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SITE ASSESSMENT FOR BUILDING 7171 MCCOY ANNEX NTC ORLANDO FL
7/1/1999
HARDING LAWSON ASSOCIATES

266

SITE ASSESSMENT REPORT

**BUILDING 7171
MCCOY ANNEX**

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

Unit Identification Code: N65928

Contract No. N62467-89-D-0317/137

Prepared by:

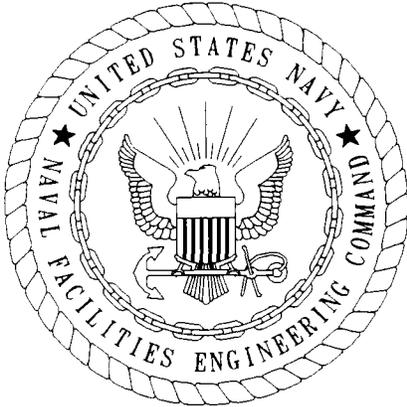
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Prepared for:

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July 1999



CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

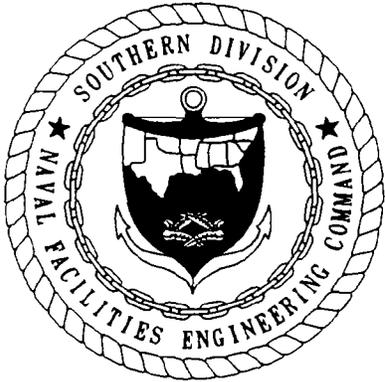
The Contractor, Harding Lawson Associates, hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/137 are complete and accurate and comply with all requirements of this contract.

DATE: June 28, 1999

NAME AND TITLE OF CERTIFYING OFFICIAL: John Kaiser
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Project Technical Lead

(DFAR 252.227-7036)



FOREWORD

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment in ways unacceptable by today's standards. With growing knowledge of the long-term effects of hazardous materials on the environment, the Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at their facilities.

One of these programs is the Comprehensive Long-Term Environmental Action, Navy Underground Storage Tank (UST) program. This program complies with Subtitle I of the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984. In addition, the UST program complies with all State and local storage tank regulations as they pertain to the locations of each naval facility.

The UST program includes the following activities:

- registration and management of Navy and Marine Corps storage tank systems,
- site assessment planning,
- site field investigations,
- preparation of site assessment reports,
- remedial (corrective) action planning,
- implementation of the remedial action plans, and
- tank and pipeline closures.

The Southern Division, Naval Facilities Engineering Command manages the UST program, and the Florida Department of Environmental Protection oversees the Navy UST program at the Naval Training Center (NTC), Orlando, Florida.

In addition to the UST program, NTC, Orlando, in conjunction with the Department of the Navy, has instituted several programs to address the requirements of Base Realignment and Closure (BRAC). BRAC Cleanup Teams composed of representatives from the Navy, as well as Federal and State regulatory agencies, have been formed to address the multitude of issues surrounding base closure and to enhance environmental decision making at BRAC installations where property will be available for transfer to the community. This team approach is intended to foster partnering, accelerate the environmental cleanup process, and expedite timely, cost-effective, and environmentally responsible disposal and reuse decisions.

At NTC, Orlando, the BRAC process includes the evaluation of the environmental condition of the property to ensure the suitability of transfer, reuse, or lease. Questions regarding the UST program at the NTC, Orlando should be addressed to Mr. Nick Ugolini, Code 1843, at (843) 820-5596.

EXECUTIVE SUMMARY

Harding Lawson Associates (HLA) has been authorized by Southern Division, Naval Facilities Engineering Command to prepare site assessment reports for petroleum-impacted sites discovered during the Base Realignment and Closure Tank Management Plan implementation at the Naval Training Center, Orlando, McCoy Annex property in Orange County, Florida. This Site Assessment Report (SAR) has been prepared to evaluate soil and groundwater conditions at the vehicle maintenance and repair facility, Building 7171.

This site assessment has been conducted following the guidelines contained in Section 62-770.600, Florida Administrative Code (FAC). A brief summary of the assessment results is provided below.

1. Four oil-water separators were previously used at the site. The location of the 1,000-gallon oil-water separator discussed in this report is shown on Figure 1-3.

The 1,000-gallon oil-water separator was located approximately 150 feet north of Building 7171 and had been used at the facility since 1973. An assessment report for this oil-water separator was completed on August 23, 1996. The assessment activities documented excessively contaminated soils in the vicinity of the oil-water separator and light non-aqueous phase liquid (LNAPL) in monitoring wells TW-1 and OLD-16-01. The assessment report recommended the preparation of a site assessment report.

2. HLA began the site assessment activities on January 28, 1999, with the installation of three shallow groundwater monitoring wells (MW-1, MW-2 and MW-3) in the vicinity of the oil-water separator. The purpose of these wells was to further assess the contaminated soil and LNAPL reported in the previous assessment report.
3. Prior to finalizing the SAR, HLA was informed by the Navy that the oil-water separator at Building 7171 was to be excavated and removed. Due to this schedule advance, HLA had to determine the extent of petroleum-impacted soil prior to the excavation of the separator. On February 4, 1999, 11 hand-auger borings were completed at Building 7171. A total of 38 soil samples were collected for visual inspection and organic vapor screening using an organic vapor analyzer (OVA). Based upon the field screening of the soil samples, approximately 280 tons (200 cubic yards [yd³]) of excessively contaminated soil was estimated for excavation.
4. On February 9, 1999, groundwater samples were collected from the three monitoring wells and shipped to Savannah Laboratories and Environmental Services, Inc. to be analyzed using the Used Oil Analytical Group in accordance with Chapter 62-770, FAC. Benzo(a)-anthracene was found in a groundwater sample collected from monitoring well MW-2 at 0.34 micrograms per liter ($\mu\text{g}/\ell$), slightly above the cleanup level of 0.20 $\mu\text{g}/\ell$. No other tested parameter was found above the State of Florida's Cleanup Target Levels for groundwater.

5. It was determined that monitoring wells MW-2 and OLD-16-01 would be destroyed during the removal of the oil-water separator. On February 11, 1999 monitor wells MW-2 and OLD-16-01 were properly abandoned by Custom Drilling Services, Inc. of Lakeland, Florida.
6. Between February 21 and 24, 1999, the oil-water separator and 582 tons (415.6 yd³) of petroleum-contaminated soil were removed from the site.
7. On April 7, 1999, one shallow monitoring well (MW-4) was installed to replace MW-2 and assess the horizontal extent of dissolved petroleum hydrocarbon contamination in the shallow aquifer.
8. On April 16, 1999, a groundwater sample was collected from monitoring well MW-4 and shipped to Savannah Laboratories and Environmental Services, Inc. to be analyzed using the Used Oil Analytical Group in accordance with Chapter 62-770, FAC. No tested parameter was found above the State of Florida's Cleanup Target Levels for groundwater.
9. On May 3, 1999, 18 soil borings (SB-1 through SB-18) were completed at Building 7171 using the Geoprobe drilling method. Eighty soil samples were collected from the 18 Geoprobe borings for OVA screening and three soil samples were collected and shipped to Savannah Laboratories and Environmental Services, Inc., for analysis. No parameter tested was found above the State of Florida's Soil Cleanup Target Levels.
10. The groundwater flow direction was determined to vary from the northeast to the south with an average hydraulic gradient of 1.41×10^{-2} feet per foot.
11. No active potable water wells are located within a one mile radius of this site.
12. HLA recommends a no further action proposal for this site.

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Naval Training Center
Orlando, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AST	aboveground storage tank
bls	below land surface
CAR	contamination assessment report
EDB	ethylene dibromide
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida-Petroleum Residual Organic
ft/day	feet per day
ft/ft	feet per foot
GCTL	groundwater cleanup target level
gpd/ft	gallons per day per foot
gpd/ft ²	gallons per day per foot squared
HLA	Harding Lawson Associates
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
µg/l	micrograms per liter
NTC	Naval Training Center
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbon
ppm	parts per million
PWC	Public Works Center
SAR	site assessment report
SCTL	soil cleanup target level
SM	service mark
TCAR	tank closure assessment report
TOC	top of casing
TRPH	total recoverable petroleum hydrocarbons
USEPA	U. S. Environmental Protection Agency
UST	underground storage tank
VOA	volatile organic aromatic

1.0 SITE DESCRIPTION AND BACKGROUND INFORMATION

Building 7171 (the vehicle maintenance and repair facility) is located northwest of the intersection of Binnacle Way and Avenue "C" in the central part of the McCoy Annex, Naval Training Center (NTC), Orlando, Orange County, Florida. Figure 1-1 shows the location of McCoy Annex and the surrounding area. The site lies within the southeast part of Section 32, Township 23 South and Range 30 East, as shown on the Orlando East, Florida, U.S. Geological Survey Quadrangle Map. Figure 1-2 is a topographic map showing the location of site and surrounding area.

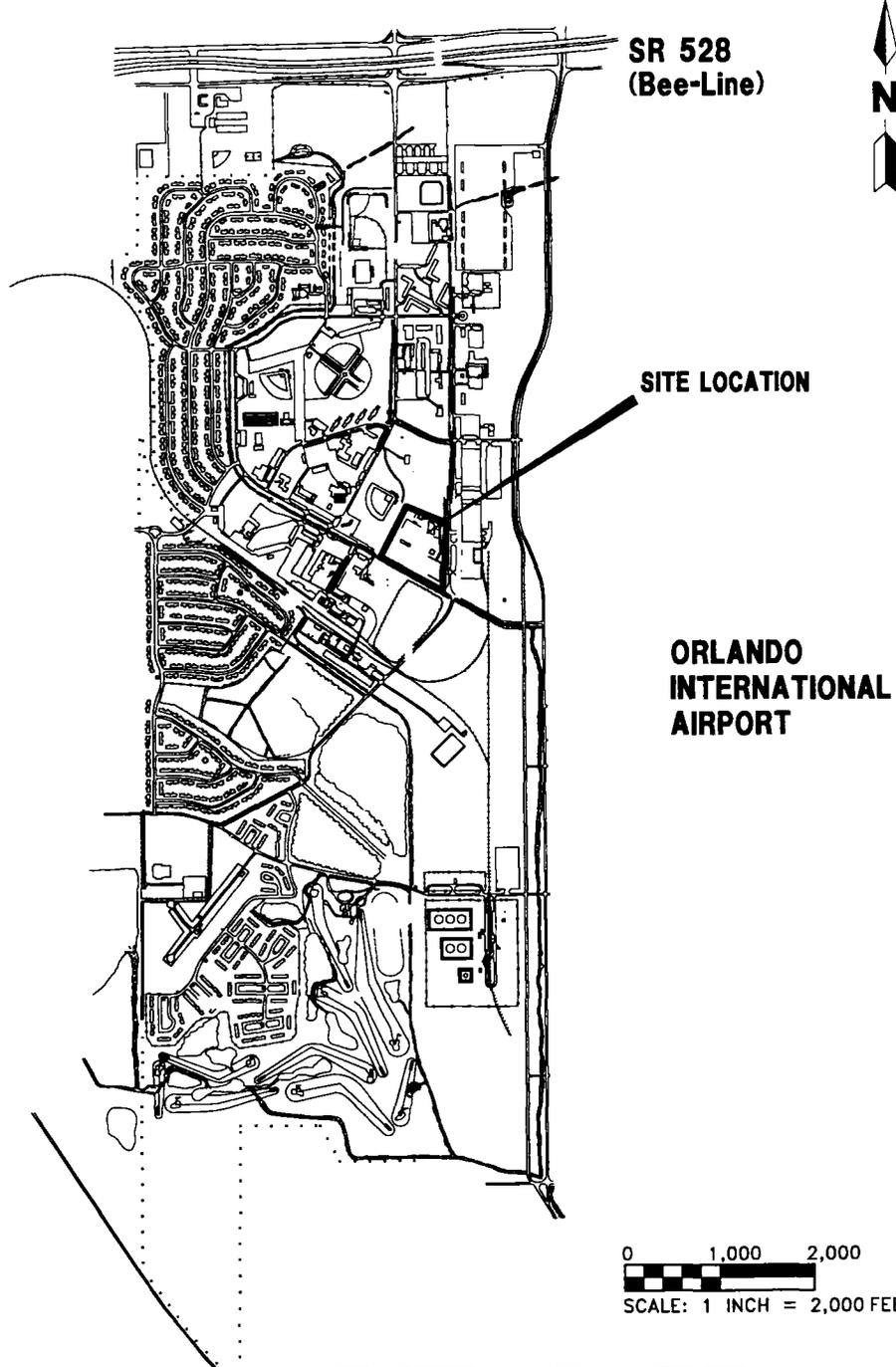
Building 7171 was constructed in 1952 and is approximately 20,471 square feet in size. The building is used as a motor pool maintenance facility and contains high-bay maintenance facilities, shops, storage areas, and office space. An adjacent portable hazardous material storage building with secondary containment and a drum storage building are located to the north of the facility and are unnumbered. The property is currently part of the Army motor pool, which was established in 1952. The compound provides vehicle maintenance and repair for vehicles and is used to support an Army Reserve unit. The property was undeveloped prior to its current use.

The location of the 1,000-gallon oil-water separator discussed in this report is shown on Figure 1-3. The separator was located approximately 150 feet north of Building 7171 and had been used at the facility since 1973. An assessment report for the oil-water separator was completed on August 23, 1996. The assessment activities documented excessively contaminated soils in the vicinity of the oil-water separator and light non-aqueous phase liquid (LNAPL) in monitoring wells TW-1 and OLD-16-01. The assessment report recommended the preparation of a site assessment report.

HLA began site assessment activities on January 28, 1999, with the installation of three shallow groundwater monitoring wells in the vicinity of the oil-water separator to further assess the contaminated soil and LNAPL reported in the 1996 assessment report. Prior to finalizing the Site Assessment Report (SAR), HLA was informed by the Navy in February that the oil-water separator at Building 7171 was to be excavated and removed. It was determined that monitoring wells MW-2 and OLD-16-01 would be destroyed during the removal of the oil-water separator. Therefore, on February 11, 1999, monitoring wells MW-2 and OLD-16-01 were properly abandoned by Custom Drilling Services, Inc. of Lakeland, Florida.

This SAR summarizes the data gathered during the site assessment activities at Building 7171, which were performed by Harding Lawson Associates (HLA). General information such as regional physiography, geology, hydrogeology, investigative methodologies, and procedures are included in the NTC, Orlando, McCoy Annex, Contamination Assessment Report (CAR) (ABB Environmental Services, Inc. [ABB-ES], 1996). Documentation of the removal of the oil-water separator and contaminated soil is found in the Source Removal Report, Building 7171 in Appendix A.

MCCOY ANNEX



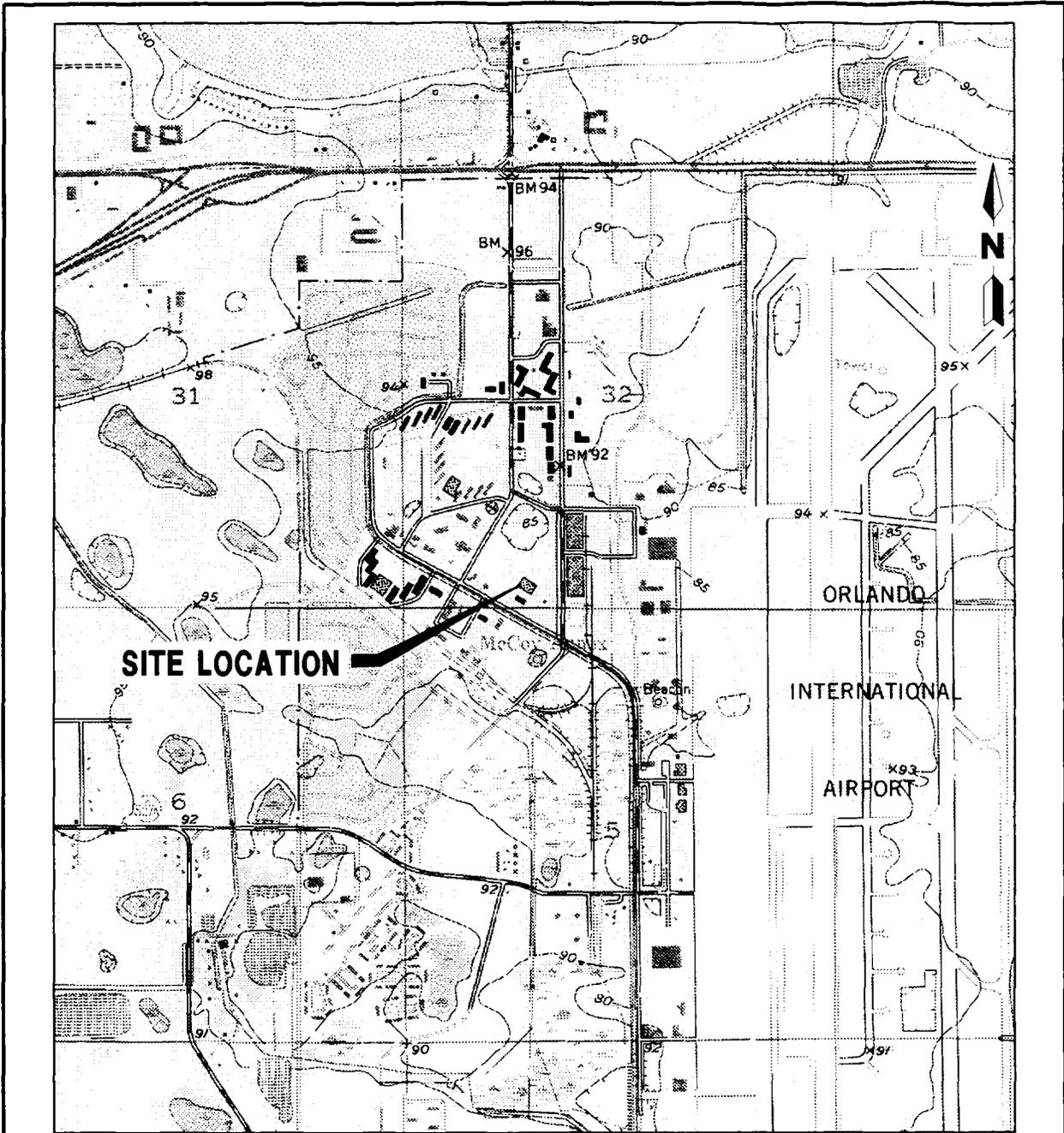
**FIGURE 1-1
SITE VICINITY MAP**



**SITE ASSESSMENT REPORT
BUILDING 7171
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Scale: 1:24,000
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 National Geodetic Vertical Datum of 1929
 1953. Photo revised 1980

SOURCE: U.S.G.S. Topographic map, Pine Castle quadrangle, Orange County, Florida, 7.5 Minute Series

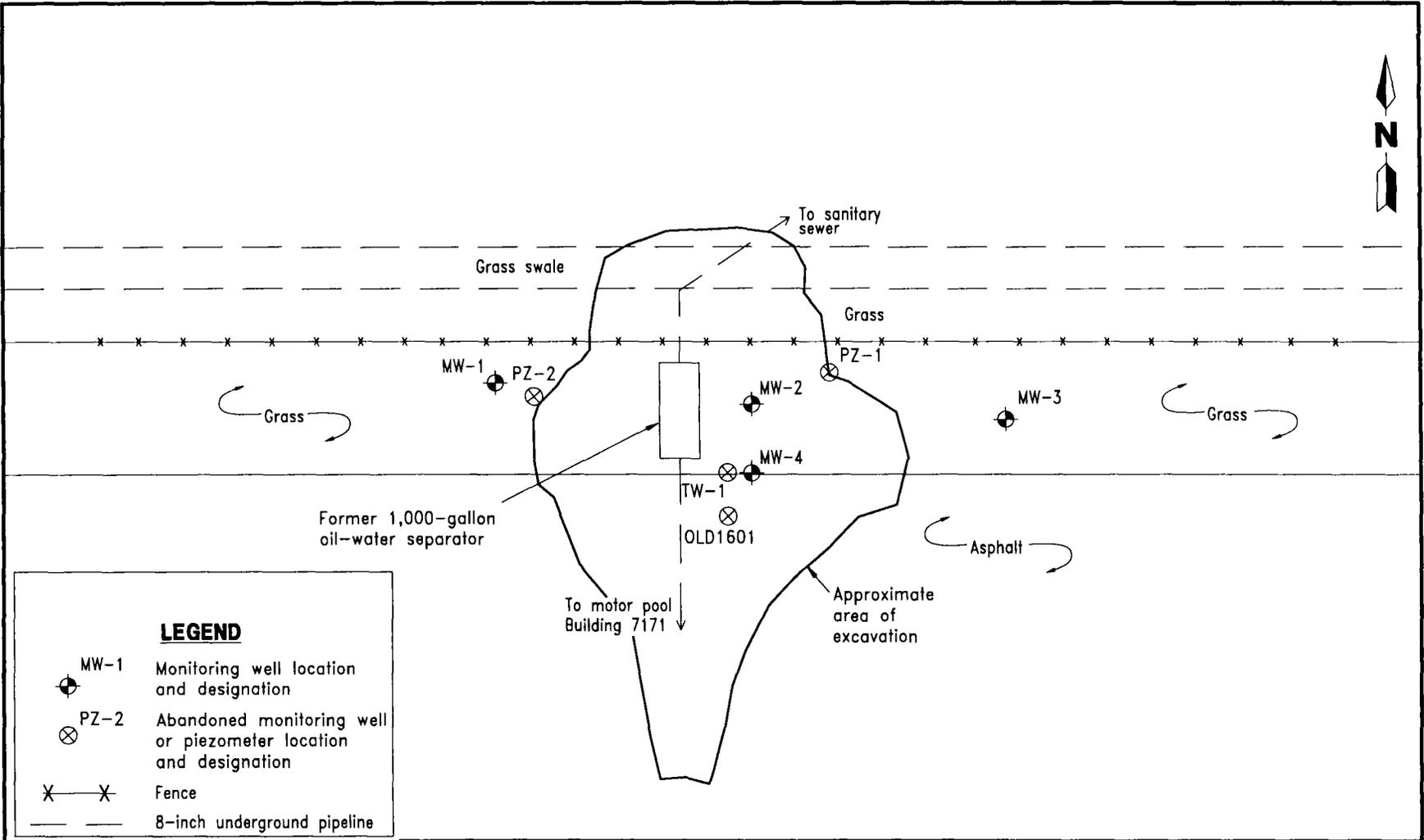
**FIGURE 1-2
 TOPOGRAPHIC MAP**



**SITE ASSESSMENT REPORT
 BUILDING 7171
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**FIGURE 1-3
SITE PLAN MAP**



**SITE ASSESSMENT REPORT
BUILDING 7171
MCCOY ANNEX**

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

2.0 SITE ASSESSMENT METHODOLOGY

2.1 SOIL BORING PROGRAM. Due to the schedule advance by the Navy to remove the oil-water separator, HLA had to determine the extent of petroleum-impacted soil prior to the excavation of the separator. On February 4, 1999, 11 hand-auger borings (HA-1 through HA-11) were completed at Building 7171. A hand auger was used to collect soil samples for visual inspection and organic vapor screening using an organic vapor analyzer (OVA). Figure 2-1 shows the hand-auger boring and sampling locations. The borings were completed into the water table, which was encountered at approximately 6 feet below land surface (bls), and assessed lithology in the tank area.

Thirty-eight soil samples were collected from the 11 hand-auger borings for OVA screening. The soil samples for OVA field screening were collected at 0 to 2 feet, 2 to 4 feet, and 4 to 6 feet bls. Headspace organic vapor readings were measured for all soil screening samples by placing the soil sample in a 16-ounce glass jar and using a calibrated OVA, Foxboro 128 equipped with a flame ionization detector, following procedures outlined in Section 62-770.200, Florida Administrative Code (FAC). Carbon filters were used to differentiate total hydrocarbon response from naturally occurring methane gas. Filtered and unfiltered readings were obtained from two separate jars. All sampling and analysis was performed in accordance with HLA's Florida Department of Environmental Protection (FDEP)-approved Comprehensive Quality Assurance Plan.

On May 3, 1999, after removal of the oil-water separator, 18 soil borings (SB-1 through SB-18) were completed at Building 7171 using the Geoprobe drilling method. The purpose of this drilling was to confirm the removal of all excessively contaminated soil from the area of the removed tank. The Geoprobe rig was used to collect soil samples for visual inspection and organic vapor screening using an OVA. Figure 2-2 shows the Geoprobe boring and sampling locations. The borings were completed to depths of between 8 and 12 feet bls.

Eighty soil samples were collected from the 18 Geoprobe borings for OVA screening. The soil samples for OVA field screening were collected at 0 to 2 feet, 2 to 4 feet, 4 to 6 feet, 8 to 10 feet and 10 to 12 feet bls. Headspace organic vapor readings were measured for all soil screening samples by placing the soil sample in a 16-ounce glass jar and using a calibrated OVA, Foxboro 128 equipped with a flame ionization detector, following procedures outlined in Section 62-770.200, FAC. Carbon filters were used to differentiate total hydrocarbon response from naturally occurring methane gas. Filtered and unfiltered readings were obtained from two separate jars. All sampling and analysis was performed in accordance with HLA's FDEP-approved Comprehensive Quality Assurance Plan.

2.2 SOIL SAMPLING PROGRAM. In order to confirm and characterize petroleum impact to soil, three soil samples (SS-1, SS-2, and SS-3) were collected for laboratory analysis on May 4, 1999. The soil samples were selected to correspond to high, medium, and low OVA results obtained during the May 3, 1999 field screening. The soil samples were packed on ice and shipped to Savannah Laboratories and Environmental Services, Inc., of Savannah, Georgia, for analysis. The soil

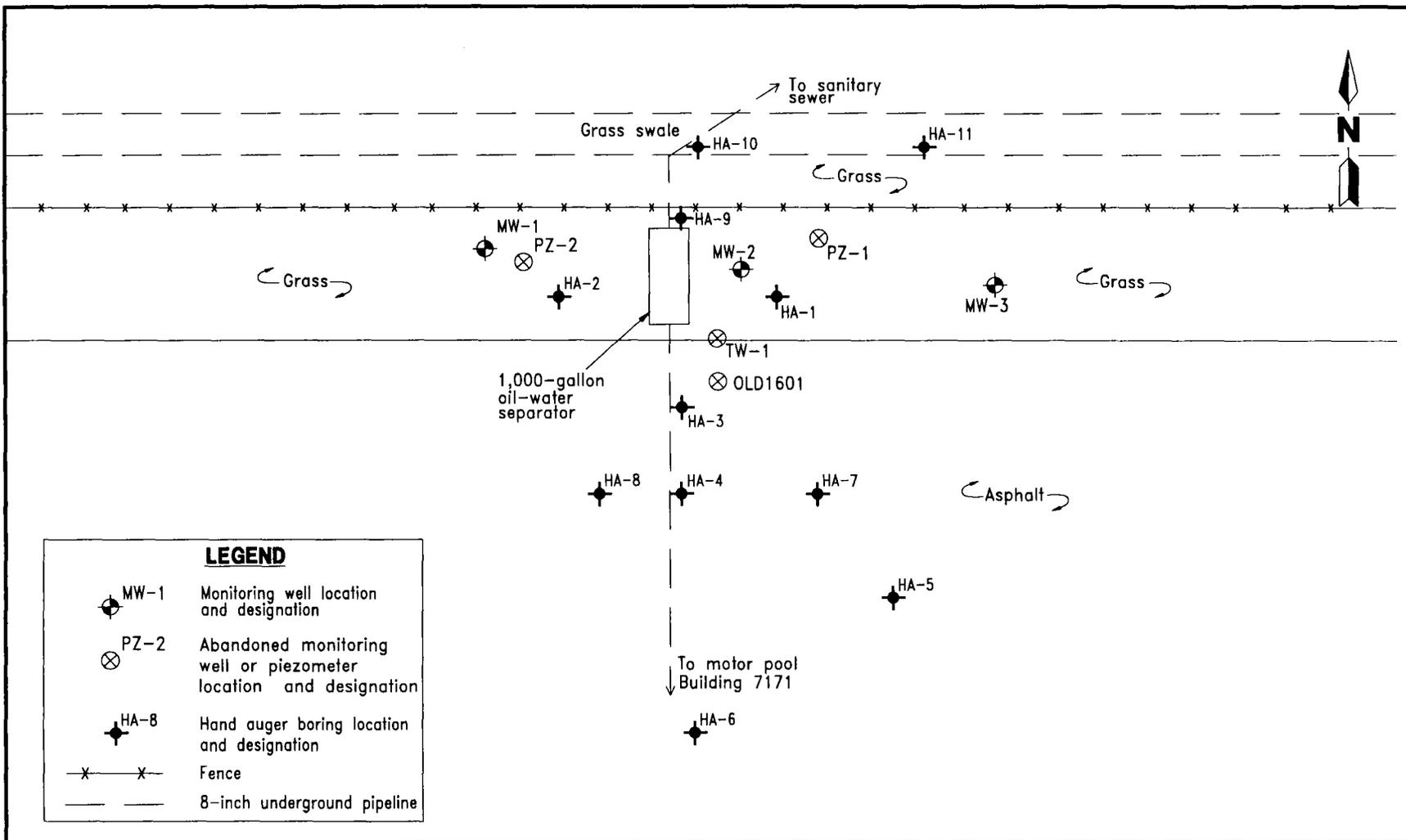
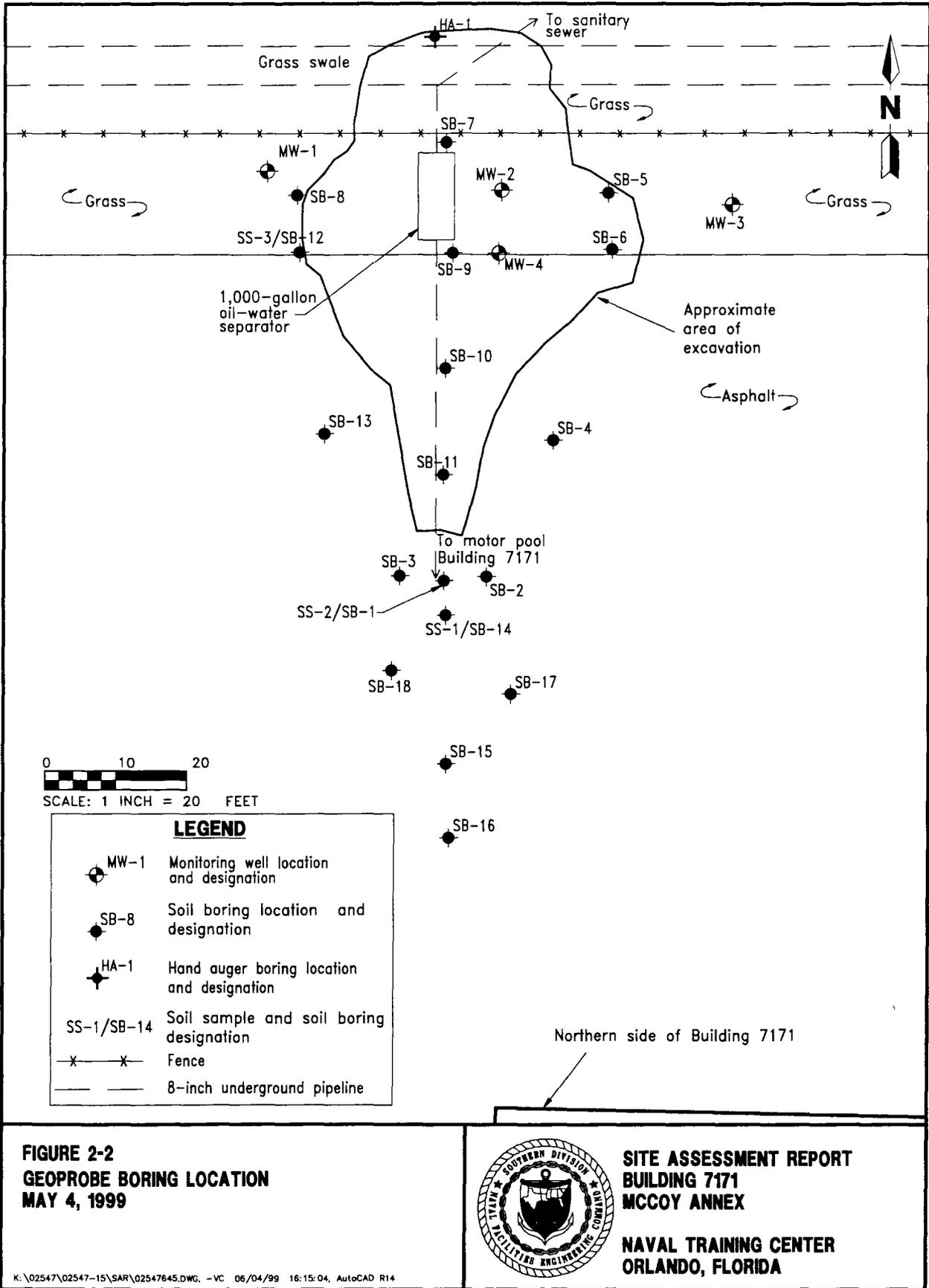


FIGURE 2-1
PRE-SOURCE REMOVAL
SOIL BORING LOCATIONS
FEBRUARY 4, 1999



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MCCOY ANNEX

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samples were analyzed using U.S. Environmental Protection Agency (USEPA) Methods 8260, 8270, 8310, total recoverable petroleum hydrocarbons (TRPH) using the Florida-Petroleum Residual Organics (FL-PRO), and eight RCRA-metals using USEPA Methods 6010 and 7471 for mercury.

