K. R. (KEN) WELCH
Assistant Vice President
Environmental Management

Mailing Address:
Room 930
1416 Dodge Street
Omaha, Nebraska 68179
Fax No. (402) 271-4461

UNION PACIFIC RAILROAD COMPANY

G. (GLENN) THOMAS
Director-Environmental Operations South
S. W. (STEVE) BERKI
Director-Environmental Operations-Central
L. A. (LANNY) SCHMID
Director-Environmental Operations-West
B. A. (BROCK) NELSON
Director-Environmental Operations-North
R. L. (RICK) EADES
Director-Environmental Site Remediation

February 13, 1998

Mr. Ray S. Risner
Corrective Action Section
Industrial & Hazardous Waste Division
Texas Natural Resource Conservation Commission
12118 North I-35, Building D
MC 127
Austin, Texas 78753

Mr. Stephen M. Omo
Permits Section
Industrial & Hazardous Waste Division
Texas Natural Resource Conservation Commission
12015 Park 35 Circle
MC 130
Austin, Texas 78753

Subject: Transmittal, Phase 2 Report - RCRA Facility Investigation and Extent of Contamination Investigation; Houston Wood Preserving Works; Houston, Texas

Dear Sirs:

Enclosed, please find copies of the referenced report. If you have any questions regarding the enclosed report, please call me at (402) 271-5979.

Sincerely,

UNION PACIFIC RAILROAD

Ed Honig, P.E.
Environmental Site Remediation Manager

cc: Marsha Hill, TNRCC - Houston
Allyn Davis, EPA Region VI - Dallas

A MEMBER OF THE ENVIRONMENTAL RESOURCES MANAGEMENT GROUP

Phase 2-A Report
RCRA Facility Investigation and Extent of Contamination Investigation

Houston Wood Preserving Works
Houston, Texas

February 13, 1998
W.O. #422-09

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

ERM®

Phase 2-A Report
RCRA Facility Investigation and Extent of Contamination Investigation

Houston Wood Preserving Works
Houston, Texas

February 13, 1998

W.O. #422-09

Robin Mann

Robin Mann

Thomas D. Pacioni, P.G.

Thomas M. Whitehurst, P.G.
Principal

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

TABLE OF CONTENTS

EXECUTIVE SUMMARY			*v*
1.0	*INTRODUCTION*		*1*
	1.1	*SITE HISTORY*	*1*
	1.2	*REGULATORY STATUS*	*3*
		1.2.1 REVIEW OF RFI REQUIREMENTS	*4*
		1.2.2 REVIEW OF EOC REQUIREMENTS	*4*
		1.2.3 REQUIREMENTS THAT HAVE BEEN SATISFIED	*5*
	1.3	*OBJECTIVES AND TECHNICAL APPROACH*	*7*
	1.4	*SCOPE OF PHASE 2-A*	*8*
	1.5	*LIMITATIONS*	*9*
2.0	*REGIONAL WATER USAGE*		*10*
	2.1	*HYDROGEOLOGY*	*10*
	2.2	*GROUND WATER USAGE*	*10*
	2.3	*SURFACE WATER USAGE*	*10*
3.0	*FIELD PROCEDURES*		*11*
4.0	*SITE GEOLOGY AND HYDROGEOLOGY*		*12*
	4.1	*FILL MATERIAL*	*12*
	4.2	*A-COHESIVE ZONE*	*12*
	4.3	*A-TRANSMISSIVE ZONE*	*12*
	4.4	*B-COHESIVE ZONE*	*13*
	4.5	*B-TRANSMISSIVE ZONE*	*13*
	4.6	*C-COHESIVE ZONE*	*13*
	4.7	*C-TRANSMISSIVE ZONE*	*13*
	4.8	*AQUIFER SLUG TEST RESULTS*	*14*
	4.9	*GROUND WATER FLOW*	*14*
		4.9.1 Horizontal Ground Water Flow	*14*
		4.9.2 Vertical Ground Water Flow	*15*
5.0	*ANALYTICAL RESULTS*		*16*
	5.1	*SURFACE SOIL ANALYTICAL RESULTS*	*16*
		5.1.1 Area 1 - Off-site Drainage Area	*17*
		5.1.2 Area 2 - Tie Storage Area	*17*
		5.1.3 Area 3 - Former Process Areas	*17*
		5.1.4 Area 4 - Closed Surface Impoundment	*17*
	5.2	*SUBSURFACE SOIL ANALYTICAL RESULTS*	*17*
		5.2.1 Area 1 - Off-site Drainage Area	*18*
		5.2.2 Area 2 - Tie Storage Area	*18*
		5.2.3 Area 3 - Former Process Areas	*18*
		5.2.4 Area 4 - Closed Surface Impoundment	*19*

TABLE OF CONTENTS (Cont'd)

	5.3	SOIL LEACHATE TESTING RESULTS	19
	5.4	SOIL GEOTECHNICAL RESULTS	19
	5.5	GROUND WATER ANALYTICAL RESULTS	19
		5.5.1 Area 1 - Off-site Drainage	20
		5.5.2 Area 2 - Tie Storage Area	20
		5.5.3 Area 3 - Former Process Areas	20
		5.5.4 Area 4 - Closed Surface Impoundment	21
6.0	SOIL ASSESSMENT		22
	6.1	SOIL TPH AND ROST CORRELATION	22
		6.1.1 QUALITATIVE COMPARISON	22
		6.1.2 QUANTITATIVE COMPARISON	23
	6.2	ANALYSES OF CREOSOTE MOBILITY, FLUID MOTIONS AND NATURAL ATTENUATION PROCESSES	23
7.0	PHASE 2-A CONCLUSIONS		24
	7.1	SUMMARY OF HYDROGEOLOGY	24
	7.2	SUMMARY OF SOIL CHARACTERISTICS	24
	7.3	GROUND WATER CHARACTERISTICS	25
8.0	PATH FORWARD		26
	8.1	SUMMARY OF ACTIVITIES	26
	8.2	PROPOSED PLAN	27
9.0	REFERENCES		29

APPENDICES

A	FIELD PROCEDURES REPORT
B	LABORATORY ANALYTICAL REPORTS
C	AQUIFER SLUG TEST RESULTS
D	PRELIMINARY OUTLINE FOR RISK REDUCTION IMPLEMENTATION PLAN

TABLE OF CONTENTS (Cont'd)

List of Figures

1-1	*Site Map*
1-2	*SWMUs and AOCs*
1-3	*Four Investigative Areas*
4-1	*Cross-Section Locations*
4-2	*Cross-Section A-A'*
4-3	*Cross-Section B-B'*
4-4	*Cross-Section C-C'*
4-5	*Cross-Section D-D'*
4-6	*Static Water Level Elevations - A-TZ*
4-7	*Static Water Level Elevations - B-TZ*
4-8	*Static Water Level Elevations - C-TZ*
5-1	*Surface Soil - Chrysene*
5-2	*Subsurface Soil - Benzo(A)Anthracene*
5-3	*Subsurface Soil - Naphthalene*
5-4	*Ground Water - A-TZ - Naphthalene*
5-5	*Ground Water - B-TZ - Naphthalene*
5-6	*Ground Water - C-TZ - Naphthalene*
6-1	*TPH/ROST Correlation*

List of Tables

5-1	*Constituents of Concern*
5-2	*Surface Soil Sample Results*
5-3	*Subsurface Soil Sample Results*
5-4	*Soil Leachate Sample Results*
5-5	*Geotechnical Soil Sample Results*
5-6	*Well Completion Information*
5-7	*Ground Water Sample Results - Wells*
5-8	*Ground Water Sample Results - Hydropunch*
6-1	*ROST/TPH Correlation Data*

EXECUTIVE SUMMARY

This report documents Phase 2-A of a permit-required RCRA facility investigation (RFI) to investigate solid waste management units and areas of concern, and an Extent of Contamination (EOC) investigation completed as part of post-closure care for a former surface impoundment at the Houston Wood Preserving Works site in Houston, Texas. The site was utilized for wood treating operations until 1985, and is currently utilized for railroad storage.

As part of the investigations, the site has been segregated into four areas: 1) Off-Site Drainage Area; 2) Tie Storage Area; 3) Former Process Areas; and 4) Closed Surface Impoundment. The Phase 2-A activities were completed in accordance with the scope and methods described in Section 5.0 of the Phase 1 report. The scope of Phase 2-A included the following:

- completion of seven deep soil borings, eleven monitor wells, eight CPT soundings, and five Hydropunch points;
- collection of 45 surface soil samples, 68 subsurface soil samples, and 20 ground water samples;
- leachability and geotechnical analyses of soil samples; and
- aquifer slug tests to measure hydraulic conductivity.

The site is underlain mostly by clay, with two continuous and one discontinuous sandy transmissive zones present within the upper 100 feet. Ground water in the upper two transmissive zones appears to flow away (radially) from a relative ground water high in the southwest corner of the site with Darcian velocities on the order of 1 ft/yr. Ground water in the third transmissive zone flows east-southeast with a Darcian velocity on the order of 1 ft/yr.

Site conditions were assessed relative to benchmark quantitation limits in order to develop an understanding of potential impacts to soil and ground water. Soil impacts were observed throughout portions of the soil column in the Off-site Drainage Area, the Tie Storage Area and the Former Process Areas. Ground water impacts were observed within the two upper transmissive zones near the Off-site Drainage Area, the Tie Storage Area, the Former Process Areas, and the Closed Surface Impoundment Area. Minor ground water impacts were observed within the third transmissive zone near the Former Process Areas. Ultimately, the extent of affected media will be determined relative to site-specific concentration limits.

Future activities include development of a Risk Reduction Implementation Plan (RRIP). The RRIP will include a work plan for completing Phase 2 and will describe the conceptual approach to implementing the Risk Reduction Standards to help determine appropriate corrective measures.

1.0 *INTRODUCTION*

ERM-Southwest, Inc. has prepared this report to document the results of Phase 2-A of a RCRA Facility Investigation (RFI) and an Extent of Contamination (EOC) investigation. The RFI is being completed at the former Houston Wood Preserving Works (HWPW) site pursuant to Texas Natural Resource Conservation Commission (TNRCC) Permit No. HW-50343-000 issued to Southern Pacific Transportation Company (SPTCo) on June 20, 1994. Concurrent with the RFI, the EOC investigation is being completed in the area of a closed permitted surface impoundment pursuant to TNRCC Compliance Plan CP-50343-000 issued to SPTCo on June 20, 1994.

The site consists of a 33-acre tract of land located at 4910 Liberty Road, Houston, Harris County, Texas. The site is approximately 1.5 miles northeast of the intersection of U.S. Highway 59 and Interstate Highway 10 (Figure 1-1).

The site was utilized for wood treating operations until 1985, and is currently utilized for railroad storage and other railroad operations. Based on the conclusions of a RCRA Facility Assessment completed on behalf of the U.S. EPA (PRC EMI, 1993) and as described in Provision VIII of the permit, ten solid waste management units (SWMUs) and six areas of concern (AOCs) are subject to the RFI. The EOC investigation is part of the post-closure care requirements described in Section VIII of the Compliance Plan.

1.1 *SITE HISTORY*

An RFI Work Plan was submitted to the TNRCC (IC, 1994d) and subsequently approved with modifications on October 16, 1995. Based on the technical approach described in the work plan, the ten SWMUs and two AOCs listed below are subject to investigation. The locations of the SWMUs and AOCs are shown on Figure 1-2.

SWMU/AOC No.	*Description*
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of the Former UST No. 44-023-05
SWMU 10	Location of the Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 6	Inactive Wastewater Lagoon

An EOC Work Plan was also submitted to the TNRCC (IC, 1994c) and subsequently approved with modifications on September 29, 1995. For the RFI/EOC, the site was grouped into the four investigation areas listed below. The locations of the four areas are shown on Figure 1-3.

Area No.	*Area Name*	*SWMU/AOC Included*
Area 1	Off-Site Drainage Area	SWMU 2, AOC 6
Area 2	Tie Storage Area	SWMU 12
Area 3	Former Process Area	SWMU 4, SWMU 5, SWMU 6, SWMU 7, SWMU 8, SWMU 9, SWMU 10, SWMU 11, AOC 1
Area 4	Former Surface Impoundment	closed permitted unit

The following list is a summary of significant documents relating to the RFI/EOC Investigations, and dates of submittals and approvals (if appropriate). Also, an upcoming schedule of activities and tentative submittals to be performed at the site is included.

