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SOURCE REMOVAL REPORT FOR BUILDING 7107 MAIN BASE NTC ORLANDO FL
6/1/1999
HARDING LAWSON ASSOCIATES

269

Harding Lawson Associates

HLA

June 1, 1999

Document No.: 02547.053

Commanding Officer
Southern Division
Naval Facilities Engineering Command
Mr. Nick Ugolini, Code 1843
2155 Eagle Drive
N. Charleston, SC 29406

Subject: **Source Removal Report (SAR) Building 7107**
Main Base, NTC, Orlando, Florida
CTO #137, Contract No. N62467-89-D-0317

Dear Mr. Ugolini:

Enclosed is the Source Removal Report (SRR) for Building 7107, McCoy Annex, NTC Orlando, Florida. This SRR is submitted as Addendum to the SAR for Building 7107 and should be inserted into Volume II of the McCoy Annex CAR. This report is submitted under the requirements of the new Chapter 62-770, F.A.C. dated September 23, 1997.

If you have any questions or need additional information please contact the undersigned at 407/895-8845.

Very truly yours,
HARDING LAWSON ASSOCIATES

John P. Kaiser
Installation Manager

Manuel Alonso, P.G.
Senior Geologist

JPK/lak
Enclosure

cc: Wayne Hansel, Code 1887, Southern Division
Lt. Gary Whipple, NTC, Orlando
David Grabka, FDEP
City of Orlando via Wayne Hansel
File Copy (2 enc)

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SOURCE REMOVAL REPORT
BUILDING 7107
McCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Unit Identification Code: N65928

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

Prepared by:

Harding Lawson Associates
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

May 1999

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, Harding Lawson Associates, 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: May 27, 1999

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)

NTCB7107.SRR
PMW.05.99

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Building 7107, McCoy Annex
Naval Training Center
Orlando, Florida

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GLOSSARY

bls	below land surface
FAC	Florida Administrative Code
FL-PRO	Florida-Petroleum Residual Organics
HLA	Harding Lawson Associates
NTC	Naval Training Center
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbon
ppm	parts per million
PWC	Public Works Center
SAR	Site Assessment Report
SOUTHNAV-FACENGCOM	Southern Division, Naval Facilities Engineering Command
SRA	Source Removal Activities
TCAR	Tank Closure Assessment Report
TRPH	total recoverable petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOA	volatile organic aromatic
yd^3	cubic yard

1.0 INTRODUCTION

1.1 SITE LOCATION AND BACKGROUND INFORMATION. Harding Lawson Associates (HLA), was contracted by Southern Division, Naval Facilities Engineering Command to document the source removal activities (SRA) associated with petroleum contamination at the former Building 7107. SRAs included excavation and disposal of petroleum-impacted soil from the former underground storage tank (UST) area. Building 7107 was located at the McCoy Annex. The McCoy Annex is located approximately 12 miles south of the Naval Training Center (NTC), Orlando's Main Base, and is part of the NTC in Orlando, Orange County, Florida (Figure 1-1).

Building 7107 (former Water Supply Pumping Station) was formerly located approximately 50 feet east of Daetwyler Drive and north of 3rd Street in the northern part of the McCoy Annex. Figure 1-1 shows the site location and the surrounding area. The site lies within the southeast part of Section 32, Township 23 South, and Range 30 East.

Building 7107, constructed in 1952 as a water supply well for the McCoy Annex, was an 85 square-foot building constructed of concrete-block walls on a concrete slab and a flat concrete roof. The water supply well was properly abandoned on August 17, 1997, following the South Florida Water Management District guidelines. Following well abandonment the building was demolished on September 5, 1997. It is believed that prior to construction of the building, the property was undeveloped.

The water supply well at Building 7107 was part of a "Water Distribution Plan" built by the U.S. Air Force. The system was designed to supply water to the McCoy Annex during an emergency. The petroleum storage tank system consisted of a 100-gallon UST used to store gasoline. The gasoline was used to run a motor that provided power to the pump in case of a power outage. During normal operations, the supply well produced water using a turbine pump equipped with surface mounted electric motor. A drive shaft connected the turbine with the gasoline motor. The location of the former petroleum storage tank system is shown on Figure 1-2.

The 100-gallon UST was removed by Navy Public Works Center, Pensacola, on November 18, 1996. Evidence of petroleum impact to soil was found within the excavation area during the tank removal. Organic vapor analyzer (OVA) readings ranged from 187 parts per million (ppm) to 8,181 ppm. During the Tank Closure Assessment Report (TCAR) for the site, groundwater was not sampled. The TCAR recommended preparation of a Site Assessment Report (SAR) for the site. Petroleum-impacted soil was removed from the excavation following the tank removal. No information is available regarding the quantity of soil removed. The TCAR contains a nonhazardous waste manifest with C.A. Meyer Paving & Construction Co. of Clermont, Florida as the designated disposal facility.

A SAR was completed for the site on January 28, 1998. The SAR recommended the removal of petroleum-impacted soil and groundwater sampling following the soil excavation.

