene	66		34		2400		200		1200	D	1200	D	11		900	D	150	
Fluorene	35	U	35	U	680	U	34	U	34	U	34	U	34	U	34	U	34	U
Indeno(1,2,3-cd)pyrene	81		36		3900		280	D	730	D	740	D	7.6		800	D	79	
Naphthalene	70	U	70	U	1400	U	69	U	70	U	70	U	69	U	70	U	68	U
Phenanthrene	35	U	35	U	680	U	34	U	360		350		34	U	200		34	U
Pyrene	70	U	70	U	2600		200		1000		1000		69	U	820		130	

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S02001		27S02002		27S02101		27S02101D		27S02102		27S02201		27S02202		27S02301		27S02302	
Lab ID	RD529010		RD529011		RD529012		RD529013		RD529014		RD529015		RD529016		RD529017		RD529018	
Sampling Date	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Depth bls (ft)	0-1'		1-2'		0-1'		0-1'		1-2'		0-1'		1-2'		0-1'		1-2'	
Acenaphthene	70	U	71	U	69	U	69	U	69	U	70	U	70	U	69	U	70	U
Acenaphthylene	70	U	71	U	69	U	69	U	69	U	70	U	70	U	69	U	70	U
Anthracene	7	U	7.1	U	6.9	U	6.9	U	6.9	U	7	U	7	U	6.9	U	7	U
Benzo(a)anthracene	7	U	7.1	U	16		26		14		77		7	U	33		7	U
Benzo(a)pyrene	8.6		12		40		60		29		190		6.8		90		12	
Benzo(b)fluoranthene	10		12		36		54		24		150	D	5.6		81		11	
Benzo(g,h,i)perylene	10		13		45		67		29		180		7	U	81		15	
Benzo(k)fluoranthene	4.3		4.9		15		23		10		65		3.4	U	36		4.8	
Chrysene	70	U	71	U	97		160		86		690		70	U	290		70	U
Dibenzo(a,h)anthracene	7	U	7.1	U	13		18		6.9	U	70		7	U	26		7	U
Fluoranthene	9		9.6		31		49		28		190		7.1		100		12	
Fluorene	34	U	35	U	34	U	34	U	34	U	34	U	34	U	34	U	34	U
Indeno(1,2,3-cd)pyrene	12		14		43		50		21		130		7	U	110		14	
Naphthalene	70	U	71	U	69	U	69	U	69	U	70	U	70	U	69	U	70	U
Phenanthrene	34	U	35	U	34	U	34	U	34	U	59		34	U	34	U	34	U
Pyrene	70	U	71	U	69	U	69	U	69	U	180		70	U	100		11	

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S02401		27S02402		27S02501		27S02502		27S02601		27S02602		27S02701		27S02702		27S02702D	
Lab ID	RD529019		RD529020		RD530001		RD530002		RD530003		RD530004		RD530005		RD530006		RD530007	
Sampling Date	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Depth bls (ft)	0-1'		1-2'		0-1'		1-2'		0-1'		1-2'		0-1'		1-2'		1-2'	
Acenaphthene	70	U	70	U	70	U	70	U	69	U	68	U	70	U	71	U	71	U
Acenaphthylene	70	U	70	U	70	U	70	U	69	U	68	U	70	U	71	U	71	U
Anthracene	7	U	7	U	7	U	7	U	6.9	U	6.8	U	7	U	7.1	U	7.1	U
Benzo(a)anthracene	28		7	U	7	U	7	U	6.9	U	6.8	U	7	U	7.1	U	7.1	U
Benzo(a)pyrene	81		3.4	U	15		3.4	U	3.5		3.4	U	7.6		12		13	
Benzo(b)fluoranthene	78		3.4	U	21		3.4	U	5.2		3.4	U	13		17		18	
Benzo(g,h,i)perylene	100		7	U	18		7	U	6.9	U	6.8	U	8.6		12		13	
Benzo(k)fluoranthene	34		3.4	U	8		3.4	U	3.4	U	3.4	U	4.8		6.8		6.5	
Chrysene	240		70	U	70	U	70	U	69	U	68	U	70	U	71	U	71	U
Dibenzo(a,h)anthracene	27		7	U	7	U	7	U	6.9	U	6.8	U	7	U	7.1	U	7.1	U
Fluoranthene	87		7	U	17		7	U	6.9	U	6.8	U	11		16		14	
Fluorene	35	U	34	U	34	U	34	U	34	U	34	U	35	U	35	U	35	U
Indeno(1,2,3-cd)pyrene	97		7	U	20		7	U	8.5		6.8	U	13		17		15	
Naphthalene	70	U	70	U	70	U	70	U	69	U	68	U	70	U	71	U	71	U
Phenanthrene	35	U	34	U	34	U	34	U	34	U	34	U	35	U	35	U	35	U
Pyrene	80		70	U	70	U	70	U	69	U	68	U	70	U	71	U	71	U

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S02801		27S02802		27S02901		27S02902		27S03001		27S03002		27S03101		27S03101D		27S03102	
Lab ID	RD530008		RD530009		RD530010		RD530011		RD773001		RD773002		RD773003		RD773016		RD773004	
Sampling Date	6/4/97		6/4/97		6/4/97		6/4/97		7/23/97		7/23/97		7/23/97		7/23/97		7/23/97	
Depth bls (ft)	0-1'		1-2'		0-1'		1-2'		0-1'		1-2'		0-1'		0-1'		1-2'	
Acenaphthene	69	U	69	U	70	U	68	U	71	U	70	U	72	U	72	U	71	U
Acenaphthylene	69	U	69	U	70	U	68	U	71	U	70	U	72	U	72	U	71	U
Anthracene	6.9	U	6.9	U	7	U	6.8	U	7.1	U	7	U	7.2	U	7.2	U	7.1	U
Benzo(a)anthracene	6.9	U	6.9	U	7	U	6.8	U	9.7		7	U	8.4		8.4		7.1	U
Benzo(a)pyrene	7		11		3.4	U	3.4	U	28		7.8		28		26		23	
Benzo(b)fluoranthene	10		22		3.4	U	3.4	U	36		9		33		29		25	
Benzo(g,h,i)perylene	7.2		12		7	U	6.8	U	28		7	U	26		26		21	
Benzo(k)fluoranthene	4		7.2		3.4	U	3.4	U	13		3.4	U	10		8.7		7.5	
Chrysene	69	U	69	U	70	U	68	U	71	U	70	U	72	U	72	U	71	U
Dibenzo(a,h)anthracene	6.9	U	6.9	U	7	U	6.8	U	10		7	U	8.5		20		7.1	
Fluoranthene	10		12		7	U	6.8	U	22		7.3		15		19		12	
Fluorene	34	U	34	U	34	U	34	U	35	U	34	U	35	U	35	U	35	U
Indeno(1,2,3-cd)pyrene	11		19		7	U	6.8	U	34		8		29		30		21	
Naphthalene	69	U	69	U	70	U	68	U	71	U	70	U	72	U	72	U	71	U
Phenanthrene	34	U	34	U	34	U	34	U	35	U	34	U	35	U	35	U	35	U
Pyrene	69	U	69	U	70	U	68	U	71	U	70	U	72	U	72	U	71	U

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S03201		27S03202		27S03301		27S03302		27S03401		27S03402		27S03501		27S03502		27S03502D	
Lab ID	RD773005		RD773006		RD773007		RD773008		RD773009		RD773010		RD773011		RD773012		RD773017	
Sampling Date	7/23/97		7/23/97		7/23/97		7/23/97		7/23/97		7/23/97		7/23/97		7/23/97		7/23/97	
Depth bls (ft)	0-1'		1-2'		0-1'		1-2'		0-1'		1-2'		0-1'		1-2'		1-2'	
Acenaphthene	710	U	71	U	680	U	69	U	360	U	71	U	14000	U	70	U	70	U
Acenaphthylene	710	U	71	U	680	U	69	U	360	U	71	U	14000	U	70	U	70	U
Anthracene	71	U	7.1	U	68	U	6.9	U	36	U	7.1	U	1400	U	7	U	7	U
Benzo(a)anthracene	71	U	7.1	U	68	U	19		72		7.1	U	1600		17		25	
Benzo(a)pyrene	120		5.5		160		55		170		12		4300		53		73	
Benzo(b)fluoranthene	140		6.5		180		64		210		15		4400		56		77	
Benzo(g,h,i)perylene	71	U	7.1	U	120		53		180		11		3000		56		70	
Benzo(k)fluoranthene	43		3.5	U	57		23		84		5.5		1500		19		27	
Chrysene	710	U	71	U	680	U	69	U	360	U	71	U	14000	U	70	U	70	U
Dibenzo(a,h)anthracene	71	U	7.1	U	68	U	22		59		7.1	U	1400	U	15		20	
Fluoranthene	71	U	7.1	U	86		51		190		12		2600		39		47	
Fluorene	350	U	35	U	340	U	34	U	180	U	35	U	7100	U	34	U	34	U
Indeno(1,2,3-cd)pyrene	71	U	7.1	U	68	U	64		220		13		3400		59		82	
Naphthalene	710	U	71	U	680	U	69	U	360	U	71	U	14000	U	70	U	70	U
Phenanthrene	350	U	35	U	340	U	34	U	180	U	35	U	7100	U	34	U	34	U
Pyrene	710	U	71	U	680	U	69	U	360	U	71	U	14000	U	70	U	70	U

Table B-2
Summary of Surface Soil Analytical Results
Supplemental Sampling, Phase II
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27S03601		27S03602	
Lab ID	RD773013		RD773014	
Sampling Date	7/23/97		7/23/97	
Depth bls (ft)	0-1'		1-2'	
Acenaphthene	70	U	70	U
Acenaphthylene	70	U	70	U
Anthracene	7	U	7	U
Benzo(a)anthracene	7	U	7	U
Benzo(a)pyrene	18		3.4	U
Benzo(b)fluoranthene	21		3.4	U
Benzo(g,h,i)perylene	15		7	U
Benzo(k)fluoranthene	7.3		3.4	U
Chrysene	70	U	70	U
Dibenzo(a,h)anthracene	7	U	7	U
Fluoranthene	17		7	U
Fluorene	34	U	34	U
Indeno(1,2,3-cd)pyrene	18		7	U
Naphthalene	70	U	70	U
Phenanthrene	34	U	34	U
Pyrene	70	U	70	U

TABLE B-3

Summary of Subsurface Soil Analytical Results

Table B-3
Summary of Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27B00101				27B00201		27B00301		27B00302		27B00302D	
Lab ID	MB000003		MB000003DL		MB000004		MB000005		MB000007		MB000006	
Sampling Date	29-May-96		29-May-96		29-May-96		29-May-96		29-May-96		29-May-96	
Volatile organics, ug/kg												
1,1,1-Trichloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
1,1,2,2-Tetrachloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
1,1,2-Trichloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
1,1-Dichloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
1,1-Dichloroethene	12	U	58	UR	12	U	10	U	12	U	12	U
1,2-Dichloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
1,2-Dichloroethene (total)	12	U	58	UR	12	U	10	U	12	U	12	U
1,2-Dichloropropane	12	U	58	UR	12	U	10	U	12	U	12	U
2-Butanone	12	U	58	UR	12	U	10	U	12	U	12	U
2-Hexanone	12	U	58	UR	12	U	10	U	12	U	12	U
4-Methyl-2-pentanone	12	U	58	UR	12	U	10	U	12	U	12	U
Acetone	500	ER	1100	D	14	U	10	U	10	U	12	U
Benzene	12	U	58	UR	12	U	10	U	12	U	12	U
Bromodichloromethane	12	U	58	UR	12	U	10	U	12	U	12	U
Bromoform	12	U	58	UR	12	U	10	U	12	U	12	U
Bromomethane	12	U	58	UR	12	U	10	U	12	U	12	U
Carbon disulfide	12	U	58	UR	12	U	10	U	12	U	12	U
Carbon tetrachloride	12	U	58	UR	12	U	10	U	12	U	12	U
Chlorobenzene	12	U	58	UR	12	U	10	U	12	U	12	U
Chloroethane	12	U	58	UR	12	U	10	U	12	U	12	U
Chloroform	12	U	58	UR	12	U	10	U	12	U	12	U
Chloromethane	12	U	58	UR	12	U	10	U	12	U	12	U
cis-1,3-Dichloropropene	12	U	58	UR	12	U	10	U	12	U	12	U
Dibromochloromethane	12	U	58	UR	12	U	10	U	12	U	12	U
Ethylbenzene	12	U	58	UR	12	U	2	J	12	U	12	U
Methylene chloride	12	U	26	DR	12	U	10	U	12	U	12	U
Styrene	12	U	58	UR	12	U	10	U	12	U	12	U
Tetrachloroethene	12	U	58	UR	12	U	10	U	12	U	12	U
Toluene	17		21	DR	6	J	35		6	J	8	J
trans-1,3-Dichloropropene	12	U	58	UR	12	U	10	U	12	U	12	U
Trichloroethene	12	U	58	UR	12	U	10	U	12	U	12	U
Vinyl chloride	12	U	58	UR	12	U	10	U	12	U	12	U
Xylene (total)	4	J	7	DR	3	J	10	J	2	J	3	J
Semivolatile organics, ug/kg												
1,2,4-Trichlorobenzene	390	U	NA		400	U	340	U	400	U	400	U
1,2-Dichlorobenzene	390	U	NA		400	U	340	U	400	U	400	U
1,3-Dichlorobenzene	390	U	NA		400	U	340	U	400	U	400	U
1,4-Dichlorobenzene	390	U	NA		400	U	340	U	400	U	400	U
2,2'-oxybis(1-Chloropropane)	390	U	NA		400	U	340	U	400	U	400	U
2,4,5-Trichlorophenol	970	U	NA		990	U	840	U	990	U	990	U
2,4,6-Trichlorophenol	390	U	NA		400	U	340	U	400	U	400	U
2,4-Dichlorophenol	390	U	NA		400	U	340	U	400	U	400	U
2,4-Dimethylphenol	390	U	NA		400	U	340	U	400	U	400	U
2,4-Dinitrophenol	970	U	NA		990	U	840	U	990	U	990	U
2,4-Dinitrotoluene	390	U	NA		400	U	340	U	400	U	400	U

