N65928.AR.002793
NTC ORLANDO
5090.3a

OIL WATER SEPARATOR ASSESSMENT REPORT FOR BUILDINGS 354 AND 2078 WITH TRANSMITTAL LETTER NTC ORLANDO FL
7/14/1997
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

747.08545

226

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherel
Secretary

July 14, 1997

Mr. Nick Ugolini
Code 184(PVC)
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Oil Water Separator Assessment Reports (OWSARs), Buildings 354 and 2078, Naval Training Center, Orlando, Florida

Dear Mr. Ugolini:

I have completed the technical review of the above referenced reports dated June 1997 (received June 16, 1997). Based upon the sampling and analysis, no further investigation is needed for the oil water separator at Buildings 2078.

Further groundwater analysis is needed at Building 354 due to exceedances of the Florida Groundwater Guidance Concentrations for chloroform and bromodichloromethane. Additional sampling and analysis of the groundwater is necessary unless the assumption can be proven by the laboratory that these compounds were detected due to laboratory-introduced contamination. Analysis is only needed using EPA Method 624/8240.

If I can be of any further assistance with this matter, please contact me at (904) 921-9989.

Sincerely,

John W. Mitchell
Remedial Project Manager

cc: Wayne Hansel, Navy SouthDiv
Lt. Gary Whipple, NTC Orlando
John Kaiser, ABB Orlando
Steve McCoy, Brown and Root, Oak Ridge
Bob Cohose, Bechtel, Knoxville
Nancy Rodriguez, USEPA Region 4
Bill Bostwick, FDEP Central District

TJB TB JJC TB for JC ESN ESN

ABB

June 12, 1997

Doc No.: 08545.015

Mr. John Mitchell
State of Florida
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Oil-Water Separator Assessment Reports (OWSARs)
Building 354 and Buildings 2078 and 2079 (Combined)
Naval Training Center, Orlando, Florida
CTO 107, Contract No. N62467-89-D-0317

Dear Mr. Mitchell:

Enclosed for your review and approval are the Oil-Water Separator Assessment Reports (OWSARs) for Buildings 354 and Buildings 2078 and 2079. Please note that the oil/water separators associated with Buildings 2078 and 2079 is provided as a single report. We have also included tabs to be inserted into the binder already forwarded to you.

Listed below are all OWSARs which have been issued to date. Please contact us if you are missing any of them:

1053	129	132/133	200	2078/2079	354	7171
7175	7184	7185	7191			

Should you have any questions or comments regarding these OWSARs please contact Mr. Nick Ugolini at (803) 820-5596 or Scott Donelick at (407) 895-8845.

Very Truly Yours,
ABB ENVIRONMENTAL SERVICES, INC.

Manuel Alonso, P.G.
Senior Geologist

S. Donelick/lak
Scott Donelick
Geologist

MA/SD/lak
Enclosure
cc: Wayne Hansel, Code 18B7, Southern Division with Attachment
Nick Ugolini, Code 1843, Southern Division with Attachment
Mark Zill, Code 010E, NTC Orlando, Department of Public Works
Lt. Gary Whipple, NTC Orlando
John Kaiser, ABB-ES
Files
g:\users\lkandt\wp51\cto107\ust\owsar\BLDG2078.RPT

ABB Environmental Services Inc.

1080 Woodcuck Road, Suite 100
St. Paul Building
Orlando, Florida 32803

Tel. (407) 895-8845
Fax (407) 896-6150

DISTRIBUTION

Southern Division, Naval Facilities Engineering Command	2
Naval Training Center, Orlando, Florida	2
Florida Department of Environmental Protection	1
ABB Environmental Services, Inc.	3

OIL-WATER SEPARATOR ASSESSMENT REPORT
BUILDINGS 2078 AND 2079

NAVAL TRAINING CENTER
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

June 1997

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

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

DATE: June 13, 1997

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)

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Buildings 2078 and 2079
Naval Training Center
Orlando, Florida

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4.0	GROUNDWATER ASSESSMENT	4
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Oil-Water Separator Assessment Report
Buildings 2078 and 2079
Naval Training Center
Orlando, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
NTC	Naval Training Center
OVA	organic vapor analyzer
℠	Service Mark

OIL-WATER SEPARATOR ASSESSMENT REPORT
BUILDINGS 2078 AND 2079

1.0 INTRODUCTION

Building 2078 (Automobile Maintenance Facility) and Building 2079 (Hazardous Materials Storage Building) are located in the southern part of the Naval Training Center (NTC), Main Base in Orange County, Florida. Figure 1 shows the site location and a map of the surrounding area.

