

N65928.AR.002600
NTC ORLANDO
5090.3a

OIL WATER SEPARATOR ASSESSMENT REPORT FOR BUILDING 7174 MCCOY ANNEX
NTC ORLANDO FL
4/1/1998
ABB ENVIRONMENTAL

**OIL-WATER SEPARATOR ASSESSMENT REPORT
BUILDING 7174**

**NAVAL TRAINING CENTER
MCCOY ANNEX
ORLANDO, FLORIDA**

Unit Identification Code: N65928

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

Prepared by:

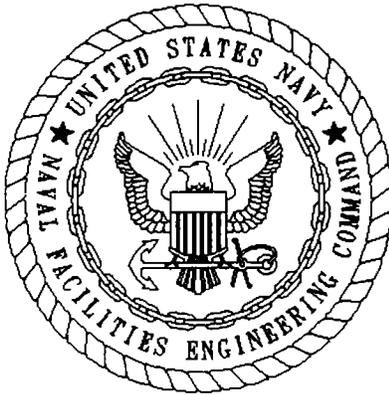
**ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301**

Prepared for:

**Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29418**

Nick Ugolini, Code 1843, Engineer-in-Charge

April 1998



CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

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

DATE: April 22, 1998

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

NAME AND TITLE OF CERTIFYING OFFICIAL: Manuel Alonso, P.G.
Project Technical Lead

(DFAR 252.227-7036)

TABLE OF CONTENTS

Oil-Water Separator Assessment Report
Building 7174
Naval Training Center
McCoy Annex
Orlando, Florida

<u>Chapter</u>	<u>Title</u>	<u>Page No.</u>
1.0	INTRODUCTION	1
2.0	OPERATION AND MAINTENANCE	1
3.0	SOIL ASSESSMENT	1
4.0	GROUNDWATER ASSESSMENT	4
5.0	CONCLUSIONS	4
6.0	RECOMMENDATIONS	4

APPENDICES

- Appendix A: Photographs
- Appendix B: Groundwater Laboratory Analytical Reports and Chain-of-Custody Records

LIST OF FIGURES

Oil-Water Separator Assessment Report
Building 7174
Naval Training Center
McCoy Annex
Orlando, Florida

<u>Figure</u>	<u>Title</u>	<u>Page No.</u>
1	Site Vicinity Map	2
2	Site Plan	3

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page No.</u>
1	Summary of Organic Vapor Analyses, March 1998	5
2	Groundwater Elevation Summary	6

GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
NTC	Naval Training Center
OVA	organic vapor analyzer
UST	underground storage tank

**OIL-WATER SEPARATOR ASSESSMENT REPORT
BUILDING 7174**

1.0 INTRODUCTION

Building 7174 (former McCoy Annex Exchange Service Station) is located in the central part of the Naval Training Center (NTC), McCoy Annex, in Orange County, Florida. Figure 1 shows the site location and a map of the surrounding area.

One oil-water separator (drain) had been operated at the site. The oil-water separator was removed as part of an initial remedial action completed at the Building 7174 site. The exact date of installation is not known, though the building was constructed in 1961. The oil-water separator was located near the northeast corner of Building 7174 and was used to contain fluids generated during automotive maintenance activities (see Figure 2). Photographs of the former oil-water separator location are provided in Appendix A.

This report summarizes the data gathered during the site assessment of the oil-water separator formerly serving Building 7174.