Table B-3
Summary of Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27B00101		27B00201	27B00301	27B00302	27B00302D
Lab ID	MB000003	MB000003DL	MB000004	MB000005	MB000007	MB000006
Sampling Date	29-May-96	29-May-96	29-May-96	29-May-96	29-May-96	29-May-96
2,6-Dinitrotoluene	390 U	NA	400 U	340 U	400 U	400 U
2-Chloronaphthalene	390 U	NA	400 U	340 U	400 U	400 U
2-Chlorophenol	390 U	NA	400 U	340 U	400 U	400 U
2-Methylnaphthalene	390 U	NA	400 U	340 U	400 U	400 U
2-Methylphenol	390 U	NA	400 U	340 U	400 U	400 U
2-Nitroaniline	970 U	NA	990 U	840 U	990 U	990 U
2-Nitrophenol	390 U	NA	400 U	340 U	400 U	400 U
3,3'-Dichlorobenzidine	390 U	NA	400 U	340 U	400 U	400 U
3-Nitroaniline	970 U	NA	990 U	840 U	990 U	990 U
4,6-Dinitro-2-methylphenol	970 U	NA	990 U	840 U	990 U	990 U
4-Bromophenyl-phenylether	390 U	NA	400 U	340 U	400 U	400 U
4-Chloro-3-methylphenol	390 U	NA	400 U	340 U	400 U	400 U
4-Chloroaniline	390 U	NA	400 U	340 U	400 U	400 U
4-Chlorophenyl-phenylether	390 U	NA	400 U	340 U	400 U	400 U
4-Methylphenol	390 U	NA	400 U	340 U	400 U	400 U
4-Nitroaniline	970 U	NA	990 U	840 U	990 U	990 U
4-Nitrophenol	970 U	NA	990 U	840 U	990 U	990 U
Acenaphthene	390 U	NA	400 U	340 U	400 U	400 U
Acenaphthylene	390 U	NA	400 U	340 U	400 U	400 U
Anthracene	390 U	NA	400 U	340 U	400 U	400 U
Benzo(a)anthracene	390 U	NA	400 U	42 J	400 U	400 U
Benzo(a)pyrene	390 U	NA	400 U	70 J	400 U	400 U
Benzo(b)fluoranthene	390 U	NA	400 U	94 J	400 U	400 U
Benzo(g,h,i)perylene	390 U	NA	400 U	74 J	400 U	400 U
Benzo(k)fluoranthene	390 U	NA	400 U	81 J	400 U	400 U
bis(2-Chloroethoxy)methane	390 U	NA	400 U	340 U	400 U	400 U
bis(2-Chloroethyl)ether	390 U	NA	400 U	340 U	400 U	400 U
bis(2-Ethylhexyl)phthalate	390 U	NA	400 U	40 J	570	400 U
Butylbenzylphthalate	390 U	NA	400 U	340 U	400 U	400 U
Carbazole	390 U	NA	400 U	340 U	400 U	400 U
Chrysene	390 U	NA	400 U	87 J	400 U	400 U
Di-n-butylphthalate	390 U	NA	400 U	340 U	400 U	400 U
Di-n-octylphthalate	390 U	NA	400 U	340 U	400 U	400 U
Dibenz(a,h)anthracene	390 U	NA	400 U	340 U	400 U	400 U
Dibenzofuran	390 U	NA	400 U	340 U	400 U	400 U
Diethylphthalate	390 U	NA	400 U	340 U	400 U	400 U
Dimethylphthalate	390 U	NA	400 U	340 U	400 U	400 U
Fluoranthene	390 U	NA	400 U	69 J	400 U	400 U
Fluorene	390 U	NA	400 U	340 U	400 U	400 U
Hexachlorobenzene	390 U	NA	400 U	340 U	400 U	400 U
Hexachlorobutadiene	390 U	NA	400 U	340 U	400 U	400 U
Hexachlorocyclopentadiene	390 U	NA	400 U	340 U	400 U	400 U
Hexachloroethane	390 U	NA	400 U	340 U	400 U	400 U
Indeno(1,2,3-cd)pyrene	390 U	NA	400 U	58 J	400 U	400 U
Isophorone	390 U	NA	400 U	340 U	400 U	400 U
N-Nitroso-di-n-propylamine	390 U	NA	400 U	340 U	400 U	400 U

Table B-3
Summary of Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27B00101		27B00101		27B00201		27B00301		27B00302		27B00302D	
Lab ID	MB000003		MB000003DL		MB000004		MB000005		MB000007		MB000006	
Sampling Date	29-May-96		29-May-96		29-May-96		29-May-96		29-May-96		29-May-96	
N-Nitrosodiphenylamine (1)	390	U	NA		400	U	340	U	400	U	400	U
Naphthalene	390	U	NA		400	U	340	U	400	U	400	U
Nitrobenzene	390	U	NA		400	U	340	U	400	U	400	U
Pentachlorophenol	970	U	NA		990	U	840	U	990	U	990	U
Phenanthrene	390	U	NA		400	U	340	U	400	U	400	U
Phenol	390	U	NA		400	U	340	U	400	U	400	U
Pyrene	390	U	NA		400	U	76	J	400	U	400	U

Table B-3
Summary of Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27B00101				27B00201		27B00301		27B00302		27B00302D	
Lab ID	MB000003		MB000003DL		MB000004		MB000005		MB000007		MB000006	
Sampling Date	29-May-96		29-May-96		29-May-96		29-May-96		29-May-96		29-May-96	
Pesticides/PCBs, ug/kg												
4,4'-DDD	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
4,4'-DDE	3.8	U	NA		3.9	U	4.1		25		24	
4,4'-DDT	3.8	U	NA		3.9	U	18		30		25	
Aldrin	2	U	NA		2	U	1.7	U	2	U	2	U
alpha-BHC	2	U	NA		2	U	1.7	U	2	U	2	U
alpha-Chlordane	2	U	NA		2	U	1.3	J	7.2		7.3	
Aroclor-1016	38	U	NA		39	U	33	U	39	U	39	U
Aroclor-1221	78	U	NA		80	U	68	U	80	U	80	U
Aroclor-1232	38	U	NA		39	U	33	U	39	U	39	U
Aroclor-1242	38	U	NA		39	U	33	U	39	U	39	U
Aroclor-1248	38	U	NA		39	U	33	U	39	U	39	U
Aroclor-1254	38	U	NA		39	U	33	U	39	U	39	U
Aroclor-1260	38	U	NA		39	U	33	U	39	U	39	U
beta-BHC	2	U	NA		2	U	1.7	U	2	U	2	U
delta-BHC	2	UJ	NA		2	UJ	1.7	UJ	2	UJ	2	UJ
Dieldrin	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
Endosulfan I	2	U	NA		2	U	1.7	U	2	U	2	U
Endosulfan II	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
Endosulfan sulfate	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
Endrin	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
Endrin aldehyde	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
Endrin ketone	3.8	U	NA		3.9	U	3.3	U	3.9	U	3.9	U
gamma-BHC (Lindane)	2	U	NA		2	U	1.7	U	2	U	2	U
gamma-Chlordane	2	U	NA		2	U	1.9	J	5.1		5.3	
Heptachlor	2	U	NA		2	U	1.7	U	2	U	2	U
Heptachlor epoxide	2	U	NA		2	U	1.7	U	2	U	2	U
Methoxychlor	20	UJ	NA		20	UJ	17	UJ	20	UJ	20	UJ
Toxaphene	200	U	NA		200	U	170	U	200	U	200	U
Inorganics, mg/kg												
Aluminum	1230	J	NA		675	J	1170	J	250	J	265	J
Antimony	3.2	B	NA		2.6	U	2.2	U	2.6	U	2.6	U
Arsenic	0.45	UJ	NA		0.53	B	0.63	B	0.46	U	0.46	U
Barium	1.8	U	NA		0.92	U	23.5	B	1.7	U	1.3	U
Beryllium	0.04	B	NA		0.04	U	0.03	B	0.04	U	0.04	U
Cadmium	0.42	U	NA		0.43	U	0.37	U	0.43	U	0.43	U
Calcium	369	B	NA		132	B	1160		79.2	U	93.4	U
Chromium	7.7		NA		4.1		3.1		1.2	U	0.93	U
Cobalt	0.35	U	NA		0.36	U	0.3	U	0.36	U	0.36	U
Copper	0.47	U	NA		0.48	U	5.4		0.48	U	0.48	U
Iron	256		NA		159		478		52.2	U	61.5	
Lead	2.2	U	NA		1.1	UJ	6.3	U	0.98	U	1.3	U
Magnesium	29.2	B	NA		8.4	B	61.8	B	8	B	9.8	B
Manganese	0.79	U	NA		0.65	U	19.1		0.64	U	0.73	U
Mercury	0.04	B	NA		0.04	U	0.12		0.04	U	0.04	U
Nickel	2.9	B	NA		1.8	U	1.6	U	1.8	U	1.8	U

Table B-3
Summary of Subsurface Soil Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27B00101				27B00201		27B00301		27B00302		27B00302D	
Lab ID	MB000003		MB000003DL		MB000004		MB000005		MB000007		MB000006	
Sampling Date	29-May-96		29-May-96		29-May-96		29-May-96		29-May-96		29-May-96	
Potassium	179	U	NA		183	U	156	U	183	U	182	U
Selenium	0.31	U	NA		0.31	U	0.27	U	0.31	U	0.31	U
Silver	0.51	UR	NA		0.52	UR	0.58	R	0.52	UR	0.52	UR
Sodium	32.3	U	NA		25.9	U	22.9	U	22.3	U	32.7	U
Thallium	0.2	U	NA		0.2	U	0.17	U	0.2	U	0.2	U
Vanadium	1.9	B	NA		1.1	B	1.1	B	0.44	B	0.38	U
Zinc	3.6	U	NA		2.7	U	18.1		4.1	U	3.4	U

TABLE B-4

Summary of Groundwater Analytical Results

Table B-4
Summary of Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27G00101		27H00101	27G00201		27H00201	27G00201D		27H00201D	27G00301		27H00301
Lab ID	MB015003		MB015004	MB026002		MB026004	MB026003		MB026005	MB026006		MB026007
Sampling Date	30-May-96		30-May-96	31-May-96		31-May-96	31-May-96		31-May-96	31-May-96		31-May-96
Volatile organics, ug/L												
1,1,1-Trichloroethane	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
1,1,2-Trichloroethane	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
1,1-Dichloroethene	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
1,2-Dibromoethane	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
1,2-Dichloropropane	1	U	NA	1	U	NA	1	U	NA	1	U	NA
2-Butanone	5	U	NA	5	U	NA	5	U	NA	5	U	NA
2-Hexanone	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
Acetone	5	U	NA	5	U	NA	5	U	NA	5	U	NA
Benzene	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
Bromodichloromethane	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
Bromomethane	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
Carbon tetrachloride	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
Chloroethane	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
Chloromethane	1	U	NA	1	U	NA	1	U	NA	1	U	NA
cis-1,2-Dichloroethene	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
Dibromochloromethane	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
Methylene chloride	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
Tetrachloroethene	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

Table B-4
Summary of Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27G00101		27H00101	27G00201		27H00201	27G00201D		27H00201D	27G00301		27H00301
Lab ID	MB015003		MB015004	MB026002		MB026004	MB026003		MB026005	MB026006		MB026007
Sampling Date	30-May-96		30-May-96	31-May-96		31-May-96	31-May-96		31-May-96	31-May-96		31-May-96
trans-1,2-Dichloroethene	1	U	NA	1	U	NA	1	U	NA	1	U	NA
trans-1,3-Dichloropropene	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
Vinyl chloride	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
Semivolatile organics, ug/L												
1,2,4-Trichlorobenzene	10	U	NA	10	U	NA	10	U	NA	10	U	NA
1,2-Dichlorobenzene	11	U	NA	11	U	NA	11	U	NA	11	U	NA
1,3-Dichlorobenzene	11	U	NA	11	U	NA	11	U	NA	11	U	NA
1,4-Dichlorobenzene	11	U	NA	11	U	NA	11	U	NA	11	U	NA
2,2'-oxybis(1-Chloropropane)	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
2,4,6-Trichlorophenol	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
2,4-Dimethylphenol	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
2,4-Dinitrotoluene	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
2-Chloronaphthalene	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
2-Methylnaphthalene	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
2-Nitroaniline	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
3,3'-Dichlorobenzidine	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
4,6-Dinitro-2-methylphenol	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
4-Chloro-3-methylphenol	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
4-Chlorophenyl-phenylether	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
4-Nitroaniline	25	U	NA	25	U	NA	25	U	NA	25	U	NA