One oil-water separator and one wash rack have been operated at the site since 1976. The wash rack is located immediately east of Building 2079 and is used to capture fluids from vehicle washing activities. The oil-water separator is located approximately 50 feet east of Building 2079 and is used to collect fluids from the wash rack (see Figure 2). Photographs of the oil-water separator and wash rack are provided in Attachment A. Buildings 2078 and 2079 were constructed in 1943, but information concerning the installation of the oil-water separator and wash rack could not be located.

This report summarizes the data gathered during the contamination assessment of the oil-water separator and wash rack located near Buildings 2078 and 2079.

2.0 OPERATION AND MAINTENANCE

Building 2078 is used as the NTC, Orlando, Main Base Automobile Maintenance Facility, and Building 2079 is used as a Hazardous Materials Storage Building. One oil-water separator and one wash rack are in service beside Building 2079. The wash rack is designed to capture fluids from vehicle washing activities conducted on a concrete pad located immediately east of Building 2079. Fluids from the wash rack are directed into an oil-water separator via a 4-inch underground iron pipe. Fluids from the oil-water separator appear to be discharged to the northeast, toward the sanitary sewer. No as-built drawings of the system could be located during a record search at the Public Works Department.

During the assessment activities, a visual inspection of the oil-water separator and wash rack revealed no obvious cracks or areas where a discharge may have occurred. The oil-water separator is constructed of steel and is 6 feet long by 4 feet wide by 3 feet deep. The wash rack drain is also constructed of steel and is 30 feet long by 18 inches wide and is covered with a steel grate. According to the NTC Orlando Environmental Coordinator, maintenance is performed on the oil-water separator annually, with the last event performed by Brownie Environmental, Inc., on July 25, 1996.

3.0 SOIL ASSESSMENT

On April 17, 1997, ABB Environmental Services, Inc. (ABB-ES) advanced nine soil borings, SB-1 through SB-9, and collected 36 soil samples for organic vapor analysis (OVA) to determine the presence of organic vapors in the soil. All soil borings were performed using a TerraProbe℠ equipped with a soil sampler, which