Date	*Description*
October 1993	RCRA Facility Assessment completed on behalf of U.S. EPA
June 20, 1994	Permit No. HW-50343-000 and Compliance Plan CP-50343-000 issued by TNRCC
August 19, 1994	Operation and Maintenance Plan and Compliance Schedule submitted on behalf of SPTCo
September 7, 1994	Revised Compliance Schedule submitted on behalf of SPTCo
September 16, 1994	EOC Work Plan submitted on behalf of SPTCo
October 14, 1994	RFI Work Plan submitted on behalf of SPTCo
November 3, 1994	Revised Compliance Schedule approved by TNRCC
January 10, 1995	Operation and Maintenance Plan approved by TNRCC
September 29, 1995	EOC Work Plan approved by TNRCC
October 16, 1995	RFI Work Plan approved by TNRCC
May 23, 1996	Phase 1 RFI/EOC Report submitted on behalf of SPTCo

Date	*Description*
November 26, 1996	EOC portion of the Phase 1 RFI/EOC Investigation Report approved by TNRCC
January 13, 1997	RFI portion of the Phase 1 RFI/EOC Investigation Report approved by TNRCC
February 13, 1998	Phase 2-A RFI/EOC Investigation Report submitted to TNRCC on behalf of SPTCo
March 31, 1998	Tentative date for submittal of the Risk Reduction Implementation Work Plan to TNRCC on behalf of SPTCo
July 29, 1998	Tentative date to begin the Phase 2-B field investigation activities
February 24, 1999	Tentative date for submittal of the Phase 2-B RFI/EOC Investigation Report to TNRCC on behalf of SPTCo
June 24, 1999	Tentative date to begin RFI Risk Assessment
August 23, 1999	Tentative date for submittal of the RFI Risk Assessment to TNRCC on behalf of SPTCo
December 21, 1999	Tentative date to begin the Corrective Measures Study
February 19, 2000	Tentative date for submittal of the Corrective Measures Study to TNRCC on behalf of SPTCo
June 20, 2000	Tentative date for submittal of the proposed permit modification and the Corrective Measures Implementation Work Plan to TNRCC on behalf of SPTCo

NOTE:

The above summary does not include routine activities such as semiannual ground water reports.

1.2 REGULATORY STATUS

In order to facilitate a mutual understanding (between the TNRCC and SPTCo) of the site's position within the regulatory process, the current regulatory status of the site was reviewed. The purpose of this section is to: a) summarize the permit-related regulatory requirements that the site is subject to; b) outline those requirements which have been satisfied by SPTCo prior to submission of this report; and c) outline those requirements which will be addressed in this report and as part of future activities.

The RFI-related regulatory requirements are based primarily on Provision VIII of the permit. The EOC-related regulatory requirements are based primarily on the Compliance Plan, which was issued in conjunction with the permit.

1.2.1 *REVIEW OF RFI REQUIREMENTS*

Provision VIII is designed to facilitate completion of an investigation to determine whether constituents of concern have been released into the environment from SWMUs or AOCs at the site. Prior to initiation of investigative activities, the permit requires submittal of an RFI Work Plan. The purpose of this Work Plan is to characterize the physical layout and operational history of the site, to present a plan for conducting an investigation of the nature and extent of constituent releases in soil (and initially in ground water), and to discuss provisions for developing a full-scale Ground Water Investigation Plan, if warranted.

The permit requires SPTCo to conduct the RFI activities in accordance with the RFI Work Plan following TNRCC's approval of the Work Plan. The data generated through these activities is (in part) intended to determine the need for additional investigative activities at the site. An RFI Report, including a discussion of the findings of the RFI, is required subsequent to completion of investigation activities.

According to the permit, if it is determined that a release to soil or ground water from any of the subject SWMUs or AOCs has occurred, then a Ground Water Investigation Plan is required. The purpose of this Plan is to identify the procedures for conducting supplemental investigations of soil and ground water at the site, as needed. In addition, a Preliminary Ground Water Report, containing a summary of the known ground water conditions at the site is required. The permit then requires that a schedule for a Final Ground Water Report be submitted to the TNRCC.

Subsequent to completion of investigation activities at the site, the permit requires that either a Corrective Measures Study (CMS) or Risk Reduction Standards implementation plan be submitted to the TNRCC. The CMS or Risk Plan is required for any SWMU or AOC at which a release has been documented through the RFI. Finally, a permit modification is required as appropriate, to incorporate any proposed corrective actions and/or changes in Ground Water Protection Standards.

1.2.2 *REVIEW OF EOC REQUIREMENTS*

Compliance Plan No. CP-50343 is designed to facilitate implementation of a corrective action program in the area of the permitted unit (i.e., Closed Surface Impoundment, NOR Unit No. 01). The Compliance Plan requires submittal of a schedule for implementation of the required activities. In addition, an Operation

and Maintenance Plan for the ground water monitoring and recovery system is required.

After submittal of the Compliance Schedule, an EOC Work Plan is required. The purpose of this Work Plan is to outline the objectives of the EOC investigation, describe the methods to be utilized during the investigation, characterize the physical layout and operational history of the permitted unit, and outline the proposed schedule for completion of the investigation.

Subsequent to approval of the EOC Work Plan, the Compliance Plan requires implementation of the investigative activities described therein. Following completion of the EOC investigation, the Compliance Plan requires submittal of an EOC Investigation Final Report. The purpose of the Final Report is (in part) to discuss the information obtained during the investigation and to provide recommendations for further investigation.

Following approval of the EOC Investigation Final Report, the Compliance Plan requires submittal of a Corrective Action Work Plan. The purpose of the Corrective Action Work Plan primarily is to present the methods by which potential corrective action alternatives will be evaluated. Subsequent to approval of the Corrective Action Work Plan, the Compliance Plan requires implementation of the Work Plan.

The Compliance Plan requires submittal of a Corrective Action Report following completion of the Corrective Action Work Plan activities. The primary purpose of the corrective Action Report is to identify a selected corrective action alternative for ground water in the area of the permitted unit. Following approval of the Corrective Action Report (and the final selected corrective action alternative) the Compliance Plan requires submittal of detailed engineering design plans and timeframes for implementation of the alternative. Subsequent to approval of the proposed design plans and timeframes, the Compliance Plan requires that the corrective action alternative be implemented in accordance with the approved schedule.

1.2.3 REQUIREMENTS THAT HAVE BEEN SATISFIED

A summary of regulatory requirements that have been satisfied prior to submittal of this report is provided below. The summary is based on documented activities completed by SPTCo and approved by the TNRCC.

As required by the Compliance Plan, SPTCo submitted a Compliance Schedule on August 19, 1994 (IC, 1994b). Additionally, as required by Provision XI.C of the Compliance Plan, SPTCo provided notice to TNRCC of its intent to install two new point-of-compliance (POC) wells between existing wells MW-2 and MW-7. The Compliance Schedule was revised by SPTCo and resubmitted on

September 7, 1994. The two new POC wells were installed on September 19, 1994. The TNRCC approved the installation of the two new POC wells and the Compliance Schedule on November 3, 1994.

Concurrent with submittal of the Compliance Schedule, SPTCo submitted an Operation & Maintenance Plan (IC, 1994a) to TNRCC. The Operation & Maintenance Plan was approved by TNRCC on January 10, 1995. Amendments 2 and 3 to the Operation & Maintenance Plan were submitted to TNRCC on May 21, 1995 and August 8, 1995, respectively.

In accordance with permit requirements, SPTCo submitted an RFI Work Plan, dated October 14, 1994 (IC, 1994d), which addressed the SWMUs and AOCs identified in the permit. The RFI Work Plan was approved, with modifications, by the TNRCC on October 16, 1995. Similarly, an EOC Work Plan was submitted on September 16, 1994 (IC, 1994c), and was approved with modifications by the TNRCC on September 29, 1995.

The RFI and EOC investigations have been combined and the initial field activities were completed by SPTCo during November and December 1995. A Phase 1 RFI/EOC Report was submitted to the TNRCC on May 23, 1996 (Terranext, 1996). The purpose of the Phase 1 report was to summarize the findings of initial investigation activities completed at the site, and to identify areas within the site where further investigation was warranted to fully characterize the nature and/or extent of releases. The EOC portion of the Phase 1 report was approved by the TNRCC on November 26, 1996. The RFI portion of the Phase 1 report was approved by the TNRCC on January 13, 1997.

The Phase 1 report included a summary of known ground water conditions at the site based on the Phase 1 results and information obtained during investigations in the area of the permitted unit. This portion of the Phase 1 RFI/EOC Report was intended to satisfy the permit requirement for submittal of a Preliminary Ground Water Report.

Based on indications that releases had occurred from SWMUs/AOCs at the site, the Phase 1 report also included a proposal for additional (i.e., Phase 2) investigation. In addition to further defining the extent of releases in soil, the Phase 2 proposal included a plan, based on soil and ground water analytical results, to conduct additional ground water investigation. This section of the Phase 1 report was intended to satisfy the permit requirements for submittal of a Ground Water Investigation Plan. Accordingly, an outline of the sequence of future reports was described as required by the permit in the Phase 2 proposal section of the Phase 1 report. The outline included submittal of a Phase 2 RFI/EOC Report.

It should be noted that one of the stated goals of Phase 2 was to fully characterize the nature and extent of releases to ground water at the site; the Phase 2 RFI/EOC Report was thereby intended to fulfill the permit requirement for submittal of a Final Ground Water Report and an EOC Investigation Final Report. Although broad in scope, the Phase 2 field activities completed during 1997 have not provided sufficient data to fully characterize the nature and extent of releases in soil and ground water at the site. Accordingly, this report is not intended to fulfill the requirements for submittal of a Final Ground Water Report or an EOC Investigation Final Report. As described in Section 8.0 herein, additional investigation is proposed for portions of the site and off-site areas (i.e., AOC 6).

1.3 *OBJECTIVES AND TECHNICAL APPROACH*

The objective of the RFI process is to investigate impacts and/or releases from waste management units associated with wood treating operations. The data collected during the RFI will be utilized for the following:

- to help understand current site conditions, including the hydrogeology of the site and the nature and extent of impacts;
- to complete a baseline risk assessment for the site; and
- to help design corrective measures, if warranted.

The objective of the EOC investigation is evaluate the extent of affected ground water outside the closed impoundment's boundary. These data will be utilized to evaluate remedial alternatives that will result in ground water conditions protective of human health and the environment.

The technical approach for the investigations is to collect sufficient, quality data to meet the goals described above. In order to meet these goals more effectively, the investigations have been implemented in a phased approach. A report which documented Phase 1 of the RFI and EOC investigation was submitted to the TNRCC on May 23, 1996 (Terranext, 1996). The Phase 1 report outlined the objectives for Phase 2 activities, and a proposed scope to meet these objectives. The specific objectives of Phase 2 include the following:

- determine the vertical extent of benzene, toluene, ethylbenzene and xylenes (BTEX), polynuclear aromatic hydrocarbons (PAH), and creosote migration in soil within areas shown to be significantly impacted from past releases;
- confirm, compare and if possible, correlate soil borings and soil sampling data with existing cone penetrometer technology (CPT) and Rapid Optical Screening Tool (ROST) data;

- determine the lateral extent of off-site impact attributable to the inactive wastewater lagoon (AOC-6);

- collect representative ground water samples and obtain hydrogeologic data across the entire site;

- develop and apply fate and transport analyses to predict possible contaminant levels off site and support natural attenuation of contaminants in the subsurface;

- collect data to assess natural attenuation processes in soil and ground water;

- obtain an understanding of the relationship between concentrations of contaminants in soil, and how these concentrations have or may affect ground water quality;

- derive risk-based concentrations through risk assessment using available site data; and

- subsequently modify the Compliance Plan and Permit as necessary to assure that site-specific elements form the basis for any further investigation, corrective measures, and post-closure activities required under the Permit.

This report documents the methods and results of the RFI/EOC field activities completed during 1997 and outlines the steps required to complete Phase 2. This first step of Phase 2 is hereinafter referred to as Phase 2-A.

1.4 SCOPE OF PHASE 2-A

The Phase 2-A activities were completed in accordance with the scope and methods described in Section 5.0 of the Phase 1 report. The scope of Phase 2-A included the following:

- completion of seven deep soil borings, eleven monitor wells, eight CPT soundings, and five Hydropunch points;
- collection of 45 surface soil samples, 68 subsurface soil samples, and 20 ground water samples;
- leachability and geotechnical analyses of soil samples; and
- aquifer slug tests to measure hydraulic conductivity.

In addition to describing the methods and results of Phase 2-A, the scope of this report includes addressing a path forward for the remaining permit requirements.

1.5 LIMITATIONS

The data and results presented herein were collected by Terranext and their predecessor company, Industrial Compliance (IC). ERM-Southwest has reviewed existing site data to the extent practical and made inferences regarding site conditions based on the field notes and other files from Terranext. ERM-Southwest makes no warranties regarding the accuracy, completeness or validity of the data and results collected to date.

2.0 *REGIONAL WATER USAGE*

2.1 *HYDROGEOLOGY*

According to the latest U.S. Geological Survey nomenclature, the formations that supply water in the Harris County area are, from oldest to youngest: the Goliad Sand of Pliocene Age; the Willis Sand, the Bentley Formation, the Montgomery Formation, and the Beaumont Clay of Pleistocene Age; and Alluvium of Pleistocene and Recent Ages. These formations are grouped into two aquifer subdivisions, which are, from oldest to youngest, the Evangeline Aquifer and the Chicot Aquifer. The Evangeline Aquifer is composed of the Goliad Sand, Willis Sand, and Bentley Formation; and, the Chicot Aquifer is composed of the Montgomery and Beaumont formations.

2.2 *GROUND WATER USAGE*

The investigation site overlies the aquifers of the Chicot hydrogeologic unit, which yield small to moderate quantities of fresh water in Harris County. However, based on information from the City of Houston Water Production/ Water Quality Division, local drinking water in this section of Harris County is obtained only from Lake Houston or the Trinity River (pc, 1997).