Table B-4
Summary of Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27G00101		27H00101		27G00201		27H00201		27G00201D		27H00201D		27G00301		27H00301	
Lab ID	MB015003		MB015004		MB026002		MB026004		MB026003		MB026005		MB026006		MB026007	
Sampling Date	30-May-96		30-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96	
4-Nitrophenol	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	
Acenaphthylene	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	
Benzo(a)anthracene	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	
Benzo(b)fluoranthene	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	
Benzo(k)fluoranthene	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	
bis(2-Chloroethyl)ether	10	U	NA		10	U	NA		10	U	NA		10	U	NA	
bis(2-Ethylhexyl)phthalate	3	J	NA		10	U	NA		10	U	NA		10	U	NA	
Butylbenzylphthalate	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	
Chrysene	10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Di-n-butylphthalate	1	J	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	
Dibenz(a,h)anthracene	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	
Diethylphthalate	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	
Fluoranthene	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	
Hexachlorobenzene	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	
Hexachlorocyclopentadiene	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	
Indeno(1,2,3-cd)pyrene	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	
N-Nitroso-di-n-propylamine	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	
Naphthalene	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	

Table B-4
Summary of Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27G00101		27H00101		27G00201		27H00201		27G00201D		27H00201D		27G00301		27H00301	
Lab ID	MB015003		MB015004		MB026002		MB026004		MB026003		MB026005		MB026006		MB026007	
Sampling Date	30-May-96		30-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96	
Pentachlorophenol	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	
Phenol	10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Pyrene	10	U	NA		10	U	NA		10	U	NA		10	U	NA	
Pesticides/PCBs, ug/L																
4,4'-DDD	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
4,4'-DDE	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
4,4'-DDT	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Aldrin	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
alpha-BHC	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
alpha-Chlordane	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
Aroclor-1016	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1221	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1232	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1242	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1248	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1254	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
Aroclor-1260	0.5	UJ	NA		0.5	U	NA		0.5	U	NA		0.5	U	NA	
beta-BHC	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
delta-BHC	0.05	UJ	NA		0.05	UJ	NA		0.05	UJ	NA		0.05	UJ	NA	
Dieldrin	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Endosulfan I	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
Endosulfan II	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Endosulfan sulfate	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Endrin	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Endrin aldehyde	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
Endrin ketone	0.1	UJ	NA		0.1	U	NA		0.1	U	NA		0.1	U	NA	
gamma-BHC (Lindane)	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
gamma-Chlordane	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
Heptachlor	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
Heptachlor epoxide	0.05	UJ	NA		0.05	U	NA		0.05	U	NA		0.05	U	NA	
Methoxychlor	0.5	UJ	NA		0.5	UJ	NA		0.5	UJ	NA		0.5	UJ	NA	
Toxaphene	5	UJ	NA		5	U	NA		5	U	NA		5	U	NA	

Table B-4
Summary of Groundwater Analytical Results
Study Area 27

Naval Training Center, Orlando
Orlando, FL

Sample ID	27G00101		27H00101		27G00201		27H00201		27G00201D		27H00201D		27G00301		27H00301	
Lab ID	MB015003		MB015004		MB026002		MB026004		MB026003		MB026005		MB026006		MB026007	
Sampling Date	30-May-96		30-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96		31-May-96	
Inorganics, ug/L																
Aluminum	186	B	103	B	89.1	B	99.3	B	104	B	72.9	B	2260		3160	
Antimony	1.1	U	1.1	U	1.1	UJ	1.1	U	1.1	U	1.1	UJ	2.1	B	1.1	UJ
Arsenic	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ	1.3	UJ
Barium	4.2	U	3.4	U	14.7	B	12.7	B	6.4	U	7.5	U	24	B	27.9	B
Beryllium	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
Cadmium	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Calcium	13700		13700		33800		34100		33800		33900		69600		69800	
Chromium	4.2	B	2.3	B	4.7	B	2.2	U	3.6	B	4.2	B	7.2	B	8.3	B
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Copper	2	UJ	2	UJ	2	UJ	2.8	J	2	UJ	2	UJ	9.2	J	2	UJ
Iron	58.1	B	42.6	U	53.6	B	50.2	U	47.2	U	38.4	U	171		137	
Lead	1.2	UJ	1.2	UJ	2	BJ	1.2	J	2.3	BJ	1.4	BJ	2.7	J	2	BJ
Magnesium	1410	B	1540	B	2720	B	2760	B	2730	B	2740	B	3460	B	3480	B
Manganese	2.2	B	2.2	B	3	B	2.1	B	2.3	B	2.2	B	1.4	B	1.1	B
Mercury	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	U	0.07	B
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
Potassium	1220	B	1210	B	872	B	767	U	1520	B	767	U	3930	B	3850	B
Selenium	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.8	B	2.4	B
Silver	2.2	UR	2.2	UR	2.2	UR	2.2	UR	2.2	UR	2.2	UR	2.2	UR	2.2	UR
Sodium	1160	BJ	1270	BJ	2090	BJ	2220	BJ	2110	BJ	2120	BJ	2710	BJ	2800	BJ
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
Vanadium	6.8	B	5.4	B	5.3	B	3	B	4.5	B	4.2	B	4.7	B	4.7	B
Zinc	4.2	U	5	U	5.1	U	3.3	U	3.8	U	5.6	U	5.7	U	6.4	U
General Chemistry, mg/L																
Total Suspended Solids	4	U	NA		4	U	NA		4	U	NA		104		NA	

Notes for Summary of Analytical Results Tables
Study Area 27

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 analytical data 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.

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.

B Reported concentration is between the instrument detection limit (IDL) and the contract required detection limit (CRDL).
The "B" qualifier is typically changed to a "J" (estimated) qualifier following data validation, which is currently pending for groundwater analytical results.

APPENDIX C

SOIL REMOVAL AT STUDY AREA 27
ENVIRONMENTAL DETACHMENT, CHARLESTON

COMPLETION REPORT

INTERIM REMEDIAL ACTION
SA – 27
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON SC

Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106

June 3, 1998

TABLE OF CONTENTS

Section **Page**

Table of Contents ii

List of Appendices ii

Acronyms, Abbreviations and Symbols iii

1. Introduction 1-1

   1.1 Objective 1-1

2. Study Area 27 2-1

   2.1 Site History 2-1

   2.2. Actions Required For Study Area 2-1

   2.3 Observations Noted 2-2

   2.4 Sampling Evolutions And Results 2-2

   2.5 Site Conditions Following Completion of Work 2-2

   2.6 Waste Generation 2-2

   2.7 Site Photographs 2-2

Appendix A Sampling Documentation SA - 27 ..... A-1

Appendix B ABB-ES 1997 Sampling Data B-1

Appendix C Non-Hazardous Waste Manifests C-1

Appendix D Site Photographs D-1

ACRONYMS, ABBREVIATIONS and SYMBOL

ABB-ES	ABB Environmental Services
CFR	Code of Federal Regulations
DET	Environmental Detachment Charleston
DRMO	Defense Reutilization and Marketing Office
FDEP	Florida Department of Environmental Protection
IRA	Interim Remedial Action
NTC	Naval Training Center
OPT	Orlando Partnering Team
PAH	Polynuclear Aromatic Hydrocarbon
PPB	Parts Per Billion
RBC	Risk Based Concentration
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
SA	Study Area
SCG	Soil Cleanup Goals
SOUTHDIV	Southern Division Naval Facilities Engineering Command
SUPSHIP	Supervisor of Shipbuilding, Conversion and Repair, USN
TSDF	Treatment, Storage and Disposal Facility
USEPA	United States Environmental Protection Agency
USN	United States Navy

1. INTRODUCTION

1.1 OBJECTIVE Southern Division Naval Facilities Engineering Command (SOUTHDIV) tasked Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Va. Environmental Detachment Charleston (DET) to provide an Interim Remedial Action (IRA) Work Plan for Study Area (SA) 27 at the Naval Training Center (NTC), Orlando, Florida. The objective of this IRA was to excavate and dispose of the carcinogenic Polynuclear Aromatic Hydrocarbon (PAH) contaminated soils at the site.

The PAH contaminated soil at SA-27 was removed at two areas identified by ABB-Environmental Services, Inc. (ABB-ES) and illustrated on page 2-3, figure 1. Confirmation samples were collected from these two excavations and resulting data is shown in Appendix A.

The cleanup goals for SA-27 are the residential limits specified by the Florida Department of Environmental Protection (FDEP) Soil Cleanup Goals (SCG), dated 29 September 1995, or the United States Environmental Protection Agency (EPA) Region III Risk Based Concentrations (RBCs), whichever specified the stricter criteria. This IRA may not necessarily be the final remedial action taken at this site. This IRA is consistent with the ultimate cleanup of the site and is not intended to circumvent the public participation process inherent within environmental cleanup under Resource Conservation and Recovery Act (RCRA).

2. STUDY AREA- 27

2.1 SITE HISTORY SA-27 is located between Bennett Road and Third Avenue, and is adjacent to NTC Gate #1. It consists of Building 2073, a hurricane locker, and an air conditioner placed on top of a concrete pad.

Surface (0-1′) and subsurface (1′-2′) soil samples taken by ABB Environmental Services, Inc. (ABB-ES) in 1997 indicated elevated levels of PAHs at several sample locations. These results are shown in Appendix B. There is no available information indicating the source of the contamination.

2.2 ACTIONS PERFORMED AT SA-27 The actions performed at SA-27 are listed below.

- Excavated approximately 36 cubic yards of PAH contaminated soil from the larger of the two PAH influenced areas on the south side of Building 2073 to a depth of 1 to 2 feet. Confirmation samples were collected (NTC0SA27S0001 through 0012). See Appendix A for laboratory results and figure 1, page 2-3 for sample locations.

- Excavated approximately 10 cubic yards of PAH contaminated soil from the smaller of the two PAH influenced areas on the north side of Building 2073 to a depth of 1 to 2 feet. Confirmation samples were collected (NTC0SA27S0013 through 0020). See Appendix A for laboratory results and figure 1, page 2-3 for sample locations.

- A two foot section of abandoned sanitary sewer pipe was removed from the excavation area. The ends of the pipe were grouted.

2.3 OBSERVATIONS NOTED

The soil excavated at this site was light silty sand.

2.4 SAMPLING EVOLUTIONS AND RESULTS FOR SA-27 In accordance with the original work plan, confirmation samples were collected at the site. Samples collected on the sidewalls were taken at the first interval (0′ to 1′). All other samples were collected in the bottom of the excavation. See Appendix A for laboratory results and figure 1, page 2-3 for sample locations.

2.5 SITE CONDITIONS FOLLOWING COMPLETION OF WORK After completion of all site work on 21 April 1998, the DET had removed a total of 46 cubic yards of PAH contaminated soil. All excavations were filled with Florida certified clean soil, compacted, graded to surrounding conditions and seeded.

2.6 WASTE GENERATION All soil excavated from this site was considered non-hazardous and disposed of to a permitted Treatment, Storage and Disposal Facility (TSDF) in accordance with 40 Code of Federal Regulations (CFR), Part 264. The waste characterization was based on a composite sample (NTC0270001) that was analyzed in accordance with Florida Soil Pre-Burn criteria to ensure thermal treatment was an accepted disposal method. These sample results are presented in Appendix A. Copies of the non-hazardous waste manifests are provided in Appendix C.