2.3 MONITORING WELL INSTALLATION PROGRAM. Three shallow monitoring wells (MW-1, MW-2 and MW-3) were installed at the site on January 28, 1999 (monitoring well MW-2 was properly abandoned on February 11, 1999, and replaced by MW-4 on April 7, 1999). The monitoring well locations are shown on Figure 2-1. The shallow monitoring wells were installed, using hollow-stem auger drilling techniques, to depths of 15 to 16 feet bls. A typical shallow monitoring well construction detail is provided on Figure 2-3. Each shallow well was constructed with 10 feet of 2-inch-diameter 0.010-inch slotted well screen coupled to 5 or 6 feet of 2-inch Schedule 40 solid polyvinyl chloride pipe. This assembly was placed in the borehole so that the screen interval is located at a depth that encompasses seasonal water table fluctuations. The annular space between the screen and the borehole wall was filled with 20/30-grade silica sand to 1 foot above the screened interval, and a 1-foot fine sand (30/65-grade) seal was placed on top of the filter pack. The remaining annular space was sealed to grade with neat cement grout mixture. A summary of the well construction details is presented in Table 2-1. Appendix B, Well Construction Details, contains the well completion logs provided by the drilling subcontractor.

**Table 2-1
Groundwater Monitoring Well Construction Data Summary**

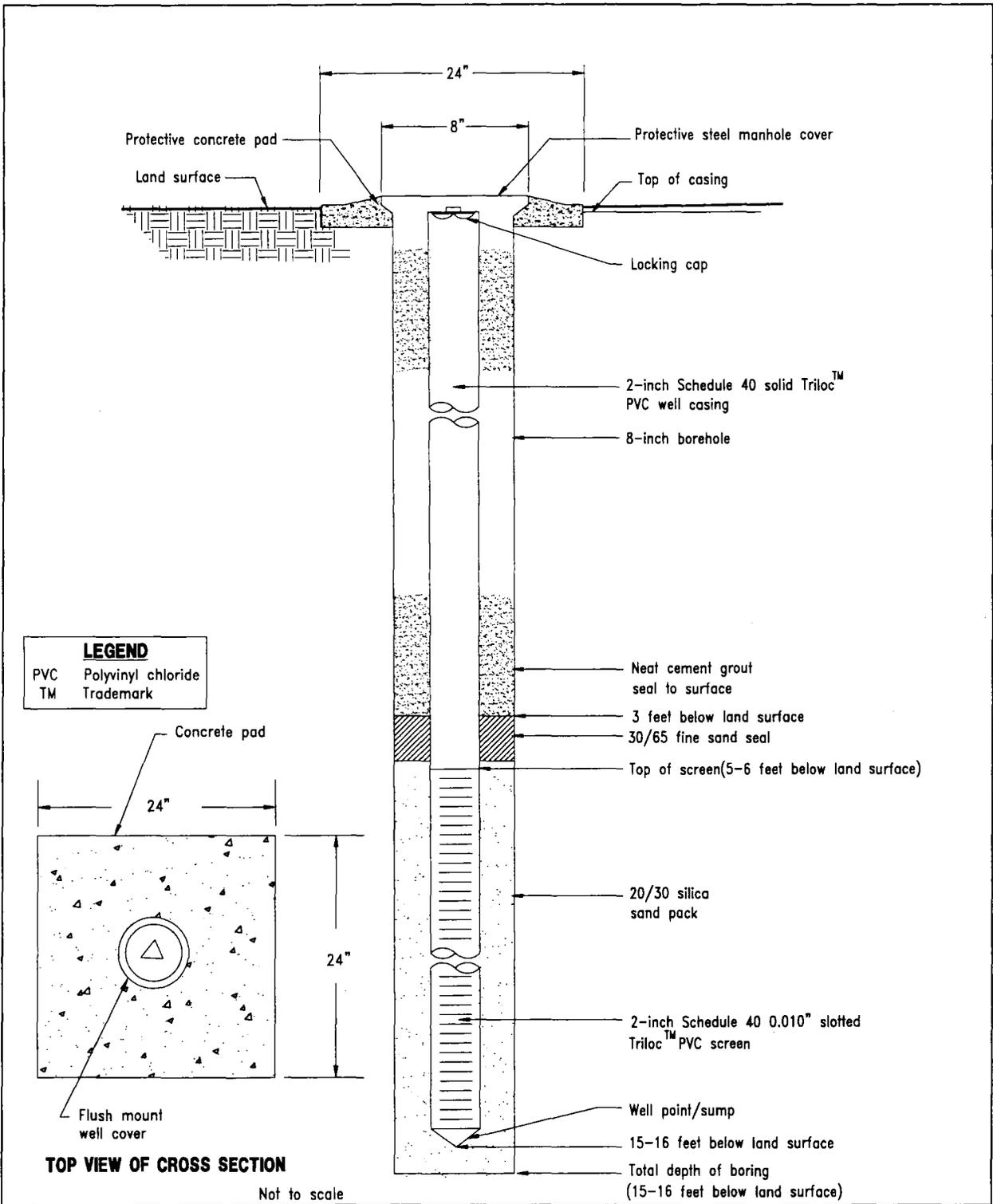
Site Assessment Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Well Number	Date Installed	Total Depth (feet bls)	Well Diameter (inches)	Screened Interval (feet bls)	Slot Size (inches)
MW-1	1/28/99	16.0	2	6.0 to 16.0	0.01
MW-2*	1/28/99	16.0	2	6.0 to 16.0	0.01
MW-3	1/28/99	16.0	2	6.0 to 16.0	0.01
MW-4	4/7/99	15.0	2	5.0 to 15.0	0.01

Note: bls = below land surface.

* = Well abandoned on February 11, 1999 prior to separator removal.

All monitoring wells were completed flush mount with surface grade concrete pads, and locking well caps were installed to conform with standards outlined in Chapter 40C-3, FAC. Each monitoring well was developed by pumping until clear and free of sediment. Thorough field decontamination procedures were strictly enforced to prevent possible cross contamination between field monitoring points. All drilling equipment, including drilling rods, bits, and hollow-stem auger, was thoroughly decontaminated between each well installation.



**FIGURE 2-3
TYPICAL SHALLOW MONITORING WELL
CONSTRUCTION DETAIL**



**SITE ASSESSMENT REPORT
BUILDING 7171
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2.4 GROUNDWATER SAMPLING PROGRAM. Groundwater samples were collected from monitoring wells MW-1, MW-2 and MW-3 on February 9, 1999 and from MW-4 on April 16, 1999. The samples were packed on ice and shipped to Savannah Laboratories and Environmental Services, Inc., for analysis. The groundwater samples collected from the monitoring wells were analyzed for the sampling requirements established in Chapter 62-770, FAC, for sites with petroleum discharges defined under the Used Oil Analytical Group, which includes the following USEPA Methods: 8260 (priority pollutant volatiles), 8270 (priority pollutant semivolatiles), 6010 and 7470 (eight RCRA-metals), 8015E (hydrocarbons), 504.1 (ethylene dibromide [EDB]), 8310 (polynuclear aromatic hydrocarbons [PAH]), and also the FL-PRO method for TRPH.

2.5 GROUNDWATER ELEVATION SURVEY. The elevation and slope of the water table were calculated using the field-surveyed top-of-well casing data for each monitoring well and correlating the elevation data to a common datum. On February 1, April 16, and May 4, 1999, depth to groundwater was measured from the top-of-casing (TOC) to the nearest hundredth of a foot in each of the piezometers and monitoring wells with an electronic water-level indicator. The groundwater depths were subtracted from the TOC elevation to obtain relative water table elevations. The wells were checked for the presence of free-floating product by visual inspection of groundwater samples taken from each well and the use of an oil-water interface probe.

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 SITE STRATIGRAPHY. For purposes of this investigation, site stratigraphy and aquifer evaluation were limited to the upper part of the surficial aquifer beneath the site. The soil profile for the site is based on visual examination of soil samples collected from soil borings and on drill cuttings obtained during this investigation. A typical stratigraphic soil profile consists of grey to black fine-grained sand to a depth of 5 feet bls and a grey fine sand to 15 feet bls. The soil profile is based upon the drill cuttings obtained during monitoring well installation and advancement of hand-auger and Geoprobe borings. Lithologic logs for the monitoring wells installed during this investigation are included as Appendix C, Lithologic Logs.

3.2 SITE HYDROGEOLOGY AND GROUNDWATER FLOW DIRECTION. Groundwater elevations across the site were calculated by measuring water levels in site monitoring wells on February 1, April 16, and May 4, 1999, and by surveying the relative TOC elevations. The hydraulic gradient across the site was calculated by measuring the change in elevation head between upgradient and downgradient monitoring wells and dividing this head difference by the horizontal distance between these two wells. On February 1, April 16 and May 4, the calculated hydraulic gradients were 3.3×10^{-2} , 1.85×10^{-3} , and 7.1×10^{-3} feet per foot, respectively. The calculated average hydraulic gradient is equal to 1.41×10^{-2} feet per foot. The site groundwater flow direction, based on the water table surface contour maps, varies from south to northeast. Table 3-1 is a summary of groundwater elevation data collected during four water level measuring events. Figures 3-1, 3-2, and 3-3 are the water table contour maps for February 1, April 16, and May 4, 1999.

3.3 AQUIFER CHARACTERISTICS. Due to the lack of groundwater contamination, a slug test was not performed at this site.

3.4 POTABLE WELL SURVEY. A potable well survey for the surrounding area is included in the McCoy Annex CAR (ABB-ES, 1996). No active potable wells are reported within one mile of the site. Two potable wells (WW-3 and WW-4), currently not in service, are located approximately 0.4-mile from the site. One irrigation well is located in the vicinity of the site: WW-7, 4,000 feet to the south. These wells are presented on Figure 5-1, Potable and Irrigation Well Locations, of the McCoy Annex CAR (ABB-ES, 1996).

3.5 SURFACE WATER. The surface water bodies nearest to the site are drainage channels located less than 100 feet from the southern and eastern property lines. No lakes or other surface water bodies are located within 2,000 feet of the facility.

**Table 3-1
Groundwater Elevation Summary**

Site Assessment Report
Building 7171, McCoy Annex
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)*
MW-1	02/01/99	NA	NA	NA	99.36	NA
	02/01/99	--	8.04	--		91.32
	02/09/99	--	8.15	--		91.21
	04/07/99	--	8.58	--		90.78
	04/16/99	--	8.64	--		90.72
	05/04/99	--	8.34	--		91.02
MW-2**	02/01/99	NA	NA	NA	99.43	NA
	02/01/99	--	8.23	--		91.20
	02/09/99	--	8.42	--		91.01
MW-3	02/01/99	NA	NA	NA	99.26	NA
	02/01/99	--	8.07	--		91.19
	02/09/99	--	8.16	--		91.10
	04/07/99	--	8.56	--		90.70
	04/16/99	--	8.62	--		90.64
	05/04/99	--	8.35	--		90.91
MW-4	04/09/99	NA	NA	NA	99.18	NA
	04/16/99	--	8.49	--		90.69
	05/04/99	--	8.16	--		91.02
PZ-1**	01/26/99	NA	NA	NA	99.48	NA
	02/01/99	--	8.32	--		91.16
	02/09/99	--	8.32	--		91.16
PZ-2**	01/26/99	NA	NA	NA	99.91	NA
	02/01/99	--	8.62	--		91.29
	02/09/99	--	8.69	--		91.22
TW-1	01/26/99	NA	NA	NA	99.47	NA
	01/26/99	9.98	10.02	0.04		89.48***
	02/01/99	9.98	10.04	0.06		89.48***
	02/09/99	9.99	10.30	0.31		89.40***

See notes at end of table.

**Table 3-1 (Continued)
Groundwater Elevation Summary**

Site Assessment Report
Building 7171, McCoy Annex
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)*
OLD-1601**	01/26/99	NA	NA	NA	99.20	NA
	01/26/99	7.85	8.15	0.30		91.28***
	02/01/99	7.89	8.43	0.54		91.18***
	02/09/99	7.94	8.48	0.54		91.13***

Notes: * Referenced to arbitrary datum.
 ** Monitoring well abandoned on 2/11/99, prior to removing oil/water separator
 *** Corrected for free product (depth to water - (product thickness x 0.75) = corrected depth to water)

ft btoc = feet below top of casing

NA = not available.

-- = not applicable.

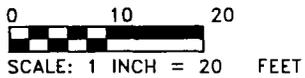
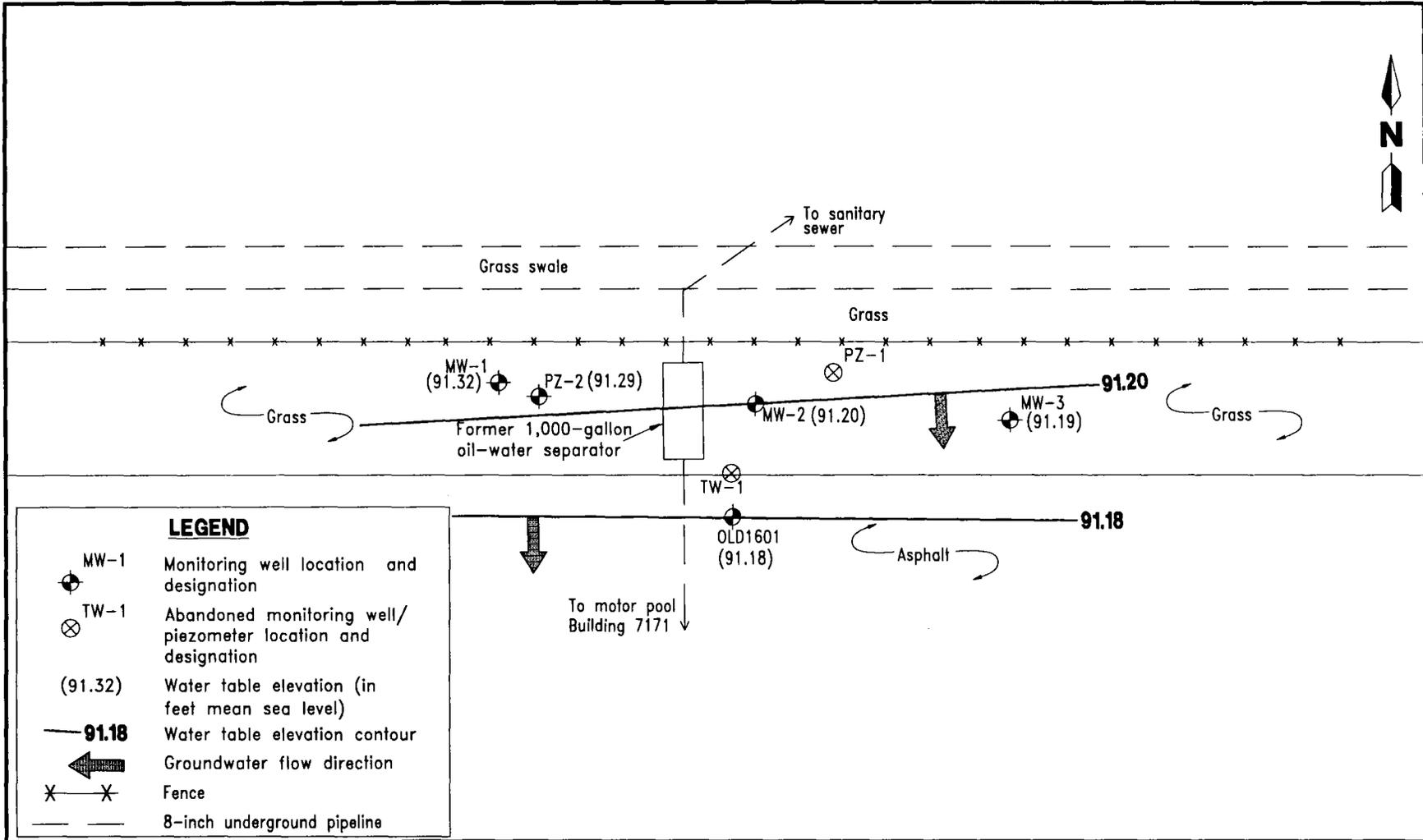


FIGURE 3-1
WATER TABLE ELEVATION CONTOUR MAP
FEBRUARY 1, 1999



SITE ASSESSMENT REPORT
BUILDING 7171
MCCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

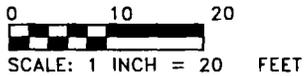
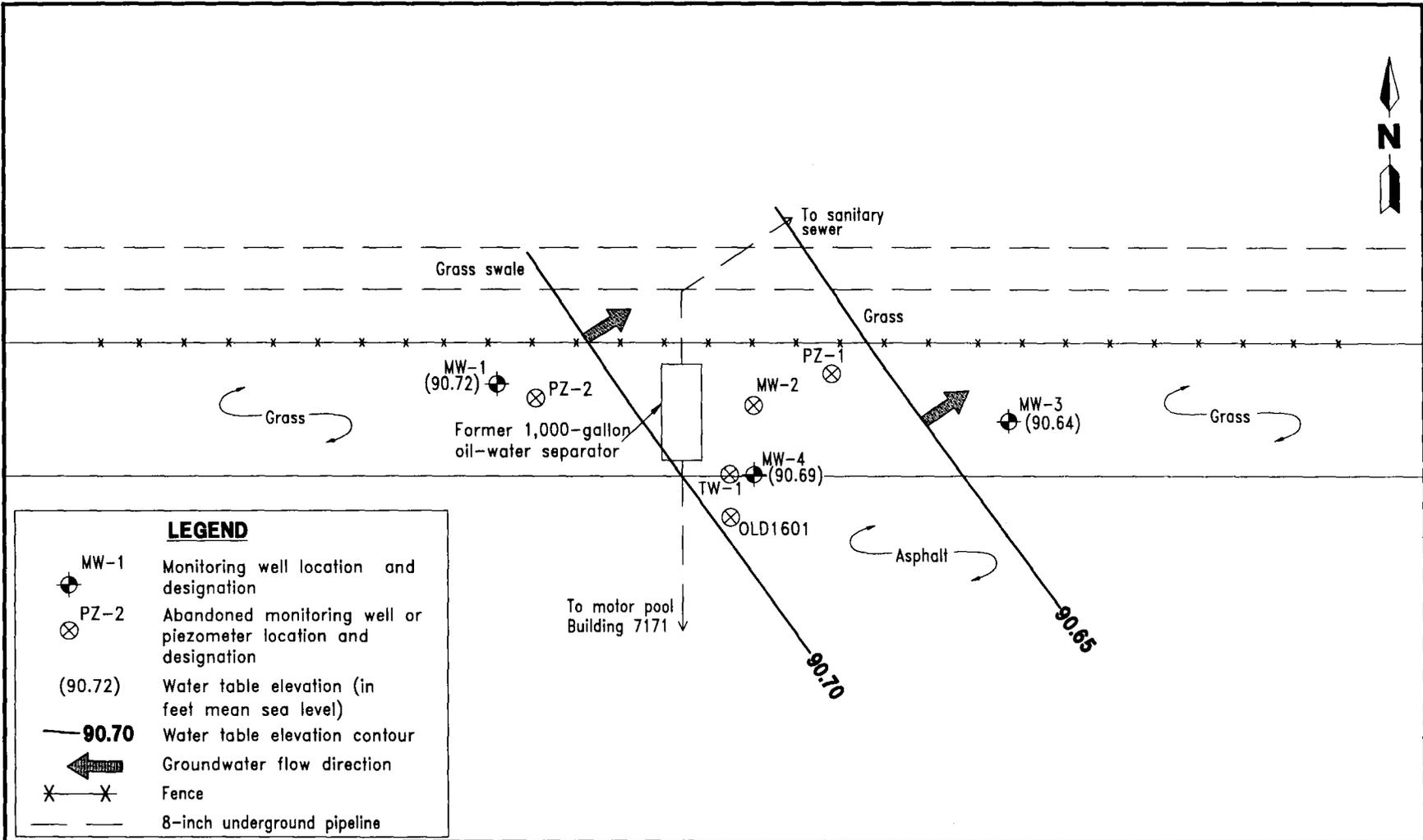
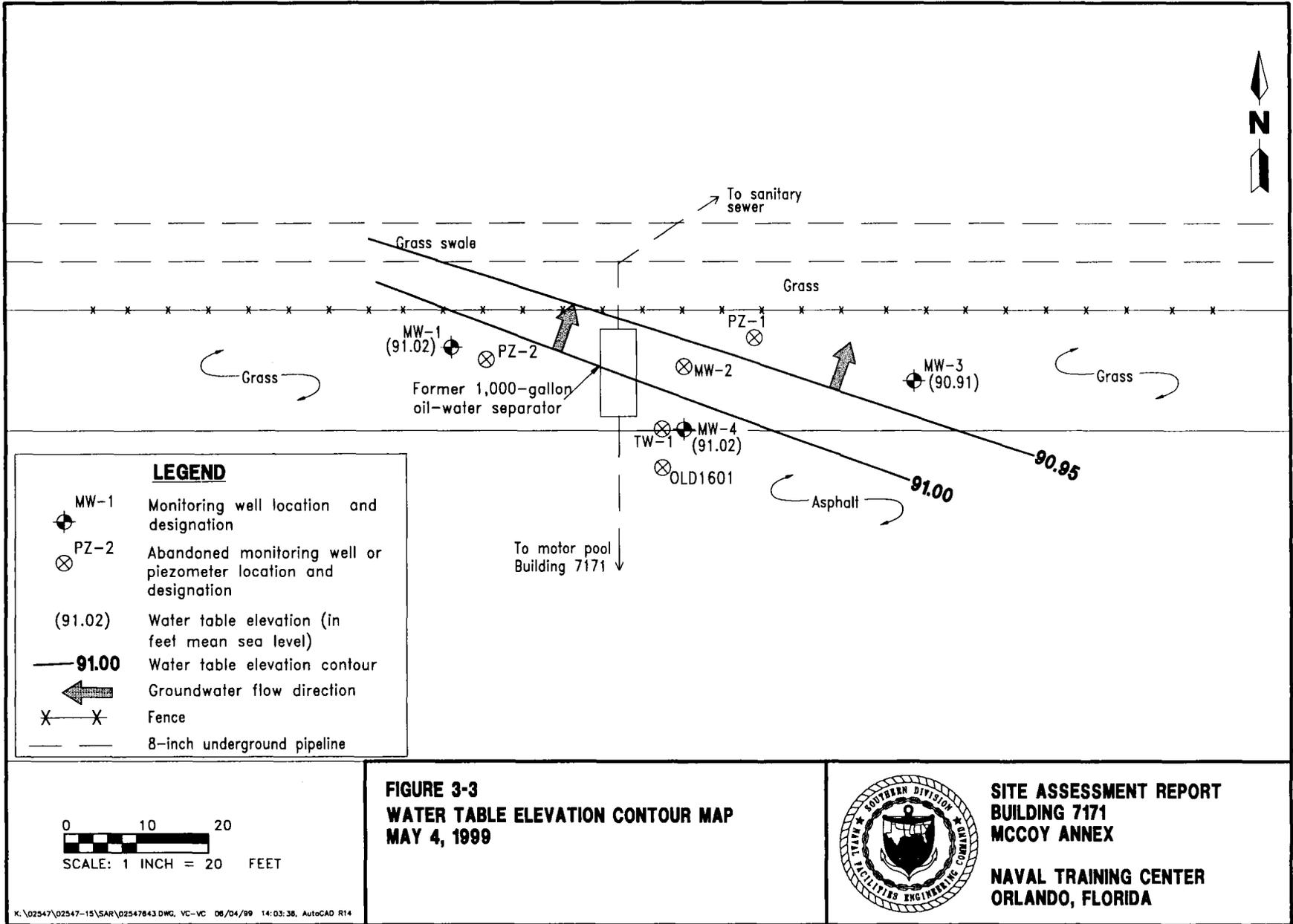


FIGURE 3-2
WATER TABLE ELEVATION CONTOUR MAP
APRIL 16, 1999



SITE ASSESSMENT REPORT
BUILDING 7171
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA



LEGEND

- MW-1 Monitoring well location and designation
- PZ-2 Abandoned monitoring well or piezometer location and designation
- (91.02) Water table elevation (in feet mean sea level)
- 91.00 Water table elevation contour
- Groundwater flow direction
- Fence
- 8-inch underground pipeline

0 10 20
SCALE: 1 INCH = 20 FEET

**FIGURE 3-3
WATER TABLE ELEVATION CONTOUR MAP
MAY 4, 1999**



**SITE ASSESSMENT REPORT
BUILDING 7171
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

4.0 SITE ASSESSMENT RESULTS

4.1 SOIL CONTAMINATION. Eleven hand-auger borings (HA-1 through HA-11) were advanced using a stainless-steel hand auger on February 4, 1999. Figure 2-1 shows the soil boring locations. Thirty-eight soil samples were collected at discrete intervals for visual inspection and OVA analysis. A summary of OVA results is presented in Table 4-1.

Between February 21 and 24, 1999, the oil-water separator and 582 tons (415.6 cubic yards [yd³]) of petroleum-contaminated soil were removed from the site.

On May 3, 1999, after removal of the oil-water separator, 18 soil borings (SB-1 through SB-18) were completed using the Geoprobe drilling method. The purpose of this drilling was to confirm the removal of all excessively contaminated soil from the area of the removed tank. The HLA-owned Geoprobe system was used to collect 80 soil samples for visual inspection and organic vapor screening using an OVA. Figure 2-2 shows the Geoprobe boring and sampling locations. A summary of OVA results is presented in Table 4-2.

Three composite soil samples were collected for laboratory analysis: SS-1 (SB-14, depth 4 to 6 feet bls), SS-2 (SB-1, depth 2 to 4 feet bls), and SS-3 (SB-12, depth 2 to 4 feet bls). The soil samples were analyzed by an off-site laboratory using USEPA Methods 8260, 8270, 8310, USEPA Methods 6010 and 7471 for mercury for eight RCRA metals, and the FL-PRO method for TRPH. Laboratory analytical results indicate that all parameters tested were below the State of Florida Soil Cleanup Target Levels (SCTLs). Barium (SS-1 at 9.9 milligrams per kilogram [mg/kg], SS-2 at 1.4 mg/kg, and SS-3 at 1.9 mg/kg), chromium (SS-1 at 6.6 mg/kg, and SS-3 at 2.2 mg/kg), and lead (SS-1 at 8.6 mg/kg, SS-2 at 1.7 mg/kg, and SS-3 at 1.5 mg/kg) were found in the soil samples above laboratory standard detection limits, but below Florida SCTLs. A summary of the soil laboratory analytical results is presented in Table 4-3, and laboratory analytical reports are included in Appendix E.

4.2 FREE-PRODUCT OCCURRENCE. Free product was detected during the site assessment activities as shown on Table 3-1. Free product was found in TW-1 on January 26, February 1, and February 9, 1999, with thicknesses of 0.04, 0.06 and 0.31 feet, respectively. Free product was found in OLD-1601 on January 26, February 1, and February 9, 1999, with thicknesses of 0.30, 0.54 and 0.54 feet, respectively. After excavation of petroleum-impacted soil and removal of the oil-water separator, MW-4 was installed in same area as TW-1 and OLD-1601 and no free product was detected in April or May 1999.

4.3 GROUNDWATER CONTAMINATION. Three shallow monitoring wells (MW-1 through MW-3) were installed at the site on January 28, 1999. One shallow monitoring well (MW-4) was installed at the site on April 7, 1999 to replace MW-2 which was abandoned on February 11, 1999. These monitoring wells were installed to assess the direction of groundwater flow and the horizontal extent of dissolved petroleum hydrocarbon contamination. Monitoring well locations are shown on Figure 2-2.

Groundwater samples were collected from monitoring wells MW-1 through MW-3 on March 9, 1999 and from MW-4 on April 16, 1999. Groundwater samples were analyzed

**Table 4-1
Summary of Organic Vapor Analyses, February 4, 1999**

Site Assessment Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Hand Auger Boring Designation	Sample Depth (feet bls)	Unfiltered ¹ (ppm)	Filtered ² (ppm)	Total Hydrocarbons (ppm)	Comments
HA-1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	78	35	43	Petroleum odor
	8	30	8.0	22	Petroleum odor
HA-2	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	42	28	14	Petroleum odor
	8	10	2.0	8.0	Petroleum odor
HA-3	2	42	22	20	Petroleum odor
	4	150	44	106	petroleum odor
	6	>1,000	>1,000	>1.0	petroleum odor
	8	90	62	28	Petroleum odor
HA-4	2	12	12	<1.0	Petroleum odor
	4	110	15	95	petroleum odor
	6	210	81	129	petroleum odor
	8	10	<1.0	10	Petroleum odor
HA-5	2	1.5	<1.0	1.5	
	4	10	5.0	5.0	
	6	15	9.0	6.0	
	8	3.0	<1.0	3.0	
HA-6	2	25	18	7.0	Petroleum odor
	4	28	25	3.0	Petroleum odor
	6	62	45	17	Petroleum odor
HA-7	2	8.0	<1.0	8.0	
	4	8.0	<1.0	8.0	
	6	27	25	2.0	
HA-8	2	2.0	<1.0	2.0	
	4	12	9.0	3.0	
	6	40	40	<1.0	
HA-9	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
HA-10	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
HA-11	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.

Note: ppm = parts per million.
bls = feet below land surface.
< = less than.
> = greater than.

**Table 4-2
Summary of Organic Vapor Analyses, May 3, 1999**

Site Assessment Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Hand Auger Boring Designation	Sample Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Physical Observations
SB-1 (SS-2)	0 to 2	20	2	18	No petroleum odor, no staining.
	2 to 4	400	2	398	Stained at 2 feet.
	4 to 6	26	14	12	Petroleum odor.
	6 to 8	180	140	40	No petroleum odor, no staining.
	8 to 10	5	2	3	No petroleum odor, no staining.
	10 to 12	1	<1	1	No petroleum odor, no staining.
SB-2	0 to 2	20	6	14	Organic odor.
	2 to 4	22	5	17	Petroleum odor.
	4 to 6	10	9	1	No petroleum odor, no staining.
	6 to 8	18	11	7	No petroleum odor, no staining.
	8 to 10	5	2	3	No petroleum odor, no staining.
	10 to 11	9	6	3	No petroleum odor, no staining.
SB-3	0 to 2	10	2	8	No petroleum odor, no staining.
	2 to 4	4	2	2	No petroleum odor, no staining.
	4 to 6	4	3	1	No petroleum odor, no staining.
	6 to 8	10	6	4	No petroleum odor, no staining.
	8 to 10	1	<1	1	No petroleum odor, no staining.
	10 to 11	7	5	2	No petroleum odor, no staining.
SB-4	0 to 2	2	<1	2	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.
SB-5	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.
SB-6	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
SB-7	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.

See notes at end of table.