A records search was completed in 1995 to identify water wells within one mile of the site (AIC, 1995). The search indicated that nine wells had been installed. Two of the wells are owned by the City of Houston (one screened from 1,142 to 1,969 feet below grade and the other screened from 641 to 1,279 feet below grade), six wells are owned by the Harris-Galveston Coastal Subsidence District for observation (screened from depths ranging from 283 to 2,119 feet below grade), and one was a privately-owned well which has been plugged and abandoned.

2.3 *SURFACE WATER USAGE*

Based on a review of USGS topographic quadrangle maps, no significant surface water bodies suitable for water supply, recreational, or industrial usage are located within one mile of the site.

3.0 *FIELD PROCEDURES*

The field activities associated with Phase 2-A were completed on behalf of SPTCo by Terranext. The scope of the field activities, and the field procedures and investigation tools that were utilized are described in a report prepared by Terranext entitled "*Phase 2 RFI/EOC Field Procedures*". The field procedures report dated December 8, 1997 is included as Appendix A.

4.0 *SITE GEOLOGY AND HYDROGEOLOGY*

Based on a review of the CPT logs and soil boring logs completed as part of previous (including Phase 2-A) hydrogeologic investigations, the subsurface has been characterized to a depth of approximately 75 feet. One deeper boring was advanced for the installation of a monitor well, but no log was generated. The subsurface is characterized by a series of low-permeability zones (i.e., cohesive soils) and water-transmissive zones.

For simplicity and organizational reasons, the nomenclature to designate strata has been modified somewhat. The native cohesive and transmissive zones underlying the site have been re-designated alphabetically from shallowest to deepest. For example, the shallowest or uppermost transmissive zone is referred to as the A-Transmissive Zone or A-TZ.

From shallowest to deepest, the lithologic zones that underlie the site include fill material, the A-Cohesive Zone (A-CZ), the A-Transmissive Zone (A-TZ), the B-Cohesive Zone (B-CZ), the B-Transmissive Zone (B-TZ), the C-Cohesive Zone (C-CZ), the C-Transmissive Zone (C-TZ), and the D-Cohesive Zone (D-CZ). Geologic cross-sections and a cross-section location map are provided in Figures 4-1 through 4-5. The general characteristics of each zone are described below.

4.1 *FILL MATERIAL*

Fill material is present at ground surface and has an average thickness of approximately 3 feet. Visual observations of the fill material indicate that the fill is primarily a mixture of gravel, clay, construction debris, and railroad ties. The layer of fill is underlain by the A-CZ.

4.2 *A-COHESIVE ZONE*

The A-CZ ranges in thickness from 8 to 15 feet and was encountered in all the CPT soundings and monitor well borings. Based on lithologic descriptions from boring logs for MW-10A, MW-10B, and MW-11A, the A-CZ in the western portion of the site consists of gray silty clay. The silty clay is stiff to very stiff, laminated, moist, and contains indications of plant material, calcium carbonate, iron oxide nodules, roots, and sandy clay lenses. The A-CZ is underlain by the A-TZ.

4.3 *A-TRANSMISSIVE ZONE*

According to CPT soundings and boring log descriptions, the A-TZ is a continuous sandy layer present across the site. The A-TZ is thickest on the eastern portion of the property (approximately 10 feet thick), and gradually thins from east to west (to less than 4 feet thick). Based on lithologic descriptions from

boring logs for MW-10A, MW-10B, and MW-11A, the A-TZ beneath the western portion of the site consists of light greenish-gray to light gray sand and silty sand that is very fine-grained, wet, and contains plant material and 10 to 25 percent clay. The A-TZ overlies the B-CZ.

4.4 *B-COHESIVE ZONE*

The B-CZ is a layer of cohesive soils (mostly clays, silty clays, sandy clays, and clayey silts) ranging in thickness from approximately 10 feet beneath the eastern portion of the site to 16 feet beneath the western portion of the site. The B-CZ was encountered in all the CPT soundings and POC well nest borings. Based on the boring logs from the POC well nests (MW-10A, MW-10B, and MW-11A, MW-11B) the B-CZ beneath the site is clay, silty clay, and sandy clay. It is mottled gray and reddish brown, very stiff to hard, and moist with a high plasticity. The unit also contains lenses of silty sand, and slickensides. The B-CZ overlies the B-TZ or C-CZ where the B-TZ is absent.

4.5 *B-TRANSMISSIVE ZONE*

The B-TZ is a sandy layer that underlies the B-CZ in the western portion of the site only, and is not present in the eastern portion of the site. Where present, the B-TZ is approximately 7 feet thick and is present at approximately 25 to 35 feet below ground surface. Based on the POC boring logs, the B-TZ consists of silty sand and sand that is mottled brown and gray, very fine-grained, and very dense in consistency.

4.6 *C-COHESIVE ZONE*

The C-CZ is a layer of cohesive soils (primarily) that underlie the B-TZ to the west and the B-CZ to the east. The C-CZ is approximately 8 feet thick. Based on boring logs from MW-12C and MW-18C, the C-CZ consists of silt and clayey silt that is reddish brown, firm in consistency, has low plasticity, and contains minor amounts of sand.

4.7 *C-TRANSMISSIVE ZONE*

The C-TZ is a silty sand layer 7 feet thick that underlies the C-CZ at an approximate depth of 65 to 66 feet below ground surface. Based on the boring logs from MW-12C and MW-18C, the C-TZ consists of silty sand that is reddish brown, very fine-grained and wet. The C-TZ overlies reddish brown clay. The underlying clay has been designated the D-CZ: Only the upper 2 feet of the D-CZ has been characterized.

4.8 *AQUIFER SLUG TEST RESULTS*

Aquifer slug tests (rising head) were performed on 10 monitor wells on May 1 and 2, 1997. The slug tests data were analyzed using the Bouwer and Rice method (Bouwer and Rice, 1976) and the solutions are included in Appendix C. The results of the rising head test are listed below.

Monitor Well ID	*Transmissive Zone*	*Hydraulic Conductivity (cm/sec)*
MW-10A	A-TZ	4.2×10^{-4}
MW-10B	B-TX	5.3×10^{-5}
MW-12A	A-TZ	3.1×10^{-3}
MW-12B	B-TZ	3.7×10^{-3}
MW-13	A-TZ	7.9×10^{-4}
MW-14 [B]	B-TZ	1.2×10^{-4}
MW-15	A-TZ	6.9×10^{-4}
MW-16	A-TZ	4.5×10^{-4}
MW-17	A-TZ	2.8×10^{-4}
MW-18	A-TZ	1.3×10^{-3}

Based on the slug test data gathered from seven monitor wells screened in the A-TZ, the hydraulic conductivity of the A-TZ ranges from 2.8×10^{-4} to 1.3×10^{-3} cm/sec, with an average conductivity of 7.0×10^{-3} cm/sec (2.8 ft/day) and a geometric mean of 7.6×10^{-4} cm/sec. Based on the slug test data gathered from three monitor wells screened in the B-TZ, the hydraulic conductivity of the B-TZ ranges from 5.3×10^{-5} to 3.7×10^{-3} cm/sec, with an average conductivity of 1.2×10^{-3} cm/sec (3.7 ft/day). and a geometric mean of 2.8×10^{-4} cm/sec.

4.9 *GROUND WATER FLOW*

Ground water elevations were measured from each monitor well on September 25, 1997 to help assess ground water flow direction and gradient. Potentiometric surface contour maps for the A-TZ, B-TZ and C-TZ are provided in Figures 4-6, 4-7 and 4-8, respectively.

4.9.1 *Horizontal Ground Water Flow*

Based on interpretation of the contour maps for both the A-TZ and B-TZ, ground water appears to flow radially away from a relative ground water high in the southwest corner of the Tie Storage Area. The horizontal hydraulic gradient is typically 0.001 ft/ft in both the A-TZ and the B-TZ. Based on the horizontal gradient and the hydraulic conductivity described in Section 4.8 above, the calculated Darcian velocity is 0.8 ft/yr in the A-TZ and 0.3 ft/yr in the B-TZ.

Based on interpretation of the C-TZ contour map, ground water flows toward the east-southeast with a horizontal hydraulic gradient of 0.003 ft/ft.

4.9.2 *Vertical Ground Water Flow*

Monitor well nests were constructed at five locations at the site. The well nests consist of two or three monitor wells that are located as near as practical to each other (i.e., less than 10 feet apart) but are screened in separate transmissive zones. The well nest locations, screened intervals, and ground water elevations measured on September 25, 1997 are summarized below:

Tie Storage Area

MW-12A	A-TZ	41.88 ft MSL
MW-12B	B-TZ	41.70 ft MSL
MW-12C	C-TZ	13.44 ft MSL

Closed Surface Impoundment

MW-10A	A-TZ	41.43 ft MSL
MW-10B	B-TZ	41.28 ft MSL

MW-11A	A-TZ	41.34 ft MSL
MW-11B	B-TZ	41.23 ft MSL

Former Process Areas

MW-15A	A-TZ	40.66 ft MSL
MW-15C	C-TZ	16.24 ft MSL

MW-18A	A-TZ	36.42 ft MSL
MW-18C	C-TZ	19.94 ft MSL

At each location where the A-TZ and B-TZ are screened, the measured ground water elevations for the two zones are within one foot. As a result, the horizontal flow direction and gradient for the two zones are similar. The A-TZ and B-TZ are separated by approximately 5 feet of clay with interlaminated silty and/or sandy seams: that is, the upper portion of the B-CZ. These observations suggest that the A-TZ and B-TZ have substantial hydraulic communication.

Based on the measured ground water elevations, the vertical hydraulic gradient between the A-TZ/B-TZ and the C-TZ appears to be downward. The C-TZ is overlain by 25 to 40 feet of clay, and the potentiometric surface of the C-TZ is an average of 23 feet lower than the A-TZ or B-TZ (where present).

5.0 *ANALYTICAL RESULTS*

The Phase 2-A field activities were conducted between February 25, 1997 and May 13, 1997. The field activities included collection of 45 surface soil samples, 68 subsurface soil samples, and 20 ground water samples for laboratory analyses. Ground water samples were collected both from monitor wells and through Hydropunch technology.

Subsurface soil samples and ground water samples were analyzed for the constituents of interest (COI) listed in the Compliance Plan (Tables I and II). The COI are provided in Table 5-1 and include volatile organic compounds (VOCs) analyzed by SW-846 Method 8260 and semivolatile organic compounds (SVOCs) analyzed by SW-846 Method 8270. The surface soil samples were analyzed for a subset of the COI as described in Section 5.1 below.

In addition, 28 discrete subsurface soil samples were collected from locations that had been characterized through CPT/ROST during Phase 1. These samples were split and analyzed for total petroleum hydrocarbons (TPH) by EPA Method 418.1 (modified) and bench-scale ROST. The objective of this task was to evaluate the relationship between TPH concentration and the fluorescence data obtained during Phase 1.

5.1 *SURFACE SOIL ANALYTICAL RESULTS*

As an initial step in understanding overall site conditions, the Limits of Quantitation (LOQs) were utilized as a benchmark for assessing which areas had been impacted through historical site activities at the SWMUs and AOCs. Ultimately, the extent of affected surface soil will be assessed relative to concentration limits appropriate for the site in accordance with the permit during development of a site conceptual model. The site conceptual model will be presented under separate cover.

A total of 31 surface soil samples were collected from a pre-set grid in accordance with U.S. EPA guidance (U.S. EPA, 1989). Additionally, 14 surface soil samples were collected during completion of soil borings and/or monitor wells. The laboratory analytical results for the surface soil samples are summarized in Table 5-2 and the laboratory analytical reports are provided in Appendix B.

The 31 surface soil samples collected from the grid pattern were analyzed for the SVOCs included on the COI list (Table 5-1) by SW-846 Method 8270. The additional surface soil samples from the soil borings and wells were analyzed for the COI listed in Table 5-1.

Bubble plots were developed from the comprehensive database of surface soil results (i.e., Phase 1 and Phase 2-A) to show the relative distribution of selected

COI. A surface soil bubble plot of soil chrysene concentrations is provided in Figure 5-1. Chrysene was selected because its distribution and range of detected concentrations are representative of the SVOCs reported in surface soil samples. The comprehensive set of surface soil analytical results is described by area below.

5.1.1 *Area 1 - Off-site Drainage Area*

No surface soil samples were collected in the Off-site Drainage Area as part of the Phase 2-A investigation. A description of observed impacts is included in the Phase 1 RFI/EOC report.

5.1.2 *Area 2 - Tie Storage Area*

A total of 20 surface soil samples were collected within the Tie Storage Area as part of the Phase 2-A investigation. Based on the reported laboratory results, unimpacted areas are present near MW-12, CPT30R, CPT28, and MW-15.

5.1.3 *Area 3 - Former Process Areas*

A total of 11 Phase 2-A surface soil samples were collected within the Former Process Areas. The Phase 2-A surface soil sample analytical results indicate two areas of impact, however their extent has not been fully assessed. The analytical results suggest historical impacts are greatest around the location of grid node G8 in the northeast area of the Former Process Area as shown on Figure 5-1.

5.1.4 *Area 4 - Closed Surface Impoundment*

The former impoundment was backfilled with imported fill material as part of closure activities in 1980. Accordingly, no surface soil samples were collected in the Closed Surface Impoundment as part of the Phase 2-A investigation.