2.7 SITE PHOTOGRAPHS/MAPS Site photographs are provided in Appendix D.

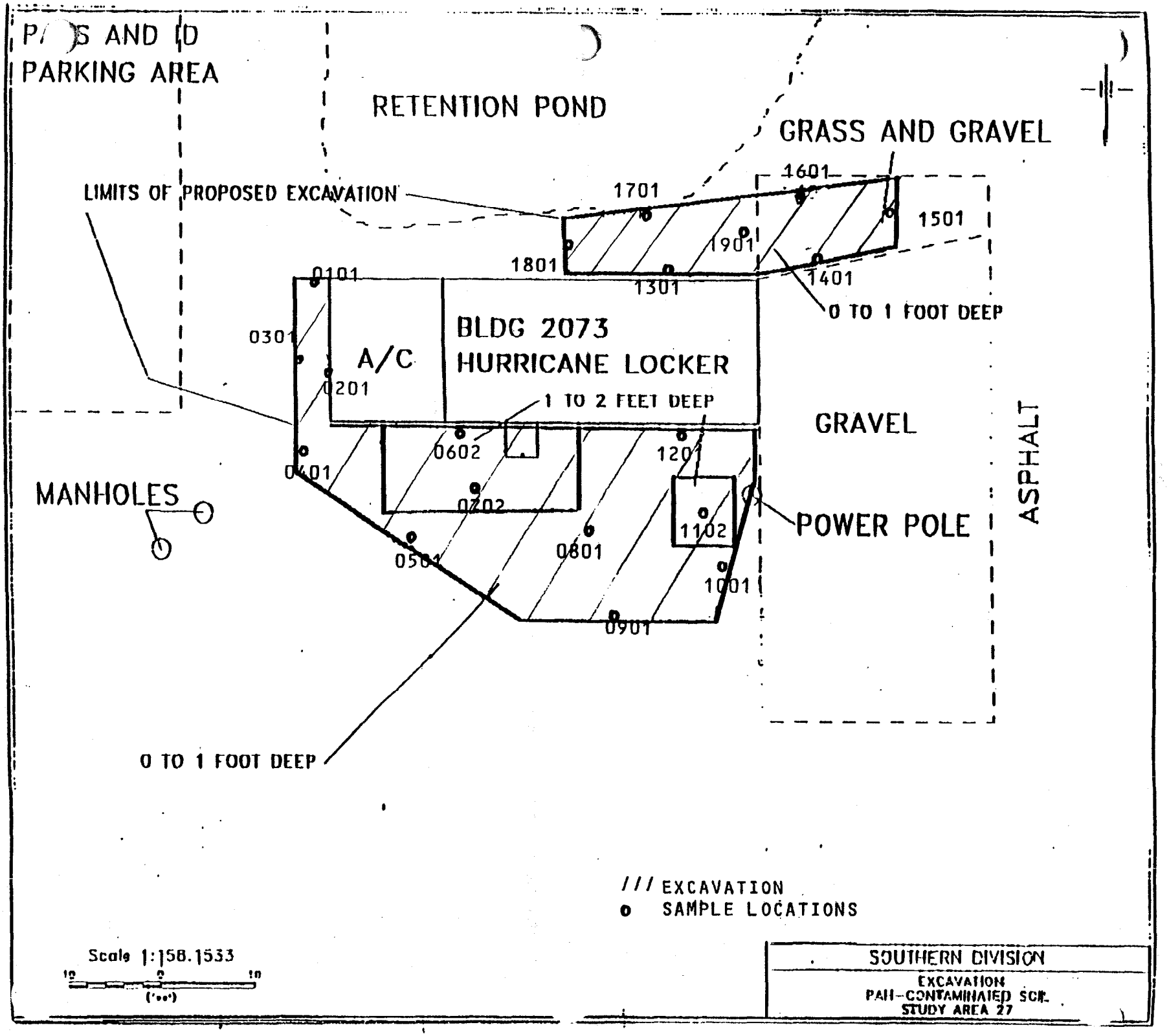
PARKING AREA
RETENTION POND
GRASS AND GRAVEL
LIMITS OF PROPOSED EXCAVATION
1601
1701
1501
1901
1801
1301
1401
0101
0301
0201
A/C
BLDG 2073
HURRICANE LOCKER
0 TO 1 FOOT DEEP
1 TO 2 FEET DEEP
GRAVEL
ASPHALT
0602
1201
0401
0202
MANHOLES
POWER POLE
1102
0801
0501
1001
0901
0 TO 1 FOOT DEEP
/// EXCAVATION
SAMPLE LOCATIONS
Scale 1:158.1533
SOUTHERN DIVISION
EXCAVATION
PAH-CONTAMINATED SOIL
STUDY AREA 27

FIGURE 1
2-3

APPENDIX A

SAMPLING DOCUMENTATION

DET NUMBERS	LABORATORY NUMBERS
NTC027S0001	98SAV001-1
NTC0SA27S000101	98SAV003-1
NTC0SA27S000201	98SAV003-2
NTC0SA27S000301	98SAV003-3
NTC0SA27S000401	98SAV003-4
NTC0SA27S000501	98SAV003-5
NTC0SA27S000602	98SAV003-6
NTC0SA27S000702	98SAV003-7
NTC0SA27S000801	98SAV003-8
NTC0SA27S000901	98SAV003-9
NTC0SA27S001001	98SAV003-10
NTC0SA27S001102	98SAV003-11
NTC0SA27S001202	98SAV003-12
NTC0SA27S001301	98SAV003-13
NTC0SA27S001401	98SAV003-14
NTC0SA27S001501	98SAV003-15
NTC0SA27S001601	98SAV003-16
NTC0SA27S001701	98SAV003-17
NTC0SA27S001801	98SAV003-18
NTC0SA27S001901	98SAV003-19
NTC0SA27C000101	98SAV003-20

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

1102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-81667
Received: 26 MAR 98
Reported: 01 APR 98

Mr. Fred McLean
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 19405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
81667-1	98SAV001-1	03-19-98/1545

PARAMETER	81667-1
Purgeable Halocarbons (8010)	
Bromodichloromethane, ug/kg dw	<5.4
Bromoform, ug/kg dw	<27
Bromomethane, ug/kg dw	<5.4
Carbon tetrachloride, ug/kg dw	<5.4
Chlorobenzene, ug/kg dw	<5.4
Chloroethane, ug/kg dw	<5.4
2-Chloroethylvinyl ether, ug/kg dw	<54
Chloroform, ug/kg dw	<5.4
Chloromethane, ug/kg dw	<5.4
Dibromochloromethane, ug/kg dw	<5.4
1,2-Dichlorobenzene, ug/kg dw	<5.4
1,3-Dichlorobenzene, ug/kg dw	<5.4
1,4-Dichlorobenzene, ug/kg dw	<5.4
Dichlorodifluoromethane, ug/kg dw	<5.4
1,1-Dichloroethane, ug/kg dw	<5.4
1,2-Dichloroethane, ug/kg dw	<5.4
1,1-Dichloroethene, ug/kg dw	<5.4
Cis/Trans-1,2-Dichloroethene, ug/kg dw	<5.4
1,2-Dichloropropane, ug/kg dw	<5.4
cis-1,3-Dichloropropene, ug/kg dw	<5.4
trans-1,3-Dichloropropene, ug/kg dw	<5.4
Methylene chloride (Dichloromethane), ug/kg dw	<11

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81667-1	98SAV001-1	03-19-98/1545

PARAMETER	81667-1
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.4
Tetrachloroethene, ug/kg dw	<5.4
1,1,1-Trichloroethane, ug/kg dw	<5.4
1,1,2-Trichloroethane, ug/kg dw	<5.4
Trichloroethylene, ug/kg dw	<5.4
Trichlorofluoromethane, ug/kg dw	<5.4
Vinyl chloride, ug/kg dw	<5.4
Surrogate - Bromochloromethane	96%
Date Analyzed	04.01.98
Dilution factor	1.0
Batch ID	0331C
Purgeable Aromatics (8020)	
Benzene, ug/kg dw	<5.4
Toluene, ug/kg dw	<5.4
Ethylbenzene, ug/kg dw	<5.4
Total Xylenes, ug/kg dw	<5.4
Methyl tert-butyl ether (MTBE), ug/kg dw	<54
Surrogate - a,a,a-Trifluorotoluene	100%
Date Analyzed	04.01.98
Dilution factor	1.0
Batch ID	0331C

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Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
81667-1	98SAV001-1	03-19-98/1545

PARAMETER	81667-1
Petroleum Hydrocarbons (9073)	
Petroleum Hydrocarbons, mg/kg dw	69
Preparation Date	03.26.98
Date Analyzed	03.26.98
Dilution factor	1.0
Batch ID	QEX0326I
Arsenic (6010)	
Arsenic, mg/kg dw	<1.1
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A
Barium (6010)	
Barium, mg/kg dw	200
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A
Cadmium (6010)	
Cadmium, mg/kg dw	<0.54
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
81667-1	98SAV001-1	03-19-98/1545

PARAMETER	81667-1
Chromium (6010)	
Chromium, mg/kg dw	5.4
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A
Lead (6010)	
Lead, mg/kg dw	43
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A
Mercury	
Mercury, mg/kg dw	1.3
Preparation Date	03.27.98
Date Analyzed	03.27.98
Batch ID	0327S
Dilution factor	10
Selenium (6010)	
Selenium, mg/kg dw	<1.1
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A

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Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
81667-1	98SAV001-1	03-19-98/1545

PARAMETER	81667-1
Silver (6010)	
Silver, mg/kg dw	<1.1
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A
PCB's (8080)	
Aroclor-1016, ug/kg dw	<36
Aroclor-1221, ug/kg dw	<73
Aroclor-1232, ug/kg dw	<36
Aroclor-1242, ug/kg dw	<36
Aroclor-1248, ug/kg dw	<36
Aroclor-1254, ug/kg dw	<36
Aroclor-1260, ug/kg dw	<36
Surrogate - TCX	58 %
Date Extracted	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326Q
Total Halogens	
Total halogens, mg/kg/dw	<220
Preparation Date	03.26.98
Date Analyzed	03.27.98
Dilution factor	1.0
Batch ID	0326A

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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
Purgeable Halocarbons (8010)			
Bromodichloromethane, ug/kg dw	<5.0	---	---
Bromoform, ug/kg dw	<25	---	---
Bromomethane, ug/kg dw	<5.0	---	---
Carbon tetrachloride, ug/kg dw	<5.0	---	---
Chlorobenzene, ug/kg dw	<5.0	120 %	56-122 %
Chloroethane, ug/kg dw	<5.0	---	---
2-Chloroethylvinyl ether, ug/kg dw	<50	---	---
Chloroform, ug/kg dw	<5.0	---	---
Chloromethane, ug/kg dw	<5.0	---	---
Dibromochloromethane, ug/kg dw	<5.0	---	---
1,2-Dichlorobenzene, ug/kg dw	<5.0	---	---
1,3-Dichlorobenzene, ug/kg dw	<5.0	---	---
1,4-Dichlorobenzene, ug/kg dw	<5.0	---	---
Dichlorodifluoromethane, ug/kg dw	<5.0	---	---
1,1-Dichloroethane, ug/kg dw	<5.0	---	---
1,2-Dichloroethane, ug/kg dw	<5.0	---	---
1,1-Dichloroethene, ug/kg dw	<5.0	110 %	56-185 %
Cis/Trans-1,2-Dichloroethene, ug/kg dw	<5.0	---	---
1,2-Dichloropropane, ug/kg dw	<5.0	---	---
cis-1,3-Dichloropropene, ug/kg dw	<5.0	---	---

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Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
trans-1,3-Dichloropropene, ug/kg dw	<5.0	---	---
Methylene chloride (Dichloromethane), ug/kg dw	<10	---	---
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.0	---	---
Tetrachloroethene, ug/kg dw	<5.0	---	---
1,1,1-Trichloroethane, ug/kg dw	<5.0	---	---
1,1,2-Trichloroethane, ug/kg dw	<5.0	---	---
Trichloroethylene, ug/kg dw	<5.0	110 %	56-133 %
Trichlorofluoromethane, ug/kg dw	<5.0	---	---
Vinyl chloride, ug/kg dw	<5.0	---	---
Surrogate - Bromochloromethane	112 %	---	---
Date Analyzed	03.31.98	---	---
Dilution factor	1.0	---	---
Batch ID	0331C	---	---
Purgeable Aromatics (8020)			
Benzene, ug/kg dw	<5.0	110 %	54-154 %
Toluene, ug/kg dw	<5.0	130 %	55-143 %
Ethylbenzene, ug/kg dw	<5.0	---	---
Total Xylenes, ug/kg dw	<5.0	---	---
Methyl tert-butyl ether (MTBE), ug/kg dw	<50	---	---
Surrogate - a,a,a-Trifluorotoluene	100 %	---	---
Date Analyzed	03.31.98	---	---
Dilution factor	1.0	---	---
Batch ID	0331C	---	---

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S8-81667
Received: 26 MAR 98
Reported: 01 APR 98

Mr. Fred McLean
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 19405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
Petroleum Hydrocarbons (9073)			
Petroleum Hydrocarbons, mg/kg dw	<10	114 %	60-140 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.26.98	---	---
Dilution factor	1.0	---	---
Batch ID	QEX0326I	---	---
Arsenic (6010)			
Arsenic, mg/kg dw	<1.0	109 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---
Barium (6010)			
Barium, mg/kg dw	<1.0	102 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---

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LOG NO: S8-81667
Received: 26 MAR 98
Reported: 01 APR 98

Mr. Fred McLean
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 19405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
Cadmium (6010)			
Cadmium, mg/kg dw	<0.50	104 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.30.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---
Chromium (6010)			
Chromium, mg/kg dw	<1.0	115 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---
Lead (6010)			
Lead, mg/kg dw	<0.50	118 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---

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Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
Mercury			
Mercury, mg/kg dw	<0.010	110 %	75-125 %
Preparation Date	03.27.98	---	---
Date Analyzed	03.27.98	---	---
Batch ID	0327S	---	---
Dilution factor	1.0	---	---
Selenium (6010)			
Selenium, mg/kg dw	<1.0	107 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---
Silver (6010)			
Silver, mg/kg dw	<1.0	102 %	75-125 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---

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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/SA-27
Sampled By: Client
Code: 17378041

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
81667-2	Method Blank	
81667-3	Lab Control Standard % Recovery	
81667-4	LCS Accuracy Control Limit (%R)	

PARAMETER	81667-2	81667-3	81667-4
PCB's (8080)			
Aroclor-1016, ug/kg dw	<33	37 %	34-137 %
Aroclor-1221, ug/kg dw	<67	---	---
Aroclor-1232, ug/kg dw	<33	---	---
Aroclor-1242, ug/kg dw	<33	---	---
Aroclor-1248, ug/kg dw	<33	---	---
Aroclor-1254, ug/kg dw	<33	---	---
Aroclor-1260, ug/kg dw	<33	59 %	58-150 %
Surrogate - TCX	25 %	22 %	---
Date Extracted	03.26.98	---	---
Date Analyzed	03.26.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326Q	---	---
Total Halogens			
Total halogens, mg/kg	<200	70 %	70-130 %
Preparation Date	03.26.98	---	---
Date Analyzed	03.27.98	---	---
Dilution factor	1.0	---	---
Batch ID	0326A	---	---