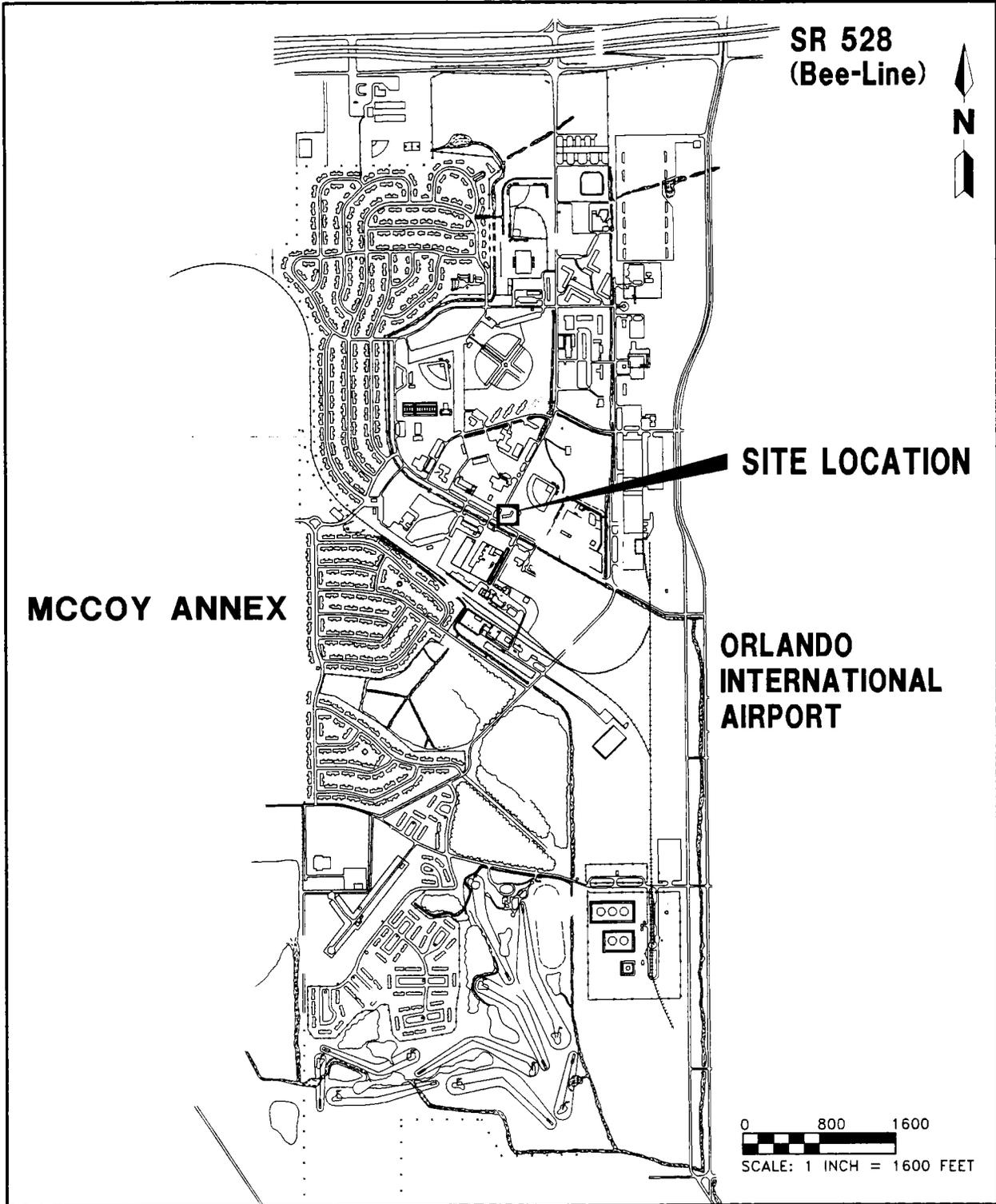
2.0 OPERATION AND MAINTENANCE

Building 7174 was used as the NTC, Orlando, McCoy Annex Exchange Service Station. One oil-water separator (drain) was in service at Building 7174. The oil-water separator was designed to capture fluids generated during automotive maintenance activities that occurred at the northeast corner of the building. Fluids were directed into the oil-water separator through a grate and flowed into a 900-gallon waste oil underground storage tank (UST) located immediately to the north. In addition, another 900-gallon waste oil UST, not associated with the oil-water separator, was located to the south. Both USTs were abandoned in place by Law Environmental on November 30, 1990.

Prior to removal, a visual inspection of the oil-water separator revealed the presence of used oil. According to the NTC Orlando Environmental Coordinator, the oil-water separator was being used without consent by the public for disposal of used oil. In January 1997, the oil-water separator and USTs were removed by the Navy Public Works Center, Pensacola. The oil-water separator was approximately 2-feet long by 3-feet wide by 2-feet deep and constructed of steel with a steel grate cover. ABB Environmental Services, Inc. (ABB-ES), was not present for the removal.

3.0 SOIL ASSESSMENT

On March 10, 1998, ABB-ES advanced six hand-augered soil borings, HA-1 through HA-6, and collected 18 soil samples for organic vapor analysis (OVA) to determine the presence of organic vapors in the soil. All soil borings were performed using a stainless steel bucket auger, which was extended to the groundwater, encountered at approximately 4.5 feet below land surface. Discrete samples were collected from depths of 0 to 2 feet, 2 to 4 feet, and 4 to 6 feet, and retained