5.2 *SUBSURFACE SOIL ANALYTICAL RESULTS*

As an initial step in understanding overall site conditions, the LOQs were utilized as a benchmark for assessing which areas had been impacted through historical site activities at the SWMUs and AOCs. The extent of affected subsurface soil ultimately will be assessed relative to concentration limits appropriate for the site in accordance with the permit during development of a site conceptual model. As previously mentioned, the site conceptual model will be presented under separate cover.

Soil borings SB02 through SB08 and monitor well borings MW-12 through MW-18 were completed as part of the Phase 2-A investigation to assess the extent of COI. In addition, CPT soundings (CPT35 through CPT42) were completed to

further assess site lithology. The soil boring logs and CPT logs are included as Attachment 1 to Appendix A. A total of 68 subsurface soil samples were collected and analyzed for the COI listed on Table 5-1. The analytical results are summarized on Table 5-3 and the laboratory analytical reports are provided in Appendix B.

Bubble plots were developed from the comprehensive database of subsurface soil results (i.e., Phase 1 and Phase 2-A) to show the relative distribution of selected COI. Subsurface soil bubble plots of benzo(a)anthracene and naphthalene are provided in Figures 5-2 and 5-3. Benzo(a)anthracene and naphthalene were selected because the range and distribution of concentrations are representative of the SVOCs reported on site. The comprehensive set of subsurface soil analytical results is described by area below.

5.2.1 *Area 1 - Off-site Drainage Area*

No subsurface soil samples were collected in the Off-site Drainage Area as part of the Phase 2-A investigation. A description of observed impacts is included in the Phase 1 RFI/EOC report.

5.2.2 *Area 2 - Tie Storage Area*

Based on the RFI/EOC investigation results, COI are present from ground surface to the silty clay of the A-CZ (approximately 7 feet below ground surface) in the Tie Storage Area. In addition, COI have been detected within the A-TZ and B-TZ soil matrix at depths of approximately 20 and 35 feet below grade. As shown on Figures 5-2 and 5-3; however, soil impacts are limited to a small area in the southeastern portion of the Tie Storage Area.

The Phase 1 report suggested that a potential creosote source may be present in a localized area near CPT25R. The ROST profile for CPT25R showed measurable fluorescence from 0 to 30 feet below grade and from 42.5 to 45 feet below grade, which corresponds to the fill, A-CZ, A-TZ, and B-TZ. As part of Phase 2-A, soil boring SB05 was advanced adjacent to CPT25R. The laboratory analytical results from samples collected from SB05 indicated that no COI were detected.

5.2.3 *Area 3 - Former Process Areas*

Based on the subsurface analytical results, as well as the relatively high fluorescence intensities recorded, COI are present in the Former Process Areas from ground surface to the clay in the C-CZ (approximately 60 feet below ground surface). A minimum of one COI was detected in each sample collected from the soil borings and well borings located in the Former Process Areas.

5.2.4 *Area 4 - Closed Surface Impoundment*

No subsurface soil samples were collected in the Closed Surface Impoundment as part of the Phase 2-A investigation. A description of observed impacts is included in the Phase 1 RFI/EOC Report.

5.3 *SOIL LEACHATE TESTING RESULTS*

Five subsurface soil samples were submitted for the Synthetic Precipitation Leaching Procedure (SW-846 Method 1312) and subsequent analysis of COI using SW-846 Methods 8260 and 8270. The samples were collected from soil borings SB03, SB04 and SB06, which are located in the Former Process Areas. A summary of the soil leachate testing results is provided in Table 5-4.

5.4 *SOIL GEOTECHNICAL RESULTS*

A total of 10 soil samples were submitted for analysis of the following geotechnical parameters: dry density, moisture content, specific gravity, fraction organic carbon, and pH. A summary of the soil geotechnical results is included in Table 5-5.

Based on the reported data, several general trends are observed. First, the transmissive zones have lower dry densities and lower specific gravity than the cohesive zones which is a result of differing mineral content, and to a lesser degree, packing and relatively larger grain size. The transmissive zones also have higher moisture content and lower fractions of organic carbon.

5.5 *GROUND WATER ANALYTICAL RESULTS*

As an initial step in understanding overall site conditions, the LOQs were utilized as a benchmark for assessing which areas had been impacted through historical site activities at the SWMUs and AOCs. Ultimately, the extent of affected ground water will be assessed relative to concentration limits appropriate for the site in accordance with the permit during development of a site conceptual model. The site conceptual model will be presented under separate cover.

As part of the Phase 2-A field activities, 11 monitor wells were installed to facilitate ground water sampling and to provide information regarding hydraulic gradient, hydraulic conductivity, lithology, and constituent concentrations in the transmissive zones. Of the 11 Phase 2-A wells, six were completed in the A-TZ, two were completed in the B-TZ and three were completed in the C-TZ. Currently, 23 wells and 3 piezometers are present at the site. A comprehensive well completion table for the wells on site, including the area and zone of completion is provided in Table 5-6.

In addition, nine ground water samples were collected using the Hydropunch sampling system. The overall objective of this phase of the Hydropunch program was to determine if the Inactive Wastewater Lagoon (AOC-6) is a source of impact to the ground water in the off-site area west of the site, and to assess the extent of any impact.

During Phase 2-A, ground water samples were collected from monitor wells on site and from Hydropunch locations on site and off site. The ground water samples were collected and analyzed for the COI listed in Table 5-1. The laboratory analytical results for the ground water samples are summarized in Tables 5-7 and 5-8, and the laboratory analytical reports are provided in Appendix B. Bubble plots which show the relative distribution of selected COI in ground water are provided in Figures 5-4, 5-5 and 5-6 within the A-TZ, B-TZ and C-TZ, respectively. The following subsections describe the ground water analytical results by area.

5.5.1 *Area 1 - Off-site Drainage*

Based on the comprehensive analytical database, the A-TZ appears to be impacted in the off-site drainage area near HP02, HP08, and HP18. The B-TZ is impacted at HP18STZ and HP21STZ. The northern portion of the Off-site Drainage Area shows no impact to the A-TZ (no data is available for the B-TZ and C-TZ in this area).

The reported results for well MW-12C, which is completed in the C-TZ near the center of the Off-site Drainage Area, has no detected COI.

5.5.2 *Area 2 - Tie Storage Area*

Based on the comprehensive analytical database, the A-TZ and B-TZ appear to be impacted in the southwest portion of the Tie-Storage Area near MW-05 and in the center of the western boundary near MW-12. The A-TZ and C-TZ also appear to be impacted in the northeast portion of the area at MW-15; whereas the B-TZ is not present in the northeast.

5.5.3 *Area 3 - Former Process Areas*

Based on the comprehensive analytical database, the A-TZ appears to be impacted in the Former Process Areas. No COI were detected at HP12. The B-TZ is not present in this area of the site. Constituents of interest were also detected in the C-TZ near MW-18. It should be noted that limited data is available relating to ground water in the Former Process Areas.

5.5.4 *Area 4 - Closed Surface Impoundment*

The A-TZ and B-TZ appear to be impacted in the area of the Closed Surface Impoundment. No data is available for the C-TZ in this area.

6.0 SOIL ASSESSMENT

Section 5.0 of the Phase 1 report described several soil assessment activities to be completed as part of Phase 2, including a comparison of soil TPH and ROST data, numerical simulation of creosote mobility and fluid motions, and assessment of potential natural attenuation processes. Based on the data collected, only the soil TPH and ROST data comparison is appropriate at this time. Each soil assessment activity is briefly described below.

6.1 SOIL TPH AND ROST CORRELATION

During Phase 1, a substantial set of soil fluorescence data was collected using CPT/ROST technology. Because the ROST tool was used *in situ* and adjacent soil samples were not collected, direct comparison to constituent concentrations could not be made. In order to assess the relative sensitivity of the ROST data to soil constituent concentrations, soil samples were collected during Phase 2 and analyzed concurrently for TPH and fluorescence.

In order to collect appropriate data, selected soil borings were sampled at various depths and samples were split for analysis. A portion of each sample was sent to Pace Analytical, Inc. of Houston, Texas for TPH analysis, and a portion was sent to Fugro Geosciences of Houston, Texas for bench-scale ROST analysis. A summary of the results is provided in Table 6-1.

A similar study was performed recently and is described in a document entitled *The Rapid Optical Screening Tool (ROST™) Laser-Induced Fluorescence (LIF) System for Screening of Petroleum Hydrocarbons in Subsurface Soils* (U.S. EPA, 1997). In that document, a qualitative correlation was demonstrated between TPH (a.k.a., TRPH) results and ROST results at two different environmental investigation sites. However, quantitative correlation was not discussed. Hence, both a quantitative and a qualitative correlation between TPH and ROST data is presented herein.

6.1.1 QUALITATIVE COMPARISON

As a first step, a qualitative analysis was performed to evaluate whether a positive ROST detection is reproducible as a positive TPH detection. The results suggest a very good correlation between TPH detects and LIF detects was observed to the extent that only one discrepancy was noted in 31 observations.

The qualitative analysis included a review of TPH and ROST detection limits. The TPH LOQ for this data set was reported at 20 mg/kg. Background fluorescence is typically established for each sounding based on the average minimum LIF response (a detection limit is then calculated by adding 2.58 standard deviations of the minimum response to the background value). However, because

the ROST probe was exposed to a batch sample for this analysis, rather than a continuous soil column, no background measurement could be obtained. Whereas a detection limit could not be calculated for a specific sample, an approximate background intensity (i.e., detection limit) of 2.65 was estimated based on the entire set of data.

6.1.2 *QUANTITATIVE COMPARISON*

Prior to numerical comparison, the data sets were transformed to natural logarithms. In addition, a value equal to one-half the TPH LOQ (i.e., 10 mg/kg) was assigned for non-detect results.

Visual inspection of the data shows an obvious trend, and an R^2 value of 0.7 is calculated through linear regression analysis (Figure 6-1). For comparison purposes, the data sets were then segregated by soil class to help account for potential variability resulting from soil texture differences. Very strong correlations were calculated for the segregated data sets. For example, an R^2 value of 0.9 was calculated when the subset for clayey silt was compared.

Derivation of site-specific calibration curves and more rigorous statistical evaluation is not presented herein based on: a) the areas where ROST was employed previously have subsequently been studied using conventional techniques; and b) the results of the conventional analysis largely supported the ROST screening results. The applicability of additional comparison will be determined based on the objectives of future use of ROST technology at the site, if any.

6.2 *ANALYSES OF CREOSOTE MOBILITY, FLUID MOTIONS AND NATURAL ATTENUATION PROCESSES*

Section 5.8 of the Phase 1 report described a conceptual methodology for numerically determining the site-specific mobility of creosote. In addition, numerical simulations of fluid motion and natural attenuation processes were proposed. Based on the data collected and the overall goals of the RFI/EOC investigations, these modeling efforts appear to be premature at this time.

The goals of the RFI/EOC investigations included assessment of the extent of affected material. Thus, until that assessment is complete, or unless further investigation cannot be completed, it is not appropriate to model these processes. If, following completion of the RFI/EOC investigations, additional understanding of these processes is required to achieve permit requirements, then the modeling will be performed.

7.0 *PHASE 2-A CONCLUSIONS*

The following general conclusions were developed based on data presented herein and in the Phase 1 report completed previously.

7.1 *SUMMARY OF HYDROGEOLOGY*

The predominant lithology beneath the site is clay, though very fine-grained sand zones are present as thin laterally continuous layers (A-TZ and C-TZ) across the site, and as a thin discontinuous layer (B-TZ) beneath the western portion of the site (see Figures 4-1 through 4-5). The A-TZ and B-TZ appear to be inter-connected to some degree, and ground water these two upper zones flows away from the southwestern portion of the site. Ground water in the C-TZ flows toward the east-southeast. The hydraulic conductivity of the sandy zones range from 10^{-3} to 10^{-5} cm/sec. There are no known uses of ground water from the A-TZ, B-TZ or C-TZ within one mile of the site.

7.2 *SUMMARY OF SOIL CHARACTERISTICS*

Surface soil and subsurface soil samples were collected as part of Phase 2-A. As an initial step in understanding overall site conditions, the LOQs were utilized as a benchmark for assessing which areas had been impacted through historical site activities at the SWMUs and AOCs. The areas that appear to be impacted include the following:

- Off-site Drainage Area - Site data indicates that portions of the B-TZ and C-CZ are impacted by COI.

- Tie Storage Area - Site data indicates that portions of the A-CZ, A-TZ, B-CZ and B-TZ are impacted by COI. Based on laboratory analytical results from SB05, the theory of a localized creosote source near CPT25R is discounted.

- Former Process Areas - Site data indicates that portions of the A-CZ, A-TZ, B-CZ and C-CZ are impacted by COI.

- Closed Surface Impoundment - The former surface impoundment was a shallow pit approximately 7 feet deep, excavated and closed according to guidance from the Texas Water Commission (now the TNRCC) in 1984. Site data indicates that the A-CZ, A-TZ, and B-CZ at the surface impoundment are less impacted by constituents of concern than the deeper B-TZ.