Table 4-2 (Continued)
Summary of Organic Vapor Analyses, May 3, 1999

Site Assessment Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Hand Auger Boring Designation	Sample Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Physical Observations
SB-8	8 to 10	2	<1	2	No petroleum odor, no staining.
	10 to 12	3	<1	3	No petroleum odor, no staining.
	0 to 2	2	<1	2	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
SB-9	6 to 8	<1	<1	<1	No petroleum odor, no staining.
	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
SB-10	6 to 8	<1	<1	<1	No petroleum odor, no staining.
	8 to 11	>1000	>1000	>1	No petroleum odor, no staining.
	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
SB-11	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.
	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
SB-12 (SS-3)	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.
	0 to 2	<1	<1	<1	No petroleum odor, no staining.
SB-13	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.
	6 to 8	<1	<1	<1	No petroleum odor, no staining.
SB-14	0 to 2	42	9	33	Petroleum odor.
	2 to 4	380	9	371	Petroleum odor.
(SS-1)	4 to 6	640	15	625	Petroleum odor.
	6 to 8	200	15	185	Petroleum odor.

See notes at end of table.

Table 4-2 (Continued)
Summary of Organic Vapor Analyses, May 3, 1999

Site Assessment Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Hand Auger Boring Designation	Sample Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Physical Observations
SB-15	0 to 2	10	2	8	Slight petroleum odor.
	2 to 4	50	12	38	Slight petroleum odor.
	4 to 6	24	10	14	Slight petroleum odor.
	6 to 8	100	30	70	Slight petroleum odor.
SB-16	0 to 2	20	10	10	No petroleum odor, no staining.
	2 to 4	18	9	9	No petroleum odor, no staining.
	4 to 6	25	15	10	No petroleum odor, no staining.
	6 to 8	15	9	6	No petroleum odor, no staining.
SB-17	0 to 2	7	3	4	No petroleum odor, no staining.
	2 to 4	25	19	6	No petroleum odor, no staining.
	4 to 6	25	21	4	No petroleum odor, no staining.
	6 to 8	85	72	13	No petroleum odor, no staining.
SB-18	0 to 2	23	16	7	No petroleum odor, no staining.
	2 to 4	55	32	23	No petroleum odor, no staining.
	4 to 6	21	14	7	No petroleum odor, no staining.
	6 to 8	10	8	2	No petroleum odor, no staining.
HA-1 (05/04/99)	0 to 2	<1	<1	<1	No petroleum odor, no staining.
	2 to 4	<1	<1	<1	No petroleum odor, no staining.
	4 to 6	<1	<1	<1	No petroleum odor, no staining.

Notes: bls = below land surface.
 ppm = parts per million.
 HA-1 = Hand auger soil boring designation.
 < = less than.
 <1 = non-detectable limit for organic vapor analyzer.
 > = greater than.

**Table 4-3
Summary of Soil Laboratory Analytical Results**

Site Assessment Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Parameter	Direct Exposure Soil Cleanup Target Levels ¹		Soil Sample/Sample Date		
	Residential	Industrial	SS-1 (082SS101) 05/04/99	SS-2 (082SS201) 05/04/99	SS-3 (082SS301) 05/04/99
Benzene	1.1	1.5	<0.210	<0.0082	<0.009
Toluene	300	2,000	<0.210	<0.0082	<0.009
Ethylbenzene	240	240	<0.210	<0.0082	<0.009
Total xylenes	290	290	NA	NA	NA
MTBE	350	6,100	NA	NA	NA
TRPH	350	2,500	70	<11	<11
Acenaphthene	2,300	22,000	<0.053	<0.054	<0.054
Acenaphthylene	1,100	11,000	<0.021	<0.022	<0.022
Benzo(a)pyrene	0.1	0.5	<0.0042	<0.0043	<0.0043
Benzo(g,h,i)perylene	2,300	45,000	<0.011	<0.011	<0.011
Benzo(b)fluoranthene	1.4	5	<0.350	<0.0043	<0.0043
Benzo(k)fluoranthene	15	52	<0.0042	<0.0043	<0.0043
Chrysene	140	490	<0.016	<0.0043	<0.0043
Benzo(a)anthracene	1.4	5.1	<0.350	<0.0043	<0.0043
Fluoranthene	2,800	45,000	<0.350	<0.011	<0.011
Fluorene	2,100	24,000	<0.011	<0.011	<0.011
Indeno(1,2,3-cd)pyrene	1.5	5.2	<0.011	<0.011	<0.011
Dibenzo(a,h)anthracene	0.1	0.5	<0.011	<0.011	<0.011
Naphthalene	1,000	8,600	<0.021	<0.022	<0.022
Phenanthrene	1,900	29,000	0.024	<0.0043	<0.0043
Anthracene	19,000	290,000	<0.0042	<0.0043	<0.0043
Pyrene	2,200	40,000	<0.011	<0.011	<0.011
Arsenic	0.8	3.7	<0.97	<1.1	<0.99
Barium	105	87,000	9.9	1.4	1.9
Cadmium	1.5	1,300	<0.48	<0.54	<0.49
Chromium	290	430	6.6	<1.1	2.2
Lead	500	920	8.6	1.7	1.5
Mercury	3.7	28	<0.021	<0.020	<0.022
Selenium	390	10,000	<0.97	<1.1	<0.99

¹ Cleanup target levels for residential and industrial exposure as defined in Table IV of Chapter 62-770, Florida Administrative Code.

Notes: All concentrations in milligrams per kilogram.
Bold indicates contaminant is above standard laboratory detection limit.

< = less than.

NA = not available.

MTBE = methyl tert-butyl ether.

TRPH = total recoverable petroleum hydrocarbons (by Florida-Petroleum Residual Organics analysis).

for Chapter 62-770, FAC Used Oil Analytical Group, which include the following USEPA Methods: 8260 (Priority Pollutant Volatiles), 8270 (Priority Pollutant Semivolatiles), 6010 and 7470 for mercury (eight RCRA-metals), 8015E (hydrocarbons), 504.1 (EDB), 8310 (PAH), and also the FL-PRO method for TRPH.

Laboratory analytical results indicate the presence of benzo(a)anthracene at a concentration slightly above the State of Florida groundwater cleanup target level (GCTL) ($0.20 \mu\text{g}/\ell$) in monitoring well MW-2 at $0.34 \mu\text{g}/\ell$ prior to the source removal activities. Follow-up sampling of monitoring well MW-4 located near the former location of MW-2 reported all tested parameters below laboratory detection limits. All the other analytes were reported at levels below the State of Florida GCTLs. Water sampling log forms are included in Appendix D. Laboratory analytical reports are included in Appendix E, and results are summarized in Table 4-4.

**Table 4-4
Summary of Groundwater Analytical Results**

Site Assessment Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Parameter	Chapter 62-770, FAC, Target Cleanup Levels (ppb)	Monitoring Well/Sample Date			
		MW-1 2/9/99	MW-2 2/9/99	MW-3 2/9/99	MW-4 4/16/99
Benzene	1*	<1	<1	<1	<1
Toluene	40*	<1	<1	<1	<1
Ethylbenzene	30*	<1	<1	<1	<1
Total xylenes	20*	<2	2.3	<2	<1
MTBE	35	NA	NA	NA	<10
1,2-Dibromoethane (EDB)	0.02*	<0.02	<0.02	<0.02	<0.02
Total lead	15*	<5	<5	<5	<5
TRPH (mg/l)	5	<0.3	1.8	<0.3	<0.3
Acenaphthene	20	<1	<1	<1	<1
Acenaphthylene	210	<1	<1	<1	<1
Benzo(a)pyrene	0.2*	<0.2	<0.2	<0.2	<0.2
Benzo(g,h,i)perylene	210	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	0.2	<0.2	<0.2	<0.2	<0.2
Benzo(k)fluoranthene	0.5	<0.2	<0.2	<0.2	<0.2
Chrysene	5	<0.2	0.21	<0.2	<0.2
Benzo(a)anthracene	0.2	<0.2	0.34	<0.2	<0.2
Fluoranthene	280	<0.5	<0.5	<0.5	<0.5
Fluorene	280	<0.5	0.53	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	0.2	<0.2	<0.2	<0.2	<0.2
Dibenz(a,h)anthracene	0.2	<0.2	<0.2	<0.2	<0.2
Phenanthrene	210	<0.2	<0.2	<0.2	<0.2
Anthracene	2,100	<0.2	<0.2	<0.2	<0.2
Pyrene	210	<0.5	<0.5	<0.5	<0.5
1-Methylnaphthalene	NA	<1	<1	<1	<1
2-Methylnaphthalene	NA	<1	<1	<1	<1
1,2-Dichloroethane	3*	<1	<1	<1	<1
Chloroform	NA	<1	<1	<1	<1
Naphthalene	20	1.0	2.6	<1	<1

See notes at end of table.

Table 4-4 (Continued)
Summary of Groundwater Analytical Results

Site Assessment Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Parameter	Chapter 62-770, FAC, Target Cleanup Levels (ppb)	Monitoring Well/Sample Date			
		MW-1 2/9/99	MW-2 2/9/99	MW-3 2/9/99	MW-4 4/16/99
Arsenic	50	<10	<10	<10	NA
Barium	2000	<10	2.3	3.1	NA
Cadmium	5	<5	<5	<5	NA
Chromium	100	<10	<10	<10	NA
Total Lead	15	<5	<5	<5	NA
Selenium	50	<10	<10	<10	NA
Silver	100	<10	<10	<10	NA
Mercury	15	<0.20	<0.20	<0.20	NA

Notes: All concentrations in micrograms per liter, unless otherwise noted.
 Bold indicates contaminant is above standard laboratory detection limit.

FAC = Florida Administrative Code.

ppb = parts per billion.

< = less than.

NA = not available.

MTBE = methyl tert-butyl ether.

EDB = ethylene dibromide.

TRPH = total recoverable petroleum hydrocarbons (reported as Florida-Petroleum Residual Organics).

mg/l = milligrams per liter.

5.0 SOURCE OF HYDROCARBONS

5.1 HYDROCARBON TYPE AND MASS DISTRIBUTION. The hydrocarbon type expected to be found in the oil-water separator at Building 7171 was mineral spirits. The laboratory analytical data from a sample of free product collected from monitoring well OLD-16-01 (Attachment E) and the type of product previously used on site support this assessment. Based on the findings of this investigation, there is no petroleum mass found sorbed to the soil in the unsaturated zone, or dissolved in groundwater. No free-floating product has been observed since excavation of the contaminated soil.

5.2 SOURCE OF HYDROCARBON. The suspected source of the small amounts of hydrocarbons found in soil is the former oil-water separator. Petroleum discharges could be attributed to overfills or small releases from cracks in the oil-water separator.

5.3 MECHANISM OF TRANSPORT. No surface drainage ditches or utility lines appear to influence the groundwater flow near the former oil-water separator area. There are no significant surface slopes in the study area.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Laboratory analytical results indicated there was benzo(a)anthracene slightly above the State GCTL in the groundwater sample collected from monitoring well MW-2 prior to removal of petroleum-impacted soil and oil/water separator. No other groundwater or soil samples were found above the State of Florida Cleanup Target Levels at the Building 7171.

Based in the findings of this SAR, HLA recommends that the site be granted a no further action status.

7.0 PROFESSIONAL REVIEW CERTIFICATION

This document, *Site Assessment Report, Building 7171, 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 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 SAR was developed for the Building 7171 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

7/30/99

Date

REFERENCES

- ABB Environmental Services, Inc. 1996. *Contamination Assessment Report, McCoy Annex, Naval Training Center, Orlando, Florida*. Prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charleston, South Carolina (February).
- Bouwer, H., and Rice. 1976. "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with completely or Partially Penetrating Wells." *Water Resources Research* 12:423-28.
- Driscoll, F.G. 1986. *Groundwater and Wells*. 2nd ed. St. Paul, Minnesota: Johnson Filtration Systems, Inc.
- Harding Lawson Associates, Inc. 1999. *Source Removal Report, Building 7171, McCoy Annex, Naval Training Center, Orlando, Florida*. Prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charleston, South Carolina (April).

APPENDIX A
SOURCE REMOVAL REPORT

**SOURCE REMOVAL REPORT
BUILDING 7171
McCOY ANNEX**

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

Unit Identification Code: N65928

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

Prepared by:

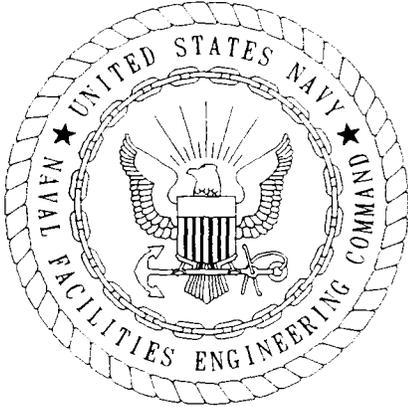
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June 1999



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: June 15, 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)

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Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

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REFERENCES

ATTACHMENTS

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- Attachment C: Postburn Laboratory Analytical Reports and Certificate of Materials Recycling
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- Attachment E: Groundwater Laboratory Analytical Reports

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Source Removal Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
FAC	Florida Administrative Code
FL-PRO	Florida-Petroleum Residual Organics
HLA	Harding Lawson Associates
LNAPL	light non-aqueous phase liquid
NTC	Naval Training Center
OVA	organic vapor analyzer
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
SAR	Site Assessment Report
SOUTHNAV- FACENCOM	Southern Division, Naval Facilities Engineering Command
SRA	Source Removal Activities
SRR	Source Removal 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 (SOUTHNAVFACENGCOM) to document the source removal activities (SRA) associated with petroleum contamination at Building 7171. SRAs included excavation and disposal of petroleum-impacted soil from the former oil-water separator located on the north side of the building. Building 7171 is located at the McCoy Annex. The McCoy Annex is located approximately 12 miles south of the Main Base, Naval Training Center (NTC), Orlando, and is part of the NTC in Orlando, Orange County, Florida (Figure 1-1).

Building 7171 is a vehicle repair building located northwest of the intersection of Binnacle Way and Avenue "C" in the central 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.

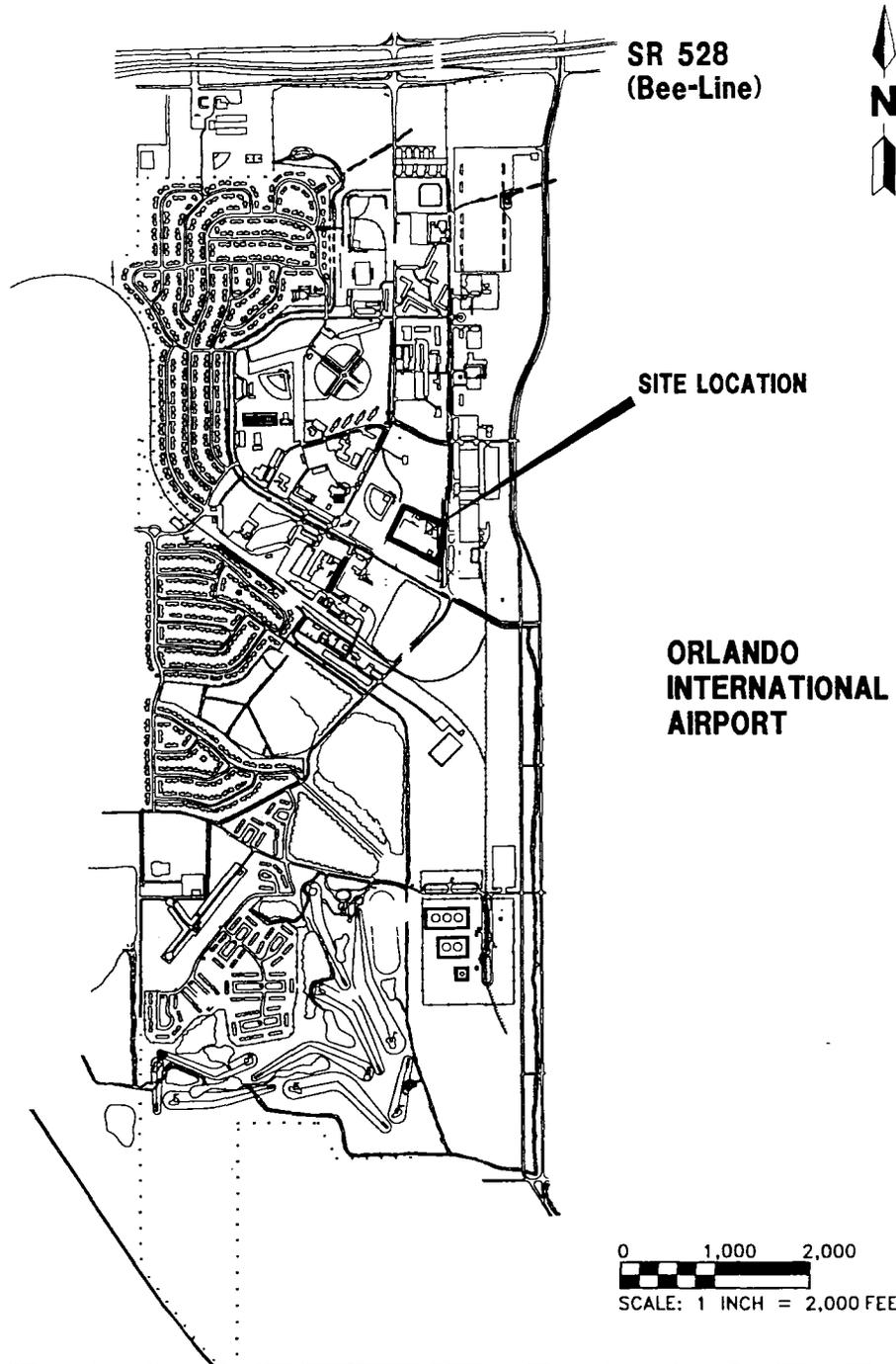
Building 7171, was constructed in 1952 and is approximately 20,471 square feet. The building is used as a motor pool maintenance facility and contains high-bay maintenance facilities, shops, storage areas, and office space. An adjacent portable hazardous material storage building with secondary containment and a drum storage building are located to the north of the facility and are unnumbered. The property is currently part of the Army motor pool, which was established in 1952. The compound provides vehicle maintenance and repair for vehicles and is used to support an Army Reserve unit. The property was undeveloped prior to its current use.

A 5,000 gallon underground storage tank (UST) containing diesel oil was located near the northeast corner of the building. The UST was used to fuel a single boiler in Building 7171. Four oil-water separators were previously used at the site. The location of the 1,000-gallon oil-water separator discussed in this report is shown on Figure 1-2.

The 1,000-gallon oil-water separator was located approximately 150 feet north of Building 7171 and had been used at the facility since 1973. An assessment report for this oil-water separator was completed on August 23, 1996. The assessment activities documented excessively contaminated soils in the vicinity of the oil-water separator and light non-aqueous phase liquid (LNAPL) in monitoring wells TW-1 and OLD-16-01. The initial assessment recommended the preparation of a contamination assessment report.

HLA began site assessment activities on January 28, 1999. Three shallow groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed in the vicinity of the oil-water separator to further assess the petroleum impact to groundwater and the LNAPL reported in the initial assessment report. Prior to finalizing the Site Assessment Report (SAR), HLA was informed by SOUTHNAVFACENGCOM that the 1,000-gallon oil-water separator at Building 7171 was to be removed and petroleum-impacted soil surrounding the separator excavated. It was determined that monitoring wells MW-2 and OLD-16-01 would be destroyed during the removal of the oil-water separator. On February 11, 1999 monitoring wells MW-2 and OLD-16-01 were properly abandoned by Custom Drilling Services, Inc. of Lakeland, Florida.

MCCOY ANNEX



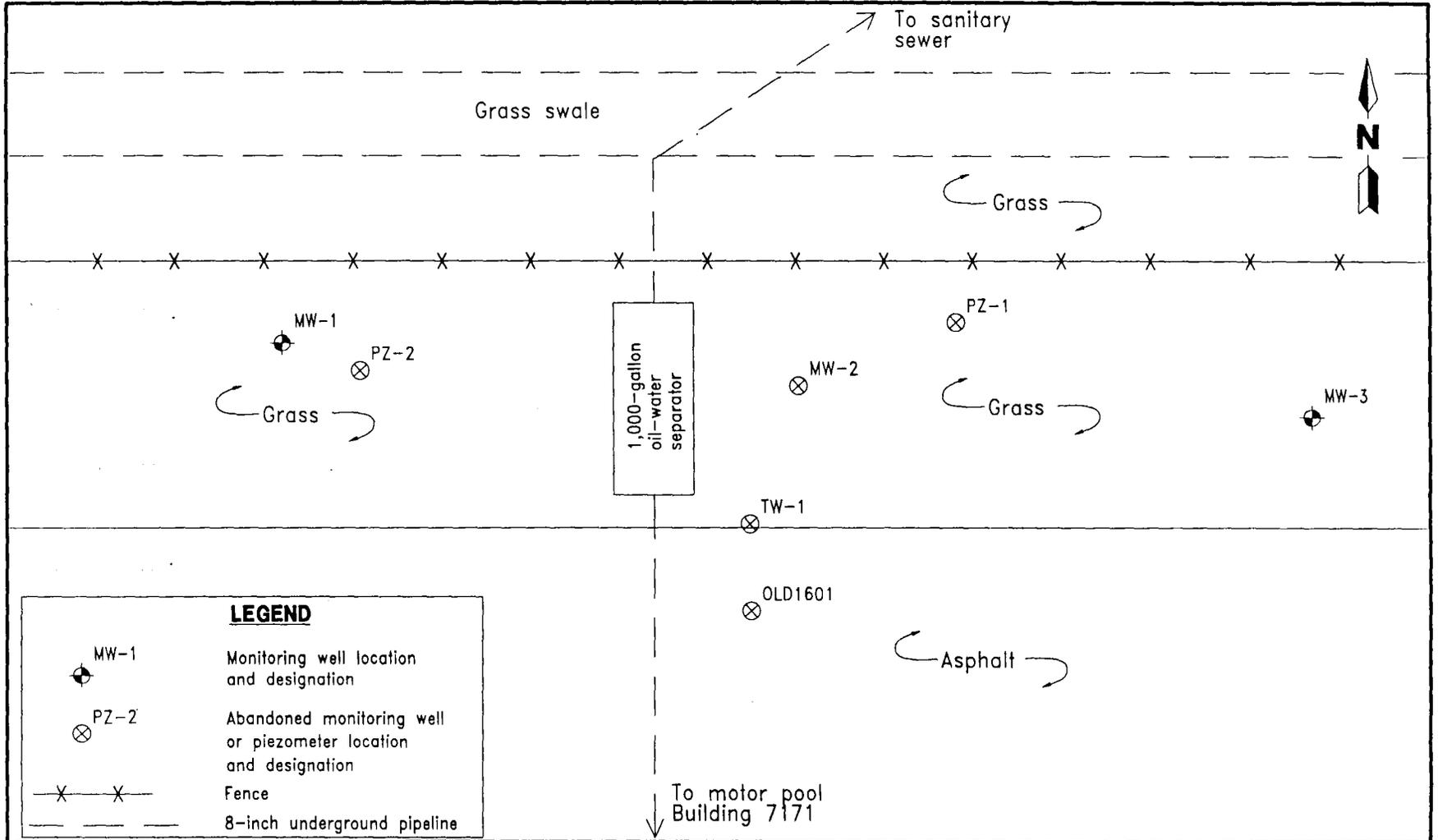
**FIGURE 1-1
SITE VICINITY MAP**



**SOURCE REMOVAL REPORT
BUILDING 7171
MCCOY ANNEX**

**NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

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LEGEND

-  MW-1 Monitoring well location and designation
-  PZ-2 Abandoned monitoring well or piezometer location and designation
-  Fence
-  8-inch underground pipeline

0 5 10
SCALE: 1 INCH = 10 FEET

**FIGURE 1-2
SITE PLAN MAP**



**SOURCE REMOVAL REPORT
BUILDING 7171
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA**

Excavation activities of petroleum-impacted soil were conducted on February 21 through 24, 1999. This report summarizes the activities associated with the removal of petroleum-impacted soil at Building 7171. Prior to conducting the SRAs, HLA informed the Florida Department of Environmental Protection of the planned removal through information provided during an Orlando Partnering Team meeting.

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

- determined the approximate extent of excessively contaminated soil prior to removal of the oil-water separator,
- documented the removal of the oil-water separator and the excavation of petroleum-impacted soil,
- conducted environmental sampling (organic vapor analyzer [OVA] screening) to assess the extent of excessively contaminated soil to be excavated and transported to a stationary thermal treatment facility,
- re-installed a groundwater monitoring well in the excavated area,
- obtained and analyzed a groundwater sample from the excavated area to assess petroleum impact to the groundwater, and
- prepared a Source Removal Report (SRR) describing all field activities, providing the supplemental information and recommendations for the site.

2.0 FIELD ACTIVITIES

2.1 OIL-WATER SEPARATOR CLOSURE. On February 4, 1999, HLA conducted environmental sampling (OVA screening) of the soil in the vicinity of the oil-water separator. The environmental sampling was conducted to assess the area and to estimate the amount of excessively contaminated soil that was to be removed during the removal of the oil-water separator and the SRAs. Eleven soil borings were hand-augered in the vicinity of the oil-water separator as shown on Figure 2-1. Based upon the results of the environmental sampling, approximately 280 tons (200 yd³) of excessively contaminated soil was estimated. Table 2-1 summarizes the OVA readings for the site conducted on February 4, 1999.

The 1,000 gallon oil-water separator was removed by the Navy Environmental Detachment - Charleston on February 22, 1999. Evidence of petroleum impact to soil was found within the excavation during removal of the separator. A crack was observed along the east side of the separator at a depth of approximately four feet below land surface (bls). During the removal of the oil-water separator, it was observed that the discharge pipe which extended from Building 7171 to the oil-water separator was not sealed correctly. An approximate one-half to one-inch gap was observed where the discharge pipe connected to the south side of the oil-water separator.

2.2 SOIL EXCAVATION. The SRAs were conducted on February 21 through 24, 1999. Petroleum-impacted soil that exhibited corrected organic vapor readings of 50 parts per million or greater was excavated as excessively contaminated soil.

The excavation was terminated at approximately twelve feet bls. Figure 2-2 shows the excavated area and soil sample locations collected during the SRA. Photographs of the SRAs are included in Attachment A.

An OVA equipped with portable flame ionization detector (Foxboro-128) was used to screen soil samples during the excavation. Organic vapor measurements of soil sample headspace were performed in samples collected from depths of 2, 4, 6, 8, and 10 feet bls following guidelines established in Chapter 62-770.200, Florida Administrative Code (FAC). Figure 2-2 shows the excavated areas within a grid pattern used to mark the soil sample locations. Organic vapor concentration readings corresponding to the sample locations and depth intervals for February 21 through 24, 1999 are summarized in Table 2-2.

The excavated soil was placed on and covered with thick plastic, stockpiled onsite, then transported to Soil Treatment Services Inc. of Kissimmee, Florida for thermal treatment. Approximately 582 tons (415.6 yd³) 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 for the Navy Environmental Detachment - Charleston for laboratory analysis prior to disposal. Preburn soil samples were composited from soils collected from different depths. The samples were delivered to AccuTest Analytical Laboratories in Orlando, Florida, and analyzed for volatile

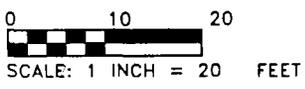
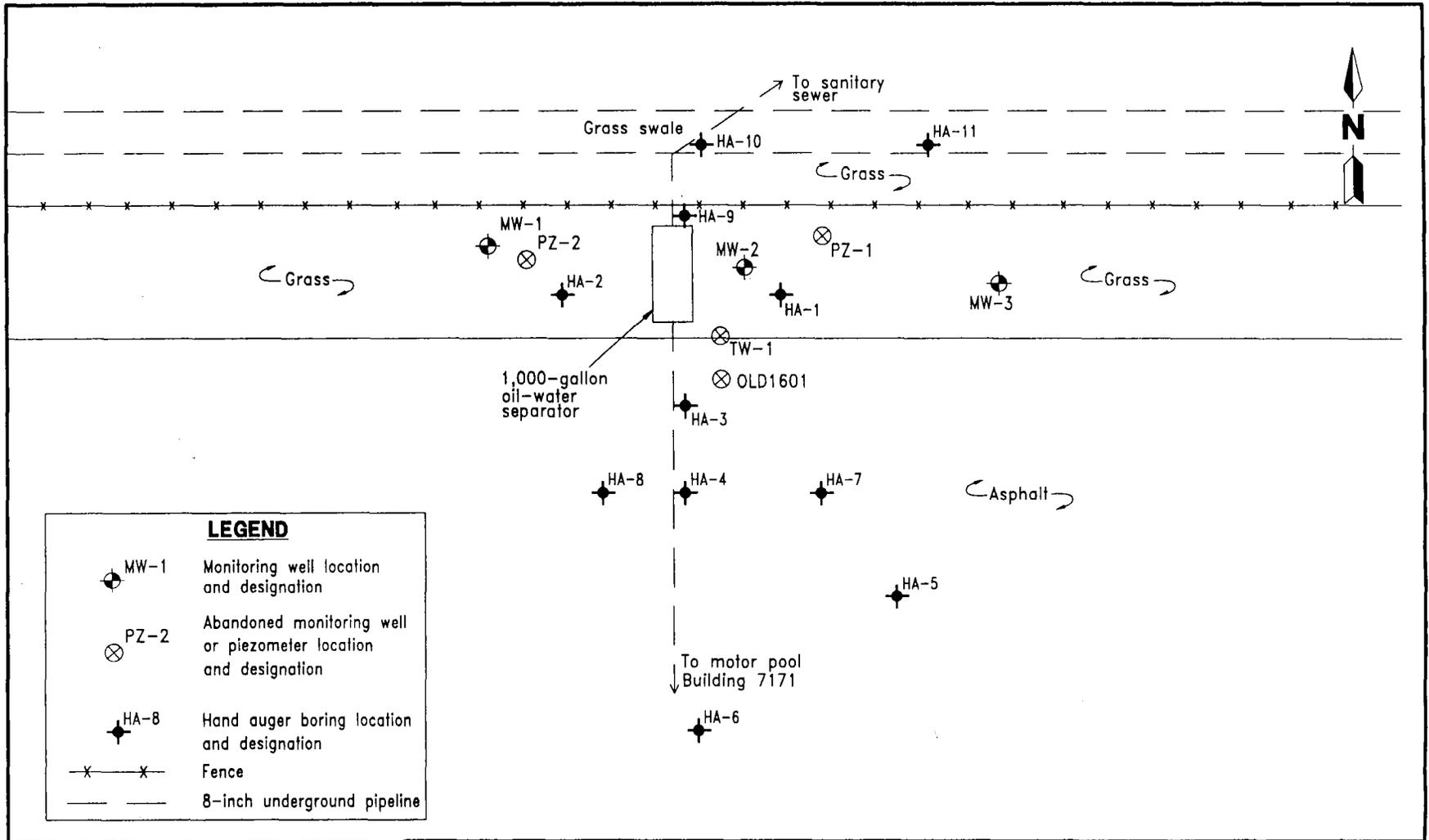


FIGURE 2-1
PRE-SOURCE REMOVAL
SOIL BORING LOCATIONS
FEBRUARY 4, 1999



SOURCE REMOVAL REPORT
BUILDING 7171
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Table 2-1
Pre-Excavation Soil Assessment
Summary of Organic Vapor Analysis - February 4, 1999

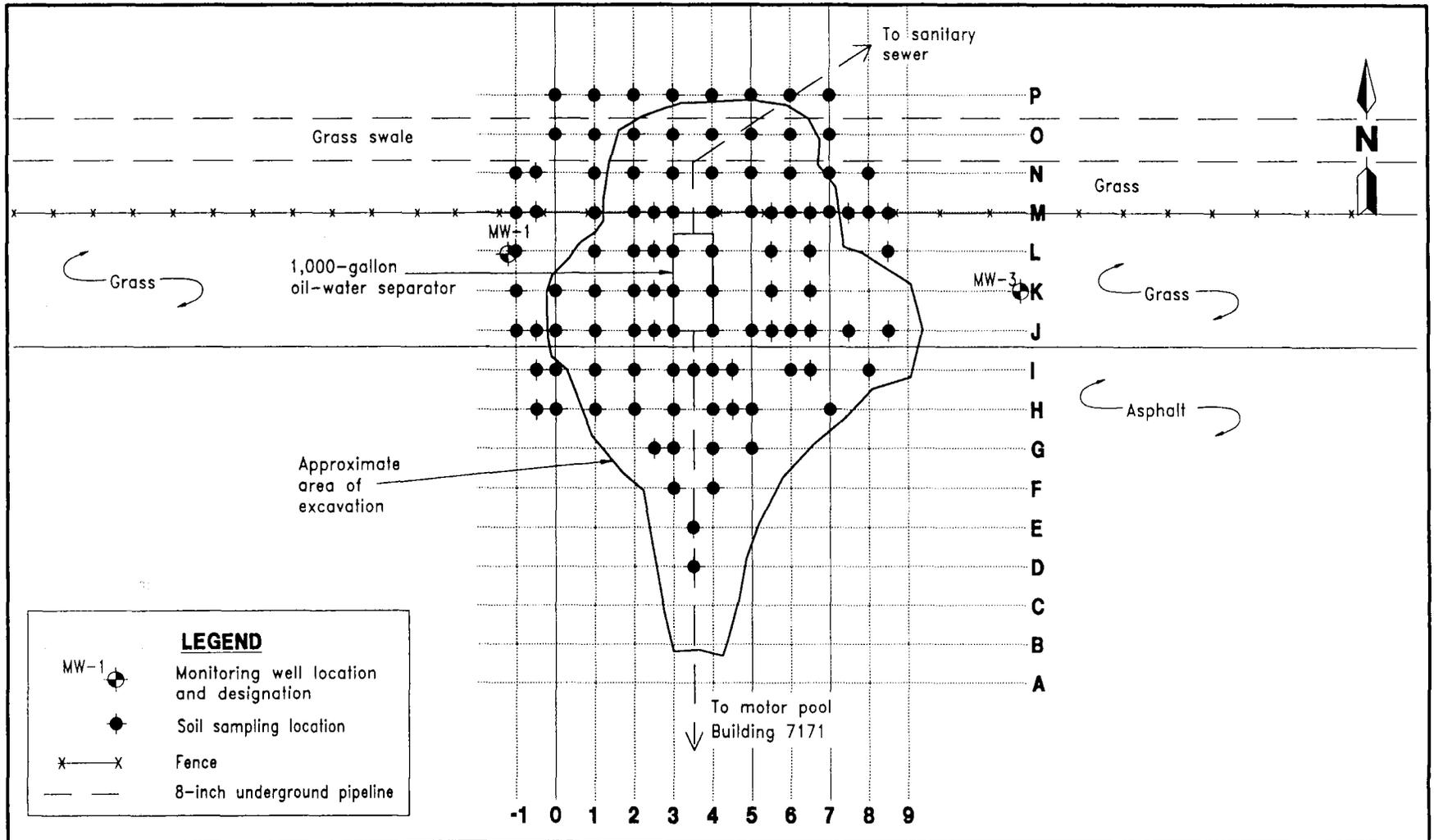
Source Removal Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Hand Auger Boring Number	Depth (feet bls)	Unfiltered (ppm) ¹	Filtered (ppm) ²	Total Hydrocarbons (ppm)	Comments
HA-1	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	78	35	43	Petroleum odor
	8	30	8.0	22	Petroleum odor
HA-2	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	42	28	14	Petroleum odor
	8	10	2.0	8.0	Petroleum odor
HA-3	2	42	22	20	Petroleum odor
	4	150	44	106	petroleum odor
	6	>1,000	>1,000	>1.0	petroleum odor
	8	90	62	28	Petroleum odor
HA-4	2	12	12	<1.0	Petroleum odor
	4	110	15	95	petroleum odor
	6	210	81	129	petroleum odor
	8	10	<1.0	10	Petroleum odor
HA-5	2	1.5	<1.0	1.5	
	4	10	5.0	5.0	
	6	15	9.0	6.0	
	8	3.0	<1.0	3.0	
HA-6	2	25	18	7.0	Petroleum odor
	4	28	25	3.0	Petroleum odor
	6	62	45	17	Petroleum odor
HA-7	2	8.0	<1.0	8.0	
	4	8.0	<1.0	8.0	
	6	27	25	2.0	
HA-8	2	2.0	<1.0	2.0	
	4	12	9.0	3.0	
	6	40	40	<1.0	
HA-9	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
HA-10	2	<1.0	<1.0	<1.0	
	4	<1.0	<1.0	<1.0	
	6	<1.0	<1.0	<1.0	
HA-11	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: ppm = parts per million.
 bls = below land surface.
 < = less than.
 > = greater than.