Methods: EPA SW-846

Michael J. Salum, Project Manager

Final Page Of Report

Serial Number 03865

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

☑ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Mike Saluin/Abbie Price

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
N00193-97-M-1208	SA-27	CNS117230C007 N00193-97-M-1208

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE	FAX
FLA.	T. LEWIS	803-743-2821 ext. 126	803-743-9413

CLIENT NAME	CLIENT PROJECT MANAGER
SPORT ENV DET CHASN	TOM KIZER / FRED McLEAN

CLIENT ADDRESS (CITY, STATE, ZIP): 1899 NO. HOBSON AVE. BLDG 30, NO. CHARLESTON, SC, 29405

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc)

REQUIRED ANALYSES: FLA. SOIL (PAC BURN) 62775.410(3)+(4)+(6)

PAGE 1 OF 1

☑ STANDARD REPORT DELIVERY

☑ EXPEDITED REPORT DELIVERY (surcharge) — Date Due: TAT 3-5 WORKING DAYS

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/19/98	1545		98SAV001-1		X			4	NTC027S0001

RUSH

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Jerry L Lewis	3/24/98	1500	Fred S McLean	3/25/98	1030			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Fred S. McLean	3/24/98	1500						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
C. Zylwz	3/26/98	9:42	☑ YES ☐ NO		S8-8166	

ORIGINAL

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

Revised 04/20/98

102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-82143
Received: 16 APR 98
Reported: 20 APR 98

Mr. Tom Kizer
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 29405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-1	98SAV003-1	04-15-98/1200
82143-2	98SAV003-2	04-15-98/1210
82143-3	98SAV003-3	04-15-98/1215
82143-4	98SAV003-4	04-15-98/1220
82143-5	98SAV003-5	04-15-98/1225

PARAMETER	82143-1	82143-2	82143-3	82143-4	82143-5
Semivolatile Organics (8270)					
Naphthalene, ug/kg dw	<340	<340	<330	<330	<340
Acenaphthylene, ug/kg dw	<340	<340	<330	<330	<340
Acenaphthene, ug/kg dw	<340	<340	<330	<330	<340
Fluorene, ug/kg dw	<340	<340	<330	<330	<340
Phenanthrene, ug/kg dw	<340	<340	<330	<330	<340
Anthracene, ug/kg dw	<340	<340	<330	<330	<340
Fluoranthene, ug/kg dw	<340	<340	<330	<330	<340
Pyrene, ug/kg dw	<340	<340	<330	<330	<340
Chrysene, ug/kg dw	<340	<340	<330	<330	<340
Benzo(a)anthracene, ug/kg dw	18J	95J	17J	<330	38J
Benzo(b)fluoranthene, ug/kg dw	<340	<340	<330	<330	<340
Benzo(k)fluoranthene, ug/kg dw	<340	<340	<330	<330	<340
Benzo(a)pyrene, ug/kg dw	<340	<340	<330	<330	<340
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<340	<330	<330	<340
Dibenzo(a,h)anthracene, ug/kg dw	<340	<340	<330	<330	<340
Benzo(g,h,i)perylene, ug/kg dw	<340	<340	<330	<330	<340
2-Methylnaphthalene, ug/kg dw	<340	<340	<330	<330	<340
Surrogate-2FBP	53 %	52 %	49 %	51 %	54 %

RECEIVED
APR 2? REC'D

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-1	98SAV003-1	04-15-98/1200
82143-2	98SAV003-2	04-15-98/1210
82143-3	98SAV003-3	04-15-98/1215
82143-4	98SAV003-4	04-15-98/1220
82143-5	98SAV003-5	04-15-98/1225

PARAMETER	82143-1	82143-2	82143-3	82143-4	82143-5
Surrogate-NBZ	43 %	42 %	39 %	41 %	45 %
Surrogate-TPH	54 %	51 %	48 %	53 %	54 %
Date Extracted	04.17.98	04.17.98	04.17.98	04.17.98	04.17.98
Date Analyzed	04.17.98	04.17.98	04.17.98	04.17.98	04.17.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0417A	0417A	0417A	0417A	0417A
Percent Solids	98	98	99	99	98

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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1899 N. Hobson Avenue
N. Charleston, SC 29405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-6	98SAV003-6	04-15-98/1235
82143-7	98SAV003-7	04-15-98/1245
82143-8	98SAV003-8	04-15-98/1248
82143-9	98SAV003-9	04-15-98/1250
82143-10	98SAV003-10	04-15-98/1252

PARAMETER	82143-6	82143-7	82143-8	82143-9	82143-10
Semivolatile Organics (8270)					
Naphthalene, ug/kg dw	<340	<340	<340	<340	<340
Acenaphthylene, ug/kg dw	<340	<340	<340	<340	<340
Acenaphthene, ug/kg dw	<340	<340	<340	<340	<340
Fluorene, ug/kg dw	<340	<340	<340	<340	<340
Phenanthrene, ug/kg dw	<340	<340	<340	<340	<340
Anthracene, ug/kg dw	<340	<340	<340	<340	<340
Fluoranthene, ug/kg dw	<340	<340	<340	<340	<340
Pyrene, ug/kg dw	<340	<340	<340	<340	<340
Chrysene, ug/kg dw	<340	<340	<340	<340	<340
Benzo(a)anthracene, ug/kg dw	<340	<340	41J	63J	<340
Benzo(b)fluoranthene, ug/kg dw	<340	<340	<340	<340	<340
Benzo(k)fluoranthene, ug/kg dw	<340	<340	<340	<340	<340
Benzo(a)pyrene, ug/kg dw	<340	<340	<340	<340	<340
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<340	<340	<340	<340
Dibenzo(a,h)anthracene, ug/kg dw	<340	<340	<340	<340	<340
Benzo(g,h,i)perylene, ug/kg dw	<340	<340	<340	<340	<340
2-Methylnaphthalene, ug/kg dw	<340	<340	<340	<340	<340
Surrogate-2FBP	46 %	50 %	54 %	53 %	55 %

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-6	98SAV003-6	04-15-98/1235
82143-7	98SAV003-7	04-15-98/1245
82143-8	98SAV003-8	04-15-98/1248
82143-9	98SAV003-9	04-15-98/1250
82143-10	98SAV003-10	04-15-98/1252

PARAMETER	82143-6	82143-7	82143-8	82143-9	82143-10
Surrogate-NBZ	37 %	42 %	44 %	43 %	44 %
Surrogate-TPH	50 %	55 %	55 %	57 %	59 %
Date Extracted	04.17.98	04.17.98	04.17.98	04.17.98	04.17.98
Date Analyzed	04.17.98	04.18.98	04.18.98	04.18.98	04.18.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0417A	0417A	0417A	0417A	0417A
Percent Solids	96	96	97	98	98

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-11	98SAV003-11	04-15-98/1254
82143-12	98SAV003-12	04-15-98/1255
82143-13	98SAV003-13	04-15-98/1510
82143-14	98SAV003-14	04-15-98/1515
82143-15	98SAV003-15	04-15-98/1526

PARAMETER	82143-11	82143-12	82143-13	82143-14	82143-15
Semivolatile Organics (8270)					
Naphthalene, ug/kg dw	<340	<340	<350	<340	<340
Acenaphthylene, ug/kg dw	<340	<340	<350	<340	<340
Acenaphthene, ug/kg dw	<340	<340	<350	<340	<340
Fluorene, ug/kg dw	<340	<340	<350	<340	<340
Phenanthrene, ug/kg dw	<340	<340	<350	<340	<340
Anthracene, ug/kg dw	<340	<340	<350	<340	<340
Fluoranthene, ug/kg dw	<340	<340	<350	<340	<340
Pyrene, ug/kg dw	<340	<340	<350	<340	<340
Chrysene, ug/kg dw	<340	<340	<350	<340	<340
Benzo(a)anthracene, ug/kg dw	20J	<340	<350	<340	<340
Benzo(b)fluoranthene, ug/kg dw	<340	<340	<350	<340	<340
Benzo(k)fluoranthene, ug/kg dw	<340	<340	<350	<340	<340
Benzo(a)pyrene, ug/kg dw	<340	<340	<350	<340	<340
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<340	<350	<340	<340
Dibenzo(a,h)anthracene, ug/kg dw	<340	<340	<350	<340	<340
Benzo(g,h,i)perylene, ug/kg dw	<340	<340	<350	<340	<340
2-Methylnaphthalene, ug/kg dw	<340	<340	<350	<340	<340
Surrogate-2FBP	57 %	70 %	56 %	65 %	58 %

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-11	98SAV003-11	04-15-98/1254
82143-12	98SAV003-12	04-15-98/1255
82143-13	98SAV003-13	04-15-98/1510
82143-14	98SAV003-14	04-15-98/1515
82143-15	98SAV003-15	04-15-98/1526

PARAMETER	82143-11	82143-12	82143-13	82143-14	82143-15
Surrogate-NBZ	46 %	56 %	47 %	51 %	48 %
Surrogate-TPH	70 %	76 %	61 %	70 %	70 %
Date Extracted	04.17.98	04.17.98	04.17.98	04.17.98	04.17.98
Date Analyzed	04.18.98	04.18.98	04.18.98	04.18.98	04.18.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0417A	0417A	0417A	0417A	0417A
Percent Solids	97	96	95	97	96

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Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-16	98SAV003-16	04-15-98/1530
82143-17	98SAV003-17	04-15-98/1535
82143-18	98SAV003-18	04-15-98/1538
82143-19	98SAV003-19	04-15-98/1542
82143-20	98SAV003-20	04-15-98/1202

PARAMETER	82143-16	82143-17	82143-18	82143-19	82143-20
Semivolatile Organics (8270)					
Naphthalene, ug/kg dw	<340	<340	<340	<340	<330
Acenaphthylene, ug/kg dw	<340	<340	<340	<340	<330
Acenaphthene, ug/kg dw	<340	<340	<340	<340	<330
Fluorene, ug/kg dw	<340	<340	<340	<340	<330
Phenanthrene, ug/kg dw	<340	<340	<340	<340	<330
Anthracene, ug/kg dw	<340	<340	<340	<340	<330
Fluoranthene, ug/kg dw	<340	<340	<340	<340	<330
Pyrene, ug/kg dw	<340	<340	<340	<340	<330
Chrysene, ug/kg dw	<340	<340	<340	<340	<330
Benzo(a)anthracene, ug/kg dw	70J	27J	<340	<340	24J
Benzo(b)fluoranthene, ug/kg dw	<340	<340	<340	<340	<330
Benzo(k)fluoranthene, ug/kg dw	<340	<340	<340	<340	<330
Benzo(a)pyrene, ug/kg dw	<340	<340	<340	<340	<330
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<340	<340	<340	<330
Dibenzo(a,h)anthracene, ug/kg dw	<340	<340	<340	<340	<330
Benzo(g,h,i)perylene, ug/kg dw	<340	<340	<340	<340	<330
2-Methylnaphthalene, ug/kg dw	<340	<340	<340	<340	<330
Surrogate-2FBP	59 %	55 %	55 %	58 %	54 %

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-82143
Received: 16 APR 98
Reported: 20 APR 98

Mr. Tom Kizer
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 29405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
82143-16	98SAV003-16	04-15-98/1530
82143-17	98SAV003-17	04-15-98/1535
82143-18	98SAV003-18	04-15-98/1538
82143-19	98SAV003-19	04-15-98/1542
82143-20	98SAV003-20	04-15-98/1202

PARAMETER	82143-16	82143-17	82143-18	82143-19	82143-20
Surrogate-NBZ	48 %	45 %	45 %	49 %	44 %
Surrogate-TPH	70 %	65 %	70 %	70 %	70 %
Date Extracted	04.17.98	04.17.98	04.17.98	04.17.98	04.17.98
Date Analyzed	04.18.98	04.18.98	04.18.98	04.18.98	04.18.98
Dilution factor	1.0	1.0	1.0	1.0	1.0
Batch ID	0417A	0417A	0417A	0417A	0417A
Percent Solids	96	98	97	96	99

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-82143
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Mr. Tom Kizer
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1899 N. Hobson Avenue
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Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
82143-21	Method Blank	
82143-22	Lab Control Standard % Recovery	
82143-23	LCS Accuracy Control Limit (%R)	

PARAMETER	82143-21	82143-22	82143-23
Semivolatile Organics (8270)			
Naphthalene, ug/kg dw	<330	---	---
Acenaphthylene, ug/kg dw	<330	---	---
Acenaphthene, ug/kg dw	<330	49 %	28-102 %
Fluorene, ug/kg dw	<330	---	---
Phenanthrene, ug/kg dw	<330	---	---
Anthracene, ug/kg dw	<330	---	---
Fluoranthene, ug/kg dw	<330	---	---
Pyrene, ug/kg dw	<330	46 %	18-136 %
Chrysene, ug/kg dw	<330	---	---
Benzo(a)anthracene, ug/kg dw	<330	---	---
Benzo(b)fluoranthene, ug/kg dw	<330	---	---
Benzo(k)fluoranthene, ug/kg dw	<330	---	---
Benzo(a)pyrene, ug/kg dw	<330	---	---
Indeno(1,2,3-cd)pyrene, ug/kg dw	<330	---	---
Dibenzo(a,h)anthracene, ug/kg dw	<330	---	---
Benzo(g,h,i)perylene, ug/kg dw	<330	---	---
2-Methylnaphthalene, ug/kg dw	<330	---	---
Surrogate-2FBP	36 %	44 %	24-118 %
Surrogate-NBZ	28 %	36 %	12-125 %
Surrogate-TPH	40 %	44 %	18-153 %
Date Extracted	04.17.98	---	---
Date Analyzed	04.17.98	---	---
Dilution factor	1.0	---	---
Batch ID	0417A	---	---

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S8-82143
Received: 16 APR 98
Reported: 20 APR 98

Mr. Tom Kizer
Environmental Detachment Charleston
1899 N. Hobson Avenue
N. Charleston, SC 29405-2106

Client PO. No.: CNS117230C007

Project: N00193-97-M-1208/S-2
Sampled By: Client
Code: 144080420

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
82143-21	Method Blank	
82143-22	Lab Control Standard % Recovery	
82143-23	LCS Accuracy Control Limit (%R)	

PARAMETER	82143-21	82143-22	82143-23

Methods: EPA SW-846

The flag 'J' indicates the presence of a compound that meets the identification criteria, but the result is less than the sample RL and greater than the MDL.