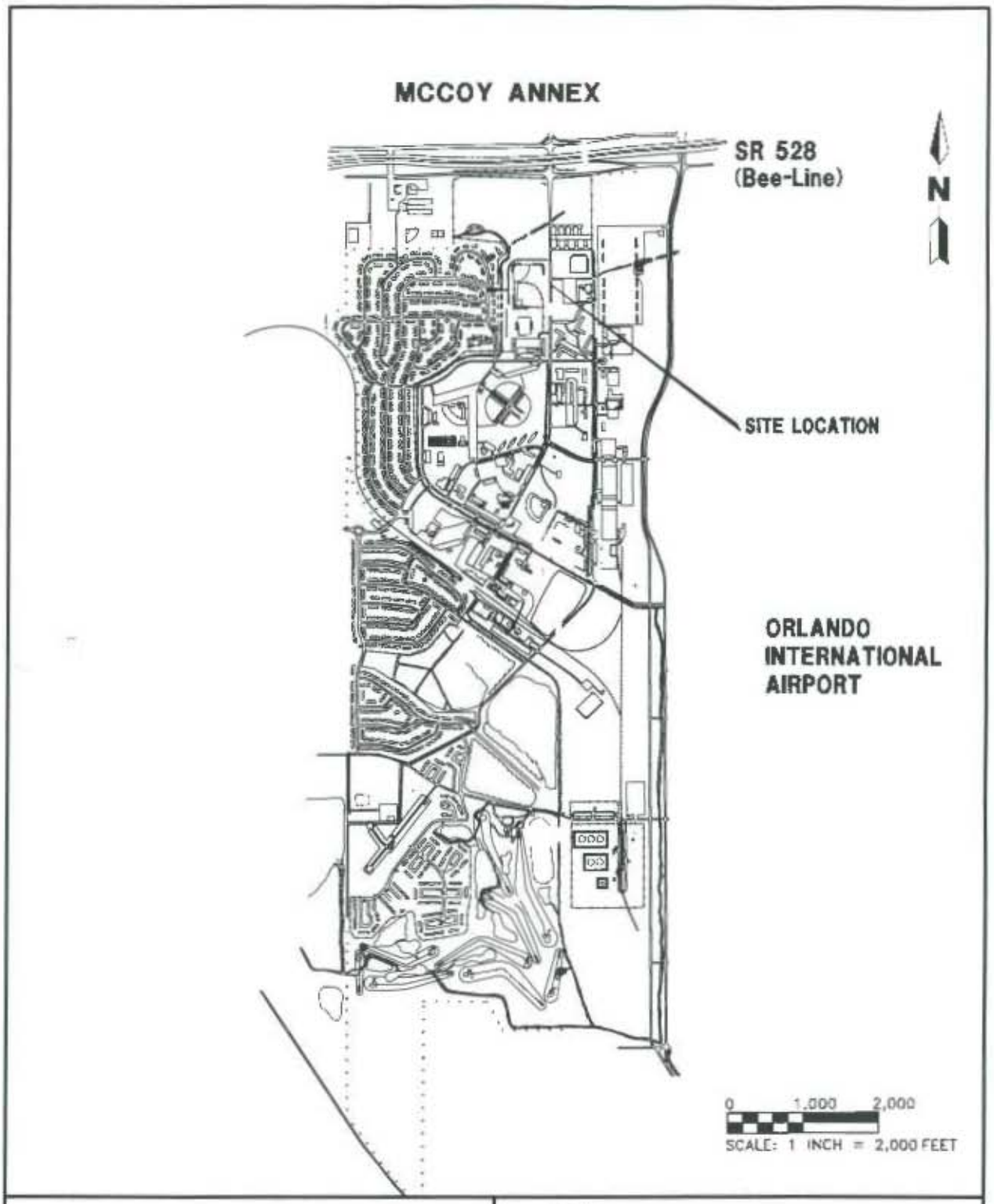

FIGURE 1-1
SITE VICINITY MAP

SOURCE REMOVAL REPORT
BUILDING 7107
MCCOY ANNEX

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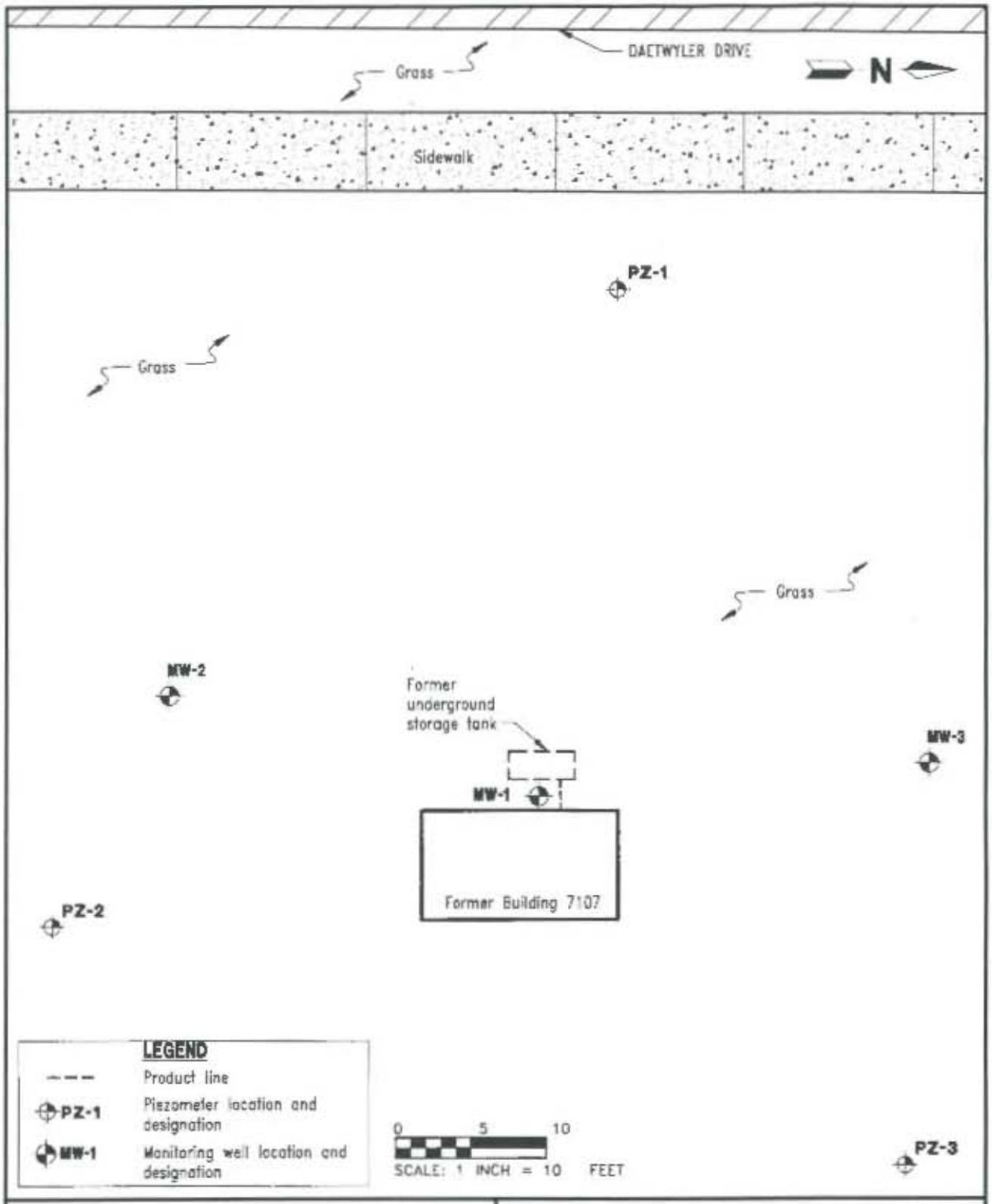

FIGURE 1-2
SITE PLAN MAP

SOURCE REMOVAL REPORT
BUILDING 7107
MCCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Petroleum-impacted soil excavation activities were conducted on February 21, 1999. This report summarizes activities associated with the removal of petroleum-impacted soil at former Building 7107. Prior to the SRAs, HLA informed the Florida Department of Environmental Protection of the petroleum contaminated soils through information provided during the Orlando Partnering Team meeting.

1.2 **SCOPE OF WORK**. The scope of work performed during the SRA included the following tasks:

- documented the excavation of petroleum-impacted soil,
- conducted environmental sampling (OVA screening) to determine the extent of excessively contaminated soil to be transported to a stationary thermal treatment facility,
- installation of a monitoring well in the excavated area,
- obtained and analyzed a groundwater sample from the monitoring well in the excavated area to assess petroleum-impact to the groundwater, and
- prepared a Source Removal Report describing all field activities, providing the supplemental information, and recommendation for the site.

2.0 FIELD ACTIVITIES

2.1 TANK CLOSURE. The 100-gallon UST was removed by Navy Public Works Center (PWC), Pensacola, on November 18, 1996. Evidence of petroleum impact to soil was found within the excavation area during the tank removal. The TCAR prepared by PWC Pensacola, reported OVA readings ranged from 187 ppm to 8,181 ppm. PWC removed some petroleum-impacted soil during the tank removal, however the quantity was not reported.

2.2 SOIL EXCAVATION. The SRA were conducted on February 21, 1999. Petroleum-contaminated soil that exhibited corrected organic vapor readings of 50 ppm or greater was excavated as excessively contaminated soil. Photographs of the SRAs are included in Appendix A.

The excavation was terminated at approximately seven feet below land surface (bls). Figure 2-1 shows the excavated area and soil sample locations collected during the SRA.

An OVA equipped with a portable flame ionization detector (Foxboro-128) was used to screen soil samples during the excavation. A grid pattern was used to mark the soil sample locations (Figure 2-1). Organic vapor measurements of soil sample headspace were performed in samples collected from depths of 2, 4, 6, and 8 feet bls following guidelines established in Chapter 62-770.200, Florida Administrative Code (FAC). Organic vapor concentration readings corresponding to the sample locations and depth intervals for February 21, 1999 are summarized in Table 2-1.