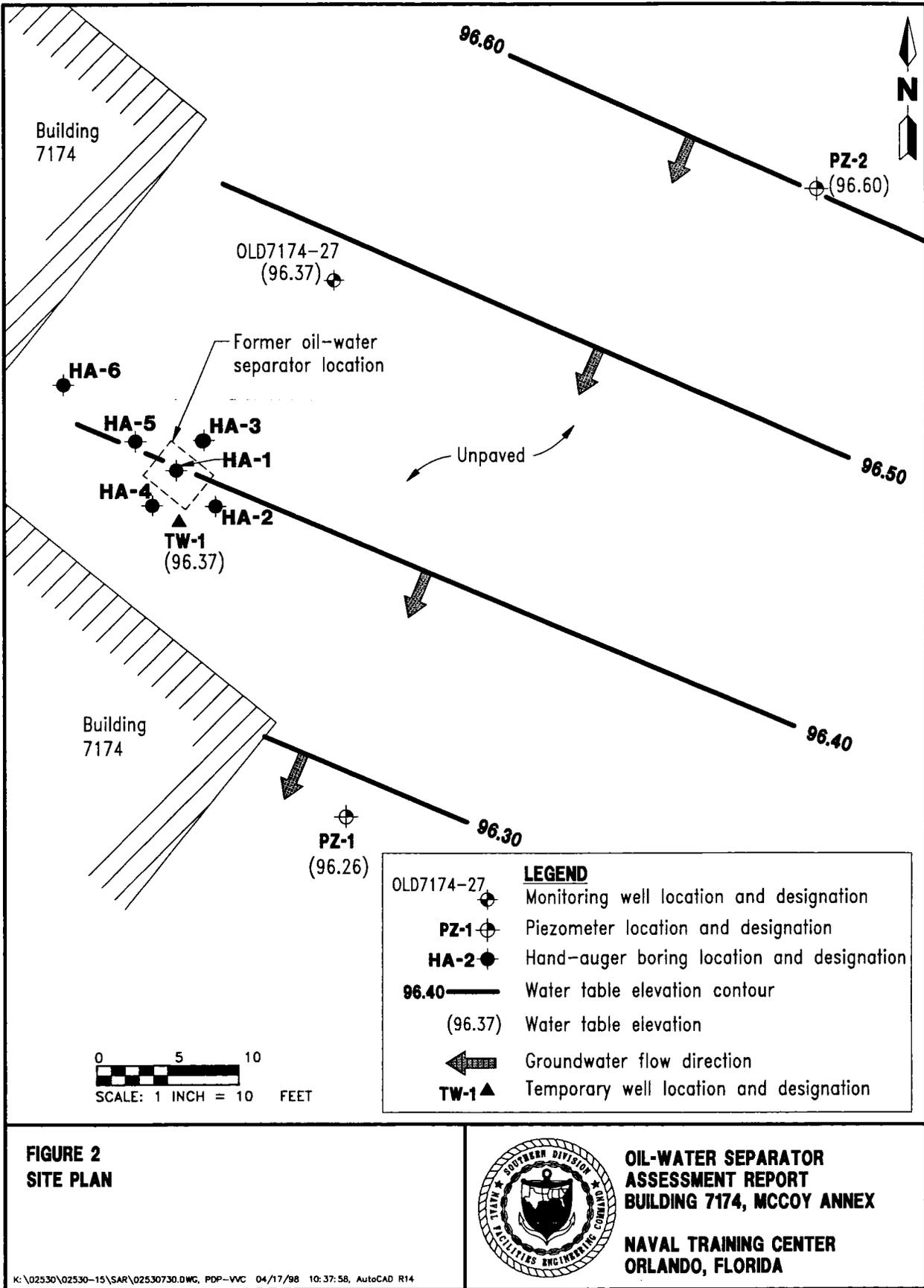


**FIGURE 1
SITE VICINITY MAP**



**OIL-WATER SEPARATOR
ASSESSMENT REPORT
BUILDING 7174, MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

K:\02530\02530-15\SAR\02530729.DWG, PDP 03/30/98 15:32:21, AutoCAD R12



for OVA analysis. All soil samples were analyzed following guidelines in ABB-ES's Florida Department of Environmental Protection-approved Comprehensive Quality Assurance Plan. The six soil borings were performed at points surrounding the oil-water separator. Locations of the borings are shown on Figure 2, Site Plan.

The OVA results indicate that all soil samples reported total hydrocarbon values of 1 part per million or less. A summary of the OVA results, including soil sample descriptions, is presented in Table 1.

4.0 GROUNDWATER ASSESSMENT

On February 19, 1998, two piezometers (PZ-1 and PZ-2) and one temporary well (TW-1) were installed into the water table to determine the direction of groundwater flow and to assess groundwater quality at the site. Using the piezometers and temporary well, the direction of groundwater flow was determined to be from north to south, which coincides with previous investigations at the site. Monitoring well OLD7174-27, 15 feet northeast of the oil-water separator, was not used to calculate groundwater flow. A summary of the groundwater elevations is included in Table 2, and the direction of groundwater flow is shown on Figure 2.