LEGEND

- MW-1  Monitoring well location and designation
-  Soil sampling location
- X—X Fence
- 8-inch underground pipeline

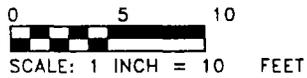


FIGURE 2-2
SOURCE REMOVAL EXCAVATION
AND SAMPLING LOCATION PLAN



SOURCE REMOVAL REPORT
BUILDING 7171
MCCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

**Table 2-2
Summary of Organic Vapor Analysis
February 21 through 24, 1999**

Source Removal Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
D-3.5,E-3.5	4	35	10	25
	6	5.0	5.0	<1.0
E-3.5	6	30	5.0	25
F-3	4	100	40	60
G-3,G-4	4	100	10	90
	6	30	15	15
G-2.5	6	20	<1.0	20
G-5	6	90	20	70
G-3,G-4,F-3,F-4	6	110	10	100
H-0(-0.5)	10	12	7.0	5.0
H-5	10	1.0	<1.0	1.0
H-7	10	60	5.0	55
H-0,H-1,H-2,H-3,H-4,I-0,I-1,I-2,I-3,I-4	10	35	10	25
H-4.5,I-4.5	10	160	20	140
I-0,I-1	10	120	3.0	117
I-0,I-1,I-2,I-3	8	>1,000	500	>500
I-1,I-2	9	250	60	190
I-3.5	6	110	30	80
I-3.5	10	35	15	20
I-3.5	11	20	8.0	12
I-6	10	300	84	216
I-6.5	8	500	5.0	495
I-6.5	10	70	2.0	68
I-8	9	100	60	40
I-(-0.5),J-(-0.5)	10	15	8.0	7.0
J-0	5	100	<1.0	100
	10	90	10	80
J-(-1)	2	10	3.0	7.0
	3	2.0	<1.0	2.0
	10	300	20	280
J-1	10	300	<1.0	300
	11	300	20	280
J-2	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	<1.0
	4	95	<1.0	95
	5	70	<1.0	70
	6	500	150	350
	11	180	30	150
		180	60	120

See notes at end of table.

Table 2-2 (Continued)
Summary of Organic Vapor Analysis
February 21 through 24, 1999

Source Removal Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
J-2.5	7	>1,000	>1,000	>1.0
	8	200	90	110
J-3	2	60	5.0	55
	4	280	48	232
	6	320	45	275
	8	300	80	220
J-4	2	60	5.0	55
	4	280	48	232
	6	320	45	275
	8	300	80	220
J-5	2	<1.0	<1.0	<1.0
	4	230	20	210
	6	320	45	275
	10	250	20	230
	12	120	80	40
J-5.5	8	300	20	280
J-6.5	8	100	7.0	93
J-7.5	8	300	20	280
J-8.5	8	30	<1.0	30
K-0	10	90	10	80
K-(-1)	2	10	3.0	7.0
	3	2.0	<1.0	2.0
	10	300	20	280
K-1	10	300	<1.0	300
	11	300	20	280
K-2	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	95	<1.0	95
	5	70	<1.0	70
	6	500	150	350
	10	180	30	150
	11	180	60	120
K-2.5	7	>1,000	>1,000	>1.0
	8	200	90	110
K-3	8	300	80	220
	10	200	60	140
K-4	8	300	80	220
K-5	2	<1.0	<1.0	<1.0
	4	230	10	220
	6	320	45	275
	10	250	20	230
	12	120	80	40

See notes at end of table.

Table 2-2 (Continued)
Summary of Organic Vapor Analysis
February 21 through 24, 1999

Source Removal Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
K-5.5	8	300	20	280
K-6.5	3	2.0	<1.0	2.0
	6	500	5.0	495
	8	100	7.0	93
L-0	8	85	10	75
	10	90	10	80
L-(-1)	2	10	3.0	7.0
	3	2.0	<1.0	2.0
	10	300	20	280
L-1	10	300	<1.0	300
	11	300	20	280
L-2	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	95	<1.0	95
	5	70	<1.0	70
	6	500	150	350
	10	180	30	150
L-2.5	7	>1,000	>1,000	>1.0
	8	200	90	110
L-3	8	300	80	220
	10	200	60	140
L-4	8	300	80	220
L-5	2	<1.0	<1.0	<1.0
	4	230	10	220
	6	320	45	275
	10	250	20	230
	12	120	80	40
L-5.5	8	300	20	280
L-6.5	3	2.0	<1.0	2.0
	6	500	5.0	495
L-8.5	8	15	<1.0	15
L-6.5,M-6.5	3.5	60	20	40
M-0	10	90	10	80
M-(-0.5),M-1,M-2,M-3	6	300	7.0	293
	8	310	10	300
	10	220	10	210
M-(-1)	2	10	3.0	7.0
	3	2.0	<1.0	<1.0
	7	10	3.0	7.0
	10	300	20	280

See notes at end of table.

Table 2-2 (Continued)
Summary of Organic Vapor Analysis
February 21 through 24, 1999

Source Removal Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
M-1	10	300	<1.0	300
	11	300	20	280
M-2	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	95	<1.0	95
	5	70	<1.0	70
	6	500	150	350
	10	180	30	150
M-2.5	7	>1,000	<1,000	>1.0
	8	200	90	110
M-3	8	300	80	220
	10	200	60	140
M-4	2	<1.0	<1.0	<1.0
	4	<1.0	<1.0	<1.0
	8	300	80	220
	10	300	100	200
M-4,M-5,M-6	6	300	20	280
M-5	2	<1.0	<1.0	<1.0
	4	105	16	89
	8	320	45	275
	10	250	20	230
	12	120	80	40
M-5.5	8	300	20	280
M-6,M-7	9	400	15	385
M-6.5	3	2.0	<1.0	2.0
	6	500	5.0	495
	10	800	200	600
M-7	8	>1,000	600	>400
M-7.5	8	180	20	160
M-7,M-8	8	30	4.0	26
M-8.5	8	20	<1.0	20
N-0,N-1	3	<1.0	<1.0	<1.0
	5	<1.0	<1.0	<1.0
N-(-0.5),N-1,N-2,N-3	6	300	7.0	293
	8	310	10	300
	10	220	10	210
N-(-1)	7	10	3.0	7.0
N-1	3	<1.0	<1.0	<1.0
	5	80	10	70
	6	100	5.0	95

See notes at end of table.

**Table 2-2 (Continued)
Summary of Organic Vapor Analysis
February 21 through 24, 1999**

Source Removal Report
Building 7171, McCoy Annex
Naval Training Center
Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
N-2	3	<1.0	<1.0	<1.0
	5	80	10	70
	6	100	5.0	95
N-3	3	<1.0	<1.0	<1.0
	5	80	10	70
N-4	3	<1.0	<1.0	<1.0
	5	80	10	70
N-4,N-5,N-6	6	300	20	280
N-5	3	<1.0	<1.0	<1.0
N-6	3	<1.0	<1.0	<1.0
	4	<1.0	<1.0	<1.0
	4.5	1.0	<1.0	1.0
N-6,N-7	9	400	15	385
N-7	3	<1.0	<1.0	<1.0
	4	<1.0	<1.0	<1.0
	4.5	1.0	<1.0	1.0
N-7,N-8	8	30	4.0	26
N-8	4.5	1.0	<1.0	1.0
O-0	2	<1.0	<1.0	<1.0
	6	100	5.0	95
O-1	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
O-2	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
O-3	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
O-4	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	<1.0	<1.0	<1.0
	6	300	20	280
O-5	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	<1.0	<1.0	<1.0
	6	300	20	280
O-6	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	<1.0	<1.0	<1.0
	6	300	20	280
O-7	2	<1.0	<1.0	<1.0
	3	1.0	<1.0	1.0
	4	<1.0	<1.0	<1.0

See notes at end of table.

Table 2-2 (Continued)
Summary of Organic Vapor Analysis
February 21 through 24, 1999

Source Removal Report
 Building 7171, McCoy Annex
 Naval Training Center
 Orlando, Florida

Soil Sample Location	Depth (feet bls)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)
O-1,P-1	6	<1.0	<1.0	<1.0
O-2,P-2	6	<1.0	<1.0	<1.0
O-3,P-3	6	<1.0	<1.0	<1.0
O-4,P-4	5	<1.0	<1.0	<1.0
	6	<1.0	<1.0	<1.0
O-5,P-5	5	<1.0	<1.0	<1.0
	6	<1.0	<1.0	<1.0
O-6,P-6	5	<1.0	<1.0	<1.0
	6	<1.0	<1.0	<1.0
O-7,P-7	5	<1.0	<1.0	<1.0
	6	<1.0	<1.0	<1.0
O-0,O-1,P-0,P-1	3	<1.0	<1.0	<1.0
	5	<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: Groundwater encountered approximately twelve feet below ground surface.

ppm = parts per million.
 bls = below land surface.
 < = less than.
 > = greater than.

organic aromatics (VOAs) (U.S. Environmental Protection Agency [USEPA] Method 8021), priority pollutant extractable organics (USEPA Method 8270), polynuclear aromatic hydrocarbons (PAHs) (USEPA Method 8310), total recoverable petroleum hydrocarbons (TRPH) Florida-Petroleum Residual Organics (FL-PRO), and eight Resource Conservation and Recovery Act (RCRA) metals. Laboratory analytical reports are included in Attachment B.

The petroleum-impacted soil was transported to Soil Treatment Services Inc. for thermal treatment. The Post-Burn Analytical Reports and Certificate of Materials Recycling are included in Attachment C.

2.4 SITE RESTORATION. The excavated area was backfilled with approximately five feet of gravel material followed by clean fill material (orange, fine sand with traces of clay) to 6 inches below grade. Gravel material was used to complete backfill of the excavated area to surface grade.

3.0 GROUNDWATER SAMPLING AND ANALYSIS

3.1 MONITORING WELL INSTALLATION. On April 7, 1999, one monitoring well (MW-4) was installed by Custom Drilling Services, Inc. in the excavated area near the location of the abandoned monitoring well MW-2. The borehole was advanced using 4.25-inch, hollow stem augers to approximately fifteen feet bls. MW-4 was constructed using a five-foot section of 2.0-inch diameter, schedule 40 polyvinyl chloride (PVC) riser connected to a ten-foot section of 0.010-inch slot PVC well screen. The space between the screen and the borehole was filled with a fine-sand filter pack. MW-4 was completed flush-mounted within a steel manhole vault embedded within a 2-foot square, concrete pad. The well was developed until the groundwater was sediment free. Construction details for MW-4 are shown on Figure 3-1.

3.2 GROUNDWATER SAMPLING AND ANALYSIS. On April 16, 1999 groundwater samples were collected from MW-4. The groundwater samples were packed on ice and shipped to Savannah Laboratories, Inc. of Savannah, Georgia to be analyzed for volatile halocarbons (USEPA Method 601), VOAs (USEPA Method 602), polynuclear aromatics/-mineral spirits (USEPA Method 8310/MOD 8015-E), TRPH FL-PRO, 1,2-dibromoethane (EDB) (USEPA Method 504), and eight RCRA metals.

Laboratory analytical results indicate all analyzed parameters were below laboratory standard detection limits in MW-4. Groundwater sampling forms are included in Attachment D. The laboratory analytical report is included in Attachment E.

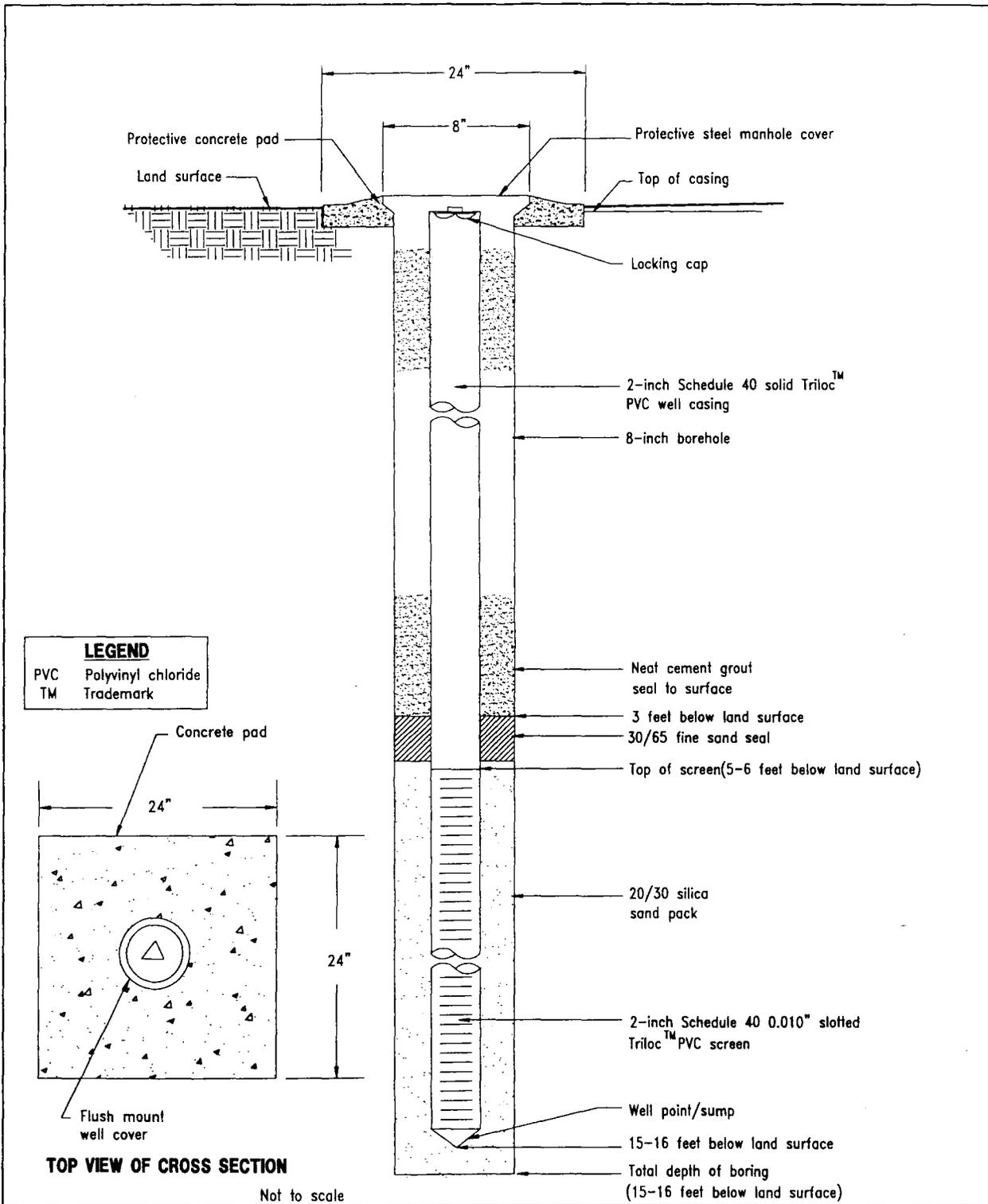


FIGURE 3-1
TYPICAL SHALLOW MONITORING WELL
CONSTRUCTION DETAIL

K:\02547\02547-15\SAR\02547848.DWG, VC-VC 06/15/99 13:49:50, ACAD14



SOURCE REMOVAL REPORT
BUILDING 7171
MCCOY ANNEX

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

4.0 CONCLUSIONS AND RECOMMENDATIONS

On February 21 through 24, 1999, SRAs were conducted at Building 7171. A total of 581.90 tons (415.6yd³) of petroleum-impacted soil was excavated and transported to Soil Treatment Services, Inc., of Kissimmee, Florida, for thermal treatment.

Following excavation of the soil and backfilling of the excavated area, a monitoring well (MW-4) was installed and sampled to assess the impact to the groundwater. Laboratory analytical results reported all analyzed parameters below laboratory standard detection limits. Based on the historical presence of LNAPL in former monitoring wells TW-1 and OLD-16-01, information provided in the oil-water separator report, and information provided in this SRR, an SAR is under preparation for Building 7171 in accordance with Chapter 62-770, FAC, to assess if any petroleum impact to soil or groundwater outside of the excavated area is present.

5.0 PROFESSIONAL REVIEW CERTIFICATION

This document, SRR, Building 7171, 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 in Chapter 62-770, FAC. This SRR was developed for the former Building 7171 at the McCoy Annex, NTC, Orlando, Florida, and should not be construed to apply to any other site.

Manuel Alonso
Professional Geologist
P.G. No. 0001256

6/29/99
Date

REFERENCE

ABB Environmental Services, Inc. 1996. *Oil-Water Separator Assessment Report, Building 7171, McCoy Annex, Naval Training Center, Orlando, Florida.* Prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina (August).

ATTACHMENT A
PHOTOGRAPHS



Photograph 1: Removal of the former oil-water separator located at Building 7171.



Photograph 2: View of the excavation pit and Building 7171 facing south.



Photograph 3: View of the excavation pit and pea gravel at Building 7171.



Photograph 4: Backfilled soil excavation located at Building 7171. View towards the west.

ATTACHMENT B

PREBURN LABORATORY ANALYTICAL REPORTS

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 Benzadi, 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.



Sample Summary

Tetra Tech, NUS

Date: 02/17/99

NTC Orlando
Project No: 7457

Job No: F3655

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

Client Sample ID: 7171-SB01-0405
Lab Sample ID: F3655-7
Matrix: SO - Soil
Method: SW846 8260B
Project: NTC Orlando

Date Sampled: 02/10/99
Date Received: 02/10/99
Percent Solids: 93.1

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	K002671.D	50	02/13/99	RAW	n/a	n/a	VK46
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RDL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	110	ug/kg	
108-90-7	Chlorobenzene	ND	110	ug/kg	
75-00-3	Chloroethane	ND	110	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	110	ug/kg	
56-23-5	Carbon tetrachloride	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	110	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	110	ug/kg	
106-93-4	1,2-Dibromoethane	ND	110	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	ug/kg	
78-87-5	1,2-Dichloropropane	ND	110	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	110	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	110	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	110	ug/kg	
541-73-1	m-Dichlorobenzene	ND	110	ug/kg	
95-50-1	o-Dichlorobenzene	ND	110	ug/kg	
106-46-7	p-Dichlorobenzene	ND	110	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	110	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	110	ug/kg	
100-41-4	Ethylbenzene	ND	110	ug/kg	
74-83-9	Methyl bromide	ND	270	ug/kg	
74-87-3	Methyl chloride	ND	270	ug/kg	
75-09-2	Methylene chloride	ND	270	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	110	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	110	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	110	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
127-18-4	Tetrachloroethylene	ND	110	ug/kg	
108-88-3	Toluene	ND	110	ug/kg	
79-01-6	Trichloroethylene	ND	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	110	ug/kg	
75-01-4	Vinyl chloride	ND	270	ug/kg	
1330-20-7	Xylene (total)	ND	330	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



Report of Analysis

Client Sample ID: 7171-SB01-0405	Date Sampled: 02/10/99
Lab Sample ID: F3655-7	Date Received: 02/10/99
Matrix: SO - Soil	Percent Solids: 93.1
Method: SW846 8260B	
Project: NTC Orlando	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	K002671.D	50	02/13/99	RAW	n/a	n/a	VK46
Run #2							

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
2037-26-5	Toluene-D8	96%		81-117%
460-00-4	4-Bromofluorobenzene	100%		74-121%
17060-07-0	1,2-Dichloroethane-D4	95%		80-120%

(a) Dilution required due to matrix interference.

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

Report of Analysis

Client Sample ID: 7171-SB01-0405	Date Sampled: 02/10/99
Lab Sample ID: F3655-7	Date Received: 02/10/99
Matrix: SO - Soil	Percent Solids: 93.1
Method: SW846 3550B/8270C	
Project: NTC Orlando	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L001112.D	10	02/15/99	NF	02/12/99	OP680	SL71
Run #2							

BN PAH List

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1800	ug/kg	
208-96-8	Acenaphthylene	ND	1800	ug/kg	
120-12-7	Anthracene	ND	1800	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1800	ug/kg	
50-32-8	Benzo(a)pyrene	ND	890	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1800	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1800	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1800	ug/kg	
218-01-9	Chrysene	ND	1800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	890	ug/kg	
206-44-0	Fluoranthene	ND	1800	ug/kg	
86-73-7	Fluorene	ND	1800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1800	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1800	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1800	ug/kg	
91-20-3	Naphthalene	ND	1800	ug/kg	
85-01-8	Phenanthrene	ND	1800	ug/kg	
129-00-0	Pyrene	ND	1800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	90%		25-121%
4165-62-2	Phenol-d5	97%		24-113%
118-79-6	2,4,6-Tribromophenol	88%		19-122%
4165-60-0	Nitrobenzene-d5	88%		23-120%
321-60-8	2-Fluorobiphenyl	97%		30-115%
1718-51-0	Terphenyl-d14	96%		18-137%

(a) Elevated detection limits due to matrix interference.

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
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Report of Analysis

Client Sample ID:	7171-SB01-0405	Date Sampled:	02/10/99
Lab Sample ID:	F3655-7	Date Received:	02/10/99
Matrix:	SO - Soil	Percent Solids:	93.1
Method:	FLORIDA-PRO		
Project:	NTC Orlando		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P03215.D	20	02/15/99	SKW	02/12/99	OP679	GOP156
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
	TPH (C8-C40)	3580	1800	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	96%		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



Report of Analysis

Client Sample ID: 7171-SB01-0405
Lab Sample ID: F3655-7
Matrix: SO - Soil
Project: NTC Orlando

Date Sampled: 02/10/99
Date Received: 02/10/99
Percent Solids: 93.1

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.29 U	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Barium	6.4 B	21.5	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Cadmium	0.27 B	0.43	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Chromium	2.1	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Lead	4.0 B	10.7	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Mercury	0.045 U	0.045	mg/kg	1	02/12/99	02/15/99 JK	SW846 7471A
Selenium	0.33 U	10.7	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Silver	0.09 U	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A

RDL = Reported Detection Limit

**Report of Analysis**

Client Sample ID: 7171-SB02-0405	Date Sampled: 02/10/99
Lab Sample ID: F3655-8	Date Received: 02/10/99
Matrix: SO - Soil	Percent Solids: 93.7
Method: SW846 8260B	
Project: NTC Orlando	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	K002656.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	5.5	ug/kg	
74-87-3	Methyl chloride	ND	5.5	ug/kg	
75-09-2	Methylene chloride	ND	5.5	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	5.5	ug/kg	
1330-20-7	Xylene (total)	ND	6.6	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

Report of Analysis

Client Sample ID: 7171-SB02-0405		
Lab Sample ID: F3655-8	Date Sampled: 02/10/99	
Matrix: SO - Soil	Date Received: 02/10/99	
Method: SW846 8260B	Percent Solids: 93.7	
Project: NTC Orlando		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	K002656.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	100%		80-120%
2037-26-5	Toluene-D8	98%		81-117%
460-00-4	4-Bromofluorobenzene	117%		74-121%
17060-07-0	1,2-Dichloroethane-D4	101%		80-120%

(a) Sample vial(s) were not properly capped; reported results are considered minimum values.

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



Report of Analysis

Client Sample ID: 7171-SB02-0405	Date Sampled: 02/10/99
Lab Sample ID: F3655-8	Date Received: 02/10/99
Matrix: SO - Soil	Percent Solids: 93.7
Method: SW846 3550B/8270C	
Project: NTC Orlando	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L001095.D	4	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	710	ug/kg	
208-96-8	Acenaphthylene	ND	710	ug/kg	
120-12-7	Anthracene	ND	710	ug/kg	
56-55-3	Benzo(a)anthracene	ND	710	ug/kg	
50-32-8	Benzo(a)pyrene	ND	360	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	710	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	710	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	710	ug/kg	
218-01-9	Chrysene	ND	710	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	360	ug/kg	
206-44-0	Fluoranthene	ND	710	ug/kg	
86-73-7	Fluorene	ND	710	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	710	ug/kg	
90-12-0	1-Methylnaphthalene	ND	710	ug/kg	
91-57-6	2-Methylnaphthalene	ND	710	ug/kg	
91-20-3	Naphthalene	ND	710	ug/kg	
85-01-8	Phenanthrene	ND	710	ug/kg	
129-00-0	Pyrene	ND	710	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		25-121%
4165-62-2	Phenol-d5	81%		24-113%
118-79-6	2,4,6-Tribromophenol	85%		19-122%
4165-60-0	Nitrobenzene-d5	80%		23-120%
321-60-8	2-Fluorobiphenyl	88%		30-115%
1718-51-0	Terphenyl-d14	87%		18-137%

(a) Dilution required due to matrix interference.

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
--	--



Report of Analysis

Client Sample ID: 7171-SB02-0405	Date Sampled: 02/10/99
Lab Sample ID: F3655-8	Date Received: 02/10/99
Matrix: SO - Soil	Percent Solids: 93.7
Method: FLORIDA-PRO	
Project: NTC Orlando	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P03216.D	2	02/15/99	SKW	02/12/99	OP679	GOP156
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
	TPH (C8-C40)	372	180	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	86%		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



Report of Analysis

Page 1 of 7

Client Sample ID: 7171-SB02-0405

Lab Sample ID: F3655-8

Matrix: SO - Soil

Project: NTC Orlando

Date Sampled: 02/10/99

Date Received: 02/10/99

Percent Solids: 93.7

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.29 U	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Barium	10.3 B	21.3	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Cadmium	0.44	0.43	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Chromium	5.2	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Lead	22.5	10.7	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Mercury	0.045 U	0.044	mg/kg	1	02/12/99	02/15/99 JK	SW846 7471A
Selenium	0.33 U	10.7	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A
Silver	0.09 U	1.1	mg/kg	1	02/12/99	02/15/99 JK	SW846 6010A

RDL = Reported Detection Limit



CHAIN OF CUSTODY

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

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION		FACILITY INFORMATION					ANALYTICAL INFORMATION						MATRIX CODES
NAME: TETRA TECH NUS ADDRESS: 1311 Executive Center Drive Tallahassee FL 32301 CITY: _____ STATE: _____ ZIP: _____ SEND REPORT TO: PAUL CALLIGAN PHONE # (850) 656-5458		PROJECT NAME: NTC LOCATION: ORLANDO PROJECT NO.: _____ FAX # (904) 656-7403					(vertical columns for analytical data)						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		SAMPLED BY:	MATRIX	# OF BOTTLES							PRESERVATION					LAB USE ONLY
		DATE	TIME				HC	NaOH	HNO3	H2SO4	NONE		
3655-1	7107-SB01-0305	2/1/99	14:30	EA.RC	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 <input type="checkbox"/> STANDARD APPROVED BY: _____ <input type="checkbox"/> 48 HOUR RUSH <input checked="" type="checkbox"/> 24 HOUR EMERGENCY <input type="checkbox"/> OTHER 79 hours EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED		DATA DELIVERABLE INFORMATION <input type="checkbox"/> STANDARD <input type="checkbox"/> COMMERCIAL "B" <input type="checkbox"/> DISK DELIVERABLE <input type="checkbox"/> STATE FORMS <input type="checkbox"/> OTHER (SPECIFY) _____					COMMENTS/REMARKS KLH767						
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY													
RELINQUISHED BY DRIVER: Abby Wilson DATE TIME: 29-99 10:30		RECEIVED BY: [Signature] DATE TIME: _____			RELINQUISHED BY: [Signature] DATE TIME: _____		RECEIVED BY: Rachel DATE TIME: 2/10/99 16:45						
3. RELINQUISHED BY: _____ DATE TIME: _____		3. RECEIVED BY: _____ DATE TIME: _____			4. RELINQUISHED BY: _____ DATE TIME: _____		4. RECEIVED BY: _____ DATE TIME: _____						
5. RELINQUISHED BY: _____ DATE TIME: _____		5. RECEIVED BY: _____ DATE TIME: _____			SEAL # _____		PRESERVE WHERE APPLICABLE <input type="checkbox"/>			OFFICE <input type="checkbox"/>		TEMPERATURE <input type="checkbox"/>	

Technical Report for

Tetra Tech, NUS

Accutest Job Number: F3738

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: 8



Harry Belzadi, 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.