The excavated soil was placed on and covered with thick plastic, stockpiled onsite, then transported by to Soil Treatment Services Inc. of Kissimmee, Florida for thermal treatment. Approximately 12.2 tons (8.7 cubic yard [yd^3]) of excessively contaminated soil was excavated from the site.

2.3 TRANSPORT AND DISPOSAL OF SOIL. Preburn composite soil samples were collected by Tetra Tech NUS, Inc. from the site for laboratory analysis prior to excavating the site. Preburn soil samples were composited from soil samples collected at different depths. Soil samples were delivered to AccuTest Analytical Laboratories in Orlando, Florida, and analyzed for volatile organic aromatics (VOAs) (U.S. Environmental Protection Agency [USEPA] Method 8021), polynuclear aromatic hydrocarbons (PAHs) (USEPA Method 8310), total recoverable petroleum hydrocarbons (TRPH) using the Florida-Petroleum Residual Organics (FL-PRO), and eight Resource Conservation and Recovery Act metals. Preburn laboratory analytical reports are included in Attachment B.

The petroleum-impacted soil was transported to Soil Treatment Services Inc. to be thermally treated. The Certificate of Materials Recycling and Postburn Analytical reports are included in Attachment C.

2.4 SITE RESTORATION. The excavated area was backfilled with clean fill material (well sorted, gray, fine sand) to surface grade to bring the site to the preexisting grade.

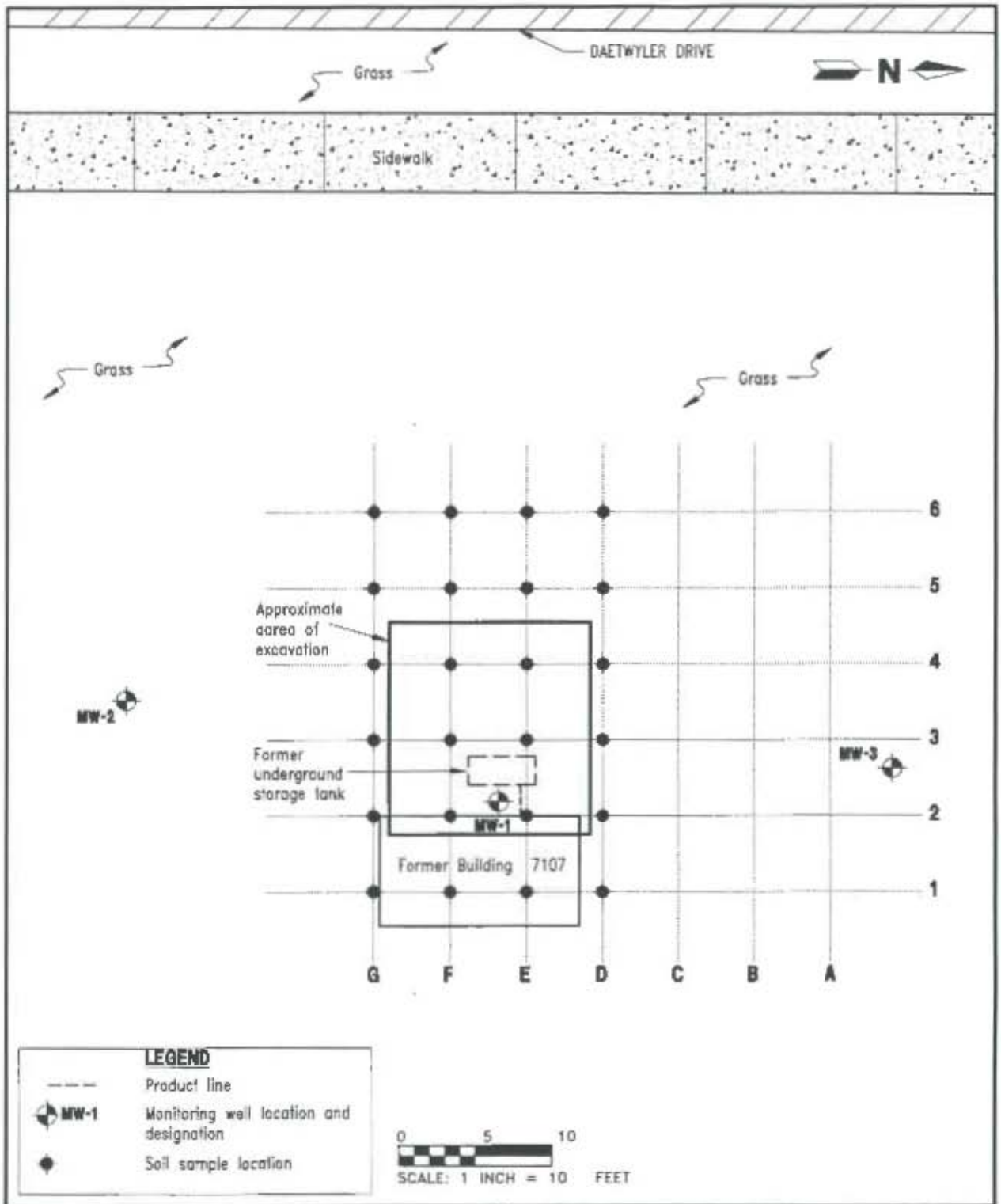

FIGURE 2-1
SOIL EXCAVATION AND SAMPLING LOCATION PLAN

SOURCE REMOVAL REPORT
BUILDING 7107
MCCOY ANNEX

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ORLANDO, FLORIDA

Table 2-1
Summary of Organic Vapor Analyzer Readings, February 21, 1999

Source Removal Report
Building 7107, McCoy Annex
Naval Training Center
Orlando, Florida

Soil Sample Location	Depth (feet)	Unfiltered[1] (ppm)	Filtered[2] (ppm)	Total Hydrocarbons (ppm)	Comments
D1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
D2	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	20	10	10	Petroleum odor
D3	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	30	10	20	Petroleum odor
D4	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	30	10	20	Petroleum odor
D5	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	30	10	20	Petroleum odor
D6	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
E1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	7	<1.0	<1.0	<1.0	
E2	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
E3	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
E4	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
E5	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor

See notes at end of table.

Table 2-1 (Continued)
Summary of Organic Vapor Analyzer Readings, February 21, 1999

Source Removal Report
Building 7107, McCoy Annex
Naval Training Center
Orlando, Florida

Soil Sample Location	Depth (feet)	Unfiltered[1] (ppm)	Filtered[2] (ppm)	Total Hydrocarbons (ppm)	Comments
E6	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
F1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
F2	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
F3	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
F4	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
F5	2	<1.0	<1.0	<1.0	
	4	150	12	138	Strong Petroleum Odor
	6	30	15	15	Strong Petroleum Odor
	8	10	<1.0	10	Strong Petroleum Odor
F6	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
G1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
G2	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
G3	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	

See notes at end of table.

Table 2-1 (Continued)
Summary of Organic Vapor Analyzer Readings, February 21, 1999

Source Removal Report
Building 7107, McCoy Annex
Naval Training Center
Orlando, Florida

Soil Sample Location	Depth (feet)	Unfiltered[1] (ppm)	Filtered[2] (ppm)	Total Hydrocarbons (ppm)	Comments
G4	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
G5	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
G6	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	

[1] Unfiltered sample readings are for total hydrocarbons, including methane.
[2] Filtered sample readings are for methane only.

Notes: Water table present at approximately 8.0 feet bls.