Based on the groundwater flow direction and OVA results, temporary well TW-1 was installed and sampled on February 23, 1998, to assess groundwater quality. The samples were transported to Savannah Laboratories and Environmental Services, Inc., in Savannah, Georgia, to be analyzed using the used oil analytical group (U.S. Environmental Protection Agency Methods 624, 625, Florida-Petroleum Residual Organics, and metals including arsenic, cadmium, chromium, and lead) as described in Chapter 62-770, Florida Administrative Code. The locations of the piezometers and temporary well are shown on Figure 2.

Laboratory analytical results indicate the presence of no compounds that exceed the State of Florida Cleanup Target Levels. Laboratory groundwater analytical results are included as Attachment B.

5.0 CONCLUSIONS

No compounds were detected at concentrations exceeding the State of Florida Cleanup Target Levels. No petroleum-impacted soil was identified at the site.

6.0 RECOMMENDATIONS

Based on the results of this investigation, ABB-ES recommends a No Further Action proposal for the oil-water separator at this site.

Table 1
Summary of Organic Vapor Analyses
March 1998

Oil-Water Separator Assessment Report
 Building 7174
 Naval Training Center
 McCoy Annex
 Orlando, Florida

Soil Boring Designation	Sample Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Physical Observations
HA-1	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	<1	<1	<1	No staining, no petroleum odor.
	4-6	<1	<1	<1	No staining, no petroleum odor.
HA-2	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	<1	<1	<1	No staining, no petroleum odor.
	4-6	<1	<1	<1	No staining, no petroleum odor.
HA-3	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	<1	<1	<1	No staining, no petroleum odor.
	4-6	1	<1	1	No staining, no petroleum odor.
HA-4	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	1	<1	1	No staining, no petroleum odor.
	4-6	<1	<1	<1	No staining, no petroleum odor.
HA-5	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	<1	<1	<1	No staining, no petroleum odor.
	4-6	<1	<1	<1	No staining, no petroleum odor.
HA-6	0-2	<1	<1	<1	No staining, no petroleum odor.
	2-4	<1	<1	<1	No staining, no petroleum odor.
	4-6	<1	<1	<1	No staining, no petroleum odor.

¹ Water table encountered at approximately 7.5 feet bls.

Notes: bls = below land surface.
 ppm = parts per million.
 <1 = nondetectable limit for organic vapor analyzer.

**Table 2
Groundwater Elevation Summary**

Oil-Water Separator Assessment Report
Building 7174
Naval Training Center
McCoy Annex
Orlando, Florida

Well Number/ Piezometer Number	Date	Depth to Product (ft btoc)	Depth to Water (ft btoc)	Product Thickness (feet)	Top-of-Casing Elevation* (feet)	Water-Level Elevation* (feet)
TW-1	02/23/98	-	5.11	-	101.48	96.37
PZ-1	02/23/98	-	3.07	-	99.33	96.26
PZ-2	02/23/98	-	5.03	-	101.63	96.60
OLD7174-27	02/23/98	-	1.70	-	98.07	96.37

* Referenced to arbitrary datum.

Notes: ft btoc = feet below top of casing.
- = not applicable.



ATTACHMENT A
PHOTOGRAPHS



Photograph 1: View of the oil-water separator area at Building 7174, facing north.



Photograph 2: View of the oil-water separator area at Building 7174, facing southwest.

ATTACHMENT B

**GROUNDWATER LABORATORY ANALYTICAL REPORTS
AND CHAIN-OF-CUSTODY RECORDS**

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310



REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
Volatile Organic Compounds (624)			
	Acrolein, ug/l	100U	
	Acrylonitrile, ug/l	100U	
	Benzene, ug/l	5.0U	
	Bromoform, ug/l	5.0U	
	Carbon tetrachloride, ug/l	5.0U	
	Chlorobenzene, ug/l	5.0U	
	Dibromochloromethane, ug/l	5.0U	
	Chloroethane, ug/l	10U	
	2-Chloroethylvinyl ether, ug/l	50U	
	Chloroform, ug/l	5.0U	
	Dichlorobromomethane, ug/l	5.0U	
	Dichlorodifluoromethane, ug/l	5.0U	
	1,1-Dichloroethane, ug/l	5.0U	
	1,2-Dichloroethane, ug/l	5.0U	
	1,1-Dichloroethene, ug/l	5.0U	
	1,2-Dichloropropane, ug/l	5.0U	
	cis-1,3-Dichloropropene, ug/l	5.0U	
	trans-1,3-Dichloropropene, ug/l	5.0U	
	Ethylbenzene, ug/l	5.0U	
	Bromomethane, ug/l	10U	
	Chloromethane, ug/l	10U	
	Methylene chloride (Dichloromethane), ug/l	5.0U	