Soil fluorescence appears to be directly proportional to soil TPH (and presumably to COI) concentrations. The extent of affected soil will be assessed relative to

concentration limits appropriate for the site in accordance with the permit during development of a site conceptual model.

7.3 *GROUND WATER CHARACTERISTICS*

Ground water samples were collected both from monitor wells and through the Hydropunch system as part of Phase 2-A. As an initial step in understanding overall site conditions, the LOQs were utilized as a benchmark for assessing which areas had been impacted through historical site activities at the SWMUs and AOCs. The areas that appear to be impacted include the following:

- Off-site Drainage Area - Site data suggests that portions of the A-TZ and B-TZ are impacted by COI.

- Tie Storage Area - Site data indicates that portions of the A-TZ and C-TZ are impacted by COI.

- Former Process Areas - Site data indicates that portions of the A-TZ and C-TZ are impacted by COI.

- Closed Surface Impoundment - Ground water near the former surface impoundment is analyzed semiannually pursuant to the Compliance Plan, and the results are provided in semiannual ground water monitoring reports submitted under separate cover. Site data indicates that the A-TZ, and B-CZ at the surface impoundment are impacted by COI.

The extent of affected ground water will be assessed relative to concentration limits appropriate for the site in accordance with the permit during development of a site conceptual model.

8.0 *PATH FORWARD*

In order to satisfy the substantive requirements of the permit and compliance plan, SPTCo proposes an aggressive path forward. Based on the extensive investigation completed on site to date, only limited additional investigation is warranted to meet the overall goals of the RFI on site. Conversely, SPTCo recognizes that the off-site data set is limited and that additional RFI/EOC investigation is warranted: for example, in the AOC-6 area and the area northeast of the site. Accordingly, a work plan to complete the RFI/EOC investigations will be submitted.

The work plan will likely incorporate by reference much of the material presented in the RFI Work Plan approved previously, except for the scope of work. The work plan will outline a detailed scope of work for Phase 2-B that will achieve the pertinent goals of Phase 2. SPTCo proposes that the goals of Phase 2 be limited hereafter to determining the lateral and vertical extent of affected media resulting from activities at SWMUs and AOCs during wood treating operations. SPTCo is confident that these objectives will be achieved during Phase 2-B; however, if the objectives are not achieved, then a Phase 2-C will be implemented. The applicability of developing fate and transport analyses to predict possible COI concentrations off site in the future (in support of natural attenuation demonstrations) will be assessed during future site activities.

8.1 *SUMMARY OF ACTIVITIES*

This section provides a conceptual summary of the actual activities associated with the site. In addition to the RFI/EOC investigations, routine ground water monitoring and other activities associated with the Closed Surface Impoundment Compliance Plan will be performed, but are not included in this summary.

It should also be noted that Interim Stabilization Measures may be implemented during the course of site activities. For example, the off-site portion of the southern drainage ditch (i.e., SWMU 1) has been remediated and an Interim Stabilization Measures report will be submitted under separate cover during the first quarter of 1998.

- Phase 1 RFI/EOC

A screening-level investigation of the SWMUs and AOCs was completed to help design a full-scale investigation (i.e., Phase 1). The Phase 1 investigation results suggested that completion of a full-scale soil and ground water investigation of waste management areas was warranted.

- Phase 2 RFI/EOC

A multi-phase, full-scale investigation was designed to determine the nature and extent of affected media. The Phase 2 investigation is in progress. A plan to complete Phase 2 will be developed and submitted as part of a Risk Reduction Implementation Plan as described below.

- Baseline Risk Assessment

A baseline risk assessment (BRA) will be completed following completion of Phase 2. If warranted based on the conclusions of the BRA, a corrective measures study (CMS) will be completed.

- Phase 3 Investigation

Phase 3 will be reserved for investigation related specifically to remedial design, if warranted, following completion of the BRA and CMS.

- Corrective Measures

If warranted based on the conclusions of the BRA and following completion of the CMS, corrective measures will be implemented. Prior to implementation, a permit and compliance plan modification will be completed to incorporate the objectives and conceptual design of the corrective measures, as well as to establish the protection standards (i.e., remedial goals) that will be achieved.

8.2 PROPOSED PLAN

In order to fully develop the framework for future activities at the site, a Risk Reduction Implementation Plan (RRIP) will be prepared and submitted. The RRIP will describe the conceptual approach to implementing the Risk Reduction Standards in accordance with Provision VIII.I.3 of the permit. The contents of the RRIP will include the following:

- a summary of the RFI/EOC investigation results;

- development of a site conceptual model, including a discussion of the extent of affected media relative to concentration limits appropriate for the site in accordance with the permit;

- the technical approach to addressing the SWMUs and AOCs individually or as groups of waste management units;

- development of preliminary risk goals for the site;

- a description of how the Risk Reduction Rules (or Program) will be applied at the site;

- preliminary risk assessment activities, including comprehensive evaluation of site data and selection of constituents of concern;

- assessment of site-specific risk assessment issues such as risk assessment for dermal exposure to carcinogenic PAHs, and wetlands and ecological assessment issues;

- a work plan for Phase 2-B as described above;

- a technical justification for modifying the permit and compliance following completion of Phase 2 to implement corrective action; and

- a detailed schedule for implementing the remaining requirements of the permit and compliance plan.

SPTCo proposes to submit the RRIP to the TNRCC during the first quarter of 1998. A preliminary outline for the RRIP is provided in Appendix D.

9.0 *REFERENCES*

Agency Information Consultants, Inc. (AIC, 1995); *Water and Monitor Well Search*, Liberty and Cashmere, Houston, Texas; September 13, 1995.

Bouwer, H. and R.C. Rice (1976); *A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers wit Completely or Partially Penetrating Wells*, Water Resources Research, 12: 423-28, 1976.

City of Houston Water Production / Water Quality Division (pc, 1997) Personal Communication, Mr. Chris VanWave; October 15, 1997.

Industrial Compliance (IC, 1994a); *Operation and Maintenance Plan for Groundwater Monitoring and Recovery System*, Southern Pacific Transportation Company, Wood Preserving Works, 4910 Liberty Road, Houston, Texas; August 19, 1994.

Industrial Compliance (IC, 1994b); *Schedule for Compliance Plan Activities*, Southern Pacific Transportation Company, Wood Preserving Works, 4910 Liberty Road, Houston, Texas; August 19, 1994.

Industrial Compliance (IC, 1994c); *Extent of Contamination Investigation Work Plan*, Southern Pacific Transportation Company, Wood Preserving Works, 4910 Liberty Road, Houston, Texas; September 16, 1994.

Industrial Compliance (IC, 1994d); *RCRA Facility Investigation Work Plan*, Southern Pacific Transportation Company, Former Wood Preserving Works, 4910 Liberty Road, Houston, Texas; October 14, 1994.

PRC Environmental Management, Inc. (PRC EMI, 1993); *RCRA Facility Assessment Report*, Southern Pacific Transportation Company, Houston, Texas; October 1993.

Terranext (1996); *Phase 1 RFI / Extent of Contamination Investigation Report*, Southern Pacific Transportation Company, Houston Wood Preserving Works, 4910 Liberty Road, Houston, Texas; May 23, 1996.

TNRCC (1994a); *Permit for Industrial Solid Waste Management Site*, Permit No. HW-50343-000, Southern Pacific Transportation Company, Wood Preserving Works, Houston, Texas; June 20, 1994.

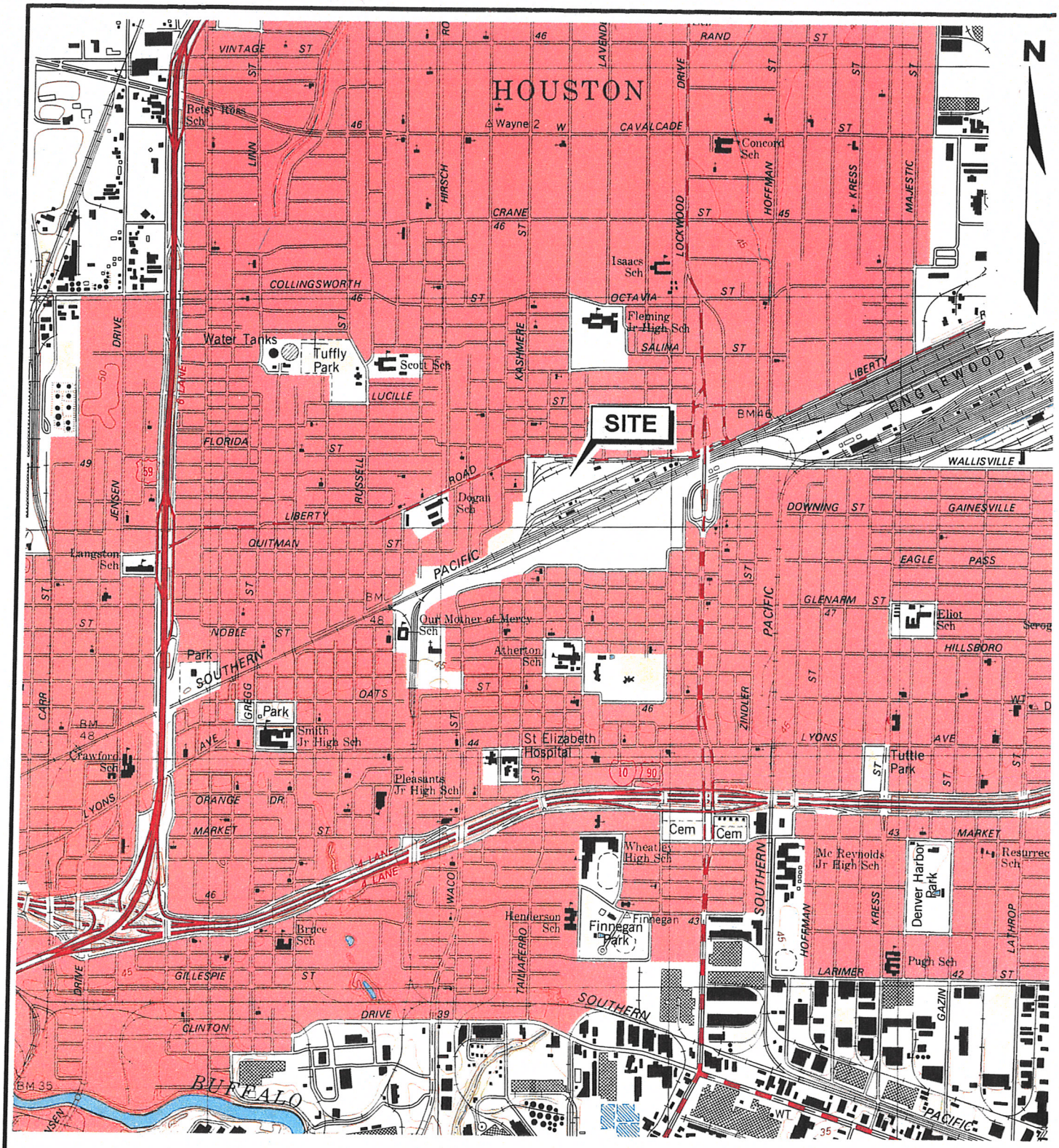
TNRCC (1994b); *Compliance Plan for Industrial Solid Waste Management Site*, Compliance Plan No. CP-50343, Southern Pacific Transportation Company, Wood Preserving Works, Houston, Texas; June 20,1994.

U.S. EPA (1989); *Interim Final RCRA Facility Investigation Guidance*, Volume I of IV, EPA 530/SW-89-031; May 1989.

U.S. EPA (1997); *The Rapid Optical Screening Tool (ROST™) Laser-Induced Fluorescence (LIF) System for Screening of Petroleum Hydrocarbons in Subsurface Soils*, EPA/600/R-97/020: February 1997.

U.S.G.S. (1982); *Settegast, Houston Heights, Bellaire, and Park Place, Texas Quadrangles,* 7.5 Minute Topographic Series; 1982.