Due to the large size of the backhoe bucket, samples from locations E2, E3, E4 and E5 were collected for the same bucket. Likewise samples from locations F2, F3, F4 and F5 were collected from the same bucket.

ppm = parts per million.
< = less than.

3.0 GROUNDWATER SAMPLING AND ANALYSIS

3.1 MICRO-WELL INSTALLATION. On April 12, 1999, one micro-well (MC-1) was installed in the center of the excavated area. The micro-well was constructed of 0.5-inch diameter, Schedule 40 solid polyvinyl chloride riser couple to three sections (three foot each) of pre-packed 0.010-inch slot well screen. The micro-well was completed within a steel manhole vault embedded within a 2-foot square, flush-mounted concrete pad. After completion, the well was developed using a peristaltic pump until the groundwater was free of sediment. Micro-well construction details are shown on Figure 3-1.

3.2 GROUNDWATER SAMPLING AND ANALYSIS. On April 16, 1999, groundwater samples were collected from MC-1 installed in the center of the excavated area. The groundwater sample was packed on ice and shipped to Savannah Laboratories Inc. of Savannah, Georgia to be analyzed using volatile halocarbons (USEPA Method 601), VOAs (USEPA Method 602), TRPH (FL-PRO), PAHs (USEPA Method 8310), 1,2--dibromoethane (USEPA Method 504) and lead (USEPA Method 239.2).

Laboratory analytical results indicate all analyzed parameters were below laboratory standard detection limits.

Groundwater sampling forms are included in Appendix D. The laboratory analytical report is included in Appendix E.

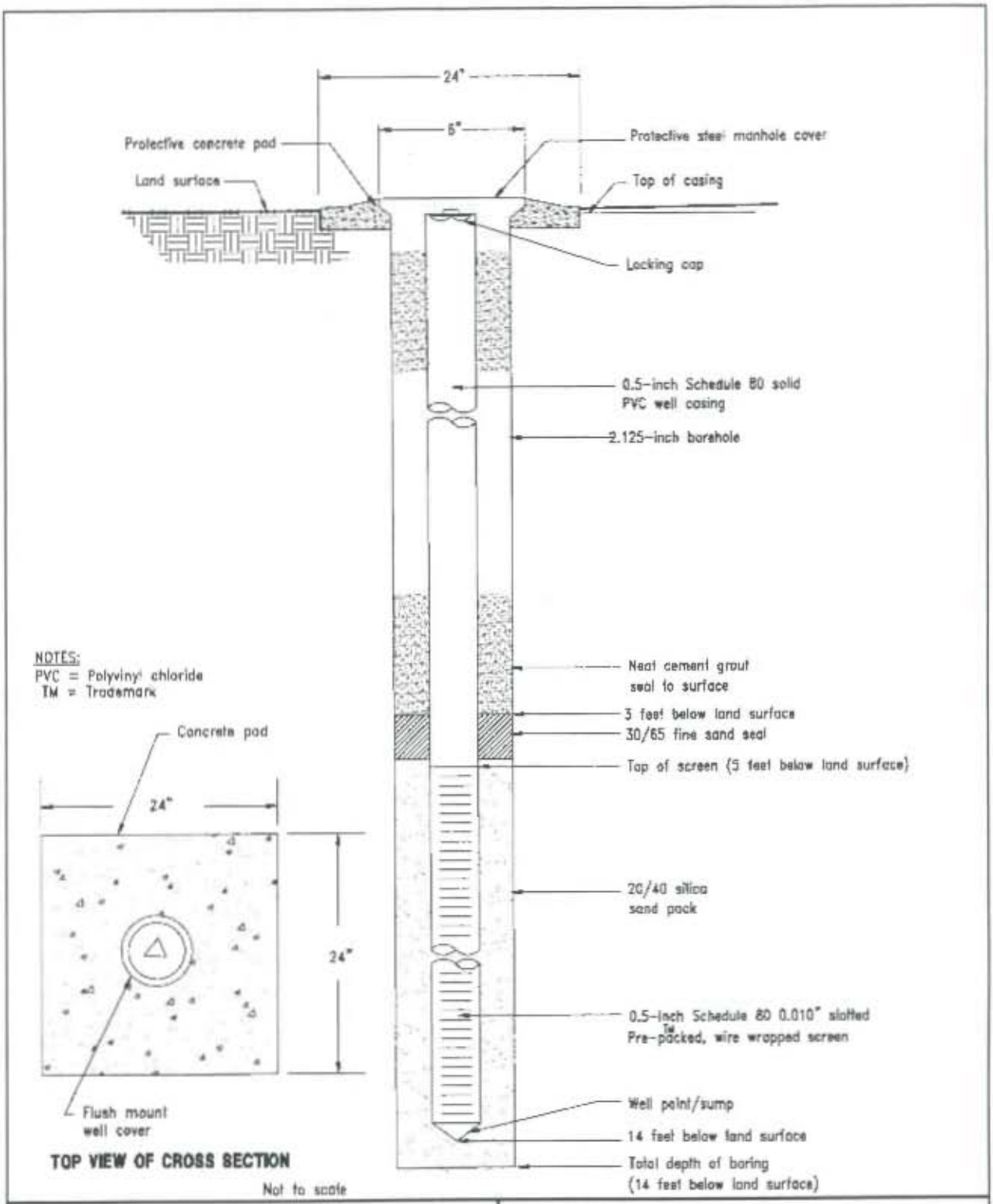

FIGURE 3-1
TYPICAL MICROWELL CONSTRUCTION DETAIL

SOURCE REMOVAL REPORT
BUILDING 7107
MCCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

4.0 CONCLUSIONS AND RECOMMENDATIONS

On February 21, 1999, SRA activities were conducted at former Building 7107, McCoy Annex. A total of 12.2 tons (8.7 yd^3) of petroleum-impacted soil was excavated and transported to Soil Treatment Services, Inc. for thermal treatment. Following excavation of the soil and back filling of the excavated area, a micro-well (MC-1) was installed and sampled to assess the impact to the groundwater. Laboratory analytical results for all analyzed parameters were below laboratory standard detection limits. Based upon laboratory analytical results, removal of the petroleum-impacted soil and information provided in the SAR for Building 7107 (ABB-ES, 1998), HLA recommends a No Further Action proposal for the site.

5.0 PROFESSIONAL REVIEW CERTIFICATION

This document, *Source Removal Report, Building 7107, McCoy Annex, Naval Training Center, Orlando, Florida*, has been prepared under the direction of a Professional Geologist registered in the State of Florida. The work and professional opinions rendered in this report were conducted or developed in accordance with commonly accepted procedures consistent with applicable standards of practice. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report or referenced in public literature. Recommendations are based upon interpretations of the applicable regulatory requirements, guidelines, and relevant issues discussed with regulatory personnel during the site investigation. If conditions that differ from those described that are determined to exist, the undersigned geologist should be notified to evaluate the effects of any additional information on this assessment or the recommendations made in this report. This report meets the criteria set forth in Chapter 492 of the Florida Statutes with regard to good professional practices as applied to Chapter 62-770, FAC. This SRR was developed for the Building 7107 site at the McCoy Annex, NTC, Orlando, in Orlando, Florida, and should not be construed to apply to any other site.

Manuel Alonso
Professional Geologist
P.G. No. 0001256

6/1/99
Date

REFERENCE

ABB Environmental Services, Inc. 1998. *Site Assessment Report, Building 7107, McCoy Annex, Naval Training Center, Orlando, Florida.* Prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina.