Sample Summary

Tetra Tech, NUS

Date: 03/03/99
Job No: F3738

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F3738-1	02/23/99	10:00 CW	02/23/99	SO	Soil	7171-SO1

Client Sample ID:	7171-SO1	Date Sampled:	02/23/99
Lab Sample ID:	F3738-1	Date Received:	02/23/99
Matrix:	SO - Soil	Percent Solids:	92.4
Method:	SW846 8260B		
Project:			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	G0007876.D	50	02/23/99	RAW	n/a	n/a	VG188
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RDL	Units	Q
71-43-2	Benzene	ND	110	ug/kg	
75-27-4	Bromodichloromethane	ND	110	ug/kg	
75-25-2	Bromoform	ND	110	ug/kg	
108-90-7	Chlorobenzene	ND	110	ug/kg	
75-00-3	Chloroethane	ND	110	ug/kg	
67-66-3	Chloroform	ND	110	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	270	ug/kg	
56-23-5	Carbon tetrachloride	ND	110	ug/kg	
75-34-3	1,1-Dichloroethane	ND	110	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	110	ug/kg	
106-93-4	1,2-Dibromoethane	ND	110	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	ug/kg	
78-87-5	1,2-Dichloropropane	ND	110	ug/kg	
124-48-1	Dibromochloromethane	ND	110	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	270	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	110	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	110	ug/kg	
541-73-1	m-Dichlorobenzene	ND	110	ug/kg	
95-50-1	o-Dichlorobenzene	ND	110	ug/kg	
106-46-7	p-Dichlorobenzene	ND	110	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	110	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	110	ug/kg	
100-41-4	Ethylbenzene	ND	110	ug/kg	
74-83-9	Methyl bromide	ND	270	ug/kg	
74-87-3	Methyl chloride	ND	270	ug/kg	
75-09-2	Methylene chloride	ND	270	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	110	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	110	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	110	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	110	ug/kg	
127-18-4	Tetrachloroethylene	ND	110	ug/kg	
108-88-3	Toluene	ND	110	ug/kg	
79-01-6	Trichloroethylene	ND	110	ug/kg	
75-69-4	Trichlorofluoromethane	ND	270	ug/kg	
75-01-4	Vinyl chloride	ND	270	ug/kg	
1330-20-7	Xylene (total)	ND	320	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



Report of Analysis

Client Sample ID: 7171-SO1	Date Sampled: 02/23/99
Lab Sample ID: F3738-1	Date Received: 02/23/99
Matrix: SO - Soil	Percent Solids: 92.4
Method: SW846 8260B	
Project:	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	G0007876.D	50	02/23/99	RAW	n/a	n/a	VG188
Run #2							

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		80-120%
2037-26-5	Toluene-D8	102%		81-117%
460-00-4	4-Bromofluorobenzene	107%		74-121%
17060-07-0	1,2-Dichloroethane-D4	92%		80-120%

(a) Sample introduction performed using method 5030A.

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

Report of Analysis

Client Sample ID: 7171-SO1	Date Sampled: 02/23/99
Lab Sample ID: F3738-1	Date Received: 02/23/99
Matrix: SO - Soil	Percent Solids: 92.4
Method: SW846 3550B/8270C	
Project:	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	L001205.D	4	02/27/99	NF	02/26/99	OP705	SL76
Run #2							

BN PAH List

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	720	ug/kg	
208-96-8	Acenaphthylene	ND	720	ug/kg	
120-12-7	Anthracene	ND	720	ug/kg	
56-55-3	Benzo(a)anthracene	ND	720	ug/kg	
50-32-8	Benzo(a)pyrene	ND	360	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	720	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	720	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	720	ug/kg	
218-01-9	Chrysene	ND	720	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	360	ug/kg	
206-44-0	Fluoranthene	ND	720	ug/kg	
86-73-7	Fluorene	ND	720	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	720	ug/kg	
90-12-0	1-Methylnaphthalene	ND	720	ug/kg	
91-57-6	2-Methylnaphthalene	ND	720	ug/kg	
91-20-3	Naphthalene	ND	720	ug/kg	
85-01-8	Phenanthrene	ND	720	ug/kg	
129-00-0	Pyrene	ND	720	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		25-121 %
4165-62-2	Phenol-d5	86%		24-113 %
118-79-6	2,4,6-Tribromophenol	83%		19-122 %
4165-60-0	Nitrobenzene-d5	96%		23-120 %
321-60-8	2-Fluorobiphenyl	88%		30-115 %
1718-51-0	Terphenyl-d14	88%		18-137 %

(a) Dilution required due to matrix interference.

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



Report of Analysis

Client Sample ID: 7171-SO1	
Lab Sample ID: F3738-1	Date Sampled: 02/23/99
Matrix: SO - Soil	Date Received: 02/23/99
Method: FLORIDA-PRO	Percent Solids: 92.4
Project:	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P03410.D	20	03/01/99	SKW	02/26/99	OP704	GOP162
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
	TPH (C8-C40)	878	180	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	93%		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



Report of Analysis

Client Sample ID: 7171-SO1	Date Sampled: 02/23/99
Lab Sample ID: F3738-1	Date Received: 02/23/99
Matrix: SO - Soil	Percent Solids: 92.4
Project:	

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.29 U	1.1	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Barium	18.5 B	21.6	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Cadmium	0.06 B	0.43	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Chromium	4.7	1.1	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Lead	8.7 B	10.8	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Mercury	0.045 U	0.045	mg/kg	1	02/26/99	03/01/99 JK	SW846 7471A
Selenium	0.55 B	10.8	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A
Silver	0.11 B	1.1	mg/kg	1	02/26/99	02/26/99 JK	SW846 6010A

RDL = Reported Detection Limit



CHAIN OF CUSTODY

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

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION		FACILITY INFORMATION				ANALYTICAL INFORMATION				MATRIX CODES		
NAME: <u>T.T. Mills</u> ADDRESS: <u>1311 Executive Center Dr #220</u> CITY: <u>Tallahassee FL</u> STATE: <u>32301</u> ZIP: _____ SEND REPORT TO: <u>Paul Calligan</u> PHONE #: <u>850-656-5458</u>		PROJECT NAME: <u># 7171</u> LOCATION: <u>NTC</u> PROJECT NO.: <u># 7781</u> FAX #: <u>850-656-7403</u>				8021 8 RCL FLO PRO 8270				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			MATRIX	# OF BOTTLES	PRESERVATION					LAB USE ONLY
		DATE	TIME	SAMPLED BY:			HCl	NaOH	HNO3	H2SO4	NONE	
<u>F-1388</u>	<u>SO1-7171</u>	<u>2-28-99</u>	<u>1000</u>	<u>GW</u>	<u>S</u>	<u>4</u>					<u>X</u>	

DATA TURNAROUND INFORMATION	DATA DELIVERABLE INFORMATION	COMMENTS/REMARKS
<input type="checkbox"/> STANDARD <input type="checkbox"/> 48 HOUR RUSH <input type="checkbox"/> 24 HOUR EMERGENCY <input checked="" type="checkbox"/> OTHER <u>72 hr</u> APPROVED BY: _____ EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED	<input type="checkbox"/> STANDARD <input type="checkbox"/> COMMERCIAL "B" <input type="checkbox"/> DISK DELIVERABLE <input type="checkbox"/> STATE FORMS <input type="checkbox"/> OTHER (SPECIFY) _____	

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

RELINQUISHED BY SAMPLER: 1.	DATE TIME:	RECEIVED BY: 1. <u>Abby Wilson</u>	RELINQUISHED BY: 2.	DATE TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3. <u>2-28-99</u>	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5. <u>1400</u>	SEAL #	PRESERVE WHERE APPLICABLE <input type="checkbox"/>	ON ICE <input type="checkbox"/>

TEMPERATURE
C

ATTACHMENT C

**POSTBURN LABORATORY ANALYTICAL REPORTS
AND CERTIFICATE OF MATERIALS RECYCLING**

#5444

#99-136

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 #7171

Orlando, Fla.

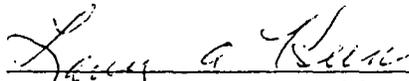
To evidence the total use, reuse and recycling of 581.90 tons of soil contaminated with petroleum products. Service performed by incineration.

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 16th, 1999

DATE



Larry A. Keene, President

Seal

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: 18402

 Sample Name: February 24, 1999 Composite #2
 Date Received: February 25, 1999
 Date Reported: March 4, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Total Petroleum Hydrocarbons	Fl-Pro	mg/kg	1.0	3/3/99	KB	23.9
Arsenic	7061	mg/kg	0.4	3/4/99	KB	0.7
Barium	7080	mg/kg	0.025	3/4/99	KB	14.3
Cadmium	7131	mg/kg	0.05	3/4/99	KB	0.9
Chromium	7191	mg/kg	0.1	3/4/99	KB	1.31
Lead	7421	mg/kg	0.05	3/4/99	KB	3.18
Mercury	7471	mg/kg	0.001	3/4/99	KB	<0.001
Selenium	7740	mg/kg	0.5	3/4/99	KB	<0.5
Silver	7760	mg/kg	0.05	3/4/99	KB	<0.05
Methyl-tert-butyl-ether	8021	ug/kg	1.4	2/26/99	KB	<1.4
Benzene	8021	ug/kg	0.9	2/26/99	KB	<0.9
Toluene	8021	ug/kg	0.7	2/26/99	KB	<0.7
Chlorobenzene	8021	ug/kg	1.7	2/26/99	KB	<1.7
Ethyl benzene	8021	ug/kg	0.8	2/26/99	KB	<0.8
m & p-Xylene	8021	ug/kg	1.6	2/26/99	KB	<1.6
o-Xylene	8021	ug/kg	0.8	2/26/99	KB	<0.8
m-Dichlorobenzene	8021	ug/kg	1.6	2/26/99	KB	<1.6
p-Dichlorobenzene	8021	ug/kg	1.6	2/26/99	KB	<1.6
o-Dichlorobenzene	8021	ug/kg	1.6	2/26/99	KB	<1.6
Total BTEX	8021	ug/kg	n/a	2/26/99	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
 Laboratory Director

Kent D. Bottorf
Signature

3/4/99
Date

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

Lab Control Number: 18402

Sample Name: February 24, 1999 Composite #2
Date Received: February 25, 1999
Date Reported: March 4, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodifluoroethane	8021	ug/kg	1.2	2/26/99	KB	<1.2
Bromomethane	8021	ug/kg	1.7	2/26/99	KB	<1.7
Chloroethane	8021	ug/kg	2.5	2/26/99	KB	<2.5
1,1-Dichloroethene	8021	ug/kg	1.3	2/26/99	KB	<1.3
Methylene Chloride	8021	ug/kg	1.3	2/26/99	KB	<1.3
trans 1,2-Dichloroethylene	8021	ug/kg	1.1	2/26/99	KB	<1.1
1,1-Dichloroethane	8021	ug/kg	1.3	2/26/99	KB	<1.3
Chloroform	8021	ug/kg	1.0	2/26/99	KB	<1.0
1,1,1-Trichloroethane	8021	ug/kg	1.3	2/26/99	KB	<1.3
Carbon Tetrachloride	8021	ug/kg	1.1	2/26/99	KB	<1.1
Trichloroethylene	8021	ug/kg	1.8	2/26/99	KB	<1.8
1,2-Dichloropropane	8021	ug/kg	1.5	2/26/99	KB	<1.5
Bromodichloromethane	8021	ug/kg	9.0	2/26/99	KB	<9.0
cis 1,3-Dichloropropane	8021	ug/kg	1.2	2/26/99	KB	<1.2
trans 1,3-Dichloropropane	8021	ug/kg	1.4	2/26/99	KB	<1.4
1-Chloro 2-Bromomethane	8021	ug/kg	1.2	2/26/99	KB	<1.2
1,1,2-Trichloroethane	8021	ug/kg	1.3	2/26/99	KB	<1.3
Tetrachloroethylene	8021	ug/kg	1.1	2/26/99	KB	<1.1
Dibromochloromethane	8021	ug/kg	1.1	2/26/99	KB	<1.1
1,2-Dibromomethane	8021	ug/kg	1.4	2/26/99	KB	<1.4
Chlorobenzene	8021	ug/kg	3.8	2/26/99	KB	<3.8
1,1,1,2-Tetrachloroethane	8021	ug/kg	1.3	2/26/99	KB	<1.3

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

Lab Control Number: 18402

Sample Name: February 24, 1999 Composite #2
Date Received: February 25, 1999
Date Reported: March 4, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Bromoform	8021	ug/kg	1.2	2/26/99	KB	<1.2
1,1,2,2-Tetrachlorethane	8021	ug/kg	1.0	2/26/99	KB	<1.0
1,2,3-Trichloropropane	8021	ug/kg	5.7	2/26/99	KB	<5.7
Bromobenzene	8021	ug/kg	1.1	2/26/99	KB	<1.1
4-Chlorotoluene	8021	ug/kg	1.4	2/26/99	KB	<1.4
m-Dichlorobenzene	8021	ug/kg	2.6	2/26/99	KB	<2.6
p-Dichlorobenzene	8021	ug/kg	2.5	2/26/99	KB	<2.5
o-Dichlorobenzene	8021	ug/kg	2.8	2/26/99	KB	<2.8
Total VOH	8021	ug/kg	n/a	2/26/99	KB	<9.0
8021 Dilution Factor	8021	x	n/a	n/a	n/a	1
Acenaphthene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Acenaphthylene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Anthracene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Benzo(a)anthracene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Benzo(a)pyrene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Benzo(b)fluoranthene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Benzo(ghi)perylene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Benzo(k)fluoranthene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Chrysene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Dibenzo(a,h)anthracene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Fluoranthene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Fluorene	8100	ug/kg	5.0	2/26/99	KB	<5.0

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: 18402

Sample Name: February 24, 1999 Composite #2
Date Received: February 25, 1999
Date Reported: March 4, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Indeno(1,2,3-cd)pyrene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Naphthalene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Phenanthrene	8100	ug/kg	5.0	2/26/99	KB	<5.0
Pyrene	8100	ug/kg	5.0	2/26/99	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

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

Lab Control Number: 18473

Sample Name: March 4, 1999 Composite #2
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	Fl-Pro	mg/kg	1.0	3/10/99	KB	19.3
Arsenic	7061	mg/kg	0.4	3/10/99	KB	0.6
Barium	7080	mg/kg	0.025	3/10/99	KB	13.1
Cadmium	7131	mg/kg	0.05	3/10/99	KB	0.9
Chromium	7191	mg/kg	0.1	3/10/99	KB	1.28
Lead	7421	mg/kg	0.05	3/10/99	KB	3.6
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
Laboratory Director

Kent D. Bottorf
Signature

3/11/99
Date

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

Lab Control Number: 18473

Sample Name: March 4, 1999 Composite #2
 Date Received: March 5, 1999
 Date Reported: March 11, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodifluoroethane	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-Trichloroethane	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
Tetrachloroethylene	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

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

Lab Control Number: 18546

Sample Name: March 8, 1999 Composite #1
 Date Received: March 12, 1999
 Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Total Petroleum Hydrocarbons	Fl-Pro	mg/kg	1.0	3/18/99	KB	24.1
Arsenic	7061	mg/kg	0.4	3/15/99	KB	<0.4
Barium	7080	mg/kg	0.025	3/15/99	KB	3.0
Cadmium	7131	mg/kg	0.05	3/15/99	KB	0.4
Chromium	7191	mg/kg	0.1	3/15/99	KB	1.70
Lead	7421	mg/kg	0.05	3/15/99	KB	5.5
Mercury	7471	mg/kg	0.001	3/15/99	KB	<0.001
Selenium	7740	mg/kg	0.5	3/15/99	KB	<0.5
Silver	7760	mg/kg	0.05	3/15/99	KB	0.56
Methyl-tert-butyl-ether	8021	ug/kg	1.4	3/15/99	KB	<1.4
Benzene	8021	ug/kg	0.9	3/15/99	KB	<0.9
Toluene	8021	ug/kg	0.7	3/15/99	KB	<0.7
Chlorobenzene	8021	ug/kg	1.7	3/15/99	KB	<1.7
Ethyl benzene	8021	ug/kg	0.8	3/15/99	KB	<0.8
m & p-Xylene	8021	ug/kg	1.6	3/15/99	KB	<1.6
o-Xylene	8021	ug/kg	0.8	3/15/99	KB	<0.8
m-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
p-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
o-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
Total BTEX	8021	ug/kg	n/a	3/15/99	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
 Laboratory Director

Kent D. Bottorf
 Signature

3/18/99
 Date

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

Lab Control Number: 18546

Sample Name: March 8, 1999 Composite #1
 Date Received: March 12, 1999
 Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodifluoroethane	8021	ug/kg	1.2	3/15/99	KB	<1.2
Bromomethane	8021	ug/kg	1.7	3/15/99	KB	<1.7
Chloroethane	8021	ug/kg	2.5	3/15/99	KB	<2.5
1,1-Dichloroethene	8021	ug/kg	1.3	3/15/99	KB	<1.3
Methylene Chloride	8021	ug/kg	1.3	3/15/99	KB	<1.3
trans 1,2-Dichloroethylene	8021	ug/kg	1.1	3/15/99	KB	<1.1
1,1-Dichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Chloroform	8021	ug/kg	1.0	3/15/99	KB	<1.0
1,1,1-Trichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Carbon Tetrachloride	8021	ug/kg	1.1	3/15/99	KB	<1.1
Trichloroethylene	8021	ug/kg	1.8	3/15/99	KB	<1.8
1,2-Dichloropropane	8021	ug/kg	1.5	3/15/99	KB	<1.5
Bromodichloromethane	8021	ug/kg	9.0	3/15/99	KB	<9.0
cis 1,3-Dichloropropane	8021	ug/kg	1.2	3/15/99	KB	<1.2
trans 1,3-Dichloropropane	8021	ug/kg	1.4	3/15/99	KB	<1.4
1-Chloro 2-Bromomethane	8021	ug/kg	1.2	3/15/99	KB	<1.2
1,1,2-Trichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Tetrachloroethylene	8021	ug/kg	1.1	3/15/99	KB	<1.1
Dibromochloromethane	8021	ug/kg	1.1	3/15/99	KB	<1.1
1,2-Dibromomethane	8021	ug/kg	1.4	3/15/99	KB	<1.4
Chlorobenzene	8021	ug/kg	3.8	3/15/99	KB	<3.8
1,1,1,2-Tetrachloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3

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

Lab Control Number: 18546

Sample Name: March 8, 1999 Composite #1
 Date Received: March 12, 1999
 Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Bromoform	8021	ug/kg	1.2	3/15/99	KB	<1.2
1,1,2,2-Tetrachlorethane	8021	ug/kg	1.0	3/15/99	KB	<1.0
1,2,3-Trichloropropane	8021	ug/kg	5.7	3/15/99	KB	<5.7
Bromobenzene	8021	ug/kg	1.1	3/15/99	KB	<1.1
4-Chlorotoluene	8021	ug/kg	1.4	3/15/99	KB	<1.4
m-Dichlorobenzene	8021	ug/kg	2.6	3/15/99	KB	<2.6
p-Dichlorobenzene	8021	ug/kg	2.5	3/15/99	KB	<2.5
o-Dichlorobenzene	8021	ug/kg	2.8	3/15/99	KB	<2.8
Total VOH	8021	ug/kg	n/a	3/15/99	KB	<9.0
8021 Dilution Factor	8021	x	n/a	n/a	n/a	1
Acenaphthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Acenaphthylene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(a)anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(a)pyrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(b)fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(ghi)perylene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(k)fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Chrysene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Dibenzo(a,h)anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Fluorene	8100	ug/kg	5.0	3/15/99	KB	<5.0

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

Lab Control Number: 18546

Sample Name: March 8, 1999 Composite #1
Date Received: March 12, 1999
Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Indeno(1,2,3-cd)pyrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Naphthalene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Phenanthrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Pyrene	8100	ug/kg	5.0	3/15/99	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

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

Lab Control Number: 18549

Sample Name: March 9, 1999 Composite #2
Date Received: March 12, 1999
Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Total Petroleum Hydrocarbons	FI-Pro	mg/kg	1.0	3/18/99	KB	18.5
Arsenic	7061	mg/kg	0.4	3/15/99	KB	<0.4
Barium	7080	mg/kg	0.025	3/15/99	KB	1.9
Cadmium	7131	mg/kg	0.05	3/15/99	KB	0.4
Chromium	7191	mg/kg	0.1	3/15/99	KB	1.7
Lead	7421	mg/kg	0.05	3/15/99	KB	5.1
Mercury	7471	mg/kg	0.001	3/15/99	KB	<0.001
Selenium	7740	mg/kg	0.5	3/15/99	KB	<0.5
Silver	7760	mg/kg	0.05	3/15/99	KB	0.28
Methyl-tert-butyl-ether	8021	ug/kg	1.4	3/15/99	KB	<1.4
Benzene	8021	ug/kg	0.9	3/15/99	KB	<0.9
Toluene	8021	ug/kg	0.7	3/15/99	KB	<0.7
Chlorobenzene	8021	ug/kg	1.7	3/15/99	KB	<1.7
Ethyl benzene	8021	ug/kg	0.8	3/15/99	KB	<0.8
m & p-Xylene	8021	ug/kg	1.6	3/15/99	KB	<1.6
o-Xylene	8021	ug/kg	0.8	3/15/99	KB	<0.8
m-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
p-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
o-Dichlorobenzene	8021	ug/kg	1.6	3/15/99	KB	<1.6
Total BTEX	8021	ug/kg	n/a	3/15/99	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
Laboratory DirectorKent D. Bottorf

Signature

3/18/99

Date

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

Lab Control Number: 18549

Sample Name: March 9, 1999 Composite #2
Date Received: March 12, 1999
Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodifluoroethane	8021	ug/kg	1.2	3/15/99	KB	<1.2
Bromomethane	8021	ug/kg	1.7	3/15/99	KB	<1.7
Chloroethane	8021	ug/kg	2.5	3/15/99	KB	<2.5
1,1-Dichloroethene	8021	ug/kg	1.3	3/15/99	KB	<1.3
Methylene Chloride	8021	ug/kg	1.3	3/15/99	KB	<1.3
trans 1,2-Dichloroethylene	8021	ug/kg	1.1	3/15/99	KB	<1.1
1,1-Dichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Chloroform	8021	ug/kg	1.0	3/15/99	KB	<1.0
1,1,1-Trichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Carbon Tetrachloride	8021	ug/kg	1.1	3/15/99	KB	<1.1
Trichloroethylene	8021	ug/kg	1.8	3/15/99	KB	<1.8
1,2-Dichloropropane	8021	ug/kg	1.5	3/15/99	KB	<1.5
Bromodichloromethane	8021	ug/kg	9.0	3/15/99	KB	<9.0
cis 1,3-Dichloropropane	8021	ug/kg	1.2	3/15/99	KB	<1.2
trans 1,3-Dichloropropane	8021	ug/kg	1.4	3/15/99	KB	<1.4
1-Chloro 2-Bromomethane	8021	ug/kg	1.2	3/15/99	KB	<1.2
1,1,2-Trichloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3
Tetrachloroethylene	8021	ug/kg	1.1	3/15/99	KB	<1.1
Dibromochloromethane	8021	ug/kg	1.1	3/15/99	KB	<1.1
1,2-Dibromomethane	8021	ug/kg	1.4	3/15/99	KB	<1.4
Chlorobenzene	8021	ug/kg	3.8	3/15/99	KB	<3.8
1,1,1,2-Tetrachloroethane	8021	ug/kg	1.3	3/15/99	KB	<1.3

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

Lab Control Number: 18549

Sample Name: March 9, 1999 Composite #2
 Date Received: March 12, 1999
 Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Bromoform	8021	ug/kg	1.2	3/15/99	KB	<1.2
1,1,2,2-Tetrachlorethane	8021	ug/kg	1.0	3/15/99	KB	<1.0
1,2,3-Trichloropropane	8021	ug/kg	5.7	3/15/99	KB	<5.7
Bromobenzene	8021	ug/kg	1.1	3/15/99	KB	<1.1
4-Chlorotoluene	8021	ug/kg	1.4	3/15/99	KB	<1.4
m-Dichlorobenzene	8021	ug/kg	2.6	3/15/99	KB	<2.6
p-Dichlorobenzene	8021	ug/kg	2.5	3/15/99	KB	<2.5
o-Dichlorobenzene	8021	ug/kg	2.8	3/15/99	KB	<2.8
Total VOH	8021	ug/kg	n/a	3/15/99	KB	<9.0
8021 Dilution Factor	8021	x	n/a	n/a	n/a	1
Acenaphthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Acenaphthylene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(a)anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(a)pyrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(b)fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(ghi)perylene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Benzo(k)fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Chrysene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Dibenzo(a,h)anthracene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Fluoranthene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Fluorene	8100	ug/kg	5.0	3/15/99	KB	<5.0

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

Lab Control Number: 18549

Sample Name: March 9, 1999 Composite #2
Date Received: March 12, 1999
Date Reported: March 18, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Indeno(1,2,3-cd)pyrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Naphthalene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Phenanthrene	8100	ug/kg	5.0	3/15/99	KB	<5.0
Pyrene	8100	ug/kg	5.0	3/15/99	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

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

Lab Control Number: 18594

Sample Name: March 16, 1999 Composite #2
Date Received: March 19, 1999
Date Reported: March 25, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Total Petroleum Hydrocarbons	FI-Pro	mg/kg	1.0	3/24/99	KB	22.6
Arsenic	7061	mg/kg	0.4	3/25/99	KB	<0.4
Barium	7080	mg/kg	0.025	3/25/99	KB	1.6
Cadmium	7131	mg/kg	0.05	3/25/99	KB	<0.05
Chromium	7191	mg/kg	0.1	3/25/99	KB	1.8
Lead	7421	mg/kg	0.05	3/25/99	KB	4.7
Mercury	7471	mg/kg	0.001	3/25/99	KB	<0.001
Selenium	7740	mg/kg	0.5	3/25/99	KB	<0.5
Iver	7760	mg/kg	0.05	3/25/99	KB	<0.05
Methyl-tert-butyl-ether	8021	ug/kg	1.4	3/23/99	KB	<1.4
Benzene	8021	ug/kg	0.9	3/23/99	KB	<0.9
Toluene	8021	ug/kg	0.7	3/23/99	KB	<0.7
Chlorobenzene	8021	ug/kg	1.7	3/23/99	KB	<1.7
Ethyl benzene	8021	ug/kg	0.8	3/23/99	KB	<0.8
m & p-Xylene	8021	ug/kg	1.6	3/23/99	KB	<1.6
o-Xylene	8021	ug/kg	0.8	3/23/99	KB	<0.8
m-Dichlorobenzene	8021	ug/kg	1.6	3/23/99	KB	<1.6
p-Dichlorobenzene	8021	ug/kg	1.6	3/23/99	KB	<1.6
o-Dichlorobenzene	8021	ug/kg	1.6	3/23/99	KB	<1.6
Total BTEX	8021	ug/kg	n/a	3/23/99	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
Laboratory DirectorKent D. Bottorf
Signature3/25/99
Date

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

Lab Control Number: 18594

Sample Name: March 16, 1999 Composite #2
Date Received: March 19, 1999
Date Reported: March 25, 1999

Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Dichlorodiflouroethane	8021	ug/kg	1.2	3/23/99	KB	<1.2
Bromomethane	8021	ug/kg	1.7	3/23/99	KB	<1.7
Chloroethane	8021	ug/kg	2.5	3/23/99	KB	<2.5
1,1-Dichloroethene	8021	ug/kg	1.3	3/23/99	KB	<1.3
Methylene Chloride	8021	ug/kg	1.3	3/23/99	KB	<1.3
trans 1,2-Dichloroethylene	8021	ug/kg	1.1	3/23/99	KB	<1.1
1,1-Dichloroethane	8021	ug/kg	1.3	3/23/99	KB	<1.3
Chloroform	8021	ug/kg	1.0	3/23/99	KB	<1.0
1,1,1-Trichlorethane	8021	ug/kg	1.3	3/23/99	KB	<1.3
Carbon Tetrachloride	8021	ug/kg	1.1	3/23/99	KB	<1.1
Trichloroethylene	8021	ug/kg	1.8	3/23/99	KB	<1.8
1,2-Dichloropropane	8021	ug/kg	1.5	3/23/99	KB	<1.5
Bromodichloromethane	8021	ug/kg	9.0	3/23/99	KB	<9.0
cis 1,3-Dichloropropane	8021	ug/kg	1.2	3/23/99	KB	<1.2
trans 1,3-Dichloropropane	8021	ug/kg	1.4	3/23/99	KB	<1.4
1-Chloro 2-Bromomethane	8021	ug/kg	1.2	3/23/99	KB	<1.2
1,1,2-Trichloroethane	8021	ug/kg	1.3	3/23/99	KB	<1.3
Tertrachloroethylene	8021	ug/kg	1.1	3/23/99	KB	<1.1
Dibromochloromethane	8021	ug/kg	1.1	3/23/99	KB	<1.1
1,2-Dibromomethane	8021	ug/kg	1.4	3/23/99	KB	<1.4
Chlorobenzene	8021	ug/kg	3.8	3/23/99	KB	<3.8
1,1,1,2-Tetrachloroethane	8021	ug/kg	1.3	3/23/99	KB	<1.3

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Bromoform	8021	ug/kg	1.2	3/23/99	KB	<1.2
1,1,2,2-Tetrachlorethane	8021	ug/kg	1.0	3/23/99	KB	<1.0
1,2,3-Trichloropropane	8021	ug/kg	5.7	3/23/99	KB	<5.7
Bromobenzene	8021	ug/kg	1.1	3/23/99	KB	<1.1
4-Chlorotoluene	8021	ug/kg	1.4	3/23/99	KB	<1.4
m-Dichlorobenzene	8021	ug/kg	2.6	3/23/99	KB	<2.6
p-Dichlorobenzene	8021	ug/kg	2.5	3/23/99	KB	<2.5
o-Dichlorobenzene	8021	ug/kg	2.8	3/23/99	KB	<2.8
Total VOH	8021	ug/kg	n/a	3/23/99	KB	<9.0
8021 Dilution Factor	8021	x	n/a	n/a	n/a	1
Acenaphthene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Acenaphthylene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Anthracene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Benzo(a)anthracene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Benzo(a)pyrene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Benzo(b)fluoranthene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Benzo(ghi)perylene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Benzo(k)fluoranthene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Chrysene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Dibenzo(a,h)anthracene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Fluoranthene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Fluorene	8100	ug/kg	5.0	3/23/99	KB	<5.0

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Lab Control Number: 18594

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Parameter	Analysis Method	Reporting Units	Method Detection Limit	Analysis Date	Analyst	Result
Indeno(1,2,3-cd)pyrene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Naphthalene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Phenanthrene	8100	ug/kg	5.0	3/23/99	KB	<5.0
Pyrene	8100	ug/kg	5.0	3/23/99	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



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.: MW-4	SAMPLE ID: 082GM401	DATE: 4/16/99
SITE NAME: NTC ORLANDO - MCCOY ANNEX		SITE LOCATION: BUILDING 7171	

PURGE DATA							
WELL DIAMETER (in): 2		TOTAL WELL DEPTH (ft): 14.88		DEPTH TO WATER (ft): 8.49		WELL CAPACITY (gal/ft): 0.16	
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (14.88 - 8.49) \times 0.16 = 1.02$							
PURGE METHOD: PERISTALTIC PUMP				PURGING INITIATED AT: 08:55		PURGING ENDED AT: 09:10	
WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	PURGE RATE (gpm): 0.47		TOTAL VOLUME PURGED (gal): 7.0 GALLONS
					COLOR	ODOR	APPEARANCE	TURBIDITY
INT	INT	6.43	23.5	900			130.7
3.4	3.5	6.51	23.1	900			18.7
4.9	5.0	6.59	23.1	900			10.15
6.9	7.0	6.63	23.1	875			9.85

SAMPLING DATA						
SAMPLED BY / AFFILIATION: CHRIS PISARRI AND MANUEL ALONSO				SAMPLER(S) SIGNATURE(S): <i>Christopher J. Pisarr</i>		
SAMPLING METHOD(S): PERISTALTIC PUMP				SAMPLING INITIATED AT: 09:10		SAMPLING ENDED AT: 09:30
FIELD DECONTAMINATION: N			FIELD-FILTERED: N		DUPLICATE: N	
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					8310/8015
	O-PLASTIC					PB 239.2

REMARKS:

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

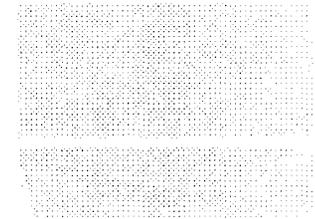
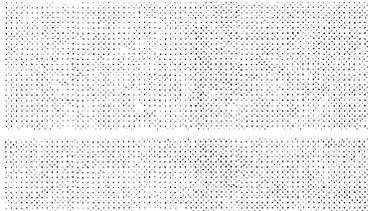
GROUNDWATER LABORATORY ANALYTICAL REPORTS

NTC Orlando Building 7171 - McCoy Annex

Sample Identifier	082GM401 MW-4
Sample Collect Date	4/16/99
Analyte	
1,1,1-Trichloroethane	1 U ug/l (1)
1,1,2,2-Tetrachloroethane	1 U ug/l (1)
1,1,2-Trichloroethane	1 U ug/l (1)
1,1-Dichloroethane	1 U ug/l (1)
1,1-Dichloroethene	1 U ug/l (1)
1,2-Dibromoethane	.02 U ug/l (.02)
1,2-Dibromo-3-chloropropane	.02 U ug/l (.02)
1,2-Dichlorobenzene	1 U ug/l (1)
1,2-Dichloroethane	1 U ug/l (1)
1,2-Dichloropropane	1 U ug/l (1)
1,3-Dichlorobenzene	1 U ug/l (1)
1,4-Dichlorobenzene	1 U ug/l (1)
1-Methylnaphthalene	1 U ug/l (1)
2-Methylnaphthalene	1 U ug/l (1)
Acenaphthene	1 U ug/l (1)
Acenaphthylene	1 U ug/l (1)
Anthracene	.2 U ug/l (.2)
Benzene	1 U ug/l (1)
Benzo (a) Anthracene	.2 U ug/l (.2)
Benzo (a) Pyrene	.2 U ug/l (.2)
Benzo (b) Fluoranthene	.2 U ug/l (.2)
Benzo (g,h,i) Perylene	.5 U ug/l (.5)
Benzo (k) Fluoranthene	.2 U ug/l (.2)
Bromodichloromethane	1 U ug/l (1)
Bromoform	5 U ug/l (5)
Bromomethane	1 U ug/l (1)
Carbon tetrachloride	1 U ug/l (1)
Chlorobenzene	1 U ug/l (1)
Chloroethane	1 U ug/l (1)

Sample Identifier	082GM401 MW-4
Sample Collect Date	4/16/99
Analyte	
Chloroform	1 U ug/l (1)
Chloromethane	1 U ug/l (1)
Chrysene	.2 U ug/l (.2)
cis 1,3-Dichloropropene	1 U ug/l (1)
Cis/Trans-1,2-Dichloroethene	1 U ug/l (1)
Dibenzo (a,h) anthracene	.2 U ug/l (.2)
Dibromochloromethane	1 U ug/l (1)
Dichlorodifluoromethane	1 U ug/l (1)
Ethylbenzene	1 U ug/l (1)
Fluoranthene	.5 U ug/l (.5)
Fluorene	.5 U ug/l (.5)
Hydrocarbons as Diesel	.3 U mg/l (.3)
Hydrocarbons as Heavy Oils	3 U mg/l (3)
Hydrocarbons as Kerosene	.3 UX mg/l (.3)
Hydrocarbons as Mineral Spirit	.3 U mg/l (.3)
Indeno (1,2,3-cd) pyrene	.2 U ug/l (.2)
Lead	.005 U mg/l (.005)
Methyl tert-butyl ether	10 U ug/l (10)
Methylene chloride	5 U ug/l (5)
Naphthalene	1 U ug/l (1)
Petroleum Range Organics (FL-	.3 U mg/l (.3)
Phenanthrene	.2 U ug/l (.2)
Pyrene	.5 U ug/l (.5)
Surrogate - a,a,a-Trifluorotol	90 Percent (0)
Surrogate - Bromochloromethan	88 Percent (0)
Surrogate - O-Terphenyl (OTP)	100 Percent (0)
Surrogate - Terphenyl - d14	96 Percent (0)
Tetrachloroethene	1 U ug/l (1)
Toluene	1 U ug/l (1)
trans 1,3-Dichloropropene	1 U ug/l (1)
Trichloroethene	1 U ug/l (1)
Trichlorofluoromethane	1 U ug/l (1)

Sample Identifier	082GM401 MW-4
Sample Collect Date	4/16/99
Analyte	
Vinyl chloride	1 U ug/l (1)
Xylenes (total)	1 U ug/l (1)



Footnotes: Values in parentheses are detection limits

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

Page 9

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-4	082GM401 MW-4	04-16-99/0930	ABOR32
PARAMETER	12469-4		
Polynuclear Aromatics (8310)			
Acenaphthene, ug/l		1.0U	
Acenaphthylene, ug/l		1.0U	
Anthracene, ug/l		0.20U	
Benzo(a)anthracene, ug/l		0.20U	
Benzo(a)pyrene, ug/l		0.20U	
Benzo(b)fluoranthene, ug/l		0.20U	
Benzo(g,h,i)perylene, ug/l		0.50U	
Benzo(k)fluoranthene, ug/l		0.20U	
Chrysene, ug/l		0.20U	
Dibenzo(a,h)anthracene, ug/l		0.20U	
Fluoranthene, ug/l		0.50U	
Fluorene, ug/l		0.50U	
Indeno(1,2,3-cd)pyrene, ug/l		0.20U	
Naphthalene, ug/l		1.0U	
Phenanthrene, ug/l		0.20U	
Pyrene, ug/l		0.50U	
1-Methylnaphthalene, ug/l		1.0U	
2-Methylnaphthalene, ug/l		1.0U	
Surrogate - Terphenyl - d14		96 *	
Date Extracted		04.21.99	
Date Analyzed		04.26.99	
Dilution factor		1.0	
Batch ID		0421K	
Instrument ID		LCAUV	

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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

Page 10

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-4	082GM401 MW-4	04-16-99/0930	ABOR32
PARAMETER		12469-4	
Hydrocarbons (Modified 8015E)			
	Hydrocarbons as Kerosene, mg/l	0.30UX	
	Hydrocarbons as Diesel , mg/l	0.30U	
	Hydrocarbons as Heavy Oils, mg/l	3.0U	
	Hydrocarbons as Mineral Spirits, mg/l	0.30U	
	Surrogate - O-Terphenyl (OTP)	90 %	
	Date Extracted	04.21.99	
	Dilution factor	1.0	
	Date Analyzed	05.07.99	
	Batch ID	0421V	
	Instrument ID	SGPFID	
	Initial Volume/Weight	1000	
	Final Volume (FV1)	1.0	
Petroleum Range Organics (FL-PRO)			
	Petroleum Range Organics (FL-PRO), mg/l	0.30U	
	Surrogate - O-Terphenyl (OTP)	100 %	
	Dilution factor	1.0	
	Date Extracted	04.21.99	
	Date Analyzed	05.06.99	
	Batch ID	0421U	
	Initial Volume/Weight	1000	
	Final Extraction Volume (FV1)	1.0	

B10g 7171

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REPORT OF RESULTS

Page 11

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-4	082GM401 MW-4	04-16-99/0930	ABOR32
PARAMETER		12469-4	
Lead (239.2)			
Lead, mg/l		0.0050U	
Preparation Date		04.22.99	
Date Analyzed		04.28.99	
Dilution factor		1.0	
Batch ID		0422I	
Initial Volume/Weight		50	
Final Volume (FV1)		50	
Microextractables (504.1)			
1,2-Dibromoethane (EDB), ug/l		0.020U	
1,2-Dibromo-3-chloropropane, ug/l		0.020U	
Date Extracted		04.21.99	
Date Analyzed		04.21.99	
Initial Volume/Weight		37	
Final Volume (FV1)		2.0	

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REPORT OF RESULTS

Page 12

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-4	082GM401 MW-4	04-16-99/0930	ABOR32
PARAMETER		12469-4	
Purgeable Halocarbons (601)			
	Bromodichloromethane, ug/l	1.00	
	Bromoform, ug/l	5.00	
	Bromomethane, ug/l	1.00	
	Carbon tetrachloride, ug/l	1.00	
	Chlorobenzene, ug/l	1.00	
	Chloroethane, ug/l	1.00	
	Chloroform, ug/l	1.00	
	Chloromethane, ug/l	1.00	
	Dibromochloromethane, ug/l	1.00	
	1,2-Dichlorobenzene, ug/l	1.00	
	1,3-Dichlorobenzene, ug/l	1.00	
	1,4-Dichlorobenzene, ug/l	1.00	
	Dichlorodifluoromethane, ug/l	1.00	
	1,1-Dichloroethane, ug/l	1.00	
	1,2-Dichloroethane, ug/l	1.00	
	1,1-Dichloroethene, ug/l	1.00	
	Cis/Trans-1,2-Dichloroethene, ug/l	1.00	
	1,2-Dichloropropane, ug/l	1.00	
	cis-1,3-Dichloropropene, ug/l	1.00	
	trans-1,3-Dichloropropene, ug/l	1.00	
	Methylene chloride (Dichloromethane), ug/l	5.00	
	1,1,2,2-Tetrachloroethane, ug/l	1.00	

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: 89-12469
 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

Page 13

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-4	082GM401 MW-4	04-16-99/0930	ABOR32
PARAMETER		12469-4	

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

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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

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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

Page 14

LOG NO	SAMPLE DESCRIPTION, LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-5	Trip Blank	04-17-99	ABOR32
PARAMETER	12469-5		
Purgeable Halocarbons (601)			
Bromodichloromethane, ug/l		1.0U	
Bromoform, ug/l		5.0U	
Bromomethane, ug/l		1.0U	
Carbon tetrachloride, ug/l		1.0U	
Chlorobenzene, ug/l		1.0U	
Chloroethane, ug/l		1.0U	
Chloroform, ug/l		1.0U	
Chloromethane, ug/l		1.0U	
Dibromochloromethane, ug/l		1.0U	
1,2-Dichlorobenzene, ug/l		1.0U	
1,3-Dichlorobenzene, ug/l		1.0U	
1,4-Dichlorobenzene, ug/l		1.0U	
Dichlorodifluoromethane, ug/l		1.0U	
1,1-Dichloroethane, ug/l		1.0U	
1,2-Dichloroethane, ug/l		1.0U	
1,1-Dichloroethane, ug/l		1.0U	
Cis/Trans-1,2-Dichloroethene, ug/l		1.0U	
1,2-Dichloropropane, ug/l		1.0U	
cis-1,3-Dichloropropene, ug/l		1.0U	
trans-1,3-Dichloropropene, ug/l		1.0U	
Methylene chloride (Dichloromethane), ug/l		5.0U	
1,1,2,2-Tetrachloroethane, ug/l		1.0U	

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 Sampled By: Client
 Code: 121290511

REPORT OF RESULTS

Page 15

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-5	Trip Blank	04-17-99	ABOR32
PARAMETER		12469-5	
	Tetrachloroethene, ug/l	1.0U	
	1,1,1-Trichloroethane, ug/l	1.0U	
	1,1,2-Trichloroethane, ug/l	1.0U	
	Trichloroethylene, ug/l	1.0U	
	Trichlorofluoromethane, ug/l	1.0U	
	Vinyl chloride, ug/l	1.0U	
	Surrogate - Bromochloromethane	93 %	
	Date Analyzed	04.22.99	
	Dilution factor	1.0	
	Batch ID	1B0421	
Purgeable Aromatics (602)			
	Benzene, ug/l	1.0U	
	Toluene, ug/l	1.0U	
	Ethylbenzene, ug/l	1.0U	
	Total Xylenes, ug/l	1.0U	
	Methyl tert-butyl ether (MTBE), ug/l	10U	
	Surrogate - a,a,a-Trifluorotoluene	100 %	
	Date Analyzed	04.22.99	
	Dilution factor	1.0	
	Batch ID	1B0421	

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

Page 16

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-6	Method Blank		ABOR32
PARAMETER	12469-6		
Polynuclear Aromatics (8310)			
Acenaphthene, ug/l		1.00	
Acenaphthylene, ug/l		1.00	
Anthracene, ug/l		0.20U	
Benzo(a)anthracene, ug/l		0.20U	
Benzo(a)pyrene, ug/l		0.20U	
Benzo(b)fluoranthene, ug/l		0.20U	
Benzo(g,h,i)perylene, ug/l		0.50U	
Benzo(k)fluoranthene, ug/l		0.20U	
Chrysene, ug/l		0.20U	
Dibenzo(a,h)anthracene, ug/l		0.20U	
Fluoranthene, ug/l		0.50U	
Fluorene, ug/l		0.50U	
Indeno(1,2,3-cd)pyrene, ug/l		0.20U	
Naphthalene, ug/l		1.00	
Phenanthrene, ug/l		0.20U	
Pyrene, ug/l		0.50U	
1-Methylnaphthalene, ug/l		1.00	
2-Methylnaphthalene, ug/l		1.00	
Surrogate - Terphenyl - d14		84 %	
Date Extracted		04.21.99	
Date Analyzed		04.23.99	
Dilution factor		1.0	
Batch ID		0421K	
Instrument ID		LCAUV	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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 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
 Coda: 121290511

REPORT OF RESULTS

Page 17

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-6	Method Blank		ABOR32
PARAMETER		12469-6	
Hydrocarbons (Modified 8015E)			
	Hydrocarbons as Kerosene, mg/l	0.30U	
	Hydrocarbons as Diesel , mg/l	0.30U	
	Hydrocarbons as Heavy Oils, mg/l	3.0U	
	Hydrocarbons as Mineral Spirits, mg/l	0.30U	
	Surrogate - O-Terphenyl (OTP)	75 %	
	Date Extracted	04.21.99	
	Dilution Factor	1.0	
	Date Analyzed	04.27.99	
	Batch ID	0421V	
	Instrument ID	SGQFID	
	Initial Volume/Weight	1000	
	Final Volume (FV1)	1.0	
Petroleum Range Organics (FL-PRO)			
	Petroleum Range Organics (FL-PRO), mg/l	0.30U	
	Surrogate - O-Terphenyl (OTP)	75 %	
	Dilution factor	1.0	
	Date Extracted	04.21.99	
	Date Analyzed	05.05.99	
	Batch ID	0421U	
	Initial Volume/Weight	1000	
	Final Extraction Volume (FV1)	1.0	

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& ENVIRONMENTAL SERVICES, INC.

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

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 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

Page 18

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-6	Method Blank		ABOR32
PARAMETER		12469-6	
Lead (239.2)			
Lead, mg/l		0.0050U	
Preparation Date		04.22.99	
Date Analyzed		04.28.99	
Dilution factor		1.0	
Batch ID		0422I	
Initial Volume/Weight		50	
Final Volume (FV1)		50	
Microextractables (504.1)			
1,2-Dibromoethane (EDB), ug/l		0.020U	
1,2-Dibromo-3-chloropropane, ug/l		0.020U	
Date Extracted		04.21.99	
Date Analyzed		04.21.99	
Initial Volume/Weight		35	
Final Volume (FV1)		2.0	

SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

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 Received: 17 APR 99
 Reported: 11 MAY 99

Mr. Chris Pisarri
 Harding Lawson Associates
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 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

Page 19

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-6	Method Blank		ABOR32
PARAMETER		12469-6	
Purgeable Halocarbons (601)			
Bromodichloromethane, ug/l		1.00	
Bromoform, ug/l		5.00	
Bromomethane, ug/l		1.00	
Carbon tetrachloride, ug/l		1.00	
Chlorobenzene, ug/l		1.00	
Chloroethane, ug/l		1.00	
Chloroform, ug/l		1.00	
Chloromethane, ug/l		1.00	
Dibromochloromethane, ug/l		1.00	
1,2-Dichlorobenzene, ug/l		1.00	
1,3-Dichlorobenzene, ug/l		1.00	
1,4-Dichlorobenzene, ug/l		1.00	
Dichlorodifluoromethane, ug/l		1.00	
1,1-Dichloroethane, ug/l		1.00	
1,2-Dichloroethane, ug/l		1.00	
1,1-Dichloroethene, ug/l		1.00	
Cis/Trans-1,2-Dichloroethene, ug/l		1.00	
1,2-Dichloropropane, ug/l		1.00	
cis-1,3-Dichloropropene, ug/l		1.00	
trans-1,3-Dichloropropene, ug/l		1.00	
Methylene chloride (Dichloromethane), ug/l		5.00	
1,1,2,2-Tetrachloroethane, ug/l		1.00	

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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

Page 20

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-6	Method Blank		ABOR32
PARAMETER		12469-6	
Tetrachloroethene, ug/l		1.00	
1,1,1-Trichloroethane, ug/l		1.00	
1,1,2-Trichloroethane, ug/l		1.00	
Trichloroethylene, ug/l		1.00	
Trichlorofluoromethane, ug/l		1.00	
Vinyl chloride, ug/l		1.00	
Surrogate - Bromochloromethane		97 %	
Date Analyzed		04.21.99	
Dilution factor		1.0	
Batch ID		1B0421	
Purgeable Aromatics (602)			
Benzene, ug/l		1.00	
Toluene, ug/l		1.00	
Ethylbenzene, ug/l		1.00	
Total Xylenes, ug/l		1.00	
Methyl tert-butyl ether (MTBE), ug/l		100	
Surrogate - a,a,a-Trifluorotoluene		93 %	
Date Analyzed		04.21.99	
Dilution factor		1.0	
Batch ID		1B0421	

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 Project: NTC Orlando-354/2547-06/SDG#ABOR
 Sampled By: Client
 Code: 121290511

REPORT OF RESULTS

Page 21

LOG NO	SAMPLE DESCRIPTION, QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-7	Lab Control Standard % Recovery		ABOR32
PARAMETER		12469-7	
Polynuclear Aromatics (8310)			
Acenaphthene		56 %	
Acenaphthylene		66 %	
Anthracene		80 %	
Benzo (a) anthracene		84 %	
Benzo (a) pyrene		62 %	
Benzo (b) fluoranthene		90 %	
Benzo (g, h, i) perylene		71 %	
Benzo (k) fluoranthene		95 %	
Chrysene		88 %	
Dibenzo (a, h) anthracene		85 %	
Fluoranthene		88 %	
Fluorene		71 %	
Indeno (1, 2, 3-cd) pyrene		100 %	
Naphthalene		60 %	
Phenanthrene		82 %	
Pyrene		83 %	
1-Methylnaphthalene		62 %	
2-Methylnaphthalene		66 %	
Surrogate - Terphenyl - d14		96 %	
Date Extracted		04.21.99	
Date Analyzed		04.23.99	
Dilution factor		1.0	
Batch ID		0421K	
Instrument ID		LCAUV	

SL SAVANNAH LABORATORIES

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 Code: 121290511

REPORT OF RESULTS

Page 22

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-7	Lab Control Standard % Recovery		ABOR32
PARAMETER		12469-7	
Hydrocarbons (Modified 8015R)			
Hydrocarbons as Diesel		62 %	
Surrogate - O-Terphenyl (OTP)		75 %	
Date Extracted		04.21.99	
Dilution factor		1.0	
Date Analyzed		04.27.99	
Batch ID		0421V	
Instrument ID		SGQFID	
Initial Volume/Weight		1000	
Final Volume (FV1)		1.0	
Petroleum Range Organics (FL-PRO)			
Petroleum Range Organics (FL-PRO)		79 %	
Surrogate - O-Terphenyl (OTP)		97 %	
Dilution factor		1.0	
Date Extracted		04.21.99	
Date Analyzed		05.05.99	
Batch ID		0421U	
Initial Volume/Weight		1000	
Final Extraction Volume (FV1)		1.0	

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Project: NTC Orlando-354/2547-06/SDG#ABOR
Sampled By: Client
Code: 121290511

REPORT OF RESULTS

Page 23

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-7	Lab Control Standard & Recovery		ABOR32
PARAMETER		12469-7	
Lead (239.2)			
Lead		107 %	
Preparation Date		04.22.99	
Date Analyzed		04.28.99	
Dilution factor		1.0	
Batch ID		0422I	
Initial Volume/Weight		50	
Final Volume (FV1)		50	
Microextractables (504.1)			
1,2-Dibromoethane (EDB)		106 %	
1,2-Dibromo-3-chloropropane		100 %	
Date Extracted		04.21.99	
Date Analyzed		04.12.99	
Initial Volume/Weight		35	
Final Volume (FV1)		2.0	
Purgeable Halocarbons (601)			
Chlorobenzene		93 %	
1,1-Dichloroethene		79 %	
Trichloroethylene		95 %	
Surrogate - Bromochloromethane		79 %	
Date Analyzed		04.21.99	
Dilution factor		1.0	
Batch ID		1B0421	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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Orlando, FL 32803

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Contract No.: N62467-89-D-0317
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Sampled By: Client
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REPORT OF RESULTS

Page 24

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
12469-7	Lab Control Standard & Recovery		ABOR32
PARAMETER		12469-7	
Purgeable Aromatics (602)			
Benzene		88 %	
Toluene		92 %	
Surrogate - a,a,a-Trifluorotoluene		90 %	
Date Analyzed		04.21.99	
Dilution factor		1.0	
Batch ID		1B0421	

Methods: EPA SW-846, Update III and 40 CFR Part 136.

X = The hydrocarbon pattern in the sample chromatogram did not correspond to patterns of the laboratory's reference standard patterns.


Linda A. Wolfe, Project Manager

Final Page Of Report

TOTAL P.24

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

102 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 Fa. 2) 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

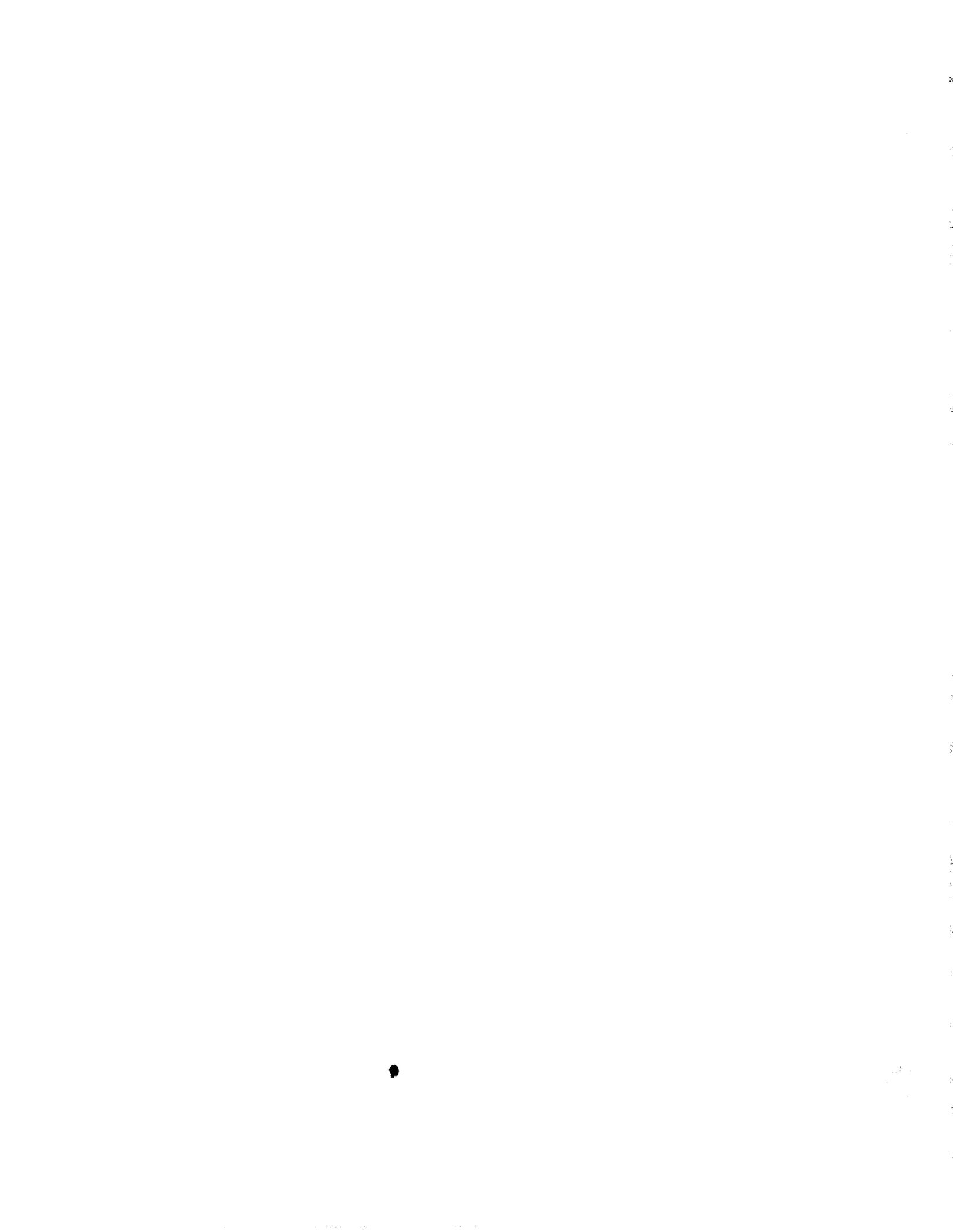
PROJECT REFERENCE Building 7171 McCoy Annex		PROJECT NO. 02547.05	PO NUMBER NE753107G	MATRIX TYPE	REQUIRED ANALYSES					PAGE	OF		
PROJECT LOC. (State) FL	SAMPLER(S) NAME Manuel Alvarez		PHONE (407) 895-8845	AQUEOUS (WATER) SOLID OR SEMISOLID AIR MONAQUEOUS LIQUID (oil, solvent, etc.) 8310/mob FI Pro PIB 239.2 504/600 601/602						STANDARD REPORT DELIVERY <input type="checkbox"/>	EXPEDITED REPORT DELIVERY (surcharge) <input type="checkbox"/>	Date Due	
CLIENT NAME HLA		CLIENT PROJECT MANAGER John Kaisee											FAX (407) 895-6150
CLIENT ADDRESS (CITY, STATE, ZIP) 1080 Woodcock Rd, Suite 100, Orlando, FL 32803													
SAMPLE DATE		TIME	SL NO.	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS SUBMITTED					REMARKS	
4/16/99		0930		0820-m 401 mw-4			X	4	2	1	3	3	
Bldg 7171													
RELINQUISHED BY: (SIGNATURE) S. Campbell		DATE 4/16/99	TIME	RELINQUISHED BY: (SIGNATURE)			DATE	TIME	RELINQUISHED BY: (SIGNATURE) Chris Pisarr		DATE 4/16/99	TIME 1500	
RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)			DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) J Swafford	DATE 4/17/99	TIME 10:50	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO. S 912469	LABORATORY REMARKS:
--	------------------------	----------------------	---	------------------	-------------------------------	---------------------

ORIGINAL

APPENDIX B
WELL CONSTRUCTION DETAILS



WELL COMPLETION LOG

Water Mgmt. Dist.: St. Johns River

Permit Number: _____

Work Order: _____

Type of Well: Monitoring

Well Number: 7171 MW-1

Method Used: 4.25" H.S.A.

Borehole Dia. 6

Site Information:

Name: NTC

Address: McCoy Building 7171

C,S,Z: Orlando, Florida

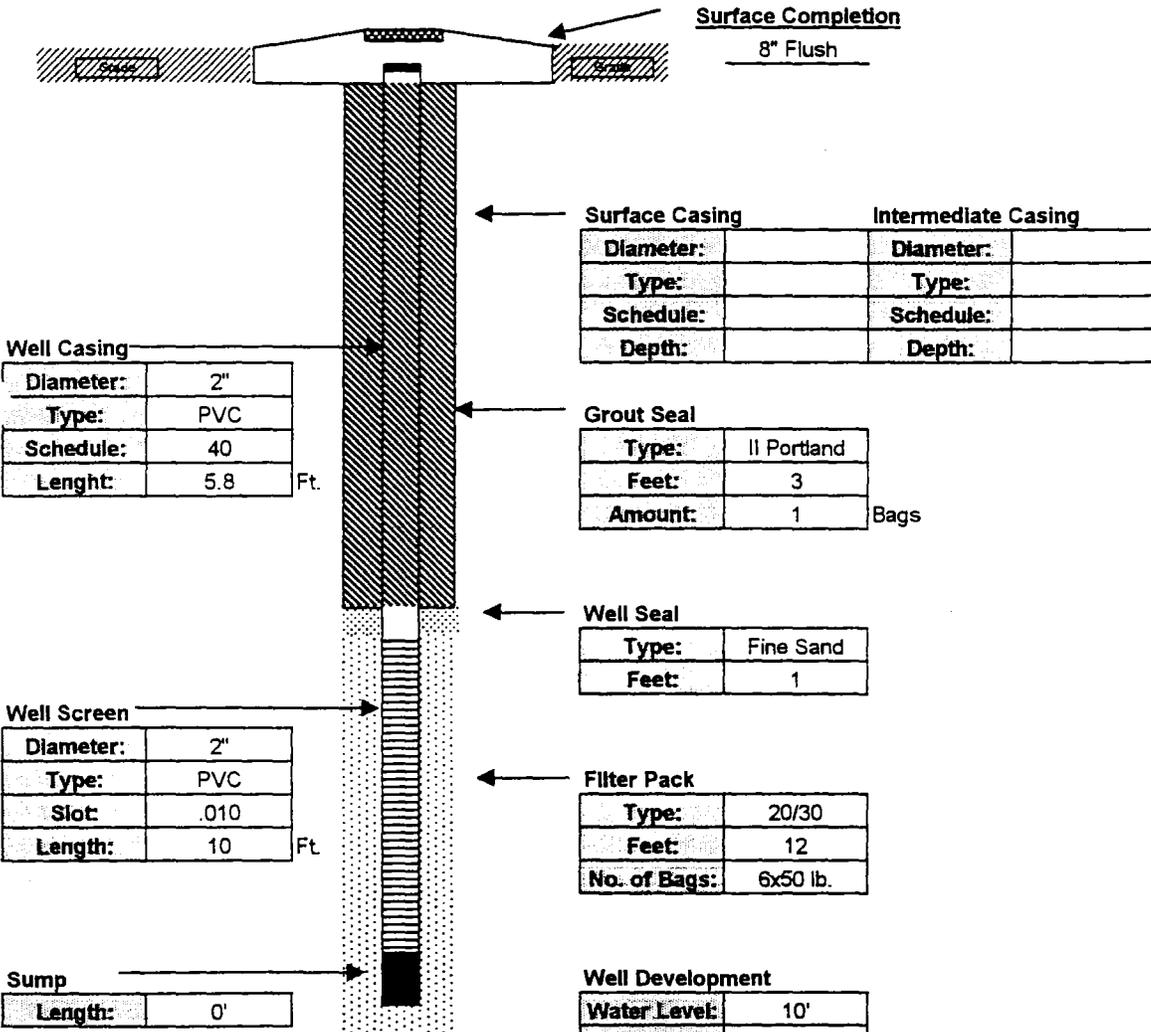
S/T/R: _____

Client / Consultant Information

Consultant: Harding Lawson Associates

Field Rep: Chris Pisani

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	15.8	10	5.8	1	6x50 lb.	20/30	Fine Sand
40	← Schedule	Slot Size: →	.010		3	← Feet →	12	1



Well Casing

Diameter:	2"
Type:	PVC
Schedule:	40
Length:	5.8 Ft.

Surface Casing		Intermediate Casing	
Diameter:		Diameter:	
Type:		Type:	
Schedule:		Schedule:	
Depth:		Depth:	

Grout Seal

Type:	II Portland
Feet:	3
Amount:	1 Bags

Well Seal

Type:	Fine Sand
Feet:	1

Well Screen

Diameter:	2"
Type:	PVC
Slot:	.010
Length:	10 Ft.

Filter Pack

Type:	20/30
Feet:	12
No. of Bags:	6x50 lb.

Sump

Length:	0'
---------	----

Well Development

Water Level:	10'		
Method:	Centrifugal		
Start: ▶	Cloudy	Finish: ▶	Sightly Cloudy
Time:	35 Min		
GPM:	N.M.		

Contractor Information

Contractor #:	2633
Completion:	01/28/99
Driller:	Roderick Fuller
Lead Hand:	Sam Kilpstien
3rd Man:	Charles Longworth
Drill Rig:	Mobile B-57

Company: Custom Drilling Services, Inc.