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
1,1,2,2-Tetrachloroethane, ug/l		5.0U	
Tetrachloroethene, ug/l		5.0U	
Toluene, ug/l		5.0U	
trans-1,2-Dichloroethene, ug/l		5.0U	
1,1,1-Trichloroethane, ug/l		5.0U	
1,1,2-Trichloroethane, ug/l		5.0U	
Trichloroethylene, ug/l		5.0U	
Trichlorofluoromethane, ug/l		5.0U	
Vinyl chloride, ug/l		10U	
Surrogate - Toluene-d8		97 %	
Surrogate - 4-Bromofluorobenzene		97 %	
Surrogate - Dibromofluoromethane		100 %	
Date Analyzed		03.05.98	
Analysis Time		1639	
Dilution factor		1.0	
Batch ID		0304D	
Clock ID		1L0305	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

Ms. Lorena Kandt
ABB Environmental Services, Inc.
1080 Woodcock Road
Orlando, FL 32803

LOG NO: S8-81025
Received: 24 FEB 98
Reported: 06 MAR 98
S7ABORQC
Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
Contract No.: N62467-89-D-0317
Project: TMP Orlando/2530-06/SDG#ABOR15
Sampled By: Client
Code: 151180310

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER	81025-1		
Acid Extractable Organics (625)			
2-Chlorophenol, ug/l		10U	
2,4-Dichlorophenol, ug/l		10U	
2,4-Dimethylphenol, ug/l		10U	
4,6-Dinitro-2-methylphenol, ug/l		50U	
2,4-Dinitrophenol, ug/l		50U	
2-Nitrophenol, ug/l		10U	
4-Nitrophenol, ug/l		50U	
p-Chloro-m-cresol, ug/l		10U	
Pentachlorophenol, ug/l		50U	
Phenol, ug/l		10U	
2,4,6-Trichlorophenol, ug/l		10U	
Surrogate-PHL		59 %	
Surrogate-2FP		65 %	
Surrogate-TBP		100 %	
Date Extracted		02.26.98	
Date Analyzed		03.05.98	
Dilution factor		1.0	
Batch ID		0226A	
Instrument ID		MSK5972	
Initial Volume/Weight		1000	
Final Extraction Volume (FV1)		1.0	

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER	81025-1		
Base Neutral Compounds (625)			
Acenaphthene, ug/l		10U	
Acenaphthylene, ug/l		10U	
Anthracene, ug/l		10U	
Benzidine, ug/l		80U	
Benzo(a)anthracene, ug/l		10U	
Benzo(a)pyrene, ug/l		10U	
3,4-Benzofluoranthene, ug/l		10U	
Benzo(g,h,i)perylene, ug/l		10U	
Benzo(k)fluoranthene, ug/l		10U	
bis(2-Chloroethoxy)methane, ug/l		10U	
bis(2-Chloroethyl)ether, ug/l		10U	
bis(2-Chloroisopropyl)ether, ug/l		10U	
bis(2-Ethylhexyl)phthalate, ug/l		10U	
4-Bromophenyl phenyl ether, ug/l		10U	
Butylbenzylphthalate, ug/l		10U	
2-Chloronaphthalene, ug/l		10U	
4-Chlorophenylphenyl ether, ug/l		10U	
Chrysene, ug/l		10U	
Dibenzo(a,h)anthracene, ug/l		10U	
1,2-Dichlorobenzene, ug/l		10U	
1,3-Dichlorobenzene, ug/l		10U	
1,4-Dichlorobenzene, ug/l		10U	