ATTACHMENT A

PHOTOGRAPHS

Photograph 1: Concrete material observed in the excavation associated with the former Building 7107.

Photograph 2: View of the capped and abandoned water line pipe encountered during the soil excavation.

Photograph 3: Stockpiled contaminated soil covered with plastic material.

Photograph 4: Building 7107 excavation area after backfill.

ATTACHMENT B

PREBURN LABORATORY ANALYTICAL REPORTS

ACCUTEST

02/17/99

Technical Report for

Tetra Tech, NUS

NTC Orlando

7457

Accutest Job Number: F3655

Report to:

Tetra Tech, NUS
800 Oak Ridge Turnpike
Suite A-600
Oak Ridge, TN 37830

ATTN: Mike Campbell

Total number of pages in report:

Harry Behzadi, Ph.D.
Laboratory Director

Results relate only to the items tested.
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

ACCUTEST

Sample Summary

Tetra Tech, NUS

Date: 02/17/99
Job No: F3655

NTC Orlando
Project No: 7457

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F3655-1	02/10/99	14:30 GB	02/10/99	SO	Soil	7107-SB01-0305
F3655-2	02/10/99	10:30 GB	02/10/99	SO	Soil	7175-SB01-0405
F3655-3	02/10/99	11:30 GB	02/10/99	SO	Soil	7175-SB02-0405
F3655-4	02/10/99	12:15 GB	02/10/99	SO	Soil	7175-SB03-0405
F3655-5	02/10/99	13:00 GB	02/10/99	SO	Soil	7175-SB04-0405
F3655-6	02/10/99	13:30 GB	02/10/99	SO	Soil	7175-SB05-0405
F3655-7	02/10/99	14:50 GB	02/10/99	SO	Soil	7171-SB01-0405
F3655-8	02/10/99	15:15 GB	02/10/99	SO	Soil	7171-SB02-0405

ACCUTEST.

Report of Analysis

Client Sample ID:	7107-SB01-0305		
Lab Sample ID:	F3655-1	Date Sampled:	02/10/99
Matrix:	SO - Soil	Date Received:	02/10/99
Method:	SW846 8260B	Percent Solids:	85.8
Project:	NTC Orlando		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K002649.D	1	02/12/99	RAW	n/a	n/a	VK46
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RDL	Units	Q
71-43-2	Benzene	ND	2.2	ug/kg	
75-27-4	Bromodichloromethane	ND	2.2	ug/kg	
75-25-2	Bromoform	ND	2.2	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	ug/kg	
75-00-3	Chloroethane	ND	2.2	ug/kg	
67-66-3	Chloroform	ND	2.2	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	2.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.2	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.2	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.2	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.2	ug/kg	
124-48-1	Dibromochloromethane	ND	2.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	2.2	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	ug/kg	
541-73-1	m-Dichlorobenzene	ND	2.2	ug/kg	
95-50-1	o-Dichlorobenzene	ND	2.2	ug/kg	
106-46-7	p-Dichlorobenzene	ND	2.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	2.2	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	ug/kg	
100-41-4	Ethylbenzene	ND	2.2	ug/kg	
74-83-9	Methyl bromide	ND	5.6	ug/kg	
74-87-3	Methyl chloride	ND	5.6	ug/kg	
75-09-2	Methylene chloride	ND	5.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.2	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.2	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	2.2	ug/kg	
108-88-3	Toluene	ND	2.2	ug/kg	
79-01-6	Trichloroethylene	ND	2.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.6	ug/kg	
1330-20-7	Xylene (total)	ND	6.7	ug/kg	

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST.

Report of Analysis

Client Sample ID:	7107-SB01-0305		
Lab Sample ID:	F3655-1	Date Sampled:	02/10/99
Matrix:	SO - Soil	Date Received:	02/10/99
Method:	SW846 8260B	Percent Solids:	85.8
Project:	NTC Orlando		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K002649.D	1	02/12/99	RAW	n/a	n/a	VK46
Run #2							

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-120%
2037-26-5	Toluene-D8	98%		81-117%
460-00-4	4-Bromofluorobenzene	112%		74-121%
17060-07-0	1,2-Dichloroethane-D4	89%		80-120%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	7107-SB01-0305		
Lab Sample ID:	F3655-1	Date Sampled:	02/10/99
Matrix:	SO - Soil	Date Received:	02/10/99
Method:	SW846 3550B/8270C	Percent Solids:	85.8
Project:	NTC Orlando		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001086.D	1	02/12/99	NF	02/12/99	OP680	SL70
Run #2							

BN PAH List

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	190	ug/kg	
208-96-8	Acenaphthylene	ND	190	ug/kg	
120-12-7	Anthracene	ND	190	ug/kg	
56-55-3	Benzo(a)anthracene	ND	190	ug/kg	
50-32-8	Benzo(a)pyrene	ND	97	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	190	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	190	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	190	ug/kg	
218-01-9	Chrysene	ND	190	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	97	ug/kg	
206-44-0	Fluoranthene	ND	190	ug/kg	
86-73-7	Fluorene	ND	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	190	ug/kg	
90-12-0	1-Methylnaphthalene	ND	190	ug/kg	
91-57-6	2-Methylnaphthalene	ND	190	ug/kg	
91-20-3	Naphthalene	ND	190	ug/kg	
85-01-8	Phenanthrene	ND	190	ug/kg	
129-00-0	Pyrene	ND	190	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	85%		25-121%
4165-62-2	Phenol-d5	89%		24-113%
118-79-6	2,4,6-Tribromophenol	87%		19-122%
4165-60-0	Nitrobenzene-d5	85%		23-120%
321-60-8	2-Fluorobiphenyl	87%		30-115%
1718-51-0	Terphenyl-d14	94%		18-137%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	7107-SB01-0305		
Lab Sample ID:	F3655-1	Date Sampled:	02/10/99
Matrix:	SO - Soil	Date Received:	02/10/99
Method:	FLORIDA-PRO	Percent Solids:	85.8
Project:	NTC Orlando		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P03217.D	1	02/15/99	SKW	02/12/99	OP679	GOP156
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
	TPH (C8-C40)	ND	97	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		40-140%

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST.

Report of Analysis

Client Sample ID:	7107-SB01-0305		
Lab Sample ID:	F3655-1	Date Sampled:	02/10/99
Matrix:	SO - Soil	Date Received:	02/10/99
		Percent Solids:	85.8
Project:	NTC Orlando		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Arsenic	0.31 U	1.2	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Barium	8.5 B	23.3	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Cadmium	0.03 B	0.47	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Chromium	7.0	1.2	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Lead	7.5 B	11.7	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Mercury	0.049 U	0.049	mg/kg	1	02/12/99	02/15/99	JK	SW846 7471A
Selenium	0.36 U	11.7	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A
Silver	0.09 U	1.2	mg/kg	1	02/12/99	02/15/99	JK	SW846 6010A

RDL = Reported Detection Limit

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: TETRA TECH NUS
ADDRESS: 1311 Executive Center Drive
CITY, STATE, ZIP: Tallahassee FL 32301
SEND REPORT TO: PAUL CALLIGAN
PHONE #: (850) 656-5458

FACILITY INFORMATION

PROJECT NAME: NTC
LOCATION: ORLANDO
PROJECT NO.:
FAX #: (904) 656-7403

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	FLoPRO, 8310	8 RCRA	8021 (Encore single)	LAB USE ONLY
3655-1	7107-SB01-0305	2/9/99	14:30	GB.AC	S	5						✓	✓	✓	
-2	7175-SB01-0405	2/10/99	10:30	GB											
-3	7175-SB02-0405		11:30												
-4	7175-SB03-0405		12:15												
-5	7175-SB04-0405		13:00												
-6	7175-SB05-0405		13:30												
-7	7171-SB01-0405		14:50												
-8	7171-SB02-0405		15:15												