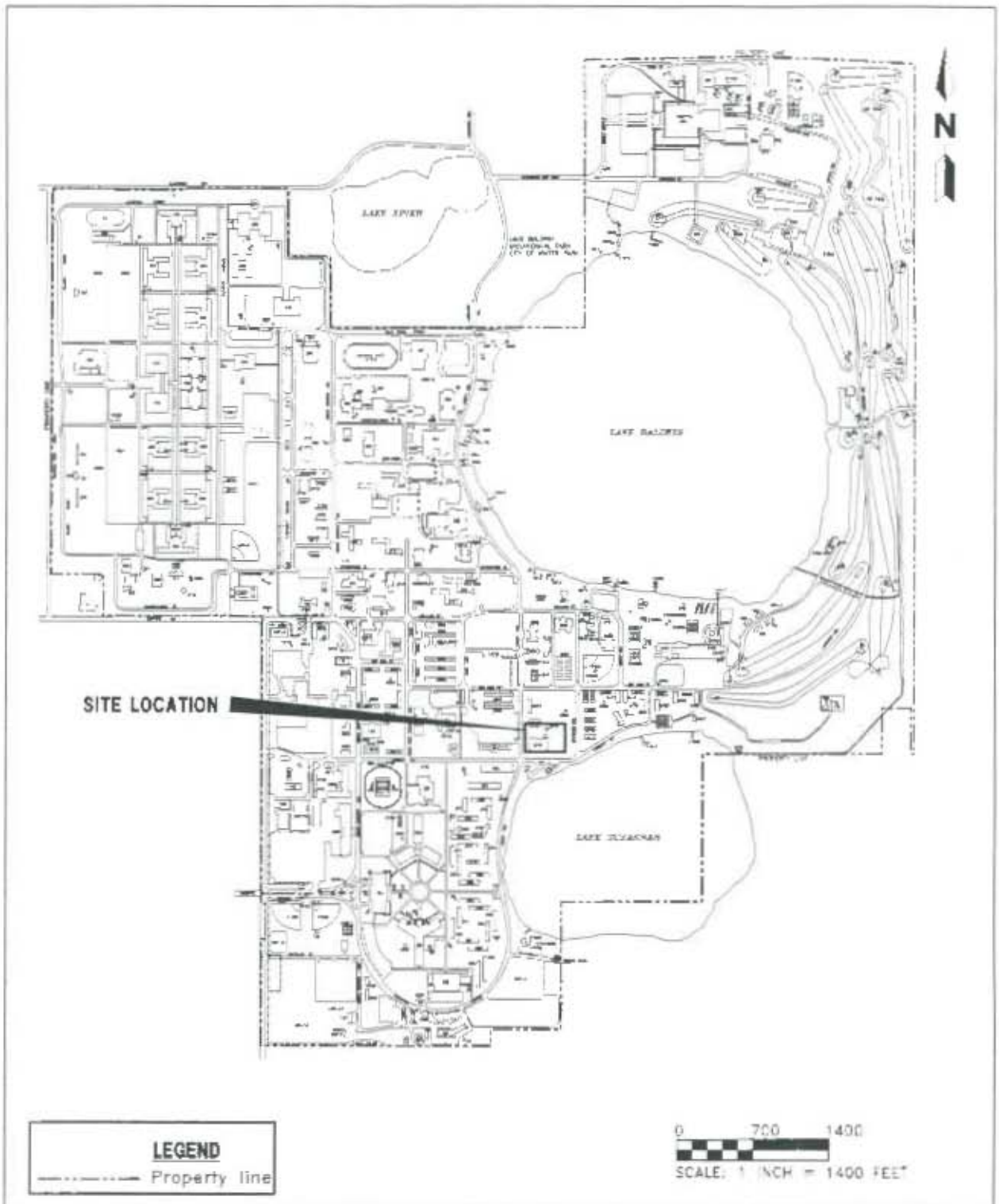

FIGURE 1
SITE VICINITY MAP

OIL-WATER SEPARATOR ASSESSMENT REPORT BUILDINGS 2078 AND 2079

NAVAL TRAINING CENTER ORLANDO, FLORIDA

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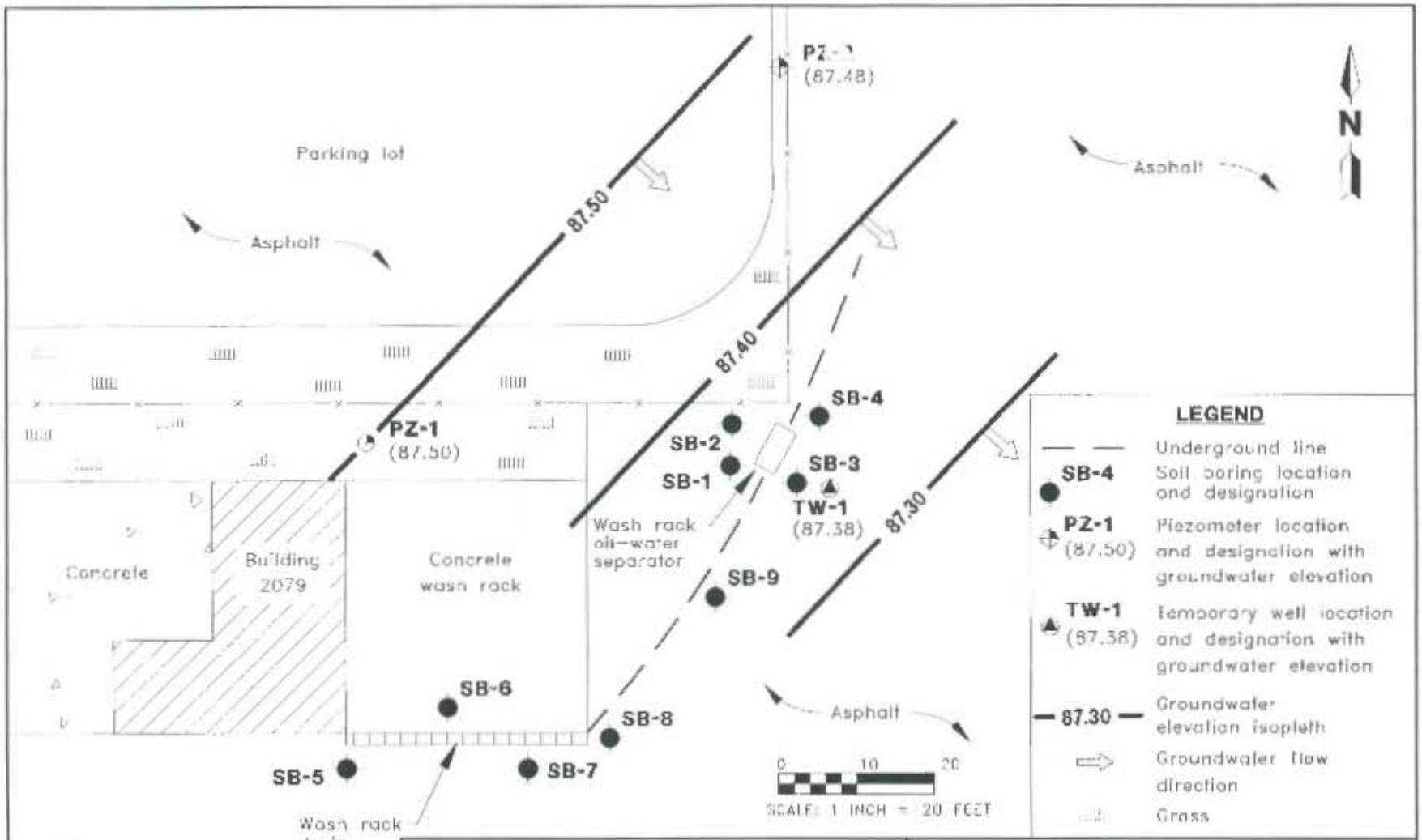