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC
 Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
3,3'-Dichlorobenzidine, ug/l		20U	
Diethylphthalate, ug/l		10U	
Dimethylphthalate, ug/l		10U	
Di-n-butylphthalate, ug/l		10U	
2,4-Dinitrotoluene, ug/l		10U	
2,6-Dinitrotoluene, ug/l		10U	
Di-n-octylphthalate, ug/l		10U	
1,2-Diphenylhydrazine, ug/l		10U	
Fluoranthene, ug/l		10U	
Fluorene, ug/l		10U	
Hexachlorobenzene, ug/l		10U	
Hexachlorobutadiene, ug/l		10U	
Hexachlorocyclopentadiene, ug/l		10U	
Hexachloroethane, ug/l		10U	
Indeno(1,2,3-cd)pyrene, ug/l		10U	
Isophorone, ug/l		10U	
Naphthalene, ug/l		10U	
Nitrobenzene, ug/l		10U	
N-Nitrosodimethylamine, ug/l		10U	
n-Nitrosodi-n-propylamine, ug/l		10U	
N-Nitrosodiphenylamine/Diphenylamine, ug/l		10U	
Phenanthrene, ug/l		10U	
Pyrene, ug/l		10U	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/71174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
1,2,4-Trichlorobenzene, ug/l		10U	
Surrogate-NBZ		82 %	
Surrogate-2FBP		92 %	
Surrogate-TPH		84 %	
Date Extracted		02.26.98	
Date Analyzed		03.05.98	
Dilution factor		1.0	
Batch ID		0226A	
Instrument ID		MSK5972	
Initial Volume/Weight		1000	
Final Extraction Volume (FV1)		1.0	
Arsenic (6010)			
Arsenic, mg/l		0.010U	
Preparation Date		02.25.98	
Date Analyzed		02.26.98	
Dilution factor		1.0	
Batch ID		0225G	
Initial Volume/Weight		50	
Final Volume (FV1)		50	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
Barium (6010)			
	Barium, mg/l	0.019	
	Preparation Date	02.25.98	
	Date Analyzed	02.26.98	
	Dilution factor	1.0	
	Batch ID	0225G	
	Initial Volume/Weight	50	
	Final Volume (FV1)	50	
Cadmium (6010)			
	Cadmium, mg/l	0.0050U	
	Preparation Date	02.25.98	
	Date Analyzed	02.26.98	
	Dilution factor	1.0	
	Batch ID	0225G	
	Initial Volume/Weight	50	
	Final Volume (FV1)	50	
Chromium (6010)			
	Chromium, mg/l	0.010U	
	Preparation Date	02.25.98	
	Date Analyzed	02.26.98	
	Dilution factor	1.0	
	Batch ID	0225G	
	Initial Volume/Weight	50	
	Final Volume (FV1)	50	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
Lead (6010)			
Lead, mg/l		0.0050U	
Preparation Date		02.25.98	
Date Analyzed		02.26.98	
Dilution factor		1.0	
Batch ID		0225G	
Initial Volume/Weight		50	
Final Volume (FV1)		50	
Mercury (7470)			
Mercury, mg/l		0.00020U	
Preparation Date		02.26.98	
Date Analyzed		02.27.98	
Dilution factor		1.0	
Batch ID		0226S	
Initial Volume/Weight		8	
Final Volume (FV1)		8	
Selenium (6010)			
Selenium, mg/l		0.010U	
Preparation Date		02.25.98	
Date Analyzed		02.26.98	
Dilution factor		1.0	
Batch ID		0225G	
Initial Volume/Weight		50	
Final Volume (FV1)		50	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 9

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
Silver (6010)			
	Silver, mg/l	0.010U	
	Preparation Date	02.25.98	
	Date Analyzed	02.26.98	
	Dilution factor	1.0	
	Batch ID	0225G	
	Initial Volume/Weight	50	
	Final Volume (FV1)	50	
Petroleum Range Organics (FL-PRO)			
	Petroleum Range Organics (FL-PRO), mg/l	0.30U	
	Surrogate - O-Terphenyl (OTP)	81 %	
	Dilution factor	1.0	
	Date Extracted	02.25.98	
	Date Analyzed	02.26.98	
	Batch ID	0225V	
	Initial Volume/Weight	1000	
	Final Extraction Volume (FV1)	2.0	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

LOG NO: S8-81025
 Received: 24 FEB 98
 Reported: 06 MAR 98
 S7ABORQC

Ms. Lorena Kandt
 ABB Environmental Services, Inc.
 1080 Woodcock Road
 Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
 Contract No.: N62467-89-D-0317
 Project: TMP Orlando/2530-06/SDG#ABOR15
 Sampled By: Client
 Code: 151180310

REPORT OF RESULTS

Page 10

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	
Polynuclear Aromatics (HPLC) (610)			
Acenaphthene, ug/l		1.0U	
Acenaphthylene, ug/l		1.0U	
Benzo(a)pyrene, ug/l		0.20U	
Benzo(g,h,i)perylene, ug/l		0.50U	
Benzo(b)fluoranthene, ug/l		0.20U	
Benzo(k)fluoranthene, ug/l		0.20U	
Chrysene, ug/l		0.20U	
Benzo(a)anthracene, ug/l		0.20U	
Fluoranthene, ug/l		0.50U	
Fluorene, ug/l		0.50U	
Indeno(1,2,3-cd)pyrene, ug/l		0.50U	
Dibenzo(a,h)anthracene, ug/l		0.50U	
Naphthalene, ug/l		1.0U	
Phenanthrene, ug/l		0.20U	
Anthracene, ug/l		0.20U	
Pyrene, ug/l		0.50U	
1-Methylnaphthalene, ug/l		1.0U	
2-Methylnaphthalene, ug/l		1.0U	
Surrogate - Terphenyl-d14		64 %	
Date Extracted		02.27.98	
Date Analyzed		03.05.98	
Dilution factor		1.0	
Batch ID		0227J	
Instrument ID		LCAUV	
Initial Volume/Weight		1000	
Final Extraction Volume (FV1)		1.0	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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

Ms. Lorena Kandt
ABB Environmental Services, Inc.
1080 Woodcock Road
Orlando, FL 32803

LOG NO: S8-81025
Received: 24 FEB 98
Reported: 06 MAR 98
S7ABORQC

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
Contract No.: N62467-89-D-0317
Project: TMP Orlando/2530-06/SDG#ABOR15
Sampled By: Client
Code: 151180310

REPORT OF RESULTS

Page 11

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
81025-1	079GT101/7174TW-1	02-23-98/1132	ABOR15
PARAMETER		81025-1	

Methods: EPA SW-846


Linda A. Wolfe, Project Manager

Final Page Of Report

SL SAVANNAH LABORATORIES
 & ENVIRONMENTAL SERVICES, INC.