Figures



Source: U.S.G.S. Quadrangle
Settegast, Texas
1982
7.5 Minute Series (Topographic)

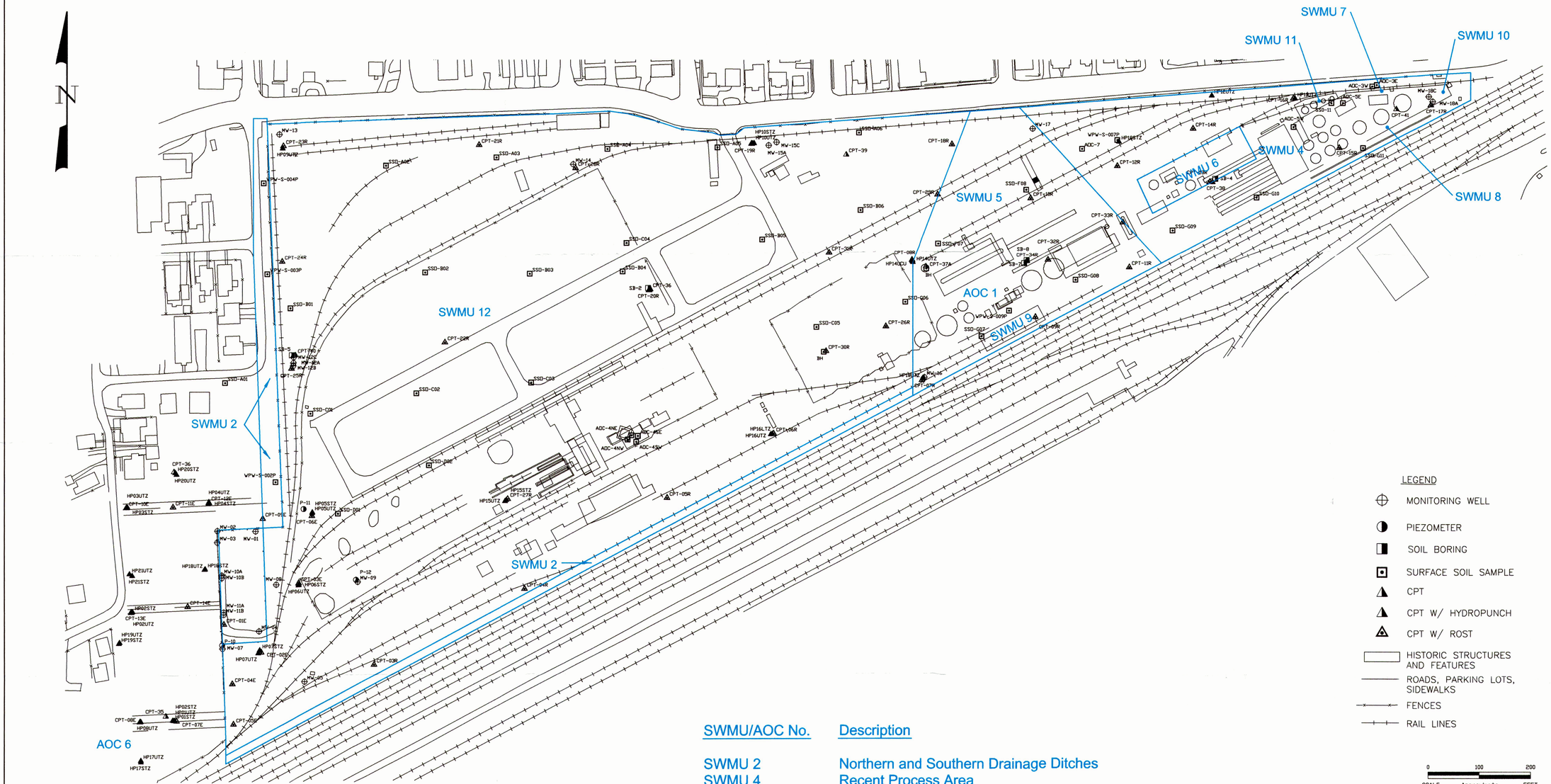
0 2000 4000
SCALE FEET

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT
ERM

FIGURE 1-1
SITE LOCATION MAP
Houston Wood Preserving Works
Houston, Texas

DATE: 11/17/97

W.O.NO.: 42209A17



LEGEND

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL SAMPLE
- CPT
- CPT W/ HYDROPUNCH
- CPT W/ ROST
- HISTORIC STRUCTURES AND FEATURES
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES

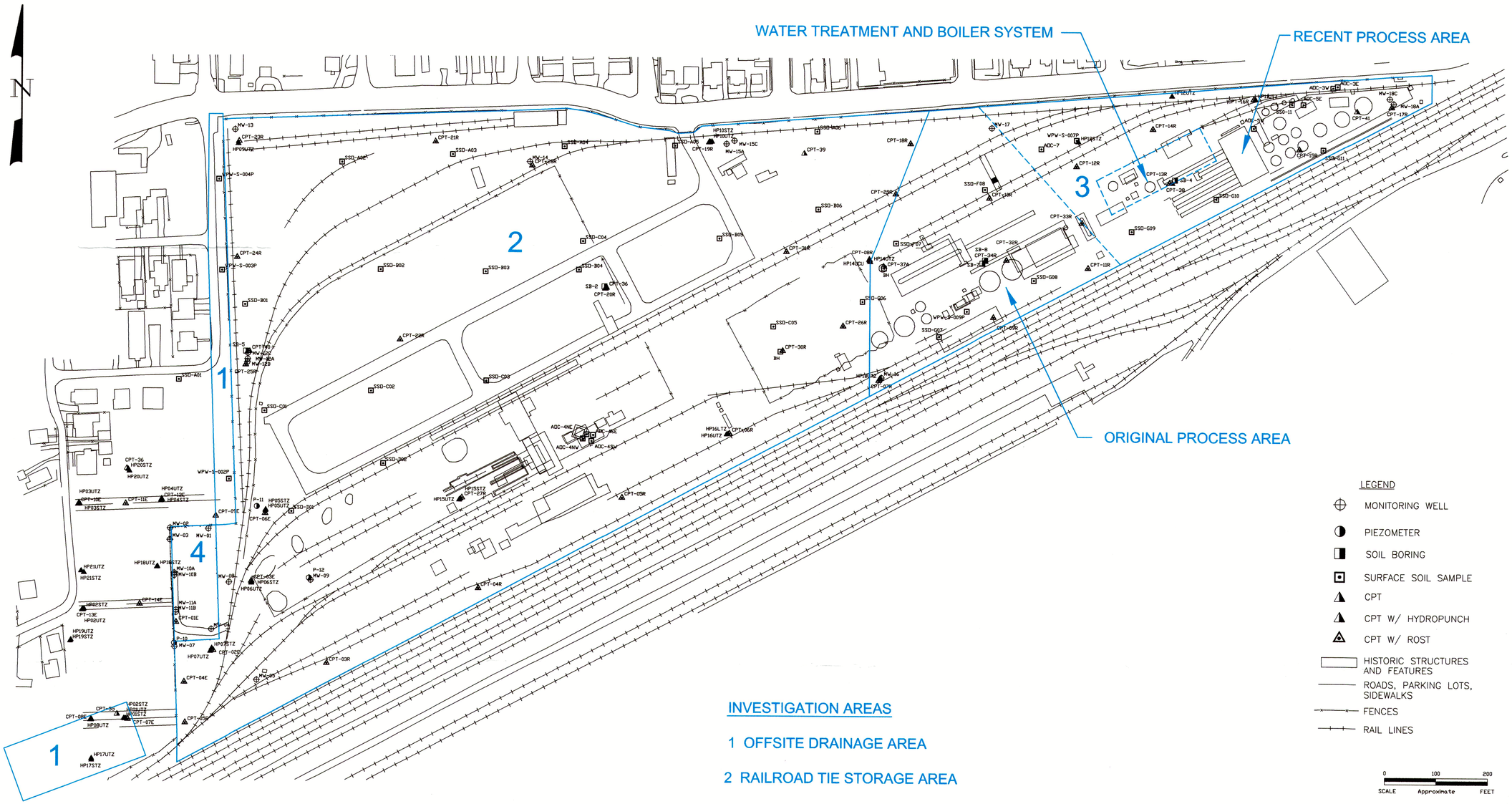
0 100 200
SCALE Approximate FEET

SWMU/AOC No.	Description
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of the Former UST No. 44-023-05
SWMU 10	Location of the Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 6	Inactive Wastewater Lagoon

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 1-2
SWMUs AND AOCs
Houston Wood Preserving Works
Houston, Texas

DESIGN:	CHECKED:	DATE: 02/02/98	SHEET NO.
DRAWN: LMc/CAK	SCALE: AS SHOWN	W.O.NO.: 42209C41B98	of



INVESTIGATION AREAS

1 OFFSITE DRAINAGE AREA

2 RAILROAD TIE STORAGE AREA

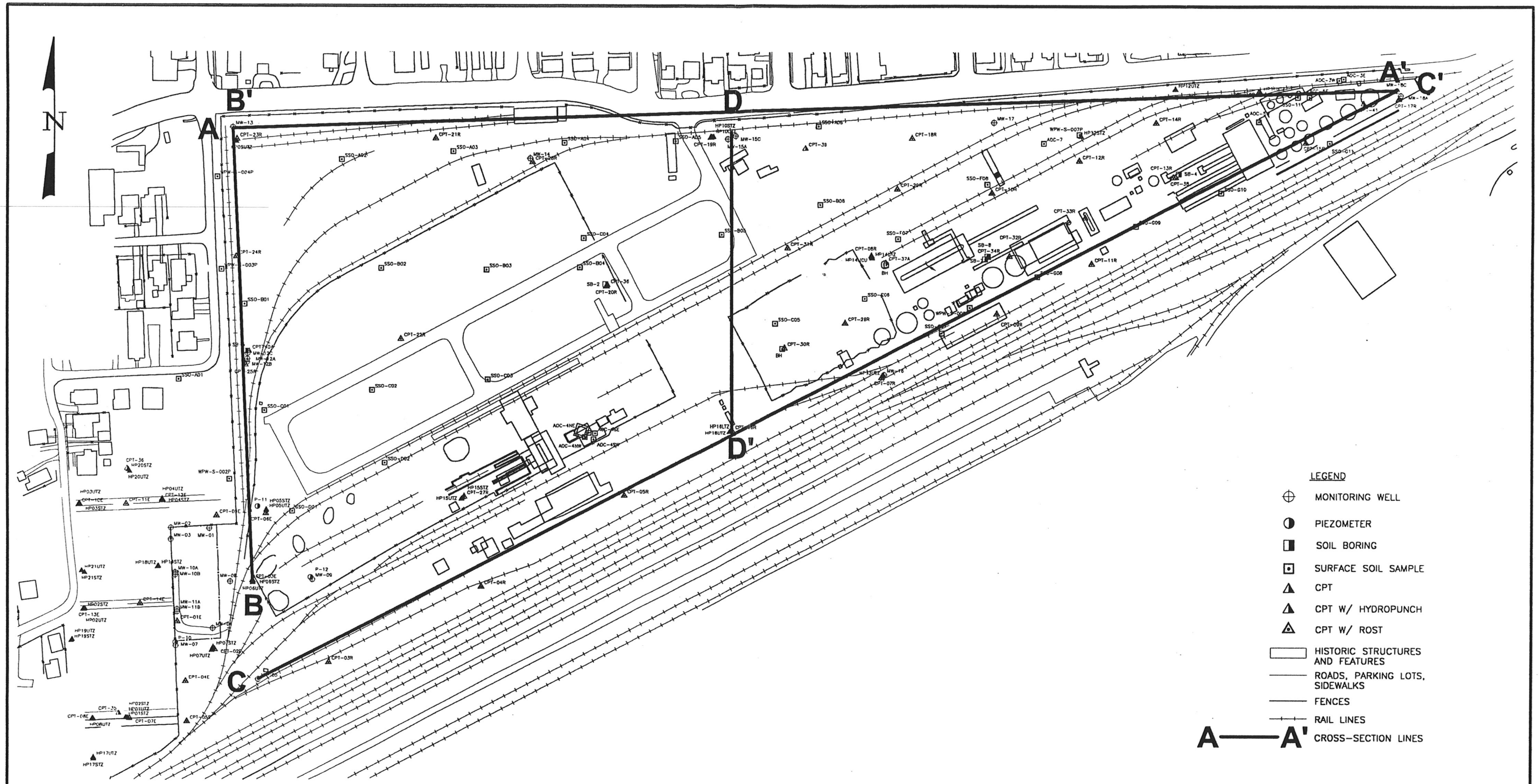
3 FORMER PROCESS AREAS
- RECENT PROCESS AREA
- ORIGINAL PROCESS AREA
- WATER TREATMENT AND BOILER SYSTEM

4 CLOSED SURFACE IMPOUNDMENT

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 1-3
FOUR INVESTIGATION AREAS
Houston Wood Preserving Works
Houston, Texas