FIGURE 2
SITE PLAN

OIL-WATER SEPARATOR ASSESSMENT REPORT BUILDINGS 2078 AMD 2079

NAVAL TRAINING CENTER ORLANDO, FLORIDA

2078-79.SAH
ASW.05 97

was extended to the groundwater, encountered at approximately 7.5 feet below land surface. Discrete samples were collected from depths of 0 to 2 feet, 2 to 4 feet, 4 to 6 feet, and 6 to 8 feet and retained 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 nine soil borings were performed surrounding the oil-water separator and the wash rack. Locations of the borings are shown on Figure 2, Site Plan.

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

4.0 GROUNDWATER ASSESSMENT

On April 17, 1997, 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 northwest to southeast. 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 sampled on April 28, 1997, to assess groundwater quality. The samples were transported to PG&B Environmental Laboratories, Inc., in Oviedo, Florida, to be analyzed using the used oil analytical group (USEPA methods 624, 625, 418, 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 target cleanup levels. Laboratory groundwater analytical results are included as Attachment B.

5.0 CONCLUSIONS

No compounds were detected at concentrations exceeding laboratory standard detection limits. 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 this site.

Table 1
Summary of Organic Vapor Analyses, April 1997

Oil-Water Separator Assessment Report
Buildings 2078 and 2079
Naval Training Center
Orlando, Florida

Soil Boring Designation	Sample Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Physical Observations
SB-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.
	6-8*	<1	<1	<1	No staining, no petroleum odor.
SB-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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-7	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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-8	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.
	6-8	<1	<1	<1	No staining, no petroleum odor.
SB-9	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.
	6-8	<1	<1	<1	No staining, no petroleum odor.

* 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
Buildings 2078 and 2079
Naval Training Center
Orlando, Florida

Well 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	04/21/97	--	12.62	--	100.00	87.38
PZ-1	04/21/97	--	12.73	--	100.23	87.50
PZ-2	04/21/97	--	13.79	--	101.27	87.48

* 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 east of Building 2079, facing north.

Photograph 2: View of the oil-water separator east of Building 2079, facing west.

Photograph 3: View of the wash rack east of Building 2079, facing north.

Photograph 4: View of the wash rack east of Building 2079, facing west.

ATTACHMENT B

GROUNDWATER LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

PC&B Environmental Laboratories, Inc.

210 Park Road, Oviedo, Florida 32765
Phone: 407-359-7194 Fax: 407-359-7197

FILE COPY

05-06-1997

John Kaiser
ABB Environmental Services
1080 Woodcock Road, Suite 100
Orlando, FL 32803-

Dear John Kaiser:

Enclosed are the results of the analysis of your samples received 04/30/1997.