DATA TURNAROUND INFORMATION

- ☐ STANDARD
- ☐ 48 HOUR RUSH
- ☒ 24 HOUR EMERGENCY
- ☒ OTHER 72 hour

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

KLH767

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
Abby Wilson	2-9-99 1080	[illegible]	2. [illegible]	2/10/99 16:50	Rachel 2/10/99 16:45
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE	ON ICE / TEMPERATURE °C

ATTACHMENT C

POSTBURN LABORATORY ANALYTICAL REPORTS AND CERTIFICATE OF MATERIALS RECYCLING

#5449 #99-134

CERTIFICATE OF MATERIALS RECYCLING

WHEREAS, Soil Treatment Services Inc., is a corporation organized under the laws of the State of Florida with its principal place of business and Kissimmee, Florida and

WHEREAS, Soil Treatment Services Inc., operates a facility which uses, reuses and recycles various waste materials under the authority of the Florida Department of Environmental Regulation;

Now, Therefore, Soil Treatment Services Inc., does issue hereby this certificate to:

C.N.I., Inc.
P.O. Box 253
Ellenton, Fla. 34222

Job: Naval Training Center
McCoy Annex
Site #7107
Orlando, Fla.

To evidence the total use, reuse and recycling of 12.18 tons of soil contaminated with petroleum products. Service performed by incineration.

Said use, reuse and recycling has been completed in a manner consistent with acceptable engineering standards and in compliance with applicable rules and regulations set forth by State and Federal Authorities on or about the date stated:

SOIL TREATMENT SERVICES, INC.

March 4th, 1999
DATE

Larry A. Keene, President

Seal

PB

BOTTORF Associates inc.

99-134 CNI
NTC #7107

Soil Analysis Report

6729 Edgewater Commerce Parkway · Orlando, Florida · 32810-4278 · Phone 407 298-0846 · Fax: 407 299-7053

Sample Received From: Soil Treatment Services
3505 Pugmill Road
Kissimmee, FL 34741

Lab Control Number: 18472

Sample Name: March 4, 1999 Composite #1
Date Received: March 5, 1999
Date Reported: March 11, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Total Petroleum Hydrocarbons	FI-Pro	mg/kg	1.0	3/10/99	KB	15.1
Arsenic	7061	mg/kg	0.4	3/10/99	KB	0.6
Barium	7080	mg/kg	0.025	3/10/99	KB	12.3
Cadmium	7131	mg/kg	0.05	3/10/99	KB	0.8
Chromium	7191	mg/kg	0.1	3/10/99	KB	1.31
Lead	7421	mg/kg	0.05	3/10/99	KB	2.3
Mercury	7471	mg/kg	0.001	3/10/99	KB	<0.001
Selenium	7740	mg/kg	0.5	3/10/99	KB	<0.5
Silver	7760	mg/kg	0.05	3/10/99	KB	<0.05
Methyl-tert-butyl-ether	8021	ug/kg	1.4	3/8/99	KB	<1.4
Benzene	8021	ug/kg	0.9	3/8/99	KB	<0.9
Toluene	8021	ug/kg	0.7	3/8/99	KB	<0.7
Chlorobenzene	8021	ug/kg	1.7	3/8/99	KB	<1.7
Ethyl benzene	8021	ug/kg	0.8	3/8/99	KB	<0.8
m & p-Xylene	8021	ug/kg	1.6	3/8/99	KB	<1.6
o-Xylene	8021	ug/kg	0.8	3/8/99	KB	<0.8
m-Dichlorobenzene	8021	ug/kg	1.6	3/8/99	KB	<1.6
p-Dichlorobenzene	8021	ug/kg	1.6	3/8/99	KB	<1.6
o-Dichlorobenzene	8021	ug/kg	1.6	3/8/99	KB	<1.6
Total BTEX	8021	ug/kg	n/a	3/8/99	KB	<0.7

Data Release Authorization

The sample integrity and reliability was verified by Laboratory personnel prior to analysis. Analysis method used are in accordance with F.A.C. 62-160 and applicable EPA protocols. Laboratory Quality Assurance is in accordance with Bottorf Associates Comprehensive Quality Assurance Plan No. 910102.

Kent D. Bottorf — Kent D. Bottorf — 3/11/99
Laboratory Director — Signature — Date

BOTTORF Associates inc.

6729 Edgewater Commerce Parkway · Orlando, Florida · 32810-4278 · Phone 407 298-0846 · Fax: 407 299-7053

Soil Analysis Report

Sample Received From: Soil Treatment Services
3505 Pugmill Road
Kissimmee, FL 34741

Lab Control Number: 18472

Sample Name: March 4, 1999 Composite #1
Date Received: March 5, 1999
Date Reported: March 11, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodiflouroethane	8021	ug/kg	1.2	3/8/99	KB	<1.2
Bromomethane	8021	ug/kg	1.7	3/8/99	KB	<1.7
Chloroethane	8021	ug/kg	2.5	3/8/99	KB	<2.5
1,1-Dichloroethene	8021	ug/kg	1.3	3/8/99	KB	<1.3
Methylene Chloride	8021	ug/kg	1.3	3/8/99	KB	<1.3
trans 1,2-Dichloroethylene	8021	ug/kg	1.1	3/8/99	KB	<1.1
1,1-Dichloroethane	8021	ug/kg	1.3	3/8/99	KB	<1.3
Chloroform	8021	ug/kg	1.0	3/8/99	KB	<1.0
1,1,1-Trichlorethane	8021	ug/kg	1.3	3/8/99	KB	<1.3
Carbon Tetrachloride	8021	ug/kg	1.1	3/8/99	KB	<1.1
Trichloroethylene	8021	ug/kg	1.8	3/8/99	KB	<1.8
1,2-Dichloropropane	8021	ug/kg	1.5	3/8/99	KB	<1.5
Bromodichloromethane	8021	ug/kg	9.0	3/8/99	KB	<9.0
cis 1,3-Dichloropropane	8021	ug/kg	1.2	3/8/99	KB	<1.2
trans 1,3-Dichloropropane	8021	ug/kg	1.4	3/8/99	KB	<1.4
1-Chloro 2-Bromomethane	8021	ug/kg	1.2	3/8/99	KB	<1.2
1,1,2-Trichloroethane	8021	ug/kg	1.3	3/8/99	KB	<1.3
Tertrachloroethylene	8021	ug/kg	1.1	3/8/99	KB	<1.1
Dibromochloromethane	8021	ug/kg	1.1	3/8/99	KB	<1.1
1,2-Dibromomethane	8021	ug/kg	1.4	3/8/99	KB	<1.4
Chlorobenzene	8021	ug/kg	3.8	3/8/99	KB	<3.8
1,1,1,2-Tetrachloroethane	8021	ug/kg	1.3	3/8/99	KB	<1.3

BOTTORF Associates inc.