Michael J. Salum, Project Manager

Final Page Of Report

— 2-DAY TURNAROUND —

Serial Number 92750

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☑ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

MIKE SALUM / ABBIE PAGE

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
N00193-97-M-1208	S-2	CNS1172306007

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE / FAX
S.C.	MIKE WHEELER	PHONE 803-743-2821 ext 149 FAX 803-743-9413

CLIENT NAME	CLIENT PROJECT MANAGER
SPORTENVORT CHASN	TOM KIZER / MIKE WHEELER

CLIENT ADDRESS (CITY, STATE, ZIP): 1849 N. HOBSON AVE., BLDG 30, NORTH CHARLESTON, S.C. 29405

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc)

REQUIRED ANALYSES: PAH

PAGE 1 OF 2

☐ STANDARD REPORT DELIVERY
☑ EXPEDITED REPORT DELIVERY (surcharge)
Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	PAH (NUMBER OF CONTAINERS SUBMITTED)	REMARKS
4/15/98	1200		98 SAV 003-1	X				1	NTC05A2730001 01
4/15/98	1210		98 SAV 003-2	X				1	NTC05A2730002 01
4/15/98	1215		98 SAV 003-3	X				1	NTC05A2730003 01
4/15/98	1220		98 SAV 003-4	X				1	NTC05A2730004 01
4/15/98	1225		98 SAV 003-5	X				1	NTC05A2730005 01
4/15/98	1235		98 SAV 003-6	X				1	NTC05A2730006 02
4/15/98	1245		98 SAV 003-7	X				1	NTC05A2730007 02
4/15/98	1248		98 SAV 003-8	X				1	NTC05A2730008 01
4/15/98	1250		98 SAV 003-9	X				1	NTC05A2730009 01
4/15/98	1252		98 SAV 003-10	X				1	NTC05A2730010 01
4/15/98	1254		98 SAV 003-11	X				1	NTC05A2730011 02
4/15/98	1255		98 SAV 003-12	X				1	NTC05A2730012 02
4/15/98	1510		98 SAV 003-13	X				1	NTC05A2730013 01

RUSH

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
A. Campbell	4/16/98	1:00	C. Vannamee	4/15/98	1615			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
[illegible]	4/16/98	9:48	☑ YES ☐ NO		S8-82143	

— 2 - DAY T NAROUND —

Serial Number 751

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☑ 5102 LaRoche Avenue, Savannah, GA 31404 — Phone: (912) 354-7858 — Fax: (912) 352-0165
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 — Phone: (904) 878-3994 — Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 — Phone: (954) 421-7400 — Fax: (954) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 — Phone: (334) 666-6633 — Fax: (334) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 — Phone: (813) 885-7427 — Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 — Phone: (504) 764-1100 — Fax: (504) 725-1163

MIKE SALUM / ABBIE PAGE

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
N00193-97-M-1208	S-2	CNS117230C007

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE / FAX
S.C.	MIKE WHEELER	PHONE 803-743-2821 EXT 149 / FAX 803-743-9413

CLIENT NAME	CLIENT PROJECT MANAGER
SPORT ENVORT CHASN	TOM KIZER / MIKE WHEELER

CLIENT ADDRESS (CITY, STATE, ZIP)

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc)

REQUIRED ANALYSES: PAH

PAGE 2 OF 2

☐ STANDARD REPORT DELIVERY

☑ EXPEDITED REPORT DELIVERY (surcharge)

Date Due:

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (oil, solvent, etc)	PAH (NUMBER OF CONTAINERS SUBMITTED)	REMARKS
4/15/98	1515		98SAV003-14		X			1	NTC03A27500140 1
4/15/98	1526		98SAV003-15		X			1	NTC03A27500150 1
4/15/98	1530		98SAV003-16		X			1	NTC03A27500160 1
4/15/98	1535		98SAV003-17		X			1	NTC03A27500170 1
4/15/98	1538		98SAV003-18		X			1	NTC03A27500180 1
4/15/98	1542		98SAV003-19		X			1	NTC03A27500190 1
4/15/98	1202		98SAV003-20		X			1	NTC03A27C00010 1

RUSH

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
A. Campbell	4/16/98	11:00	CC Wamanda	4/15/98	1615			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
C. Y. [illegible]	4/16/98	9:48	☑ YES ☐ NO		S8-82143	

ORIGINAL

APPENDIX B

ABB-ES 1997 SAMPLING DATA

ABB

4 March, 1998

Commanding Officer
Southern Division
Naval Facilities Engineering Command
Attn: Ms. Barbara Nwokike, Code 1837
2155 Eagle Drive
N. Charleston, SC 29419-9010

Subject: **Study Area 27 Soil Removal**
NTC, Orlando

Dear Barbara:

We recently calculated the volume of soil at Study Area 27 that has either benzo(a)pyrene or total (carcinogenic) PAHs at concentrations exceeding Florida's residential Soil Cleanup Goals (SCGs) in surface soil. Approximately 44 cubic yards of soil exceeds the Florida residential SCGs. The sample locations and PAH concentrations are shown on the attached figures, which present

- benzo(a)pyrene concentrations in surface soil in the depth range of 0 to 1 foot below land surface (bls);
- benzo(a)pyrene concentrations in surface soil in the depth range of 1 to 2 feet bls;
- total (carcinogenic) PAHs in surface soil in the depth range of 0 to 1 foot below land surface (bls); and
- total (carcinogenic) PAHs concentrations in surface soil in the depth range of 1 to 2 feet bls.

From these maps, we have delineated the boundaries of the PAH-contaminated soil in the depth range of 0 to 1 foot bls, and 1 to 2 feet bls. This figure is also attached, and is the basis for the 44 cubic yard soil volume.

Please call me at 904-269-7012 if you have any questions.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Richard P. Allen

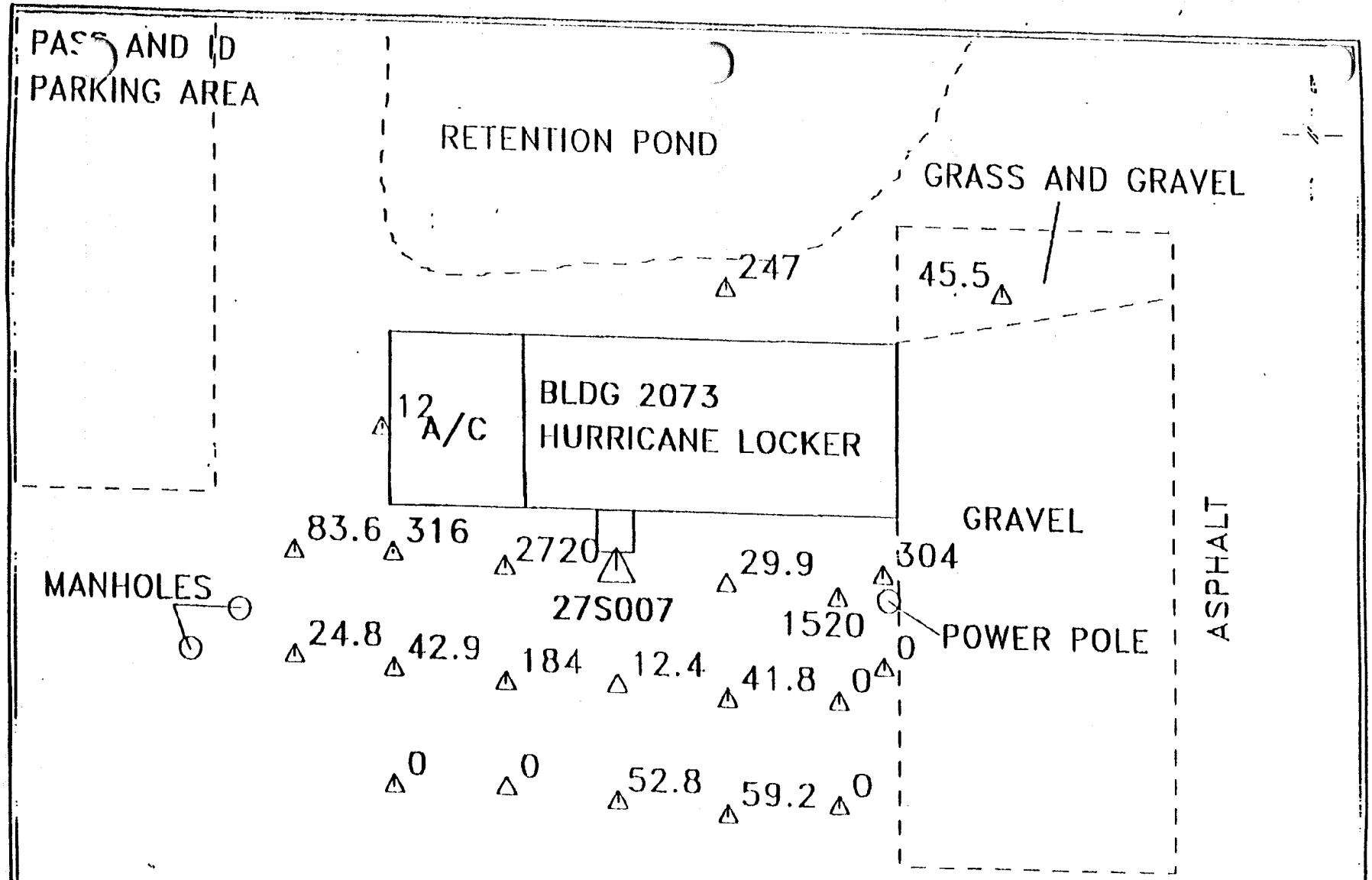
Richard P. Allen
Principal Scientist
encls.

cc: John Kaiser (ABB-ES, Orlando) w/attachment

ABB Environmental Services Inc.

1036 Kingsley Avenue
Suite 127
Orange Park, Florida 32073

Telephone (904) 269-7012
Fax (904) 264-5832



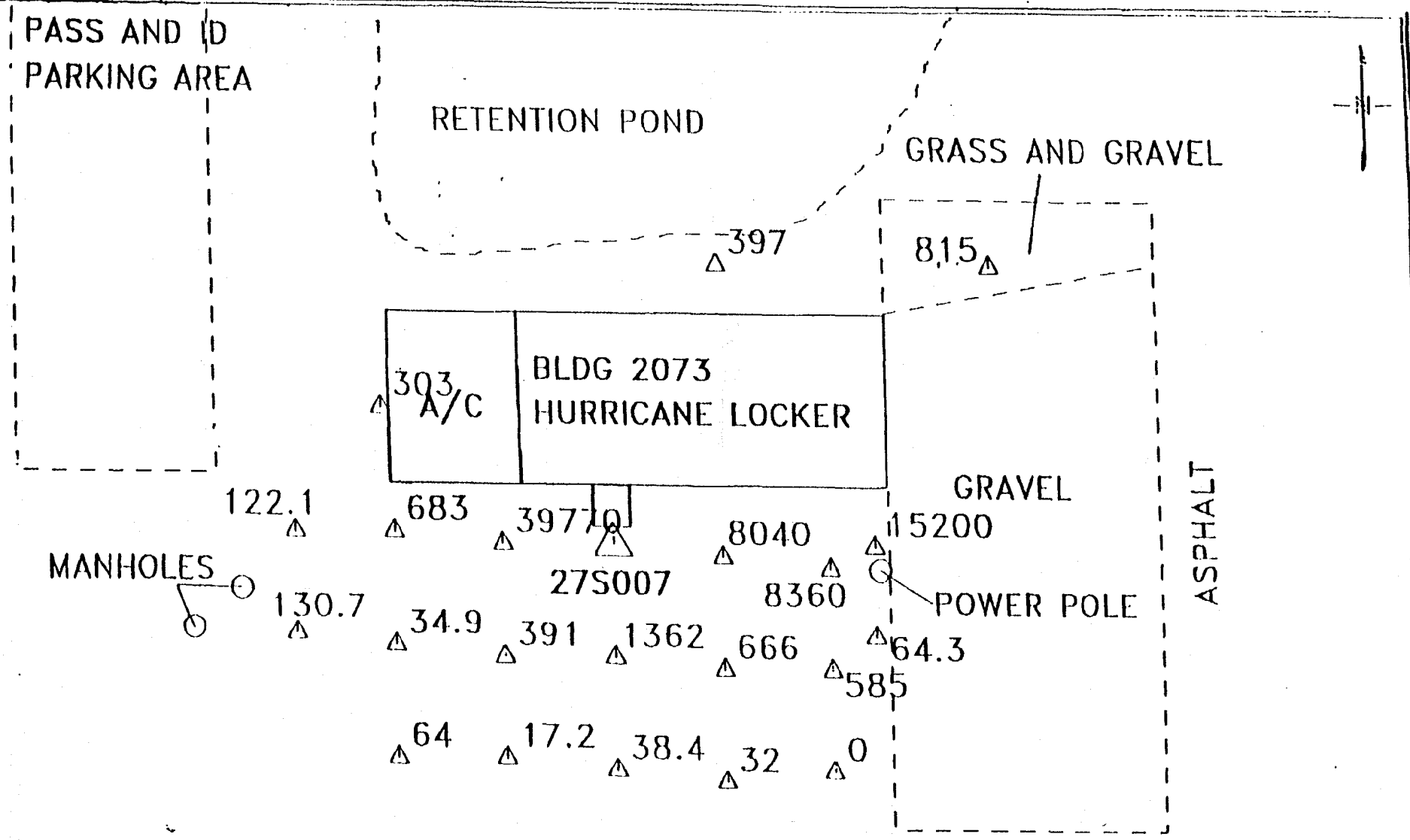
NOTE: CONCENTRATIONS OF CARCINOGENIC PAHS (BENZO[A]ANTHRACENE, CHRYSENE, BENZO[B]FLUORANTHENE BENZO[K]FLUORANTHENE, BENZO[A]PYRENE, DIBENZ[A,H]ANTHRACENE, INDENO[1,2,3-CD]PYRENE AND BENZO[G,H,I]PERYLENE)