Our laboratory is certified by the Florida DHRS (Lab #E83239) and operates under an FDEP approved Comprehensive Quality Assurance Plan (#900134G). Unless otherwise noted, all results are reported as wet weight. All data were determined in accordance with published procedures (EPA-600/4-79-020), Methods for Chemical Analysis of Water and Wastes, Revised March 1983 and/or Standard Methods for the examination of Water and Wastewater, 18th Edition 1989 and/or Test Methods for Evaluating Solid Waste (EPA-SW-846, Revised January 1995), unless stated otherwise in our CompQapp under method modifications.

If you have any questions, please do not hesitate to give me a call.

Sincerely,

Declan Cowley
Laboratory Director

PC&B Environmental Laboratories, Inc.

210 Park Road, Oviedo, Florida 32765
Phone: 407-359-7194 Fax: 407-359-7197

Client : ABB Environmental Services
1080 Woodcock Road, Suite 100
Orlando, FL 32803-

Contact : John Kaiser
Phone : (407) 895-8845

Laboratory Reference Number : 97040190

Project Name : NTC Orlando
Project Number : 8545-58
Sample temperature at time of receipt: 4 degrees C

Chain of Custody : 3091

Laboratory ID	Matrix	Client ID	Status	Date/Time Sampled
97040190-1	Water	070GT101/2078 TW-1	RUN	04/28/1997 08:42

Number	Parameter	Description
1	Group Test	Waste Oil Group for FAC 17-770
1	EPA 418.1/9073	TRPH by IR

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
FAX: 359-7197

Volatile Organics by GCMS

CLIENT NAME: ABB Environmental Services
PROJECT NAME: NTC Orlando
PROJECT NUMBER: 8545-58
DATE RECEIVED: 04/30/1997
ANALYTICAL PROTOCOL: EPA 624/8240

Lab Reference Number	97040190-1	
Client Sample ID	070GT101/2078 TW-1	
Date Sampled	04/28/1997	
Date Extracted	05/01/1997	
Date Analyzed	05/01/1997	
Sample Matrix (as Received)	Water	
Analysis Confirmed	GCMS	
Dilution Factor	1	
Result Units	ug/l	
Benzene	1.0	U
Bromodichloromethane	1.0	U
Bromoform	1.0	U
Bromomethane	1.0	U
Carbon tetrachloride	1.0	U
Chlorobenzene	1.0	U
Chlorodibromomethane	1.0	U
Chloroethane	1.0	U
2-Chloroethyl vinyl ether	1.0	U
Chloroform	1.0	U
Chloromethane	1.0	U
Dibromomethane	1.0	U
1,2-Dibromomethane	1.0	U
Dichlorodifluoromethane	1.0	U
1,1-Dichloroethane	1.0	U
1,2-Dichloroethane	1.0	U
1,1-Dichloroethene	1.0	U
1,2-Dichlorobenzene	1.0	U
1,3-Dichlorobenzene	1.0	U
1,4-Dichlorobenzene	1.0	U
trans-1,2-Dichloroethene	1.0	U
cis-1,2-Dichloroethene	1.0	U
1,2-dichloropropane	1.0	U
cis-1,3-Dichloropropene	1.0	U
trans-1,3-Dichloropr ne	1.0	U
Ethylbenzene	1.0	U
Methylene chloride	1.0	U
Styrene	1.0	U
1,1,2,2-Tetrachloroethane	1.0	U
1,1,1,2-Tetrachloroethane	1.0	U
Tetrachloroethene	1.0	U
Toluene	1.0	U
1,1,1-Trichloroethane	1.0	U
1,1,2-Trichloroethane	1.0	U
Trichloroethene	1.0	U
Trichlorofluoromethane	1.0	U
1,2,3-trichloropropane	1.0	U
Vinyl chloride	1.0	U
Xylenes (total)	1.0	U
Acetone	25	U
Acetonitrile	25	U
Acrolein	25	U
Acrylonitrile	25	U
Carbon disulfide	25	U
2-Butanone	25	U
2-Hexanone	25	U
4-Methyl-2-pentanone	25	U
Vinyl acetate	25	U
MTBE	5.0	U
(Surr) 1,2-Dichloroethane (%)	93	
(Surr) Toluene-d8 (%)	101	
(Surr) 4-Bromofluorobenzene (%)	93	

U = Undetected. The value preceeding the 'U' is the MDL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239/83353

Reviewed by _____

Quality Control Report for Spike/Spike Duplicate Analysis

Volatile Organics by GCMS

Matrix: Water
Lab Sample ID: mw-qc
QC Batch ID: 9705MS1001
Spike Units: ug/l

Analysis Date: 05/01/1997
Preparation Date: 05/01/1997
Method: EPA 624
Analyst: NM