Soil Analysis Report

6729 Edgewater Commerce Parkway · Orlando, Florida · 32810-4278 · Phone 407 298-0846 · Fax: 407 299-7053

Sample Received From: Soil Treatment Services
3505 Pugmill Road
Kissimmee, FL 34741

Lab Control Number: 18472

Sample Name: March 4, 1999 Composite #1
Date Received: March 5, 1999
Date Reported: March 11, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Bromoform	8021	ug/kg	1.2	3/8/99	KB	<1.2
1,1,2,2-Tetrachlorethane	8021	ug/kg	1.0	3/8/99	KB	<1.0
1,2,3-Trichloropropane	8021	ug/kg	5.7	3/8/99	KB	<5.7
Bromobenzene	8021	ug/kg	1.1	3/8/99	KB	<1.1
4-Chlorotoluene	8021	ug/kg	1.4	3/8/99	KB	<1.4
m-Dichlorobenzene	8021	ug/kg	2.6	3/8/99	KB	<2.6
p-Dichlorobenzene	8021	ug/kg	2.5	3/8/99	KB	<2.5
o-Dichlorobenzene	8021	ug/kg	2.8	3/8/99	KB	<2.8
Total VOH	8021	ug/kg	n/a	3/8/99	KB	<9.0
8021 Dilution Factor	8021	x	n/a	n/a	n/a	1
Acenaphthene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Acenapthylene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Anthracene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Benzo(a)anthracene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Benzo(a)pyrene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Benzo(b)fluoranthene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Benzo(ghi)perylene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Benzo(k)fluoranthene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Chrysene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Dibenzo(a,h)anthracene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Fluoranthene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Fluorene	8100	ug/kg	5.0	3/8/99	KB	<5.0

BOTTORF Associates inc.

Soil Analysis Report

6729 Edgewater Commerce Parkway · Orlando, Florida · 32810-4278 · Phone 407 298-0846 · Fax: 407 299-7053

Sample Received From: Soil Treatment Services
3505 Pugmill Road
Kissimmee, FL 34741

Lab Control Number: 18472

Sample Name: March 4, 1999 Composite #1
Date Received: March 5, 1999
Date Reported: March 11, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Indeno(1,2,3-cd)pyrene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Naphthalene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Phenanthrene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Pyrene	8100	ug/kg	5.0	3/8/99	KB	<5.0
Total PAH	8100	ug/kg	n/a	n/a	n/a	<5.0
8100 Dilution Factor	8100	x	n/a	n/a	n/a	1

ATTACHMENT D

GROUNDWATER SAMPLING FORM

FLORIDA

DEP Form #	62-770.900(3)
Form Title	Petroleum or Petroleum Products Water Sampling Log
Effective Date	September 23, 1997

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MC-1	SAMPLE ID:078MC101	DATE:4/16/99
SITE NAME: NTC ORLANDO – MCCOY ANNEX	SITE LOCATION: BUILDING 7107		

PURGE DATA

WELL DIAMETER (in): 0.5	TOTAL WELL DEPTH (ft): 14.10	DEPTH TO WATER (ft): 7.59	WELL CAPACITY (gal/ft): 0.01

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.10 – 7.59) x 0.01= 0.07

PURGE METHOD: PERISTALTIC PUMP	PURGING INITIATED AT: 10:35	PURGING ENDED AT: 10:55
	PURGE RATE (gpm): 0.3	TOTAL VOLUME PURGED (gal): 6.0 GALLONS

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	TURBIDITY
INT	INT	6.66	24.6	260				METER NOT
35.7	2.5	6.52	24.1	238				WORKING.
64.3	4.5	6.33	24.1	240				
85.7	6.0	6.32	24.1	230				

SAMPLING DATA

SAMPLED BY / AFFILIATION CHRIS PISARRI AND MANUEL ALONSO	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S): PERISTALTIC PUMP	SAMPLING INITIATED AT: 11:00	SAMPLING ENDED AT: 11:15

FIELD DECONTAMINATION: N	FIELD-FILTERED: N	DUPLICATE: Y

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG					601/602
	CG					504 EDB
	AG					FL-PRO
	AG					8310
	O-PLASTIC					PB 239.2

REMARKS: EQUIPMENT BLANK TAKEN AT THIS SITE.

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

ATTACHMENT E

GROUNDWATER LABORATORY ANALYTICAL REPORTS

NTC ORLANDO, FLORIDA -- McCOY ANNEX -- BUILDING 7107
GROUNDWATER ANALYTICAL DATA -- REPORT NO. 11070

Lab Sample Number:	S912469-1				S912469-2			
Site	7107				7107			
Locator	071MC101 MC-1				071RB201			
Collect Date:	16-APR-99				16-APR-99			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
EPA 601								
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1
Bromoform	5	U	ug/l	5	5	U	ug/l	5
Bromomethane	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1
Chloromethane	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1
1,4-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1
Dichlorodifluoromethane	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1
Cis/Trans-1,2-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1
Methylene chloride	5	U	ug/l	5	5	U	ug/l	5
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1
Trichloroethylene	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	1	U	ug/l	1	1	U	ug/l	1
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1
EPA 602								
Benzene	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1
Methyl tert-butyl ether	10	U	ug/l	10	10	U	ug/l	10
Polynuclear Aromatics (8310)								
Acenaphthene	1	U	ug/l	1	1	U	ug/l	1
Acenaphthylene	1	U	ug/l	1	1	U	ug/l	1
Anthracene	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(a)anthracene	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(a)pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(b)fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(g,h,i)perylene	.5	U	ug/l	.5	.5	U	ug/l	.5
Benzo(k)fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2
Chrysene	.2	U	ug/l	.2	.2	U	ug/l	.2
Dibenzo(a,h)anthracene	.2	U	ug/l	.2	.2	U	ug/l	.2
fluoranthene	.5	U	ug/l	.5	.5	U	ug/l	.5
Fluorene	.5	U	ug/l	.5	.5	U	ug/l	.5
Ideno(1,2,3-cd)pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2

NTC ORLANDO, FLORIDA -- McCOY ANNEX -- BUILDING 7107
GROUNDWATER ANALYTICAL DATA -- REPORT NO. 11070

Lab Sample Number:	S912469-1				S912469-2			
Site	7107				7107			
Locator	071MC101 MC-1				071RB201			
Collect Date:	16-APR-99				16-APR-99			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Naphthalene	1	U	ug/l	1	1	U	ug/l	1
Phenanthrene	.2	U	ug/l	.2	.2	U	ug/l	.2
Pyrene	.5	U	ug/l	.5	.5	U	ug/l	.5
1-Methylnaphthalene	1	U	ug/l	1	1	U	ug/l	1
2-Methylnaphthalene	1	U	ug/l	1	1	U	ug/l	1
Microextractables (504.1)								
Ethylene dibromide	.02	U	ug/l	.02	.02	U	ug/l	.02
1,2-Dibromo-3-chloropropane	.02	U	ug/l	.02	.02	U	ug/l	.02
Flo Pro								
Petroleum Range Organics (Fl-P	.3	U	mg/l	.3	.3	U	mg/l	.3
Lead	.005	U	mg/l	.005	.005	U	mg/l	.005

U = NOT DETECTED J = ESTIMATED VALUE
X = SAMPLE HYDROCARBON PATTERN DID NOT CORRESPOND
TO REFERENCE PATTERN P = >25% DIFFERENCE IN 2 GC COLUMNS

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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

LOG NO: S9-12469
Received: 17 APR 99
Reported: 11 MAY 99

Mr. Chris Pisarri
Harding Lawson Associates
1080 Woodcock Road
Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
Contract No.: N62467-89-D-0317
Project: NTC Orlando-354/2547-06/SDG#ABOR
Sampled By: Client
Code: 121290511

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-1	071MC101 MC-1	04-16-99/1100	ABOR32
12469-2	071RB201	04-16-99/1145	ABOR32