Address: 330 G. Winston Creek Parkway

C,S,Z: Lakeland, Florida 33810

Phone/FAX: (941) 686-1399 / (941) 680-1399

WELL COMPLETION LOG

Water Mgmt. Dist.: St. Johns River

Permit Number: _____

Work Order: _____

Type of Well: Monitoring

Well Number: 7171 MW-2

Method Used: 4.25" H.S.A.

Borehole Dia. 6

Site Information:

Name: NTC

Address: McCoy Building 7171

C, S, Z: Orlando, Florida

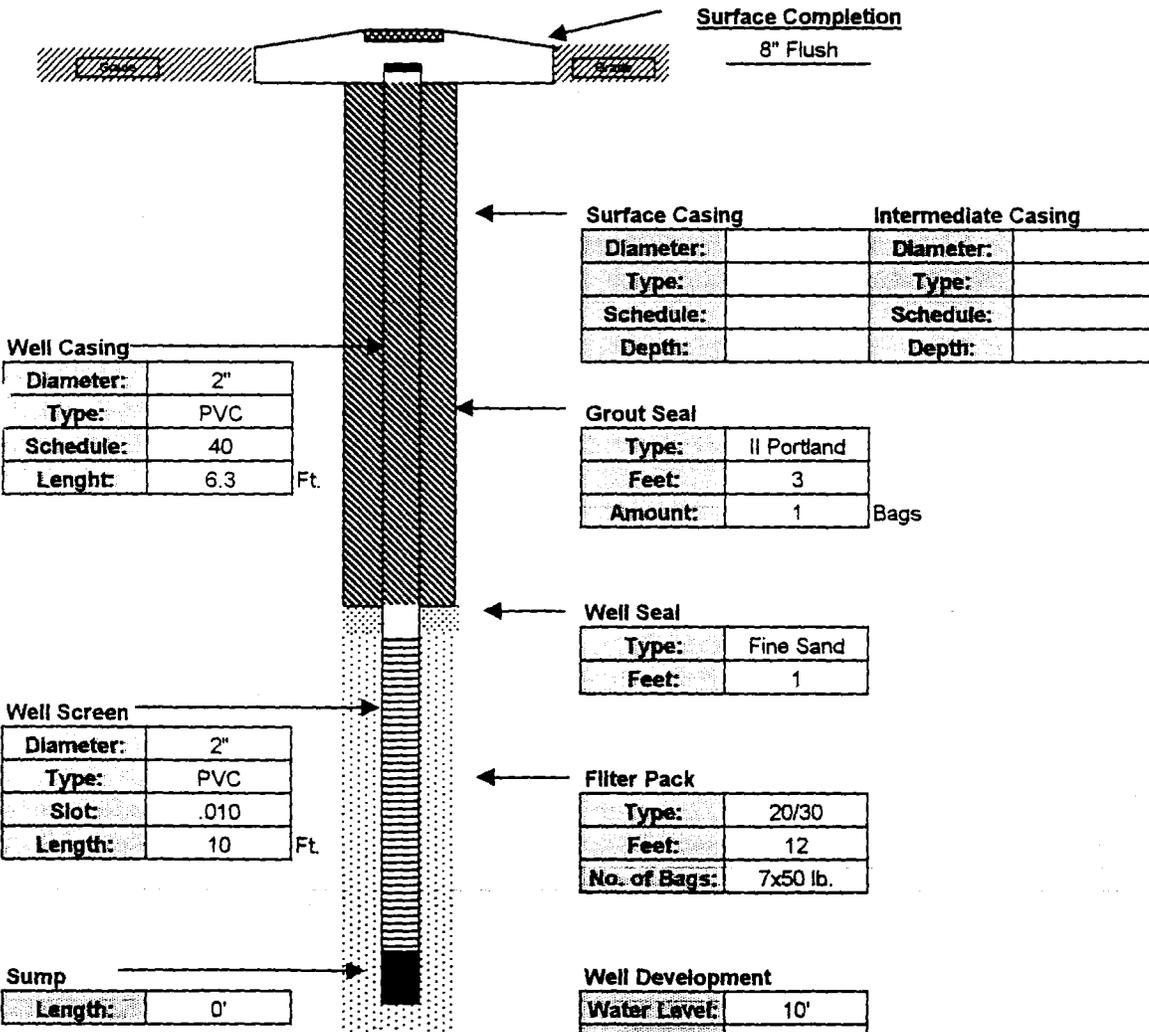
S/T/R: _____

Client / Consultant Information

Consultant: Harding Lawson Associates

Field Rep: Chris Pisarr

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	16.3	10	6.3	1	7x50 lb.	20/30	Fine Sand
40	← Schedule	Slot Size: →	.010		3	← Feet →	12	1



Well Casing

Diameter:	2"
Type:	PVC
Schedule:	40
Length:	6.3 Ft.

Surface Casing		Intermediate Casing	
Diameter:		Diameter:	
Type:		Type:	
Schedule:		Schedule:	
Depth:		Depth:	

Grout Seal

Type:	II Portland
Feet:	3
Amount:	1 Bags

Well Seal

Type:	Fine Sand
Feet:	1

Well Screen

Diameter:	2"
Type:	PVC
Slot:	.010
Length:	10 Ft.

Filter Pack

Type:	20/30
Feet:	12
No. of Bags:	7x50 lb.

Sump

Length:	0'
---------	----

Well Development

Water Level:	10'		
Method:	Centrifugal		
Start: →	Cloudy	Finish: →	Clear
Time:	25 Min		
GPM:	N.M.		

Contractor Information

Contractor #:	2633
Completion:	01/28/99
Driller:	Roderick Fuller
Lead Hand:	Sam Kilpstin
3rd Man:	Charles Longworth
Drill Rig:	Mobile B-57

Company: Custom Drilling Services, Inc.
Address: 330 G. Winston Creek Parkway
C, S, Z: Lakeland, Florida 33810
Phone/FAX: (941) 686-1399 / (941) 680-1399

WELL COMPLETION LOG

Water Mgmt. Dist.: St. Johns River

Permit Number: _____

Work Order: _____

Type of Well: Monitoring

Well Number: 7171 MW-3

Method Used: 4.25" H.S.A.

Borehole Dia. 6

Site Information:

Name: NTC

Address: McCoy Building 7171

C,S,Z: Orlando, Florida

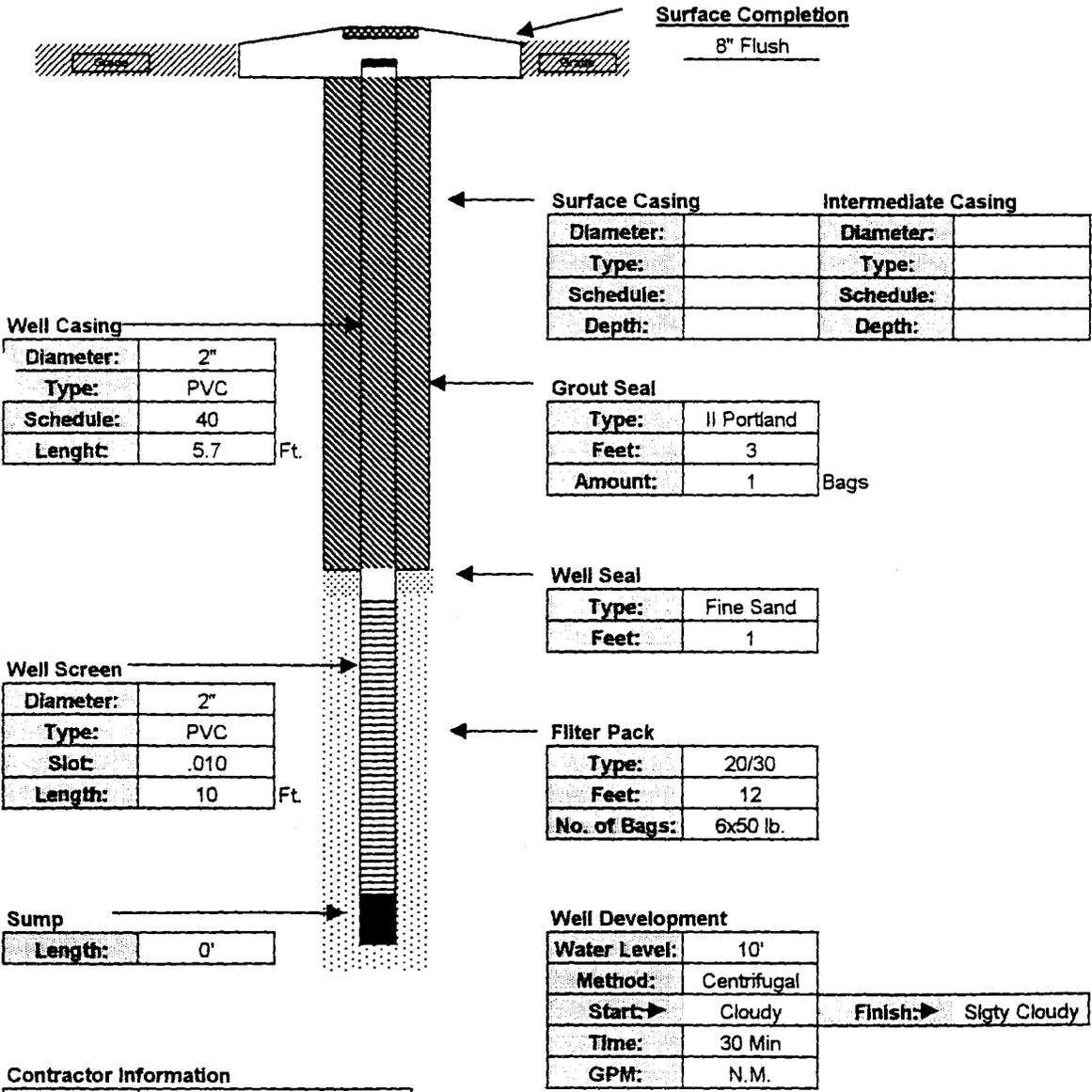
S/T/R: _____

Client / Consultant Information

Consultant: Harding Lawson Associates

Field Rep: Chris Pisani

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	15.7	10	5.7	1	6x50 lb.	20/30	Fine Sand
40	← Schedule	Slot Size: →	.010		3	← Feet →	12	1



Contractor Information

Contractor #:	2633
Completion:	01/28/99
Driller:	Roderick Fuller
Lead Hand:	Sam Kilpstien
3rd Man:	Charles Longworth
Drill Rig:	Mobile B-57

Company:	Custom Drilling Services, Inc.
Address:	330 G. Winston Creek Parkway
C,S,Z:	Lakeland, Florida 33810
Phone/FAX:	(941) 686-1399 / (941) 680-1399

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order:

Type of Well: Monitoring

Well Number: 7171 MV-2A 4

Method Used: 4.25" H.S.A.

Borehole Dia. 6

Site Information:

Name: NTC

Address: McCoy Building 7171

C.S.Z: Orlando, Florida

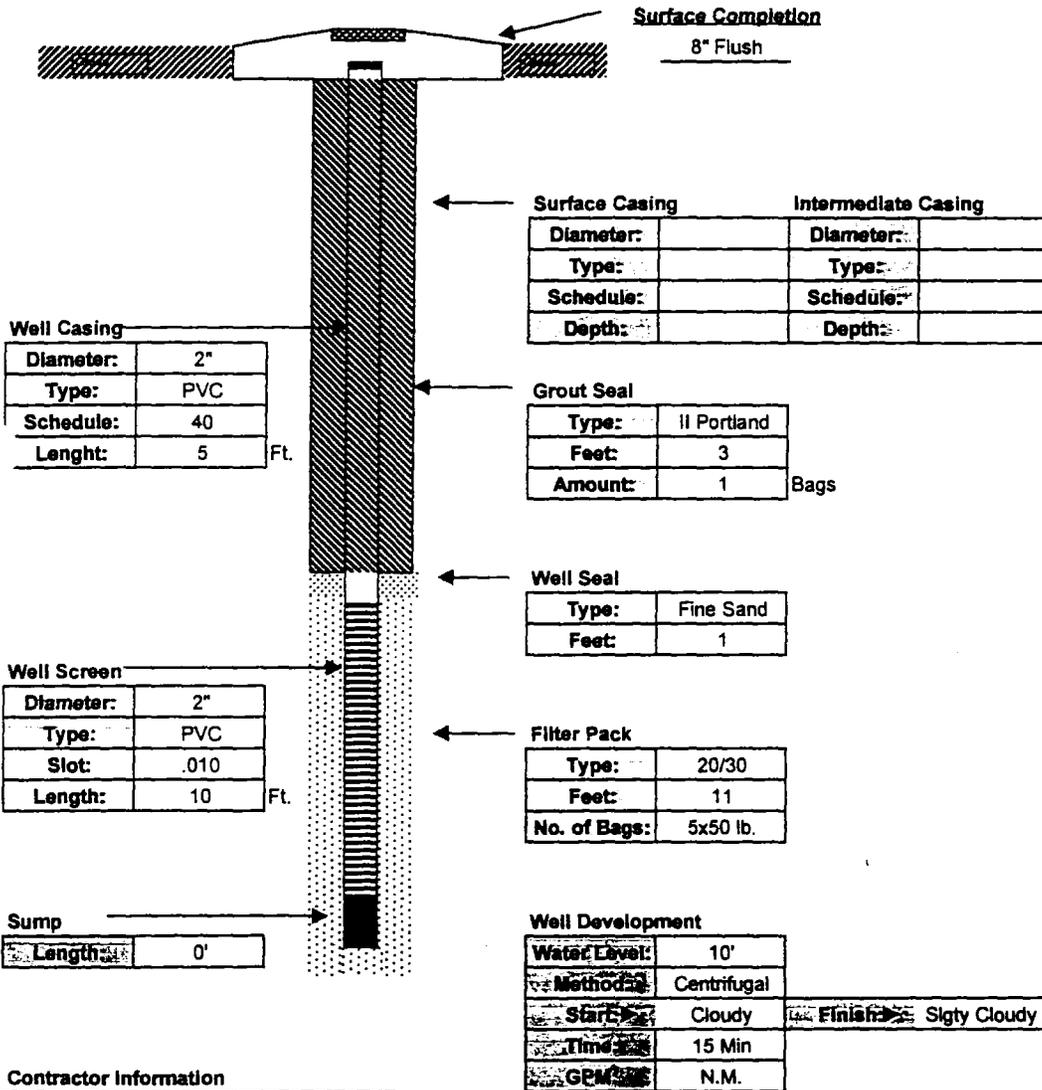
S/T/R: -

Client / Consultant Information

Consultant: Harding Lawson Associates

Field Rep: Chris Pisani

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	15	10	5	1	5x50 lb.	20/30	Fine Sand
40	← Schedule Slot Size: →		.010		3	← Feet →	11	1



Contractor Information

Contractor #	2633
Completion	04/07/99
Driller	Roderick Fuller
Lead Hand	Sam Kilpstien
3rd Man	Charles Longworth
Drill Rig	Mobile B-57

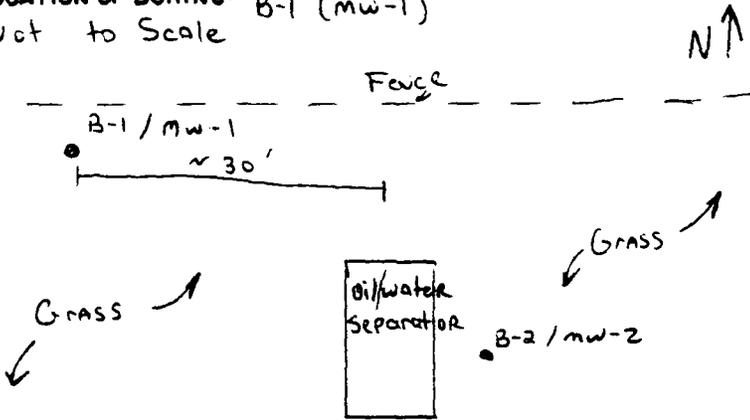
Well Development

Water Level	10'		
Method	Centrifugal		
Start	Cloudy	Finish	Slightly Cloudy
Time	15 Min		
GPM	N.M.		

Company	Custom Drilling Services, Inc.
Address	330 G. Winston Creek Parkway
C.S.Z	Lakeland, Florida 33810
Phone/FAX	(941) 686-1399 / (941) 680-1399

APPENDIX C
LITHOLOGIC LOGS

LOCATION OF BORING: B-1 (mw-1)
Not to Scale



PROJECT: mw-1
Building 7171
BORING NO. B-1
TOTAL DEPTH: 16.5'

JOB NO.:
LOGGED BY: C. Pisarri

PROJ. MGR: Manuel Alonso
EDITED BY:

DRILLING CONTRACTOR: Custom Drilling Services
DRILL RIG TYPE: Mobile - 57
DRILLERS NAME: Rod Fuller
SAMPLING METHODS: Cuttings

HAMMER WT.: NA
DROP:

STARTED, TIME: 1030
DATE: 11/28/99

COMPLETED, TIME: 1115
DATE: 11/28/99

ASPHALT PARKING

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6-IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	UNFILTERED DVA (ppm)	FILTERED DVA (ppm)	DEPTH IN FEET	GRAPHIC LOG
2'							6.0	-	1	
									2	
4'						4.0	-		3	
									4	
6'						6.0	-		5	
									6	
									7	
									8	
									9	
									10	

BORING DEPTH (ft.) ~16.5'

CASING DEPTH (ft.) ~16.5'

WATER DEPTH (ft.) ~10'

TIME:

DATE: 11/28/99

BACKFILLED, TIME: DATE: BY:

SURFACE ELEV.: DATUM:

CONDITIONS: Clear, sunny, 70-75°

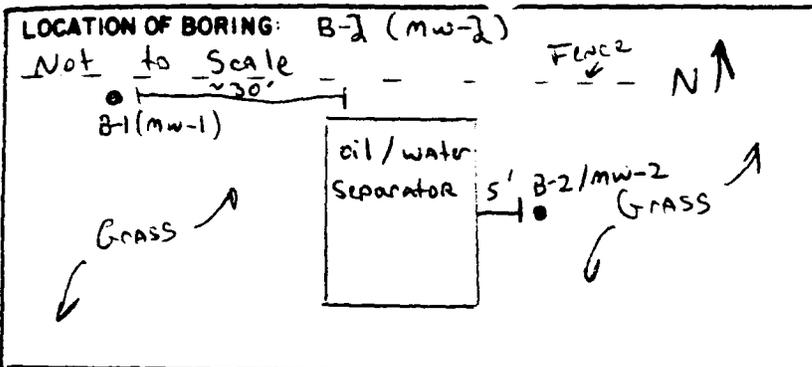
SAND (SP), Grey, fine-med. grained, no odor

SAND (SP), Brown, fine-med. grained, no odor moist

SAND (SP), Lite Grey, fine-med. grained, no odor

Sat. Soil observed at ~9.5' BGS.

DEPTH	TYPE	BLOWS	DRIVEN	REC'D	COND	D RATE				DEPTH	GRAPHIC LOG	PROJECT: Building 7171 NO	BORING NO. B-1 mw-1
										11			
										12		SAND (SP) Lite Grey to Grey, fine to medium grained, no odor	
										13			
										14			
										15			
										16			
										7			
										8			
										9			
										0			
										1			
										2			
										3			
										4			
										5			
										6			
										7			
										8			
										9			
										0			



PROJECT: mw-2

BORING NO. B-2

TOTAL DEPTH: 16.5

Building 7171

JOB NO.:

LOGGED BY: C Pisarri

PROJ. MGR: Manuel Alonzo

EDITED BY:

DRILLING CONTRACTOR: Custom Drilling Services

DRILL RIG TYPE: Mobile - 57

DRILLERS NAME: Rod Fuller

SAMPLING METHODS: Cuttings

HAMMER WT.: NA

DROP:

STARTED, TIME: 0900

DATE: 11/28/99

COMPLETED, TIME: 0925

DATE: 1/28/99

ASPHALT Parking

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6-IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	unfiltered OVA (PPM)	Filtered OVA (PPM)	DEPTH IN FEET
2'							ND	6.0	1
4'							ND	4.0	1
6'							120	18	1
9'							95	34	1

BORING DEPTH (ft.) 16.5'

CASING DEPTH (ft.) ~16.5'

WATER DEPTH (ft.) ~10'

TIME:

DATE: 11/28/99

BACKFILLED, TIME: DATE: BY:

SURFACE ELEV.: DATUM:

CONDITIONS: clear, sunny, 70°-75°

SAND (SP), Grey, fine-grained
no odor, roots

SAND (SP), Brown, fine-med
grained, petro. odor at
~ 5.5' BGS

SAND (SP) tan to grey,
fine to med grained, strong
petro. odor,

Sat. soil observed at
~ 9.5' BGS

DEPTH	TYPE	BLOWS	DRIVEN	REC'D	COND	D RATE				DEPTH	GRAPHIC LOG	PROJECT: Building 7171 NO	BORING NO B-2
										11	.....		mw-2
										12	.....	SAND (SP) Grey, fine to med. grained, wet	
										13	.....	
										14	.....	
										15	.....	
										16	.....	
										7	.....	
										8	.....	
										9	.....	
										0	.....	
										1	.....	
										2	.....	
										3	.....	
										4	.....	
										5	.....	
										6	.....	
										7	.....	
										8	.....	
										9	.....	
										0	.....	

LOCATION OF BORING: B-3 (mw-3)

NOT TO SCALE!

NA

PROJECT:

mw-3

BORING NO. B-3

Building 7171

TOTAL DEPTH: 16.5'

JOB NO.:

LOGGED BY: C. P. SARZI

PROJ. MGR: Manuel Alonso

EDITED BY:

DRILLING CONTRACTOR: Custom Drilling Service

DRILL RIG TYPE: Mobile - 57

DRILLERS NAME: Rod Fuller

SAMPLING METHODS: Cuttings

HAMMER WT.: NA

DROP:

STARTED, TIME: 1205

DATE: 1/28/99

COMPLETED, TIME: 1225

DATE: 1/28/99

BORING DEPTH (ft.) ~16.5'

CASING DEPTH (ft.) ~16.5'

WATER DEPTH (ft.) ~10'

TIME:

DATE:

1/28/99

BACKFILLED, TIME:

DATE:

BY:

SURFACE ELEV.:

DATUM:

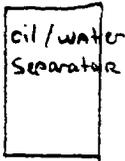
CONDITIONS: Clear, Sunny, 70-75°

SAND (SP) Grey, fine-med. grained, no odor

SAND (SP) Dark Brown, fine to medium grained, organic, no petro. odor

SAND (SP) tan to grey, fine to medium grained, moist no petro. odor

Sat. Soil observed at ~9.5' BGS



ASPHALT

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6-IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	Unfiltered OVA (ppm)	Filtered OVA (ppm)	DEPTH IN FEET
2'							ND	1	1
4'							ND	1	4
6'							ND	1	6
10'							ND	1	10

GRAPHIC LOG

DEPTH	TYPE	BLOWS	DRIVEN	REC'D	COND	D RATE				DEPTH	GRAPHIC LOG	PROJECT: Building 7171 NO	BORING NO. B-3
													mw-3
										11	<p>SAND (SP) Grey, fine to medium grained, wet, no petro. odor.</p>		
										12			
										13			
										14			
										15			
										16			
										7			
										8			
										9			
										0			
										1			
										2			
										3			
										4			
										5			
										6			
										7			
										8			
										9			
										0			

LOCATION OF BORING: McCoy Annex Bldg 7171

PROJECT:

BORING NO. MW-2A

Building 7171

TOTAL DEPTH: 15

JOB NO.:

LOGGED BY: C Pisara

PROJ. MGR: Manuel Alonso

EDITED BY:

DRILLING CONTRACTOR: Custom Drilling Services

DRILL RIG TYPE: Mobile - 57

DRILLERS NAME: Rod Fuller

SAMPLING METHODS: cuttings

HAMMER WT:

DROP:

STARTED, TIME: 1255

DATE: 4/7/99

COMPLETED, TIME: 1335

DATE: 4/7/99

BORING DEPTH (ft.):

15'

CASING DEPTH (ft.):

15'

WATER DEPTH (ft.):

~ 9'

TIME:

DATE:

4/7/99

BACKFILLED, TIME:

DATE:

BY:

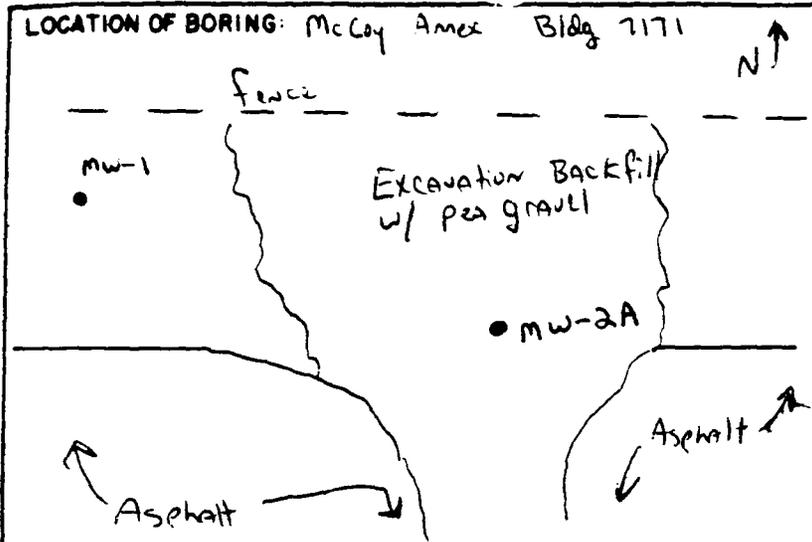
SURFACE ELEV.:

DATUM:

CONDITIONS: Clear, 85°, Pea-gravel surface

Fill material consisting of ~ 1-2' of Pea gravel. Back fill of grey sand and gravel material to approx 11' B.G.S.

Sat. Soil observed at ~ 9-10' B.G.S.



SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6-IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	DEPTH IN FEET
							1
							2
							3
							4
							5
							6
							7
							8
							9
							10

GRAPHIC LOG

APPENDIX D
WATER SAMPLING LOG FORMS



Petroleum or Petroleum Products Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-1	SAMPLE ID: 082GW101	DATE: 2/9/99
SITE NAME: McCoy Annex		SITE LOCATION: Building 7171	

PURGE DATA								
WELL DIAMETER (in):	2	TOTAL WELL DEPTH (ft):	16.00	DEPTH TO WATER (ft):	8.15	WELL CAPACITY (gal/ft):	0.16	
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (16.00 - 8.15) \times 0.16 = 1.26$								
PURGE METHOD: Peristaltic Pump			PURGING INITIATED AT: 1300		PURGING ENDED AT: 1345			
WELL VOLS. PURGED			PURGE RATE (gpm): ~0.1		TOTAL VOLUME PURGED (gal): ~4.5			
	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER NTU
1.0	0.79	6.30	25.0	150			MURKY	8.1
2.0	1.59	6.35	24.4	140			"	175.8
3.0	2.38	6.58	25.0	140			"	116.3
4.0	3.17	6.50	25.0	120			"	77.0
4.5	3.57	6.54	25.7	140			"	60.1

SAMPLING DATA							
SAMPLED BY / AFFILIATION: HLA				SAMPLER(S) SIGNATURE(S)			
SAMPLING METHOD(S): Peristaltic Pump				SAMPLING INITIATED AT: 1345		SAMPLING ENDED AT:	
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/> N			FIELD-FILTERED: Y <input checked="" type="checkbox"/> N			DUPLICATE: Y N	
SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH		

REMARKS:

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.



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.: <u>mw-2</u>	SAMPLE ID: <u>0826w201</u>	DATE: <u>2/9/99</u>
SITE NAME: <u>McCoy Annex</u>		SITE LOCATION: <u>Building 7171</u>	

PURGE DATA									
WELL DIAMETER (in): <u>2</u>		TOTAL WELL DEPTH (ft): <u>16.20</u>			DEPTH TO WATER (ft): <u>8.42</u>			WELL CAPACITY (gal/ft): <u>0.16</u>	
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (16.20 - 8.42) \times 0.16 = 1.25$									
PURGE METHOD: <u>Peristaltic Pump</u>				PURGING INITIATED AT: <u>1510</u>			PURGING ENDED AT: <u>1545</u>		
WELL VOLS. PURGED		CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	PURGE RATE (gpm): <u>~ 0.2</u>	TOTAL VOLUME PURGED (gal): <u>~ 5.0</u>		OTHER
						COLOR	ODOR	APPEARANCE	NTU
<u>0.8</u>		<u>1.0</u>	<u>6.41</u>	<u>25.1</u>	<u>600</u>	<u>Clear</u>	<u>Petro odor</u>	<u>Slight Sheen</u>	<u>12.02</u>
<u>1.6</u>		<u>2.0</u>	<u>6.50</u>	<u>25.3</u>	<u>550</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>8.58</u>
<u>2.4</u>		<u>3.0</u>	<u>6.60</u>	<u>25.2</u>	<u>500</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>7.18</u>
<u>3.2</u>		<u>4.0</u>	<u>6.62</u>	<u>24.8</u>	<u>500</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>7.35</u>
<u>4.0</u>		<u>5.0</u>	<u>6.62</u>	<u>24.7</u>	<u>500</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>9.83</u>

SAMPLING DATA									
SAMPLED BY / AFFILIATION: <u>HLA</u>					SAMPLER(S) SIGNATURE(S)				
SAMPLING METHOD(S): <u>Peristaltic Pump</u>					SAMPLING INITIATED AT: <u>1545</u>			SAMPLING ENDED AT:	
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/> N			FIELD-FILTERED: Y <input checked="" type="checkbox"/> N			DUPLICATE: Y N			
SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)		FINAL pH			

REMARKS:

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

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



Petroleum or Petroleum Products Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: <u>MW-3</u>	SAMPLE ID: <u>082GW301</u>	DATE: <u>2/9/99</u>
SITE NAME: <u>McCoy Annex</u>		SITE LOCATION: <u>Building 7171</u>	

PURGE DATA								
WELL DIAMETER (in): <u>2</u>		TOTAL WELL DEPTH (ft): <u>15.90</u>			DEPTH TO WATER (ft): <u>8.16</u>		WELL CAPACITY (gal/ft): <u>0.16</u>	
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (15.90 - 8.16) \times 0.16 = 1.24$								
PURGE METHOD: <u>Peristaltic Pump</u>				PURGING INITIATED AT: <u>1410</u>		PURGING ENDED AT: <u>1500</u>		
WELL VOLS. PURGED		CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	PURGE RATE (gpm): <u>~0.1</u>		TOTAL VOLUME PURGED (gal): <u>~5.0</u>
						COLOR	ODOR	APPEARANCE
								OTHER
<u>1.0</u>			<u>6.39</u>	<u>26.6</u>	<u>290</u>	<u>Clear</u>		<u>14.17</u>
<u>2.0</u>			<u>6.43</u>	<u>26.7</u>	<u>290</u>	<u>"</u>		<u>7.41</u>
<u>3.0</u>			<u>6.54</u>	<u>25.1</u>	<u>300</u>	<u>"</u>		<u>4.62</u>
<u>4.0</u>			<u>6.42</u>	<u>25.1</u>	<u>300</u>	<u>"</u>		<u>3.01</u>
<u>5.0</u>			<u>6.41</u>	<u>25.2</u>	<u>300</u>	<u>"</u>		<u>2.69</u>

SAMPLING DATA								
SAMPLED BY / AFFILIATION: <u>HLA</u>				SAMPLER(S) SIGNATURE(S):				
SAMPLING METHOD(S): <u>Peristaltic Pump</u>				SAMPLING INITIATED AT: <u>1500</u>		SAMPLING ENDED AT:		
FIELD DECONTAMINATION: <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>			FIELD-FILTERED: <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>			DUPLICATE: <u>Y</u> <input type="checkbox"/> <u>N</u>		
SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH			

REMARKS:

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.