Scale 1:158.533

(feet)

SOUTHERN DIVISION

PAH CONCENTRATIONS VICINITY OF SAMPLE
STUDY AREA 27
DEEP (1 TO 2 FEET BLS)



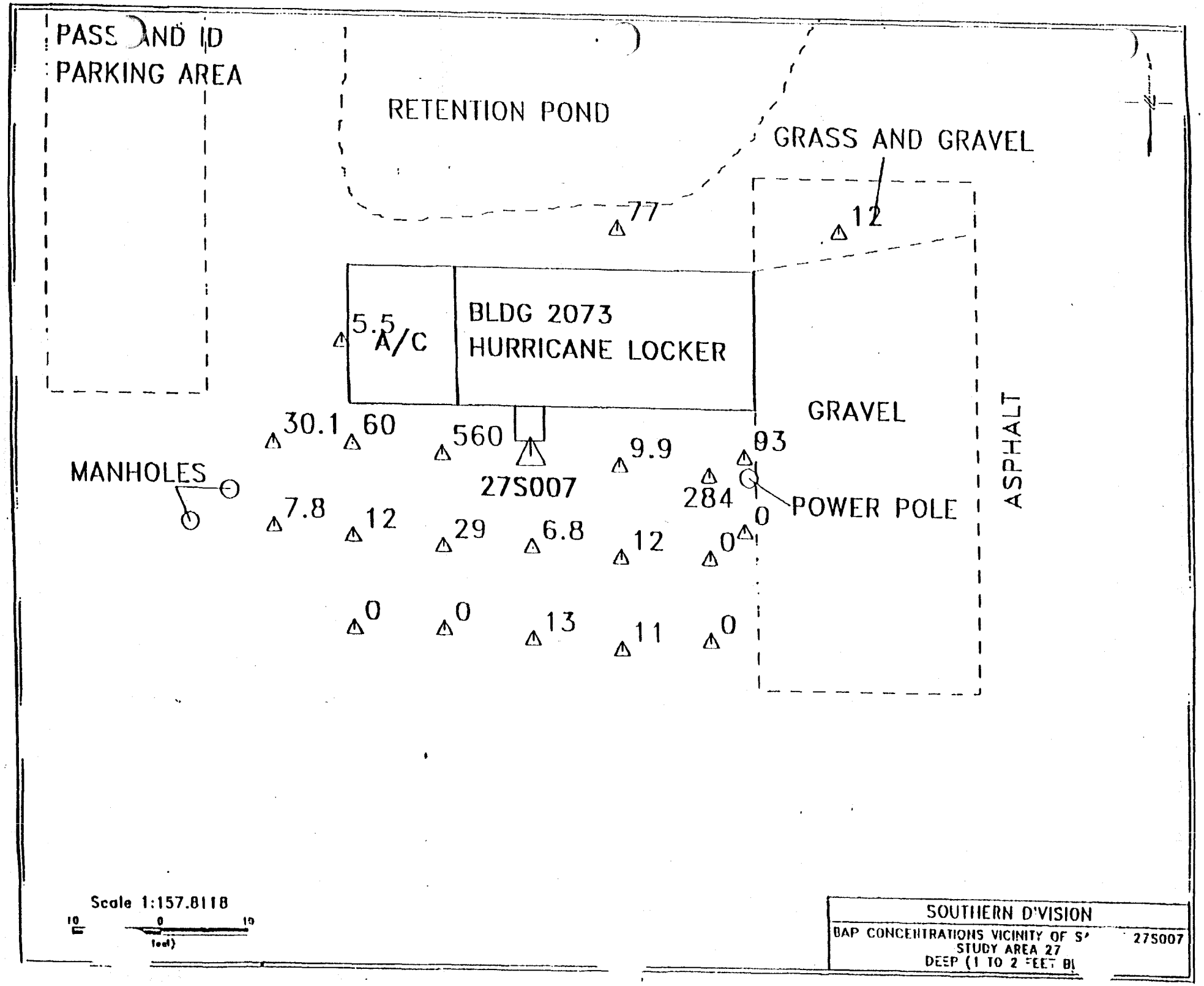
NOTE: CONCENTRATIONS OF CARCINOGENIC PAHS (BENZO[A]ANTHRACENE, CHRYSENE, BENZO[B]FLUORANTHENE BENZO[K]FLUORANTHENE, BENZO[A]PYRENE, DIBENZ[A,H]ANTHRACENE, INDENO[1,2,3-CD]PYRENE AND BENZO[G,H,I]PERYLENE)

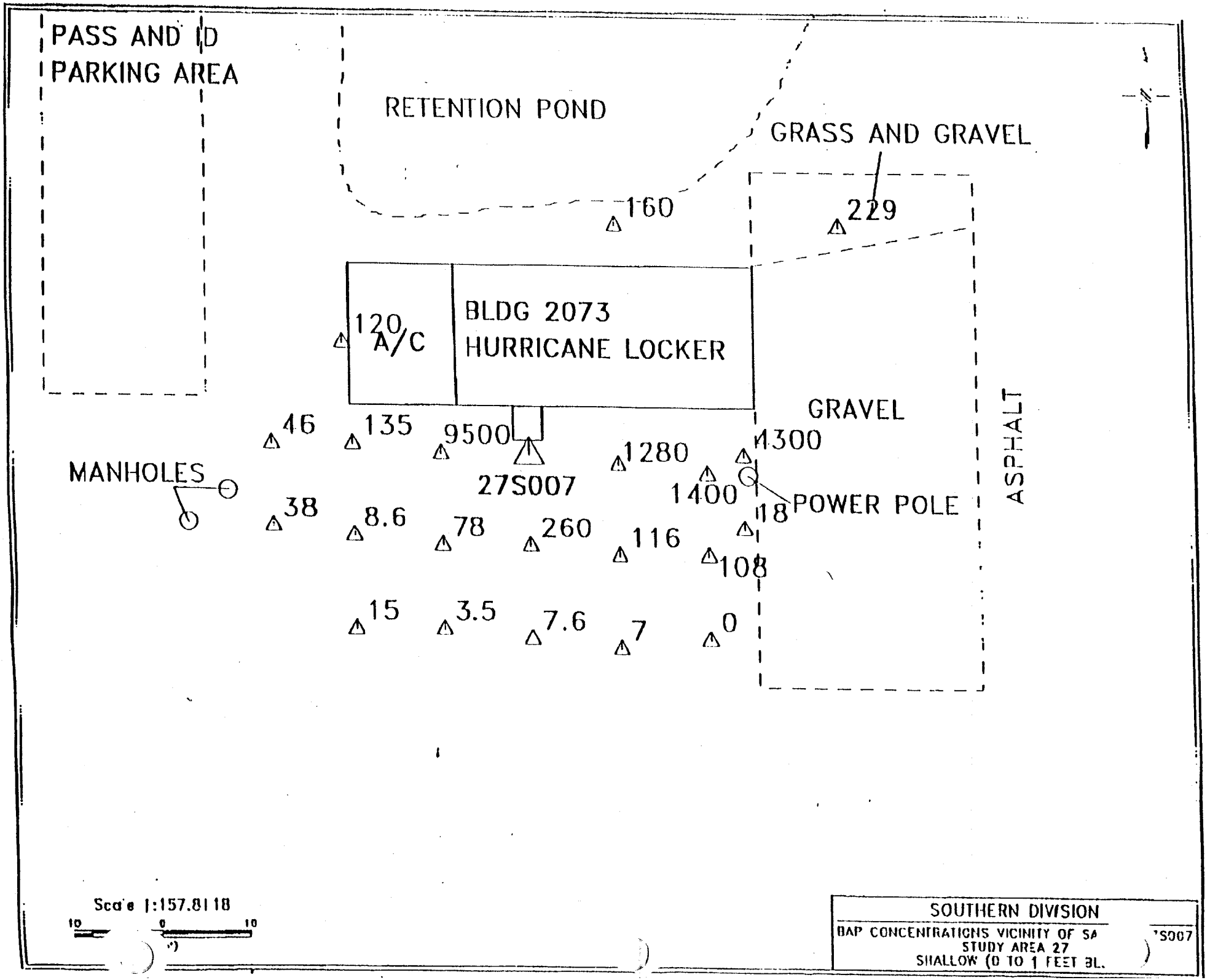
Scale 1:157.8118

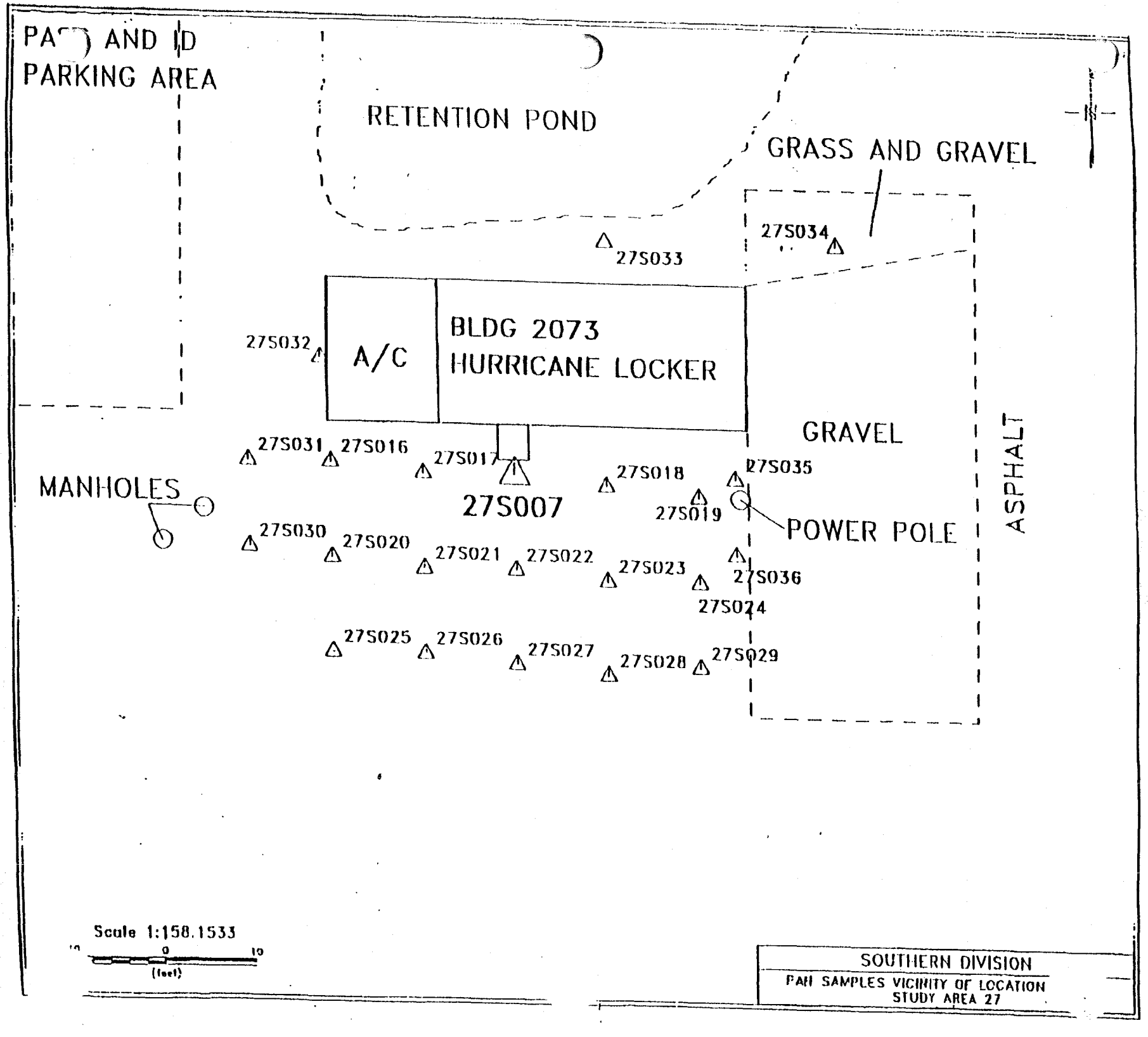
10 0 10 (feet)