Analyte	Spike Amount	Sample Result	Spike Result	Spike Percent Recovery	MSD Result	MSD Percent Recovery	RPD
Benzene	50.0	0.0	50.0	100	49.0	98	2
Carbon tetrachloride	50.0	0.0	49.0	98	50.0	100	2
Chlorobenzene	50.0	0.0	48.0	96	47.0	94	2
1,1-Dichloroethene	50.0	0.0	58.0	116	59.0	118	2
1,4-Dichlorobenzene	50.0	0.0	46.0	92	43.0	86	7
Ethylbenzene	50.0	0.0	48.0	96	49.0	98	2
Toluene	50.0	0.0	51.0	102	49.0	98	4
Trichloroethene	50.0	0.0	49.0	98	48.0	96	2

Quality Control Limits

Analyte	Lower Limit	Upper Limit	RPD
Benzene	66	142	12
Carbon tetrachloride	65	138	12
Chlorobenzene	73	123	8
1,1-Dichloroethene	53	156	16
1,4-Dichlorobenzene	53	136	15
Ethylbenzene	68	123	10
Toluene	68	127	10
Trichloroethene	69	133	11

Quality Control Report for LCS Analysis

Volatile Organics by GCMS

Matrix: Water
Lab Sample ID: LCS
QC Batch ID: 9705MS1001
LCS Units: ug/l

Analysis Date: 05/02/1997
Preparation Date: 05/01/1997
Method: EPA 624
Analyst: NM

Analyte	LCS Conc	LCS Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Benzene	20.0	22.0	110	75	120
Carbon tetrachloride	20.0	19.0	95	75	120
Chlorobenzene	20.0	20.0	100	75	120
1,1-Dichloroethene	20.0	20.0	100	75	120
1,4-Dichlorobenzene	20.0	21.0	105	75	120
Ethylbenzene	20.0	18.0	90	75	120
Toluene	20.0	22.0	110	75	120
Trichloroethene	20.0	18.0	90	75	120

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
FAX: 359-7197

Semivolatile Organics by GCMS

CLIENT NAME: ABB Environmental Services
PROJECT NAME: NTC Orlando
PROJECT NUMBER: 8545-58
DATE RECEIVED: 04/30/1997
ANALYTICAL PROTOCOL: EPA 625/8270

Lab Reference Number	97040190-1
Client Sample ID	070GT101/2078 TW-1
Date Sampled	04/28/1997
Date Extracted	05/02/1997
Date Analyzed	05/02/1997
Sample Matrix (as Received)	Water
Analysis Confirmed	GCMS
Dilution Factor	1
Result Units	ug/l
Acenaphthene	5 U
Acenaphthylene	5 U
Anthracene	5 U
Benzidine	10 U
Benzoic Acid	25 U
Benzo(a)anthracene	5 U
Benzo(b)fluoranthene	5 U
Benzo(k)fluoranthene	5 U
Benzo(ghi)perylene	5 U
Benzo(a)pyrene	5 U
Benzyl alcohol	10 U
Bis(2-chloroethyl)ether	5 U
Bis(2-chloroethoxy)methane	5 U
Bis(2-chloroisopropyl)ether	5 U
Bis(2-ethylhexyl)phthalate	5 U
4-Bromophenyl phenyl ether	5 U
Butyl benzyl phthalate	5 U
1-Chloronaphthalene	5 U
2-Chloronaphthalene	5 U
4-Chloro-3-methylphenol	5 U
2-Chlorophenol	5 U
4-Chlorophenyl phenyl ether	5 U
Chrysene	5 U
Dibenz(a,h)anthracene	5 U
Dibenzofuran	5 U
Di-n-butyl phthalate	5 U
1,3-Dichlorobenzene	5 U
1,4-Dichlorobenzene	5 U
1,2-Dichlorobenzene	5 U
3,3'-Dichlorobenzidine	10 U
2,4-Dichlorophenol	5 U
2,6-Dichlorophenol	5 U
Diethylphthalate	5 U
2,4-Dimethylphenol	5 U
Dimethylphthalate	5 U
4,6-Dinitro-2-methylphenol	5 U
2,4-Dinitrophenol	25 U
2,4-Dinitrotoluene	5 U
2,6-Dinitrotoluene	5 U
Diphenylamine	5 U
1,2-Diphenylhydrazine	5 U
Di-n-octylphthalate	5 U
Fluoranthene	5 U
Fluorene	5 U
Hexachlorobenzene	5 U
Hexachlorobutadiene	5 U
Hexachlorocyclopentadiene	5 U
Hexachloroethane	5 U
Indeno(123-cd)pyrene	5 U
Isophorone	5 U
1-Methylnaphthalene	5 U
2-Methylnaphthalene	5 U