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.: MW-4	SAMPLE ID: 082GM401	DATE: 4/16/99
SITE NAME: NTC ORLANDO - MCCOY ANNEX		SITE LOCATION: BUILDING 7171	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.88	DEPTH TO WATER (ft): 8.49	WELL CAPACITY (gal/ft): 0.16					
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (14.88 - 8.49) \times 0.16 = 1.02$								
PURGE METHOD: PERISTALTIC PUMP		PURGING INITIATED AT: 08:55	PURGING ENDED AT: 09:10					
WELL VOL. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	PURGE RATE (gpm): 0.47		TOTAL VOLUME PURGED (gal): 7.0 GALLONS	
					COLOR	ODOR	APPEARANCE	TURBIDITY
INT	INT	6.43	23.5	900				130.7
3.4	3.5	6.51	23.1	900				18.7
4.9	5.0	6.59	23.1	900				10.15
6.9	7.0	6.63	23.1	875				9.85

SAMPLING DATA

SAMPLED BY / AFFILIATION: CHRIS PISARRI AND MANUEL ALONSO				SAMPLER(S) SIGNATURE(S): <i>Christopher J. Pisani</i>			
SAMPLING METHOD(S): PERISTALTIC PUMP				SAMPLING INITIATED AT: 09:10		SAMPLING ENDED AT: 09:30	
FIELD DECONTAMINATION: N			FIELD-FILTERED: N			DUPLICATE: N	
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					8310/8015	
	O-PLASTIC					PB 239.2	

REMARKS:

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

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

APPENDIX E
GROUNDWATER AND SOIL LABORATORY ANALYTICAL REPORTS

NTC ORLANDO, FLOR -- BUILDING 7171
GROUNDWATER ANALYTICAL DATA -- REPORT NO. 10941

Lab Sample Number:	S910910*1	S910910*2	S910910*3	S910910*4
Site	7171	7171	7171	7171
Locator	082GW101 7171 MW-1	082GW201 7171 MW-2	082GW301 7171 MW-3	082RB101 7171 RB-1
Collect Date:	09-FEB-99	09-FEB-99	09-FEB-99	09-FEB-99
	VALUE QUAL UNITS DL			

Volatiles (8260)

Chloromethane	1 U	ug/l	1									
Bromomethane	1 U	ug/l	1									
Vinyl chloride	1 U	ug/l	1									
Chloroethane	1 U	ug/l	1									
Methylene chloride	5 U	ug/l	5									
Acetone	25 U	ug/l	25									
Carbon disulfide	1 U	ug/l	1									
1,1-Dichloroethene	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
cis-1,2-Dichloroethene	1 U	ug/l	1									
trans-1,2-Dichloroethene	1 U	ug/l	1									
Chloroform	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1	1.2	ug/l	1
1,2-Dichloroethane	1 U	ug/l	1									
2-Butanone	10 U	ug/l	10									
1,1,1-Trichloroethane	1 U	ug/l	1									
Carbon tetrachloride	1 U	ug/l	1									
Bromodichloromethane	1 U	ug/l	1									
1,1,2,2-Tetrachloroethane	1 U	ug/l	1									
1,2-Dichloropropane	1 U	ug/l	1									
trans-1,3-Dichloropropene	1 U	ug/l	1									
Trichloroethene	1 U	ug/l	1									
Dibromochloromethane	1 U	ug/l	1									
1,1,2-Trichloroethane	1 U	ug/l	1									
Benzene	1 U	ug/l	1									
cis-1,3-Dichloropropene	1 U	ug/l	1									
Bromoform	1 U	ug/l	1									
2-Hexanone	10 U	ug/l	10									
4-Methyl-2-pentanone	10 U	ug/l	10									
Tetrachloroethene	1 U	ug/l	1									
Toluene	1 U	ug/l	1									
Chlorobenzene	1 U	ug/l	1									
Ethylbenzene	1 U	ug/l	1									
Styrene	1 U	ug/l	1									
Xylenes (total)	2 U	ug/l	2	2.3	ug/l	2	2 U	ug/l	2	2 U	ug/l	2

Flo Pro

Petroleum Range Organics (Fl-P)	.3 U	mg/l	.3	1.8	mg/l	.3	.3 U	mg/l	.3	.3 U	mg/l	.3
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Hydrocarbons (Modified 8015E)

Hydrocarbons as Mineral Spirit	.3 U	mg/l	.3	.3 UX	mg/l	.3	.3 U	mg/l	.3	.3 U	mg/l	.3
--------------------------------	------	------	----	-------	------	----	------	------	----	------	------	----

TCL Semivolatiles (8270)

Phenol	10 U	ug/l	10									
bis (2-Chloroethyl) ether	10 U	ug/l	10									
2-Chlorophenol	10 U	ug/l	10									
1,2-Dichlorobenzene	10 U	ug/l	10									
1,3-Dichlorobenzene	10 U	ug/l	10									
1,4-Dichlorobenzene	10 U	ug/l	10									
2-Methylphenol (o-cresol)	10 U	ug/l	10									
2,2'-Oxybis(1-Chloropropane)	-			10 U	ug/l	10	10 U	ug/l	10	10 U	ug/l	10

NTC ORLANDO, FLORIDA BUILDING 7171
GROUNDWATER ANALYTICAL DATA -- REPORT NO. 10941

Lab Sample Number:	S910910*1	S910910*2	S910910*3	S910910*4
Site	7171	7171	7171	7171
Locator	082GW101 7171 MW-1	082GW201 7171 MW-2	082GW301 7171 MW-3	082RB101 7171 RB-1
Collect Date:	09-FEB-99	09-FEB-99	09-FEB-99	09-FEB-99

	S910910*1			S910910*2			S910910*3			S910910*4		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
3-Methylphenol/4-Methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
N-Nitroso-di-n-propylamine	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachloroethane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Isophorone	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitrophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dimethylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
bis (2-Chloroethoxy) methane	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
1,2,4-Trichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Naphthalene	10	U	ug/l	10	2.6	U	ug/l	1	1	U	ug/l	1
4-Chloroaniline	20	U	ug/l	20	20	U	ug/l	20	20	U	ug/l	20
Hexachlorobutadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chloro-3-methylphenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Methylnaphthalene	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Hexachlorocyclopentadiene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,6-Trichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4,5-Trichlorophenol	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Chloronaphthalene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2-Nitroaniline	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
Dimethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Acenaphthylene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
3-Nitroaniline	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
Acenaphthene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2,4-Dinitrophenol	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
4-Nitrophenol	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
Dibenzofuran	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,4-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
2,6-Dinitrotoluene	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Diethylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
4-Chlorophenylphenyl ether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluorene	.5	U	ug/l	.5	.53	U	ug/l	.5	10	U	ug/l	10
4-Nitroaniline	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
4,6-Dinitro-2-methylphenol	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
N-Nitrosodiphenylamine/Dipheny	-			10	10	U	ug/l	10	10	U	ug/l	10
4-Bromophenyl-phenylether	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Hexachlorobenzene	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Pentachlorophenol	50	U	ug/l	50	50	U	ug/l	50	50	U	ug/l	50
Phenanthrene	.2	U	ug/l	.2	.2	U	ug/l	.2	10	U	ug/l	10
Anthracene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Di-n-butylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Fluoranthene	10	U	ug/l	10	.5	U	ug/l	.5	.5	U	ug/l	.5
Pyrene	.5	U	ug/l	.5	.5	U	ug/l	.5	.5	U	ug/l	.5
Butylbenzylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
3,3-Dichlorobenzidine	20	U	ug/l	20	20	U	ug/l	20	20	U	ug/l	20
Benzo (a) anthracene	.2	U	ug/l	.2	10	U	ug/l	10	.2	U	ug/l	.2
bis (2-Ethylhexyl) phthalate	6	U	ug/l	6	6	U	ug/l	6	6	U	ug/l	6
Chrysene	.2	U	ug/l	.2	.21	U	ug/l	.2	.2	U	ug/l	.2
Di-n-octylphthalate	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Benzo (b) fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2	10	U	ug/l	10
Benzo (k) fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo (a) pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Indeno (1,2,3-cd) pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2

NTC ORLANDO, FLORIDA -- BUILDING 7171
GROUNDWATER ANALYTICAL DATA -- REPORT NO. 10941

Lab Sample Number: Site Locator Collect Date:	S910910*1 7171 082GW101 7171 MW-1 09-FEB-99			S910910*2 7171 082GW201 7171 MW-2 09-FEB-99			S910910*3 7171 082GW301 7171 MW-3 09-FEB-99			S910910*4 7171 082RB101 7171 RB-1 09-FEB-99		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Dibenzo (a,h) anthracene	.2	U	ug/l	.2	10	U	ug/l	10	.2	U	ug/l	.2
Benzo (g,h,i) perylene	.5	U	ug/l	.5	10	U	ug/l	10	.5	U	ug/l	.5
Carbazole	10	U	ug/l	10	10	U	ug/l	10	10	U	ug/l	10
Polynuclear Aromatics (8310)												
Acenaphthene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Acenaphthylene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Anthracene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(a)anthracene	.2	U	ug/l	.2	10	U	ug/l	10	.2	U	ug/l	.2
Benzo(a)pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Benzo(b)fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2	10	U	ug/l	.2
Benzo(g,h,i)perylene	.5	U	ug/l	.5	10	U	ug/l	10	.5	U	ug/l	.5
Benzo(k)fluoranthene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Chrysene	.2	U	ug/l	.2	.21	U	ug/l	.2	.2	U	ug/l	.2
Dibenzo(a,h)anthracene	.2	U	ug/l	.2	10	U	ug/l	10	.2	U	ug/l	.2
Fluoranthene	10	U	ug/l	10	.5	U	ug/l	.5	.5	U	ug/l	.5
Fluorene	.5	U	ug/l	.5	.53	U	ug/l	.5	10	U	ug/l	10
Indeno(1,2,3-cd)pyrene	.2	U	ug/l	.2	.2	U	ug/l	.2	.2	U	ug/l	.2
Naphthalene	10	U	ug/l	10	2.6	U	ug/l	1	1	U	ug/l	1
Phenanthrene	.2	U	ug/l	.2	.2	U	ug/l	.2	10	U	ug/l	10
Pyrene	.5	U	ug/l	.5	.5	U	ug/l	.5	.5	U	ug/l	.5
1-Methylnaphthalene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Methylnaphthalene	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Microextractables (504.1)												
Ethylene dibromide	.02	U	ug/l	.02	.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	.02	U	ug/l	.02
Metals (6010)												
Arsenic	.01	U	mg/l	.01	.01	U	mg/l	.01	.01	U	mg/l	.01
Barium	.01	U	mg/l	.01	.023	U	mg/l	.01	.031	U	mg/l	.01
Cadmium	.005	U	mg/l	.005	.005	U	mg/l	.005	.005	U	mg/l	.005
Chromium	.01	U	mg/l	.01	.01	U	mg/l	.01	.01	U	mg/l	.01
Lead	.005	U	mg/l	.005	.005	U	mg/l	.005	.005	U	mg/l	.005
Selenium	.01	U	mg/l	.01	.01	U	mg/l	.01	.01	U	mg/l	.01
Silver	.01	U	mg/l	.01	.01	U	mg/l	.01	.01	U	mg/l	.01
Mercury (7470)												
Mercury	.0002	U	mg/l	.0002	.0002	U	mg/l	.0002	.0002	U	mg/l	.0002

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.

- 202 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
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- Phone: (912) 354-7858 Fax: (912) 352-0165
- Phone: (904) 878-3994 Fax: (904) 878-9504
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- 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

PN ME7531016

PROJECT REFERENCE <i>Building 7771 McLean</i>		PROJECT NO. <i>10-07-05</i>	P.O. NUMBER <i>10-07-05</i>	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
PROJECT LOC. (State) <i>FL</i>	SAMPLER(S) NAME <i>Manual Amon</i>		PHONE <i>904-89-8945</i>	AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (oil, solvent, etc)	8260 RCRA Metals RCRA HG FI-PRO 8015-EX1 8270		
CLIENT NAME <i>HCA</i>		CLIENT PROJECT MANAGER <i>[Signature]</i>					

CLIENT ADDRESS (CITY, STATE, ZIP)
1000 Woodland Road, Tallahassee, FL 32303

STANDARD REPORT DELIVERY

EXPEDITED REPORT DELIVERY (surcharge)

Date Due: _____

SAMPLE		SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED										REMARKS
DATE	TIME			1	2	3	4	5	6	7	8	9	10	
<i>4/10/05</i>	<i>13:45</i>		<i>082 GW 101 7171 MW-1</i>	<input checked="" type="checkbox"/>				<i>3</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>4</i>	
<i>4/10/05</i>	<i>15:45</i>		<i>082 GW 201 7171 MW-2</i>	<input checked="" type="checkbox"/>				<i>3</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>4</i>	
<i>4/10/05</i>	<i>15:00</i>		<i>082 GW 301 7171 MW-3</i>	<input checked="" type="checkbox"/>				<i>3</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>4</i>	
<i>4/10/05</i>	<i>15:10</i>		<i>082 RB 101 7171 RB-1</i>	<input checked="" type="checkbox"/>				<i>3</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>2</i>	<i>4</i>	<i>3</i>
			<i>TR.P Blank</i>	<input checked="" type="checkbox"/>				<i>3</i>						
			<i>Temp Blank</i>											

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>4/10/05</i>	TIME <i>13:45</i>	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>4/10/05</i>	TIME <i>5:10</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>4/10/05</i>	TIME <i>2:30</i>	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT <input type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
---	------	------	--	------------------	------------	---------------------

NTC Orlando - Building 7171 SAR - water

Sample Identifier	082GM401 MW-4
Sample Collect Date	4/16/99
Analyte	

EPA 8260 (Volatiles)

1,1,1-Trichloroethane	1. U ug/l (1.)
1,1,1,2-Tetrachloroethane	1. U ug/l (1.)
1,1,2-Trichloroethane	1. U ug/l (1.)
1,1-Dichloroethane	1. U ug/l (1.)
1,1-Dichloroethene	1. U ug/l (1.)
1,2-Dibromoethane	0.02 U ug/l (0.02)
1,2-Dibromo-3-chloropropane	0.02 U ug/l (0.02)
1,2-Dichlorobenzene	1. U ug/l (1.)
1,2-Dichloroethane	1. U ug/l (1.)
1,2-Dichloropropane	1. U ug/l (1.)
1,3-Dichlorobenzene	1. U ug/l (1.)
1,4-Dichlorobenzene	1. U ug/l (1.)
Benzene	1. U ug/l (1.)
Bromodichloromethane	1. U ug/l (1.)
Bromoform	5. U ug/l (5.)
Bromomethane	1. U ug/l (1.)
Carbon tetrachloride	1. U ug/l (1.)
Chlorobenzene	1. U ug/l (1.)
Chloroethane	1. U ug/l (1.)
Chloroform	1. U ug/l (1.)
Chloromethane	1. U ug/l (1.)
cis 1,3-Dichloropropene	1. U ug/l (1.)
Dibromochloromethane	1. U ug/l (1.)
Dichlorodifluoromethane	1. U ug/l (1.)
Ethylbenzene	1. U ug/l (1.)
Methylene chloride	5. U ug/l (5.)
Naphthalene	1. U ug/l (1.)

Sample Identifier	082GM401 MW-4		
Sample Collect Date	4/16/99		
Analyte			
Tetrachloroethene	1. U ug/l (1.)		
Toluene	1. U ug/l (1.)		
trans 1,3-Dichloropropene	1. U ug/l (1.)		
Trichloroethene	1. U ug/l (1.)		
Trichlorofluoromethane	1. U ug/l (1.)		
Vinyl chloride	1. U ug/l (1.)		
Xylenes (total)	1. U ug/l (1.)		
EPA 8270 (Semivolatiles)			
1,2-Dichlorobenzene	1. U ug/l (1.)		
1,3-Dichlorobenzene	1. U ug/l (1.)		
1,4-Dichlorobenzene	1. U ug/l (1.)		
1-Methylnaphthalene	1. U ug/l (1.)		
2-Methylnaphthalene	1. U ug/l (1.)		
Acenaphthene	1. U ug/l (1.)		
Acenaphthylene	1. U ug/l (1.)		
Anthracene	0.2 U ug/l (0.2)		
Chrysene	0.2 U ug/l (0.2)		
Fluoranthene	0.5 U ug/l (0.5)		
Fluorene	0.5 U ug/l (0.5)		
Naphthalene	1. U ug/l (1.)		
Phenanthrene	0.2 U ug/l (0.2)		
Pyrene	0.5 U ug/l (0.5)		
EPA 8270C (PAHs)			
Acenaphthene	1. U ug/l (1.)		
Acenaphthylene	1. U ug/l (1.)		
Anthracene	0.2 U ug/l (0.2)		
Chrysene	0.2 U ug/l (0.2)		
Fluoranthene	0.5 U ug/l (0.5)		
Fluorene	0.5 U ug/l (0.5)		
Naphthalene	1. U ug/l (1.)		

Sample Identifier	082GM401 MW-4		
Sample Collect Date	4/16/99		
Analyte			
Phenanthrene	0.2 U ug/l (0.2)		
Pyrene	0.5 U ug/l (0.5)		
EPA 8310 (PAHs)			
1-Methylnaphthalene	1. U ug/l (1.)		
2-Methylnaphthalene	1. U ug/l (1.)		
Acenaphthene	1. U ug/l (1.)		
Acenaphthylene	1. U ug/l (1.)		
Anthracene	0.2 U ug/l (0.2)		
Chrysene	0.2 U ug/l (0.2)		
Fluoranthene	0.5 U ug/l (0.5)		
Fluorene	0.5 U ug/l (0.5)		
Naphthalene	1. U ug/l (1.)		
Phenanthrene	0.2 U ug/l (0.2)		
Pyrene	0.5 U ug/l (0.5)		
Metals			
Lead	0.005 U mg/l (0.005)		

Footnotes: Values in parentheses are detection limits

NTC Orlando - Building 7171 SAR - soil

Sample Identifier	082SS101 (SB-14)	082SS201 (SB-1)	082SS301 (SB-12)
Sample Collect Date	5/4/99	5/4/99	5/4/99
Analyte			

EPA 8260 (Volatiles)

1,1,1-Trichloroethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,1,2,2-Tetrachloroethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,1,2-Trichloroethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,1-Dichloroethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,1-Dichloroethene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,2,4-Trichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,2-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,2-Dichloroethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,2-Dichloropropane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
1,3-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,4-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Benzene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Bromodichloromethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Bromoform	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Bromomethane	420. U ug/kg (420.)	16. U ug/kg (16.)	18. U ug/kg (18.)
Carbon tetrachloride	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Chlorobenzene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Chloroethane	420. U ug/kg (420.)	16. U ug/kg (16.)	18. U ug/kg (18.)
Chloroform	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Chloromethane	420. U ug/kg (420.)	16. U ug/kg (16.)	18. U ug/kg (18.)
cis 1,3-Dichloropropene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Dibromochloromethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Ethylbenzene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Hexachlorobutadiene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Methylene chloride	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Naphthalene	350. U ug/kg (350.)	22. U ug/kg (22.)	22. U ug/kg (22.)
Tetrachloroethene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)

Sample Identifier	082SS101 (SB-14)	082SS201 (SB-1)	082SS301 (SB-12)
Sample Collect Date	5/4/99	5/4/99	5/4/99
Analyte			
Toluene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
trans 1,2-Dichloroethene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
trans 1,3-Dichloropropene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Trichloroethene	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Trichlorofluoromethane	210. U ug/kg (210.)	8.2 U ug/kg (8.2)	9. U ug/kg (9.)
Vinyl chloride	420. U ug/kg (420.)	16. U ug/kg (16.)	18. U ug/kg (18.)

EPA 8270 (Semivolatiles)

1,2,4-Trichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,2-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,3-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1,4-Dichlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
1-Methylnaphthalene	21. U ug/kg (21.)	22. U ug/kg (22.)	22. U ug/kg (22.)
2,4,6-Trichlorophenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2,4-Dichlorophenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2,4-Dimethylphenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2,4-Dinitrophenol	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)
2,4-Dinitrotoluene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2,6-Dinitrotoluene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2-Chloronaphthalene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2-Chlorophenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
2-Methylnaphthalene	26. ug/kg (20.)	22. U ug/kg (22.)	22. U ug/kg (22.)
2-Nitrophenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
3,3-Dichlorobenzidine	700. U ug/kg (700.)	720. U ug/kg (720.)	720. U ug/kg (720.)
4-Bromophenyl-phenylether	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
4-Chloro-3-methylphenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
4-Chlorophenyl-phenylether	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
4-Nitrophenol	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)
Acenaphthene	350. U ug/kg (350.)	54. U ug/kg (54.)	360. U ug/kg (360.)
Acenaphthylene	350. U ug/kg (350.)	360. U ug/kg (360.)	22. U ug/kg (22.)
Anthracene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Benzidine	2900. U ug/kg (2900.)	2900. U ug/kg (2900.)	2900. U ug/kg (2900.)

Sample Identifier	082SS101 (SB-14)	082SS201 (SB-1)	082SS301 (SB-12)
Sample Collect Date	5/4/99	5/4/99	5/4/99
Analyte			
bis(2-Chloroethoxy) methane	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
bis(2-Chloroethyl) ether	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
bis(2-Chloroisopropyl) ether	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
bis(2-Ethylhexyl) phthalate	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Chrysene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	360. U ug/kg (360.)
Di-n-butyl phthalate	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Di-n-octyl phthalate	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Fluoranthene	350. U ug/kg (350.)	11. U ug/kg (11.)	360. U ug/kg (360.)
Fluorene	350. U ug/kg (350.)	11. U ug/kg (11.)	11. U ug/kg (11.)
Hexachlorobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Hexachlorobutadiene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Hexachlorocyclopentadiene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Hexachloroethane	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Isophorone	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
N-Nitroso-di-n-propylamine	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
N-Nitroso-dimethylamine	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
N-Nitroso-diphenylamine	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Naphthalene	350. U ug/kg (350.)	22. U ug/kg (22.)	22. U ug/kg (22.)
Nitrobenzene	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Pentachlorophenol	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)	1800. U ug/kg (1800.)
Phenanthrene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Phenol	350. U ug/kg (350.)	360. U ug/kg (360.)	360. U ug/kg (360.)
Pyrene	11. U ug/kg (11.)	11. U ug/kg (11.)	360. U ug/kg (360.)
EPA 8270C (PAHs)			
Acenaphthene	350. U ug/kg (350.)	54. U ug/kg (54.)	360. U ug/kg (360.)
Acenaphthylene	350. U ug/kg (350.)	360. U ug/kg (360.)	22. U ug/kg (22.)
Anthracene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Chrysene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	360. U ug/kg (360.)
Fluoranthene	350. U ug/kg (350.)	11. U ug/kg (11.)	360. U ug/kg (360.)
Fluorene	350. U ug/kg (350.)	11. U ug/kg (11.)	11. U ug/kg (11.)
Naphthalene	350. U ug/kg (350.)	22. U ug/kg (22.)	22. U ug/kg (22.)

Sample Identifier	082SS101 (SB-14)	082SS201 (SB-1)	082SS301 (SB-12)
Sample Collect Date	5/4/99	5/4/99	5/4/99
Analyte			
Phenanthrene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Pyrene	11. U ug/kg (11.)	11. U ug/kg (11.)	360. U ug/kg (360.)
EPA 8310 (PAHs)			
1-Methylnaphthalene	21. U ug/kg (21.)	22. U ug/kg (22.)	22. U ug/kg (22.)
2-Methylnaphthalene	26. ug/kg (20.)	22. U ug/kg (22.)	22. U ug/kg (22.)
Acenaphthene	350. U ug/kg (350.)	54. U ug/kg (54.)	360. U ug/kg (360.)
Acenaphthylene	350. U ug/kg (350.)	360. U ug/kg (360.)	22. U ug/kg (22.)
Anthracene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Chrysene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	360. U ug/kg (360.)
Fluoranthene	350. U ug/kg (350.)	11. U ug/kg (11.)	360. U ug/kg (360.)
Fluorene	350. U ug/kg (350.)	11. U ug/kg (11.)	11. U ug/kg (11.)
Naphthalene	350. U ug/kg (350.)	22. U ug/kg (22.)	22. U ug/kg (22.)
Phenanthrene	350. U ug/kg (350.)	4.3 U ug/kg (4.3)	4.3 U ug/kg (4.3)
Pyrene	11. U ug/kg (11.)	11. U ug/kg (11.)	360. U ug/kg (360.)
Metals			
Arsenic	0.97 U mg/kg (0.97)	1.1 U mg/kg (1.1)	0.99 U mg/kg (0.99)
Barium	9.9 mg/kg (1.)	1.4 mg/kg (1.)	1.9 mg/kg (1.)
Cadmium	0.48 U mg/kg (0.48)	0.54 U mg/kg (0.54)	0.49 U mg/kg (0.49)
Chromium	6.6 mg/kg (1.)	1.1 U mg/kg (1.1)	2.2 mg/kg (1.)
Lead	8.6 mg/kg (0.5)	1.7 mg/kg (0.5)	1.5 mg/kg (0.5)
Mercury	0.021 U mg/kg (0.021)	0.02 U mg/kg (0.02)	0.022 U mg/kg (0.022)
Selenium	0.97 U mg/kg (0.97)	1.1 U mg/kg (1.1)	0.99 U mg/kg (0.99)
Silver	0.97 U mg/kg (0.97)	1.1 U mg/kg (1.1)	0.99 U mg/kg (0.99)
Total Petroleum Hydrocarbons			
Diesel Range Organics	42. mg/kg (3.3)	3.6 U mg/kg (3.6)	3.6 U mg/kg (3.6)
Mineral Spirits Range Organics	10. U mg/kg (10.)	11. U mg/kg (11.)	11. U mg/kg (11.)
Petroleum Range Organics	70. mg/kg (10.)	11. U mg/kg (11.)	11. U mg/kg (11.)

Footnotes: Values in parentheses are detection limits

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

NTC Orlando

PROJECT REFERENCE McLoy Annex Buildings 7171, 7175 PROJECT NO 819 7171 02547 06 PO NUMBER NE 7531076
 PROJECT LOC (State) FL SAMPLER(S) NAME Chris Pisarri PHONE (407) 895 8845
Pat Crane FAX (407) 896 6150
 CLIENT NAME HLA CLIENT PROJECT MANAGER John Kasee
 CLIENT ADDRESS (CITY, STATE, ZIP) 1080 Woodcock Rd, Suite 100 Orlando, FL 32803

MATRIX TYPE	REQUIRED ANALYSES		PAGE	OF
AQUEOUS/LIQUID (or solvent, etc)	<input checked="" type="checkbox"/>	STANDARD REPORT DELIVERY	1	1
SOLID OF SEMI-SOLID	<input type="checkbox"/>	EXPEDITED REPORT DELIVERY (surcharge)		
AIR	<input type="checkbox"/>	Date Due		
INDIVIDUOUS	<input type="checkbox"/>			
B260 Encore	<input type="checkbox"/>			
B260 Bulk	<input type="checkbox"/>			
RCA Metals	<input type="checkbox"/>			
B37C 12-31C/FIP	<input type="checkbox"/>			
B015 CHLORINATED HYDROCARBONS	<input type="checkbox"/>			
FL-PAH	<input type="checkbox"/>			
B310	<input type="checkbox"/>			
B000 Encore	<input type="checkbox"/>			
B000 Bulk	<input type="checkbox"/>			

SAMPLE		SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED								REMARKS	
DATE	TIME												
5/4/99	1145		082 SS 101 Bldg 7171 (SB-14)	X		2	1	1	1				
5/4/99	1210		082 SS 201 Bldg 7171 (SB-1)	X		2	1	1	1				
5/4/99	1240		082 SS 301 Bldg 7171 (SB-12)	X		2	1	1	1				
5/4/99	1315		063 SS 101 Bldg 7175 (SB-21)	X	FIP			1	1	2	1		gasoline site
5/4/99	1340		063 SS 201 Bldg 7175 (SB-25)	X				1	1	2	1		
5/4/99	1400		063 SS 301 Bldg 7175 (SB-17)	X				1	1	2	1		
			Temp Blank	X								1	

RELINQUISHED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME	RELINQUISHED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME	RELINQUISHED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME
RECEIVED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME	RECEIVED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME	RECEIVED BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY (SIGNATURE) <u>[Signature]</u>	DATE	TIME	CUSTODY IN A/C	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS
	5/5/99	9:45	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		5912845	

Inc. Doc. # 516-08519 4/10/96



QUALITY ANALYTICAL
LABORATORIES, INC.

April 9, 1996

FILE COPY

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

RE: Analytical Data for
ABB UST 527

QAL Reference
MA565

Dear Mr. John Kaiser:

On **March 26, 1996**, QAL, Inc. received samples with a request for analysis. The analytical results and associated quality control data are enclosed.

It is our policy to store your samples for 30 days from the date of this letter. If extended storage is required, special arrangements can be accommodated upon early notification. The disposition of samples identified as hazardous will require special handling and you will be contacted if necessary.

QAL, Inc. appreciates your business and looks forward to serving you again. If you have any questions concerning your report or need any additional information, please call me at (334) 271-2440.

Sincerely,

Jennifer Boone
Client Services

Enclosures

xc: Mr. Manuel Alonzo

Mr. John McVoy

Sample ID Cross-reference Table

QAL, Inc. Lab Sample ID	Client Sample ID	Collect Date	Sample Matrix	Additional Description
FS = Field Sample				
MA565001	FS OLD16001	03/25/96	Water	GRAB

The above lab sample ID's and cross reference information apply to samples as received by the laboratory. Modifiers to the lab sample ID may be added for internal tracking purposes. Any modified sample ID will be reflected in the appropriate case narrative only.

**CASE NARRATIVE
GC TPFH CHARACTERIZATION**

QAL Lab Reference No./SDG.: MA565

Project: ABB UST

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody included with this data package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHOD

Preparation: SW-846 3510B
Cleanup: N/A
Analysis: SW-846 8015B(MOD)

IV. PREPARATION

Sample preparation proceeded normally.

V. ANALYSIS

A. Calibration : All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Surrogates: All acceptance criteria were met.

D. Spikes: All acceptance criteria were met.

E. Samples: The hydrocarbon fingerprint pattern for sample MA565001 (OLD16001) more closely resembles the pattern for mineral spirits; however, the patterns do not match exactly. The pattern indicates that some weathering of the sample has taken place.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and QAL, Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED: Brian Geers

Brian Geers
Manager, Organics Department

DATE: 4-5-96

**CASE NARRATIVE
Addendum**

Sample Information

<u>LAB SAMPLE ID</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLE MATRIX</u>	<u>DATE SAMPLED</u>	<u>DATE EXTRACTED</u>	<u>DATE ANALYZED</u>	<u>SAMPLE pH¹</u>
MA565001	OLD16001	FREE PRODUCT	03/25/96	N/A	04/02/96	N/A
DIBLK_04-01	DIBLK_04-01	FREE PRODUCT	N/A	N/A	04/01/96	N/A

¹ Applies to samples designated for purgeable VOA analysis only.

000003

METHOD: 8015B(MOD)
TFH CHARACTERIZATION

Client: QAL, Inc./LMG
Project: ABB UST
Client Sample ID: OLD16001
Sample Matrix: Free Product
Dilution Factor: 1.0

Lab Sample ID: MA565001
Date Sampled: 03/25/96
Date Received: 03/27/96
Date Extracted: N/A
Date Analyzed: 04/02/96

<u>Compound</u>	<u>Detected</u>
Gasoline	NO
Diesel	NO
JP-4	NO
JP-5	NO
Jet A	NO
Kerosene	NO
Mineral Spirits	YES

NO = Analyzed for but not detected.
YES = Analyzed for and detected.

Comments:

Approved by: Brian G. [Signature]

FORM I

000004

kdl.041

Quality Analytical
Laboratories Inc.

5090 Caterpillar Road,
Redding, CA 96003-1412

916 244-5227
Fax No. 916 244-4109

METHOD: 8015B(MOD)
TFH CHARACTERIZATION

Client Sample ID: DIBLK_04-01
Sample Matrix: Free Product
Dilution Factor: 1.0

Lab Sample ID: DIBLK_04-01
Date Extracted: N/A
Date Analyzed: 04/01/96

<u>Compound</u>	<u>Detected</u>
Gasoline	NO
Diesel	NO
JP-4	NO
JP-5	NO
Jet A	NO
Kerosene	NO
Mineral Spirits	NO

NO = Analyzed for but not detected.
YES = Analyzed for and detected.

Comments:

Approved by: *Brian G. [Signature]*

FORM I

kdl.041

Quality Analytical
Laboratories Inc.

5090 Caterpillar Road,
Redding, CA 96003-1412

916 244-5227
Fax No. 916 244-4109

000005