SOUTHERN DIVISION

PAH CONCENTRATIONS VICINITY OF 27S007
STUDY AREA 27
SHALLOW (0 TO 1 FEET)


PASS AND ID
PARKING AREA
RETENTION POND
GRASS AND GRAVEL
77
12
5.5
A/C
BLDG 2073
HURRICANE LOCKER
GRAVEL
ASPHALT
30.1
60
560
9.9
93
MANHOLES
27S007
284
POWER POLE
7.8
12
29
6.8
12
0
0
0
13
11
0
Scale 1:157.8118
10
0
10
feet
SOUTHERN DIVISION
BAP CONCENTRATIONS VICINITY OF S
STUDY AREA 27
DEEP (1 TO 2 FEET BI
27S007


PASS AND ID
PARKING AREA
RETENTION POND
GRASS AND GRAVEL
160
229
120
A/C
BLDG 2073
HURRICANE LOCKER
GRAVEL
ASPHALT
46
135
9500
1280
1300
MANHOLES
27S007
1400
POWER POLE
38
8.6
78
260
116
18
108
15
3.5
7.6
7
0
Scale 1:157.8118
10
0
10
SOUTHERN DIVISION
BAP CONCENTRATIONS VICINITY OF SA
STUDY AREA 27
SHALLOW (0 TO 1 FEET BL.
'S007


PA AND D
PARKING AREA
RETENTION POND
GRASS AND GRAVEL
27S034
27S033
27S032
A/C
BLDG 2073
HURRICANE LOCKER
GRAVEL
ASPHALT
27S031
27S016
27S017
27S018
27S035
MANHOLES
27S007
27S019
POWER POLE
27S030
27S020
27S021
27S022
27S023
27S036
27S024
27S025
27S026
27S027
27S028
27S029
Scale 1:158.1533
10
0
10
(feet)
SOUTHERN DIVISION
PAH SAMPLES VICINITY OF LOCATION
STUDY AREA 27

APPENDIX C

NON-HAZARDOUS WASTE MANIFESTS

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required*

Manifest Document No.:

2. Page 1 of 1

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

LOAD # 1

5. Transporter 1 Company Name

6. US EPA ID Number: Not Required*

TRUCK # 121

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
C.A. MEYER PAVING & CONSTRUCTION CO.
14023 Tiny Morse Blv'd.
Clermont, Florida 32711

10. US EPA ID Number: Not Required*

A. Transporter's Phone

B. Transporter's Phone

C. Facility's Phone (407) 877-3600

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous Petroleum Contaminated Soil	1	TRK		
b.				
c.				
d.				

GENERATOR

J. Additional Descriptions for Materials Listed Above

*US EPA ID# Not Required. Non-Hazardous Waste

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Transporter hereby certifies that all of the material in this load was placed on my truck at the address referenced above. Nothing has been added to this load after departure from address listed above.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FAC

19. Discrepancy Indication Space

J. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
C.A. MEYER PAVING & CONSTRUCTION CO.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. Not Required*	Manifest Document No.	2. Page 1 of 1

3. Generator's Name and Mailing Address
NIC
[illegible]

4. Generator's Phone ([illegible]) [illegible]

LOAD # 2

5. Transporter 1 Company Name	6. US EPA ID Number Not Required*	TRUCK # 116
7. Transporter 2 Company Name	8. US EPA ID Number	
9. Designated Facility Name and Site Address C.A. MEYER PAVING & CONSTRUCTION CO. 14623 Tiny Mose Blvd. Clermont, Florida 32711	10. US EPA ID Number Not Required*	A. Transporter's Phone B. Transporter's Phone C. Facility's Phone (407) 877-3609

GENERATOR

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous Petroleum Contaminated Soil	1	TRK		
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

*US EPA ID# Not Required. Non-Hazardous Waste

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Transporter hereby certifies that all of the material in this load was placed on my truck at the address referenced above. Nothing has been added to this load after departure from address listed above.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Mike Zill JIC CWC	[signature]	04	15	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
[illegible] Russell	[signature]			

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
C.A. MEYER PAVING & CONSTRUCTION CO.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Not Required*

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address

[illegible]

4. Generator's Phone ([illegible]) [illegible]

LOAD # 3

5. Transporter 1 Company Name

6. US EPA ID Number Not Required*

TRUCK # 121

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

C.A. MEYER PAVING & CONSTRUCTION CO.
14023 Tiny Morse Blv'd.
Clermont, Florida 32711

10. US EPA ID Number Not Required*

A. Transporter's Phone

B. Transporter's Phone

C. Facility's Phone (407) 877-3600

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous Petroleum Contaminated Soil	1.	TRK		
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

*US EPA ID# Not Required. Non-Hazardous Waste

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Transporter hereby certifies that all of the material in this load was placed on my truck at the address referenced above. Nothing has been added to this load after departure from address listed above.

GENERATOR

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: [illegible] Signature: [illegible] Month 04 Day 15 Year 19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JESSE Flint Signature: [illegible] Month 4 Day 15 Year 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: Signature: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

C.A. MEYER PAVING & CONSTRUCTION CO.

Printed/Typed Name: Signature: Month Day Year

GENERATOR'S COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. Not Required*	Manifest Document No.	2. Page 1 of 1

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

LOAD # 4

5. Transporter 1 Company Name	6. US EPA ID Number Not Required*
7. Transporter 2 Company Name	8. US EPA ID Number
9. Designated Facility Name and Site Address C.A. MEYER PAVING & CONSTRUCTION CO. 14023 Tiny Mouse Blv'd. Clermont, Florida 32711	10. US EPA ID Number Not Required*

TRUCK # 121

A. Transporter's Phone

B. Transporter's Phone

C. Facility's Phone (407) 877-9809

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous Petroleum Contaminated Soil	1	TRK		
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

*US EPA ID# Not Required. Non-Hazardous Waste

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Transporter hereby certifies that all of the material in this load was placed on my truck at the address referenced above. Nothing has been added to this load after departure from address listed above.

16. **GENERATOR'S CERTIFICATION:** *I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.*

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
JESSE FLINT	[illegible]	4	15	99

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

C.A. MEYER PAVING & CONSTRUCTION CO.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR

TRANSPORTER

FACI

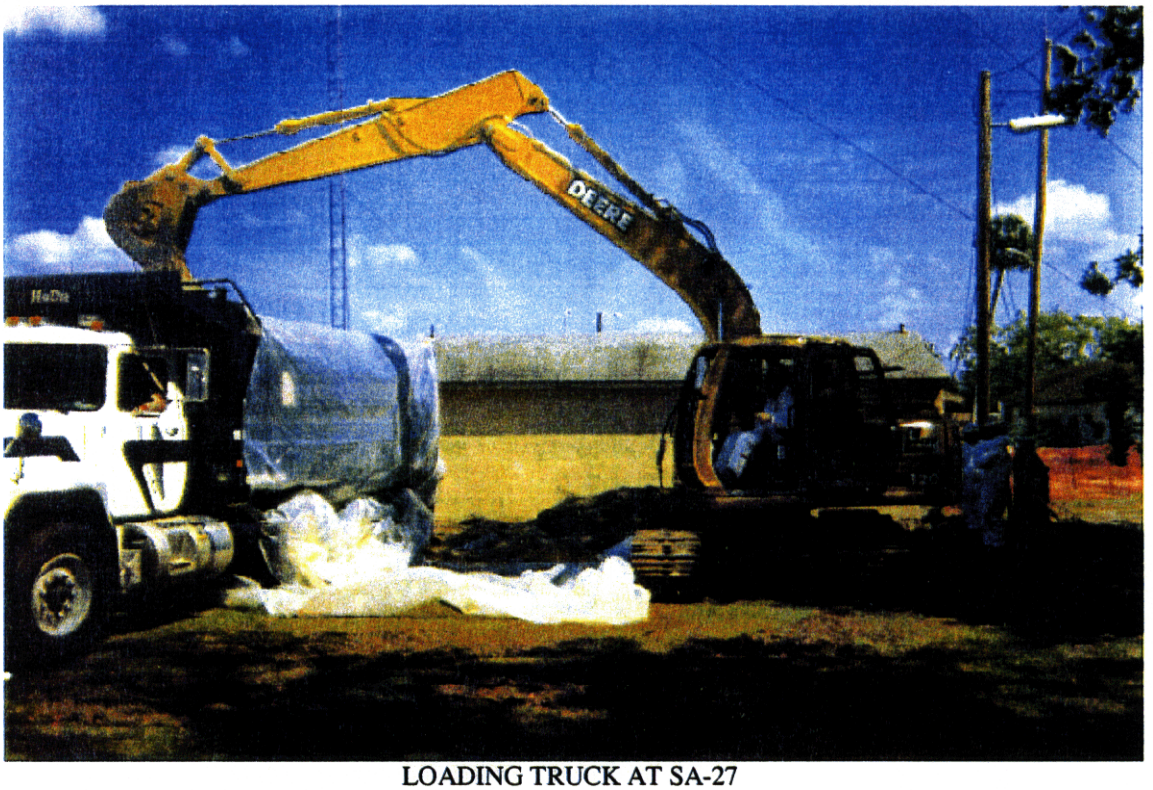
GENERATOR'S COPY

APPENDIX D

SITE PHOTOGRAPHS

SOUTH SIDE OF BUILDING 2073 PRIOIR TO EXCAVATION

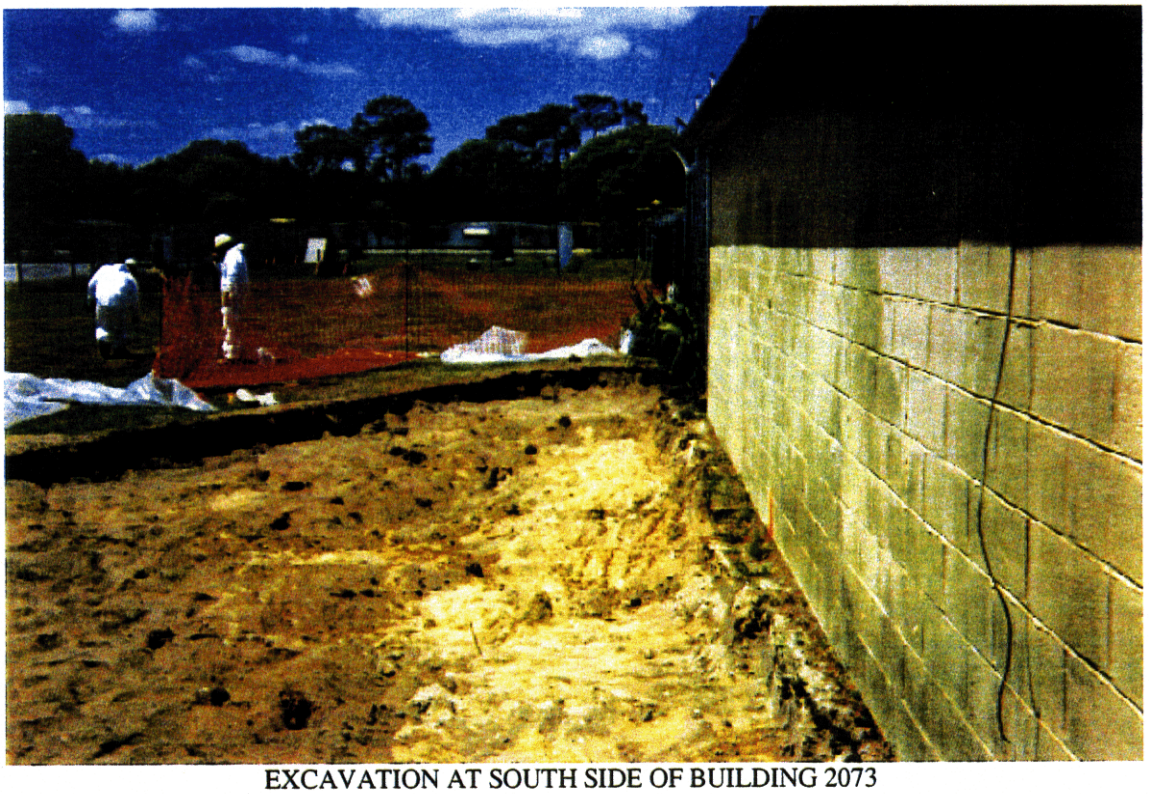
NORTH SIDE OF BUILDING 2073 PRIOR TO EXCAVATION



LOADING TRUCK AT SA-27

EXCAVATION ON NORTH SIDE OF BUILDING 2073

EXCAVATION AT SOUTHWEST CORNER OF BUILDING 2073



EXCAVATION AT SOUTH SIDE OF BUILDING 2073