DESIGN:	CHECKED:	DATE: 02/12/98	SHEET NO.
DRAWN: LMc/CAK	SCALE: AS SHOWN	W.O.NO.: 42209C42B98	of

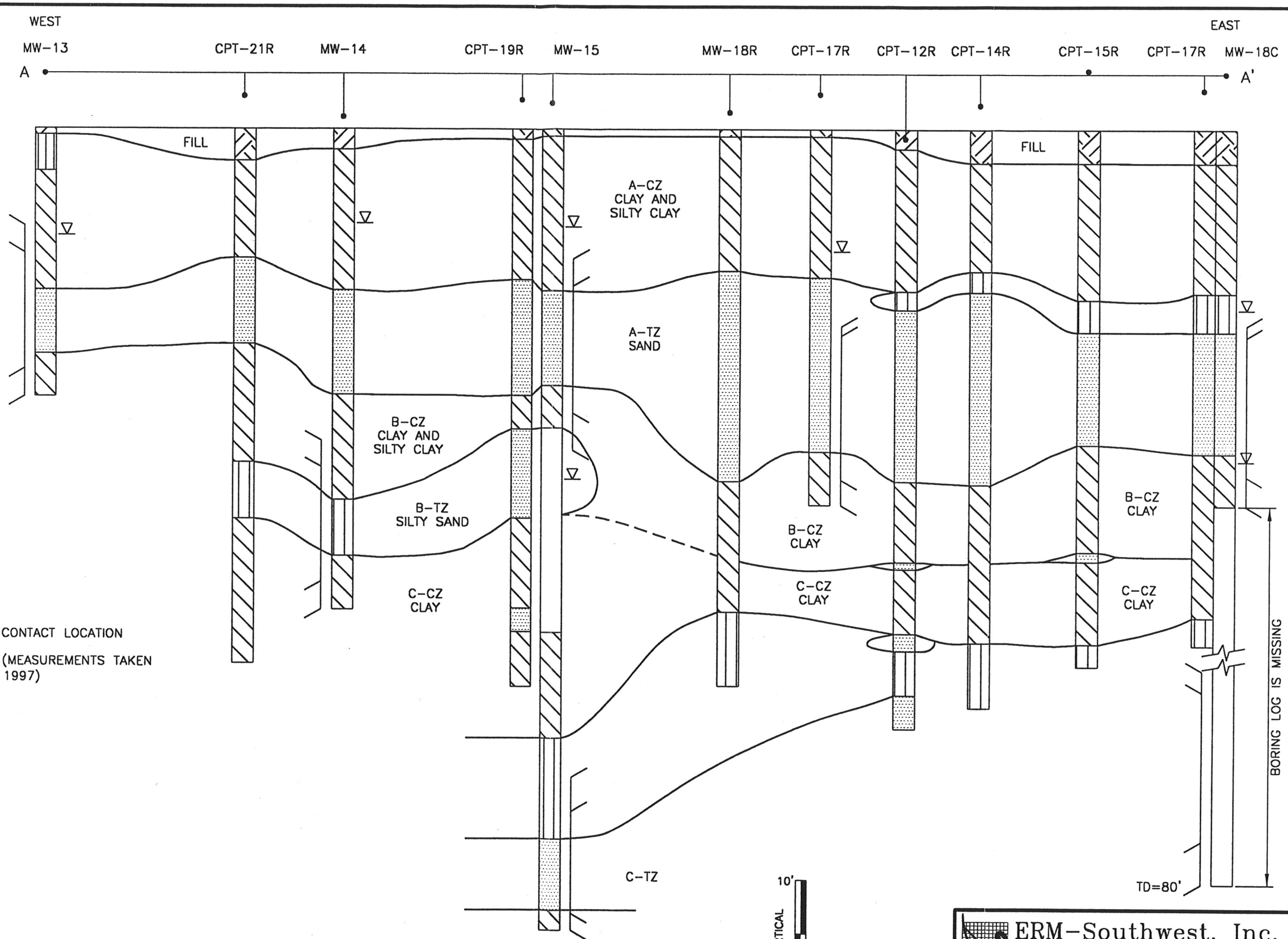


ERM-Southwest, Inc.

HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-1
CROSS-SECTION LOCATIONS
HOUSTON WOOD PRESERVING WORKS
Houston, Texas

DESIGN: CEW	CHECKED:	DATE: 12/04/97	SHEET NO.
DRAWN: LMc	SCALE: AS SHOWN	W.O.NO.: 42209B10L97	of

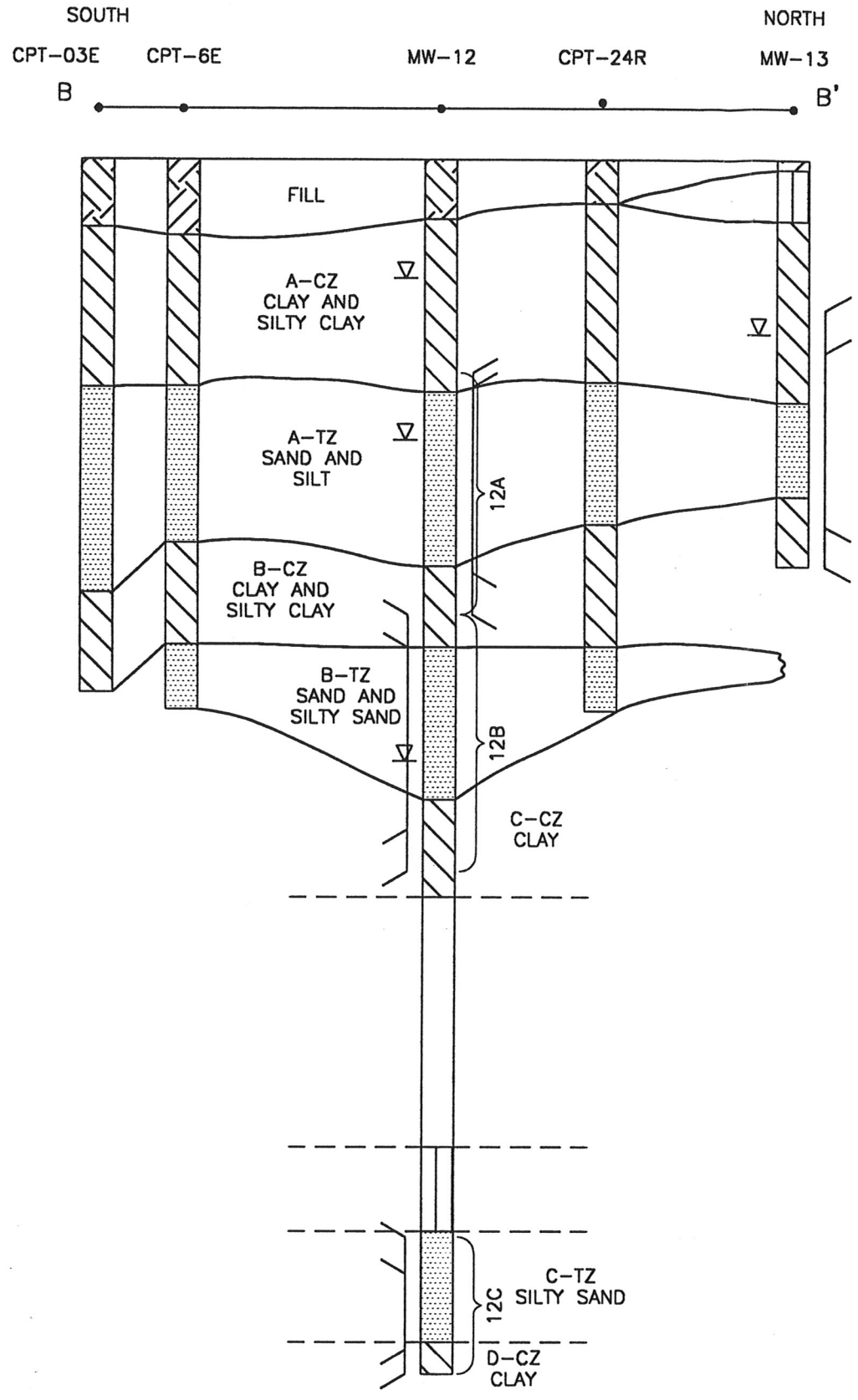


NOTE: GEOLOGIC LOGS CPT-21R, MW-14, CPT-19R, MW-15, CPT-18R, MW-17, CPT-12R, CPT-14R, MW-15, AND CPT-17R HAVE BEEN PROJECTED ONTO CROSS-SECTION LINE.

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-2
CROSS-SECTION A-A'
Houston Wood Preserving Works
Houston, Texas

DESIGN: RM	CHECKED: RM	DATE: 12/04/97	SHEET NO.
DRAWN: HS	SCALE: AS SHOWN	W.O.NO.: 42209B07L97	of



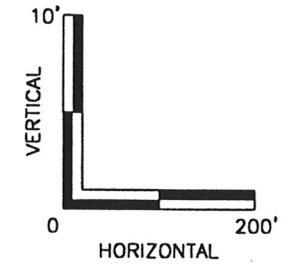
LEGEND

- FILL
- CLAY
- SAND
- SILT
- APPROXIMATE CONTACT LOCATION
- WATER LEVEL (MEASUREMENTS TAKEN OCTOBER 20, 1997)

KEY

- TOP OF SAND PACK
- TOP OF SCREEN
- BASE OF SCREEN
- BASE OF SAND PACK

NOTE: GEOLOGIC LOG CPT-24R HAS BEEN PROJECTED ONTO CROSS-SECTION LINE.



ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-3
CROSS-SECTION B-B'
Houston Wood Preserving Works
Houston, Texas

DESIGN: RM	CHECKED: RM	DATE: 12/04/97	SHEET NO.
DRAWN: HS	SCALE: AS SHOWN	W.O.NO.: 42209B08L97	of

SOUTHWEST

CPT-03R C

CPT-04R

CPT-05R

CPT-06R

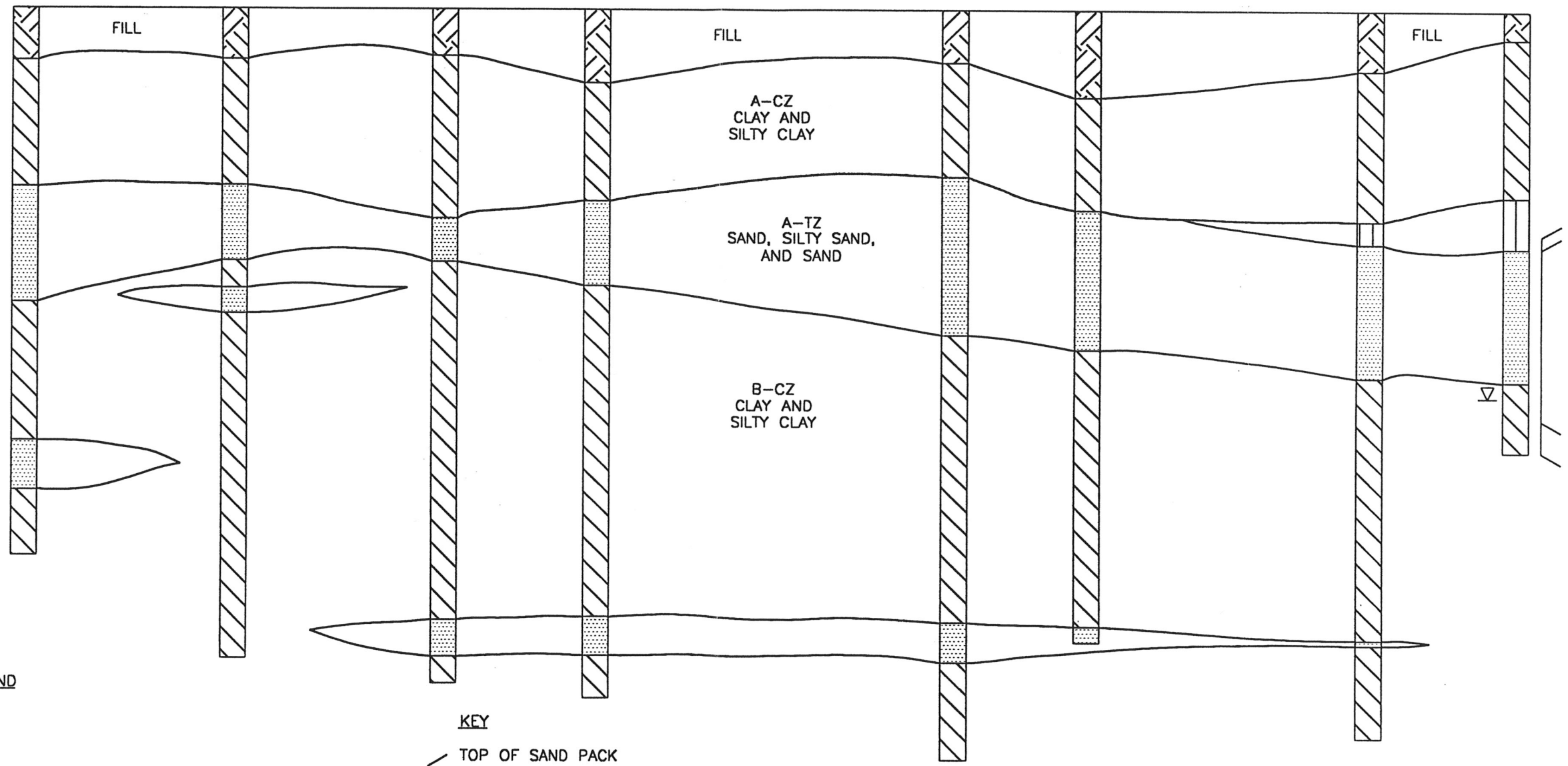
CPT-09R

CPT-11R

CPT-15R

NORTHEAST

MW-18 C'



LEGEND

- FILL
- CLAY
- SAND
- SILT
- ▽ WATER LEVEL (MEASUREMENTS TAKEN OCTOBER 20, 1997)

KEY

- TOP OF SAND PACK
- TOP OF SCREEN
- BASE OF SCREEN
- BASE OF SAND PACK

10' VERTICAL

0 200' HORIZONTAL

NOTE: GEOLOGIC LOGS CPT-03R, CPT-04R, CPT-05R, CPT-06R, CPT-09R, AND CPT-11R HAVE BEEN PROJECTED ONTO CROSS-SECTION LINE.