PARAMETER	12469-1	12469-2
Petroleum Range Organics (FL-PRO)		
Petroleum Range Organics (FL-PRO), mg/l	0.30U	0.30U
Surrogate - O-Terphenyl (OTP)	83 %	96 %
Dilution factor	1.0	1.0
Date Extracted	04.21.99	04.21.99
Date Analyzed	05.06.99	05.06.99
Batch ID	0421U	0421U
Initial Volume/Weight	1000	1000
Final Extraction Volume (FV1)	1.0	1.0
Lead (239.2)		
Lead, mg/l	0.0050U	0.0050U
Preparation Date	04.22.99	04.22.99
Date Analyzed	04.28.99	04.28.99
Dilution factor	1.0	1.0
Batch ID	0422I	0422I
Initial Volume/Weight	50	50
Final Volume (FV1)	50	50
Microextractables (504.1)		
1,2-Dibromoethane (EDB), ug/l	0.020U	0.020U
1,2-Dibromo-3-chloropropane, ug/l	0.020U	0.020U
Date Extracted	04.21.99	04.21.99
Date Analyzed	04.21.99	04.21.99
Initial Volume/Weight	37	38
Final Volume (FV1)	2.0	2.0

Bldg 7107

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12469-2	071RB201	04-16-99/1145	ABOR32

PARAMETER	12469-1	12469-2
Purgeable Halocarbons (601)		
Bromodichloromethane, ug/l	1.0U	1.0U
Bromoform, ug/l	5.0U	5.0U
Bromomethane, ug/l	1.0U	1.0U
Carbon tetrachloride, ug/l	1.0U	1.0U
Chlorobenzene, ug/l	1.0U	1.0U
Chloroethane, ug/l	1.0U	1.0U
Chloroform, ug/l	1.0U	1.0U
Chloromethane, ug/l	1.0U	1.0U
Dibromochloromethane, ug/l	1.0U	1.0U
1,2-Dichlorobenzene, ug/l	1.0U	1.0U
1,3-Dichlorobenzene, ug/l	1.0U	1.0U
1,4-Dichlorobenzene, ug/l	1.0U	1.0U
Dichlorodifluoromethane, ug/l	1.0U	1.0U
1,1-Dichloroethane, ug/l	1.0U	1.0U
1,2-Dichloroethane, ug/l	1.0U	1.0U
1,1-Dichloroethene, ug/l	1.0U	1.0U
Cis/Trans-1,2-Dichloroethene, ug/l	1.0U	1.0U
1,2-Dichloropropane, ug/l	1.0U	1.0U
cis-1,3-Dichloropropene, ug/l	1.0U	1.0U
trans-1,3-Dichloropropene, ug/l	1.0U	1.0U
Methylene chloride (Dichloromethane), ug/l	5.0U	5.0U

Bldg 7107

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-1	071MC101 MC-1	04-16-99/1100	ABOR32
12469-2	071RB201	04-16-99/1145	ABOR32

PARAMETER	12469-1	12469-2
1,1,2,2-Tetrachloroethane, ug/l	1.0U	1.0U
Tetrachloroethene, ug/l	1.0U	1.0U
1,1,1-Trichloroethane, ug/l	1.0U	1.0U
1,1,2-Trichloroethane, ug/l	1.0U	1.0U
Trichloroethylene, ug/l	1.0U	1.0U
Trichlorofluoromethane, ug/l	1.0U	1.0U
Vinyl chloride, ug/l	1.0U	1.0U
Surrogate - Bromochloromethane	91 %	88 %
Date Analyzed	04.22.99	04.22.99
Dilution factor	1.0	1.0
Batch ID	1B0421	1B0421
Purgeable Aromatics (602)		
Benzene, ug/l	1.0U	1.0U
Toluene, ug/l	1.0U	1.0U
Ethylbenzene, ug/l	1.0U	1.0U
Total Xylenes, ug/l	1.0U	1.0U
Methyl tert-butyl ether (MTBE), ug/l	10U	10U
Surrogate - a,a,a-Trifluorotoluene	93 %	90 %
Date Analyzed	04.22.99	04.22.99
Dilution factor	1.0	1.0
Batch ID	1B0421	1B0421

Bldg 7107

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Mr. Chris Pisarri
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1080 Woodcock Road
Orlando, FL 32803

Client PO. No.: NE753107G

Requisition: RFP#ATQ97-031
Contract No.: N62467-89-D-0317
Project: NTC Orlando-354/2547-06/SDG#ABOR
Sampled By: Client
Code: 121290511

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-1	071MC101 MC-1	04-16-99/1100	ABOR32
12469-2	071RB201	04-16-99/1145	ABOR32

PARAMETER	12469-1	12469-2
Polynuclear Aromatics (8310)		
Acenaphthene, ug/l	1.0U	1.0U
Acenaphthylene, ug/l	1.0U	1.0U
Anthracene, ug/l	0.20U	0.20U
Benzo(a)anthracene, ug/l	0.20U	0.20U
Benzo(a)pyrene, ug/l	0.20U	0.20U
Benzo(b)fluoranthene, ug/l	0.20U	0.20U
Benzo(g,h,i)perylene, ug/l	0.50U	0.50U
Benzo(k)fluoranthene, ug/l	0.20U	0.20U
Chrysene, ug/l	0.20U	0.20U
Dibenzo(a,h)anthracene, ug/l	0.20U	0.20U
Fluoranthene, ug/l	0.50U	0.50U
Fluorene, ug/l	0.50U	0.50U
Indeno(1,2,3-cd)pyrene, ug/l	0.20U	0.20U
Naphthalene, ug/l	1.0U	1.0U
Phenanthrene, ug/l	0.20U	0.20U
Pyrene, ug/l	0.50U	0.50U
1-Methylnaphthalene, ug/l	1.0U	1.0U
2-Methylnaphthalene, ug/l	1.0U	1.0U
Surrogate - Terphenyl - d14	96 %	108 %
Date Extracted	04.21.99	04.21.99
Date Analyzed	04.26.99	04.26.99
Dilution factor	1.0	1.0
Batch ID	0421K	0421K
Instrument ID	LCAUV	LCAUV

Sibg 7107

A 1 H 8096 72 30 871

Serial Number 1[illegible]284

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

PROJECT REFERENCE	PROJECT NO.	P.O. NUMBER
Building 7107 Military Area	02347.05	NE 753107 G

PROJECT LOC. (State)	SAMPLER(s) NAME	PHONE	FAX
FL	Chris Pizzari, Manuel Alonso	(407) 896-8895	(407) 896-6150

CLIENT NAME	CLIENT PROJECT MANAGER
HLA	John Kaiser

CLIENT ADDRESS (CITY, STATE, ZIP): 10550 Woodcock Rd, Suite 100, Orlando, FL 32803

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

REQUIRED ANALYSES: 8310 J; FL-PRO J; P13-339.2 J; 504.1 DB; 601/602 J

PAGE ___ OF ___

☐ STANDARD REPORT DELIVERY

☐ EXPEDITED REPORT DELIVERY (surcharge)

Date Due: _____

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	AQUEOUS (WATER)	SOLID OR SEMI-SOLID	AIR	NONAQUEOUS LIQUID	8310	FL-PRO	P13-339.2	504.1 DB	601/602						REMARKS
4/16/99	1100		07183201 MC-1	X				2	2	1	3	3						
4/16/99			R.N. BLANK	X				2	2	1	3	3						In other Box.

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
S. Campbell	4/16/99					Chris Pizzari	4/16/99	1500
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:
			☐ YES ☐ NO			

CLIENTS FIELD COPY