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
FAX: 359-7197

Semivolatile Organics by GCMS

CLIENT NAME: ABB Environmental Services
PROJECT NAME: NTC Orlando
PROJECT NUMBER: 8545-58
DATE RECEIVED: 04/30/1997
ANALYTICAL PROTOCOL: EPA 625/8270

Lab Reference Number	97040190-1
Client Sample ID	070GT101/2078 TW-1
Date Sampled	04/28/1997
Date Extracted	05/02/1997
Date Analyzed	05/02/1997
Sample Matrix (as Received)	Water
Analysis Confirmed	GCMS
Dilution Factor	1
Result Units	ug/l
2-Methylphenol	5 U
4-Methylphenol	5 U
Naphthalene	5 U
2-Nitroaniline	25 U
3-Nitroaniline	25 U
4-Nitroaniline	25 U
Nitrobenzene	5 U
2-Nitrophenol	5 U
4-Nitrophenol	5 U
N-Nitrosodiphenylamine	5 U
N-Nitroso-di-n-propylamine	5 U
Pentachlorophenol	15 U
Phenanthrene	5 U
Phenol	5 U
Pyrene	5 U
1,2,4-Trichlorobenzene	5 U
2,4,5-Trichlorophenol	5 U
2,4,6-Trichlorophenol	5 U
(Surr) 2-Fluorophenol (%)	50
(Surr) Phenol-d5 (%)	32
(Surr) Nitrobenzene-d5 (%)	37
(Surr) 2-Fluorobiphenyl (%)	50
(Surr) 2,4,6-Tribromophenol (%)	50
(Surr) Terphenyl-d14 (%)	57

U = Undetected. The value preceeding the 'U' is the MDL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239/83353

Reviewed by: _____

Quality Control Report for Spike Analysis

Semivolatile Organics by GCMS

Matrix: Water
Lab Sample ID: 9704169-3
QC Batch ID: 9705BNA004
Spike Units: ug/l

Analysis Date: 05/02/1997
Preparation Date: 05/02/1997
Method: EPA 625
Analyst: KN

Analyte	Spike Amount	Sample Result	Spike Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Acenaphthene	100	0	60	60	34	111
4-Chloro-3-methylphenol	200	0	142	71	25	113
2-Chlorophenol	200	0	124	62	39	104
1,3-Dichlorobenzene	100	0	70	70	49	112
2,4-Dinitrotoluene	100	0	67	67	29	108
4-Nitrophenol	200	0	120	60	22	101
N-Nitroso-di-n-propylamine	100	0	59	59	28	111
Pentachlorophenol	200	0	126	63	38	124
Phenol	200	0	139	70	23	113
Pyrene	100	0	77	77	46	125
1,2,4-Trichlorobenzene	100	0	57	57	34	110

Quality Control Report for LCS Analysis

Semivolatile Organics by GCMS

Matrix: Water
Lab Sample ID: LCS
QC Batch ID: 9705BNA004
LCS Units: ug/l

Analysis Date: 05/02/1997
Preparation Date: 05/02/1997
Method: EPA 625
Analyst: KN

Analyte	LCS Conc	LCS Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Acenaphthene	100	67	67	60	120
4-Chloro-3-methylphenol	200	145	73	50	120
2-Chlorophenol	200	136	68	50	120
1,3-Dichlorobenzene	100	79	79	60	120
2,4-Dinitrotoluene	100	62	62	50	120
4-Nitrophenol	200	141	71	50	120
N-Nitroso-di-n-propylamine	100	56	56	50	120
Pentachlorophenol	200	151	76	50	120
Phenol	200	144	72	50	120
Pyrene	100	84	84	60	120
1,2,4-Trichlorobenzene	100	63	63	50	120

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194

Report of Analysis

CLIENT NAME: ABB Environmental Services
PROJECT NAME: NTC Orlando
PROJECT NUMBER: 8545-58
DATE RECEIVED: 04/30/1997