- 5102 LaRoche Avenue, Savannah, GA 31404
- 2846 Industrial Plaza Drive, Tallahassee, FL 32301
- 414 SW 12th Avenue, Deerfield Beach, FL 33442
- 900 Lakeside Drive, Mobile, AL 36693
- 6712 Benjamin Road, Suite 100, Tampa, FL 33634
- 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165
 Phone: (904) 878-3994 Fax: (904) 878-9504
 Phone: (954) 421-7400 Fax: (954) 421-2584
 Phone: (334) 666-6633 Fax: (334) 666-6696
 Phone: (813) 885-7427 Fax: (813) 885-7049
 Phone: (504) 764-1100 Fax: (504) 725-1163

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE		PROJECT NO. 2530-06	P.O. NUMBER NE7531076	MATRIX TYPE	REQUIRED ANALYSES				PAGE OF				
PROJECT LOC. (State) FL	SAMPLER(S) NAME SCOTT DONELICK		PHONE 407-895-8845	AQUEOUS (WATER SOLID OR SEMI-SOLID) AIR NON-AQUEOUS LIQUID (oil, solvent, etc)	EPA 624	EPA 625	8 RCRA Metals	Mercury	FL-PRO	EPA 610 HPLC	<input checked="" type="checkbox"/> STANDARD REPORT DELIVERY		
CLIENT NAME ABB-ES		CLIENT PROJECT MANAGER JOHN KAISER									<input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)		
CLIENT ADDRESS (CITY, STATE, ZIP) 1080 WOODCOCK ROAD, SUITE 100 ORLANDO, FL 32803													
SAMPLE		SL NO.	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS SUBMITTED				REMARKS			
DATE	TIME												
2-23-98	11:32		07967101 / 71747W-1			X	3	2	1	1	2	2	

RELINQUISHED BY: (SIGNATURE) <i>Samuel</i>	DATE 2/5	TIME 2:10	RELINQUISHED BY: (SIGNATURE) <i>Scott Donelick</i>	DATE 2-23-98	TIME 16:30	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>Scott Donelick</i>	DATE 2/6	TIME 3:00P	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY							
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>E. Gray</i>	DATE 2/24/98	TIME 10:22	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO. 88-81025	LABORATORY REMARKS:	

ORIGINAL

Lab Sample Number: S881025-1
 Site 7174
 Locator 079GT101/7174TW-1
 Collect Date: 23-FEB-98
 VALUE QUAL UNITS

Flo Pro
 Petroleum Range Organics (F1-P) .3 U mg/l

EPA624

Acrolein	100 U	ug/l
Acrylonitrile	100 U	ug/l
Benzene	5 U	ug/l
Bromoform	5 U	ug/l
Carbon tetrachloride	5 U	ug/l
Chlorobenzene	5 U	ug/l
Dibromochloromethane	5 U	ug/l
Chloroethane	10 U	ug/l
2-Chloroethylvinyl ether	50 U	ug/l
Chloroform	5 U	ug/l
Dichlorobromomethane	5 U	ug/l
Dichlorodifluoromethane	5 U	ug/l
1,1-Dichloroethane	5 U	ug/l
1,2-Dichloroethane	5 U	ug/l
1,1-Dichloroethene	5 U	ug/l
1,2-Dichloropropane	5 U	ug/l
cis-1,3-Dichloropropene	5 U	ug/l
trans-1,3-Dichloropropene	5 U	ug/l
Ethylbenzene	5 U	ug/l
Bromomethane	10 U	ug/l
Chloromethane	10 U	ug/l
Methylene chloride	5 U	ug/l
1,1,2,2-Tetrachloroethane	5 U	ug/l
Tetrachloroethene	5 U	ug/l
Toluene	5 U	ug/l
trans-1,2-Dichloroethene	5 U	ug/l
1,1,1-Trichloroethane	5 U	ug/l
1,1,2-Trichloroethane	5 U	ug/l
Trichloroethylene	5 U	ug/l
Trichlorofluoromethane	5 U	ug/l
Vinyl chloride	10 U	ug/l

EPA625

N-Nitrosodimethylamine	10 U	ug/l
Phenol	10 U	ug/l
bis(2-Chloroethyl) ether	10 U	ug/l
2-Chlorophenol	10 U	ug/l
1,3-Dichlorobenzene	10 U	ug/l
1,4-Dichlorobenzene	10 U	ug/l
1,2-Dichlorobenzene	10 U	ug/l
2,2-oxybis(1-Chloropropane)	-	
N-Nitroso-di-n-propylamine	10 U	ug/l
Hexachloroethane	10 U	ug/l
Nitrobenzene	10 U	ug/l
Isophorone	10 U	ug/l
2,4-Dimethylphenol	10 U	ug/l
2-Nitrophenol	10 U	ug/l

BUILDING 7174
 NTC ORLANDO, FLORIDA, MAIN BASE

Lab Sample Number: S881025-1
 Site 7174
 Locator 079GT101/7174TW-1
 Collect Date: 23-FEB-98

VALUE QUAL UNITS

bis(2-Chloroethoxy) methane	10 U	ug/l
2,4-Dichlorophenol	10 U	ug/l
1,2,4-Trichlorobenzene	10 U	ug/l
Naphthalene	10 U	ug/l
Hexachlorobutadiene	10 U	ug/l
4-Chloro-3-methylphenol	-	
Hexachlorocyclopentadiene	10 U	ug/l
2,4,6-Trichlorophenol	10 U	ug/l
2-Chloronaphthalene	10 U	ug/l
Dimethylphthalate	10 U	ug/l
2,6-Dinitrotoluene	10 U	ug/l
Acenaphthylene	1 U	ug/l
Acenaphthene	1 U	ug/l
2,4-Dinitrophenol	50 U	ug/l
4-Nitrophenol	50 U	ug/l
2,4-Dinitrotoluene	10 U	ug/l
Diethylphthalate	10 U	ug/l
4-Chlorophenyl-phenylether	-	
Fluorene	.5 U	ug/l
4,6-Dinitro-2-methylphenol	50 U	ug/l
N-Nitrosodiphenylamine	-	
1,2-Diphenylhydrazine	10 U	ug/l
4-Bromophenyl-phenylether	10 U	ug/l
Hexachlorobenzene	10 U	ug/l
Pentachlorophenol	50 U	ug/l
Phenanthrene	.2 U	ug/l
Anthracene	.2 U	ug/l
Di-n-butylphthalate	10 U	ug/l
Fluoranthene	.5 U	ug/l
Benidine	80 U	ug/l
Pyrene	.5 U	ug/l
Butylbenzylphthalate	10 U	ug/l
3,3-Dichlorobenzidine	20 U	ug/l
Benzo (a) anthracene	.2 U	ug/l
Chrysene	.2 U	ug/l
bis(2-Ethylhexyl) phthalate	10 U	ug/l
Di-n-octylphthalate	10 U	ug/l
Benzo (b) fluoranthene	.2 U	ug/l
Benzo (k) Fluoranthene	.2 U	ug/l
Benzo (a) pyrene	.2 U	ug/l
Indeno (1,2,3-cd) pyrene	.5 U	ug/l
Dibenzo (a,h) anthracene	10 U	ug/l
Benzo (g,h,i) perylene	10 U	ug/l

PAH COMPOUNDS

Naphthalene	10 U	ug/l
2-Methylnaphthalene	1 U	ug/l
1-Methylnaphthalene	1 U	ug/l
Acenaphthylene	1 U	ug/l
Acenaphthene	1 U	ug/l
Fluorene	.5 U	ug/l
Phenanthrene	.2 U	ug/l

BUILDING 7174
NTC ORLANDO, FLORIDA, MAIN BASE

Lab Sample Number: S881025-1
Site 7174
Locator 079GT101/7174TW-1
Collect Date: 23-FEB-98

VALUE QUAL UNITS

Anthracene	.2 U	ug/l
Fluoranthene	.5 U	ug/l
Pyrene	.5 U	ug/l
Benzo (a) anthracene	.2 U	ug/l
Chrysene	.2 U	ug/l
Benzo (b) fluoranthene	.2 U	ug/l
Benzo (k) fluoranthene	.2 U	ug/l
Benzo (a) pyrene	.2 U	ug/l
Indeno (1,2,3-cd) pyrene	.5 U	ug/l
Dibenzo (a,h) anthracene	10 U	ug/l
Benzo (g,h,i) perylene	10 U	ug/l
RCRA Metals		
Arsenic	.01 U	mg/l
Barium	.019 U	mg/l
Cadmium	.005 U	mg/l
Chromium	.01 U	mg/l
Lead	.005 U	mg/l
Mercury	.0002 U	mg/l
Selenium	.01 U	mg/l
Silver	.01 U	mg/l