Lab Reference Number			97040190-1
Client Sample ID			070GT101/2078 TW-1
Date Sampled			04/28/1997
Sample Matrix (as Received)			Water
EPA 418.1/9073	TRPH	mg/l	1.0 U
EPA 6010	Arsenic, Total	ug/l	5.0 U
EPA 6010	Cadmium, Total	ug/l	1 U
EPA 6010	Chromium, Total	ug/l	5.0 U
EPA 6010	Lead, Total	ug/l	3 U

U = Undetected. The value preceeding the 'U' is the MDL for the analyte. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G · FHRS Certification # E83239/83353

Reviewed by : _____

Quality Control Report for Spike Analysis

INORGANICS

Matrix: Water
Lab Sample ID: 9705001-5

Analysis Date: 05/01/1997
Preparation Date: 05/01/1997

Analyte	Spike Amount	Sample Result	Spike Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Arsenic, Total	200 ug/l	0	190	95	74	130
Cadmium, Total	100 ug/l	3	98	95	66	121
Chromium, Total	100 ug/l	11	106	95	69	125
Lead, Total	100 ug/l	0	97	97	66	124

Quality Control Report for Spike Analysis

INORGANICS

Matrix: Water
Lab Sample ID: 9704170-3

Analysis Date: 04/30/1997
Preparation Date: 04/30/1997

Analyte	Spike Amount	Sample Result	Spike Result	Percent Recovery	Lower Control Limit	Upper Control Limit
TRPH	10.0 mg/l	0.0	10.0	100	85	111
Arsenic, Total	200 ug/l	0	190	95	74	130
Cadmium, Total	100 ug/l	3	98	95	66	121
Chromium, Total	100 ug/l	11	106	95	69	125
Lead, Total	100 ug/l	0	97	97	66	124

Quality Control Report for LCS Analysis

INORGANICS

Matrix: Water
Lab Sample ID: LCS

Analysis Date: 05/01/1997
Preparation Date: 05/01/1997

Analyte	LCS Conc			LCS Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Arsenic, Total	200	ug/l	0	197	99	70	120
Cadmium, Total	100	ug/l	0	101	101	70	120
Chromium, Total	100	ug/l	0	99	99	70	120
Lead, Total	100	ug/l	0	99	99	70	120

Quality Control Report for Spike Analysis

INORGANICS

Matrix: Water
Lab Sample ID: 9704170-3

Analysis Date: 04/30/1997
Preparation Date: 04/30/1997

Analyte	Spike Amount	Sample Result	Spike Result	Percent Recovery	Lower Control Limit	Upper Control Limit
TRPH	10.0 mg/l	0.0	10.0	100	85	111

Quality Control Report for LCS Analysis

INORGANICS

Matrix: Water
Lab Sample ID: LCS

Analysis Date: 04/30/1997
Preparation Date: 04/30/1997

Analyte	LCS Conc		LCS Result	Percent Recovery	Lower Control Limit	Upper Control Limit
TRPH	10.0 mg/l	0.0	10.3	103	70	120

Nº 0091

PC&B Laboratories, Inc.

210 Park Road, Oviedo, Fl 32765
407-359-7194 (FAX) 407-359-7197

Chain of Custody

Work Order: 9704190

Date: 4-28-97 Page 1 of 1

COMPANY ABB-EVS
ADDRESS 1080 WOODLOCK ROAD SUITE 100
ORLANDO FL 32803
SAMPLED BY [signature]
SIGN [signature] PHONE NO: 895-8845

ANALYSIS REQUEST

#	SAMPLE ID.	DATE/TIME	MATRIX	EPA 624	EPA 625	EPA 418.1	Metals (Cr, Cd, Pb, As)											NUMBER OF CONTAINERS
1	0706-7101/2078 TW-1	4/28/97/0842	H_2O	2	1	1	1											5
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	4/23/97	1: [signature]	4/23/97
2: [signature]	4/29/97 1500	2: [signature]	4/30/97 13:10
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

PROJECT INFORMATION
PROJECT NAME: NTC Orlando
PROJECT #: 8545-58
SITE ADDRESS: BUILDING 2078
PROJECT MANAGER: John Kaiser
INVOICE TO: (IF DIFFERENT FROM ABOVE) Attn: Lorena Kandt

SAMPLE RECEIPT
Total No. of Containers
Chain of Custody Seals
Rec'd Good Condition/Cold
PO#:
SHIPPED VIA