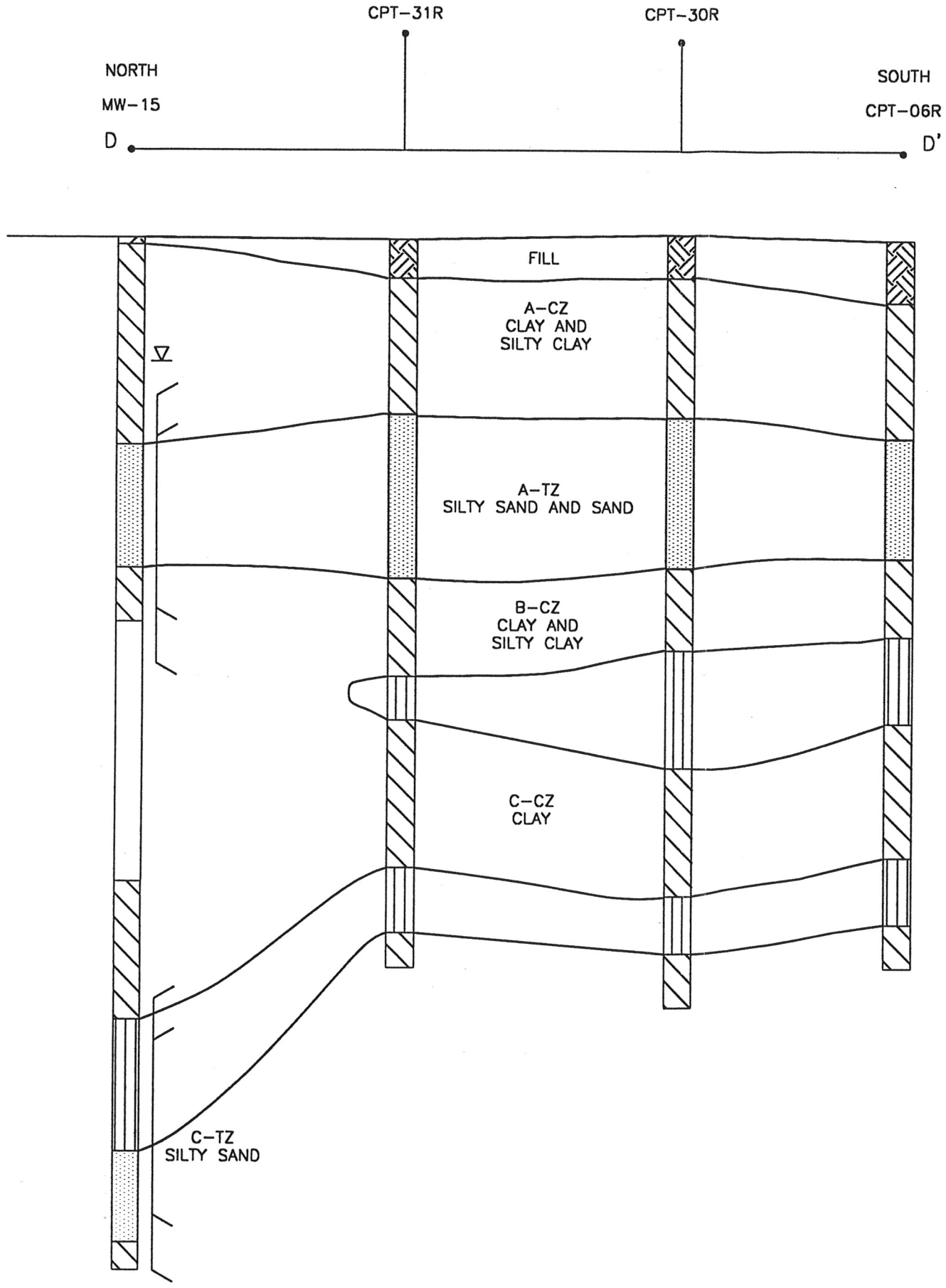
ERM-Southwest, Inc.

HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

ERM.

FIGURE 4-4
CROSS-SECTION C-C'
Houston Wood Preserving Works
Houston, Texas

DESIGN: RM	CHECKED: RM	DATE: 12/04/97	SHEET NO.
DRAWN: HS	SCALE: AS SHOWN	W.O.NO.: 42209B09L97	of



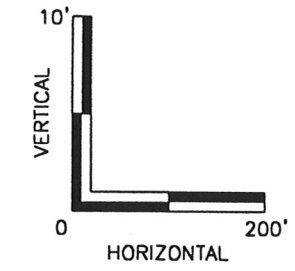
LEGEND

- FILL
- CLAY
- SAND
- SILT
- ▽ WATER LEVEL (MEASUREMENTS TAKEN OCTOBER 20, 1997)

KEY

- TOP OF SAND PACK
- TOP OF SCREEN
- BASE OF SCREEN
- BASE OF SAND PACK

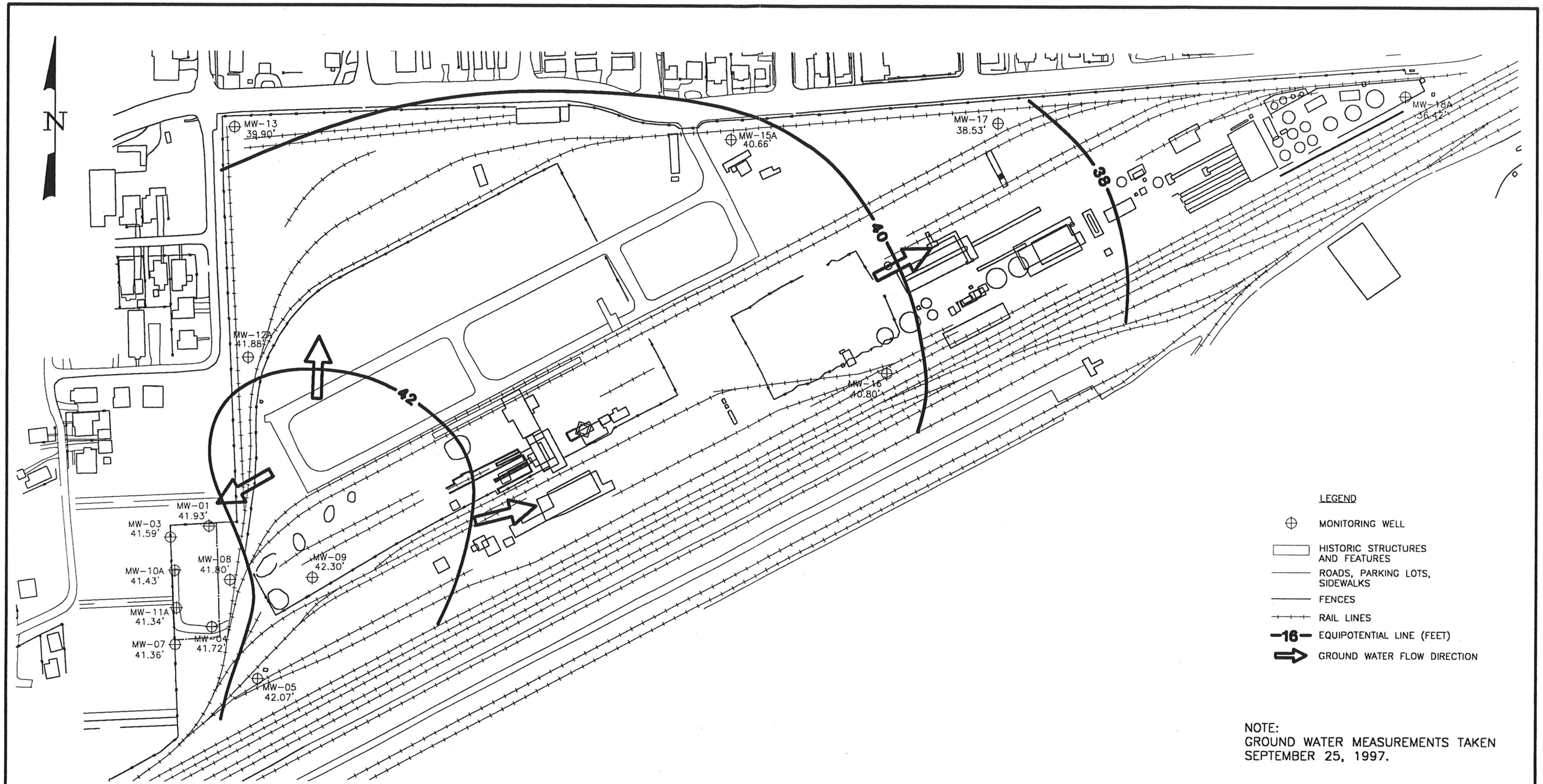
NOTE: GEOLOGIC LOGS CPT-31R AND CPT-30R HAVE BEEN PROJECTED ONTO CROSS-SECTION LINE.



ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-5
CROSS-SECTION D-D'
Houston Wood Preserving Works
Houston, Texas

DESIGN: RM	CHECKED: RM	DATE: 12/04/97	SHEET NO.
DRAWN: LMc	SCALE: AS SHOWN	W.O.NO.: 42209B11L97	of



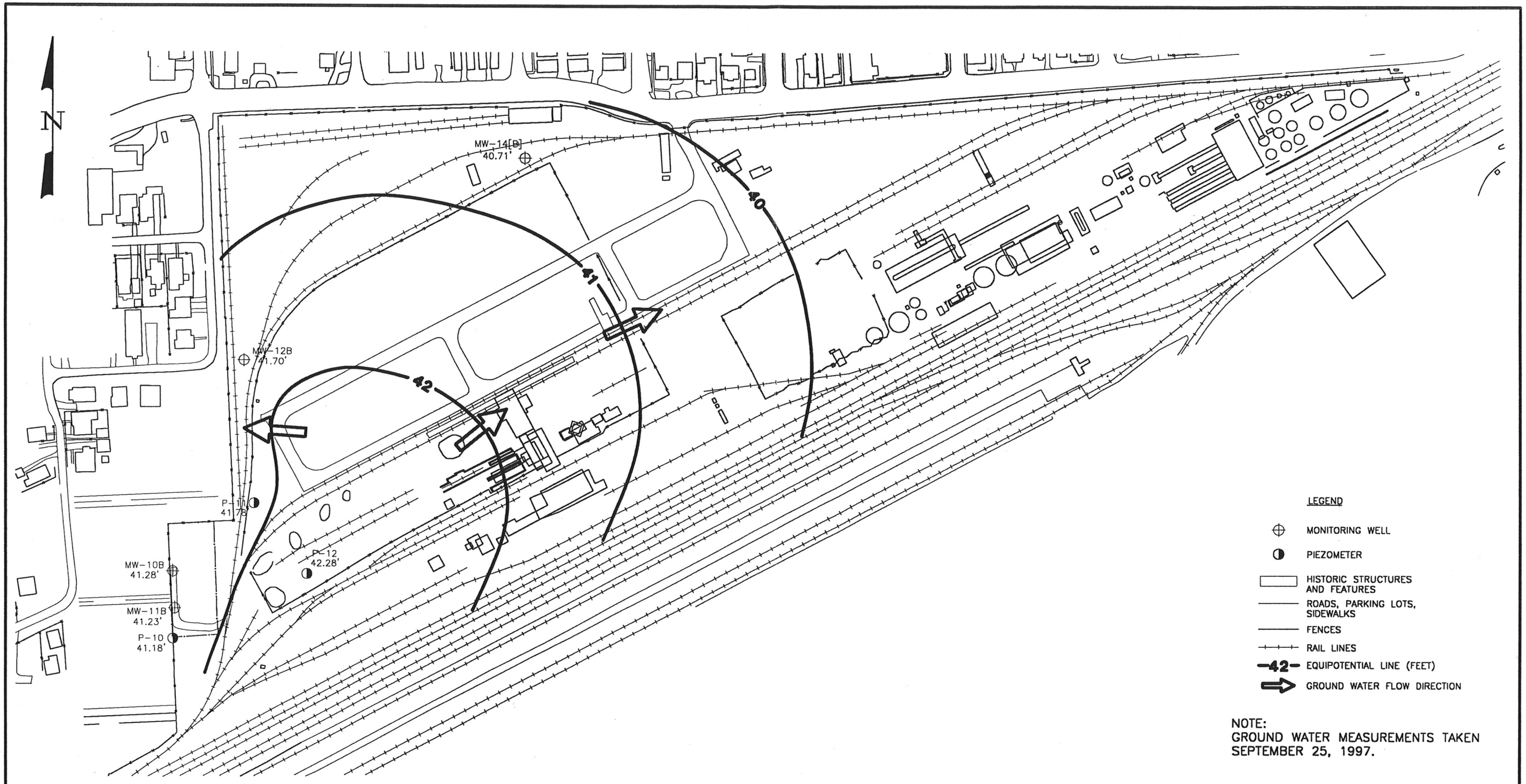
NOTE:
GROUND WATER MEASUREMENTS TAKEN SEPTEMBER 25, 1997.

0 200 400
SCALE APPROXIMATE FEET

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-6
STATIC WATER LEVEL ELEVATION - A-TZ
HOUSTON WOOD PRESERVING WORKS
Houston, Texas

DESIGN: RM	CHECKED:	DATE: 12/04/97	SHEET NO.
DRAWN: LMc	SCALE: AS SHOWN	W.O.NO.: 42209B16L97	of



LEGEND

- MONITORING WELL
- PIEZOMETER
- HISTORIC STRUCTURES AND FEATURES
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- 42 EQUIPOTENTIAL LINE (FEET)
- GROUND WATER FLOW DIRECTION

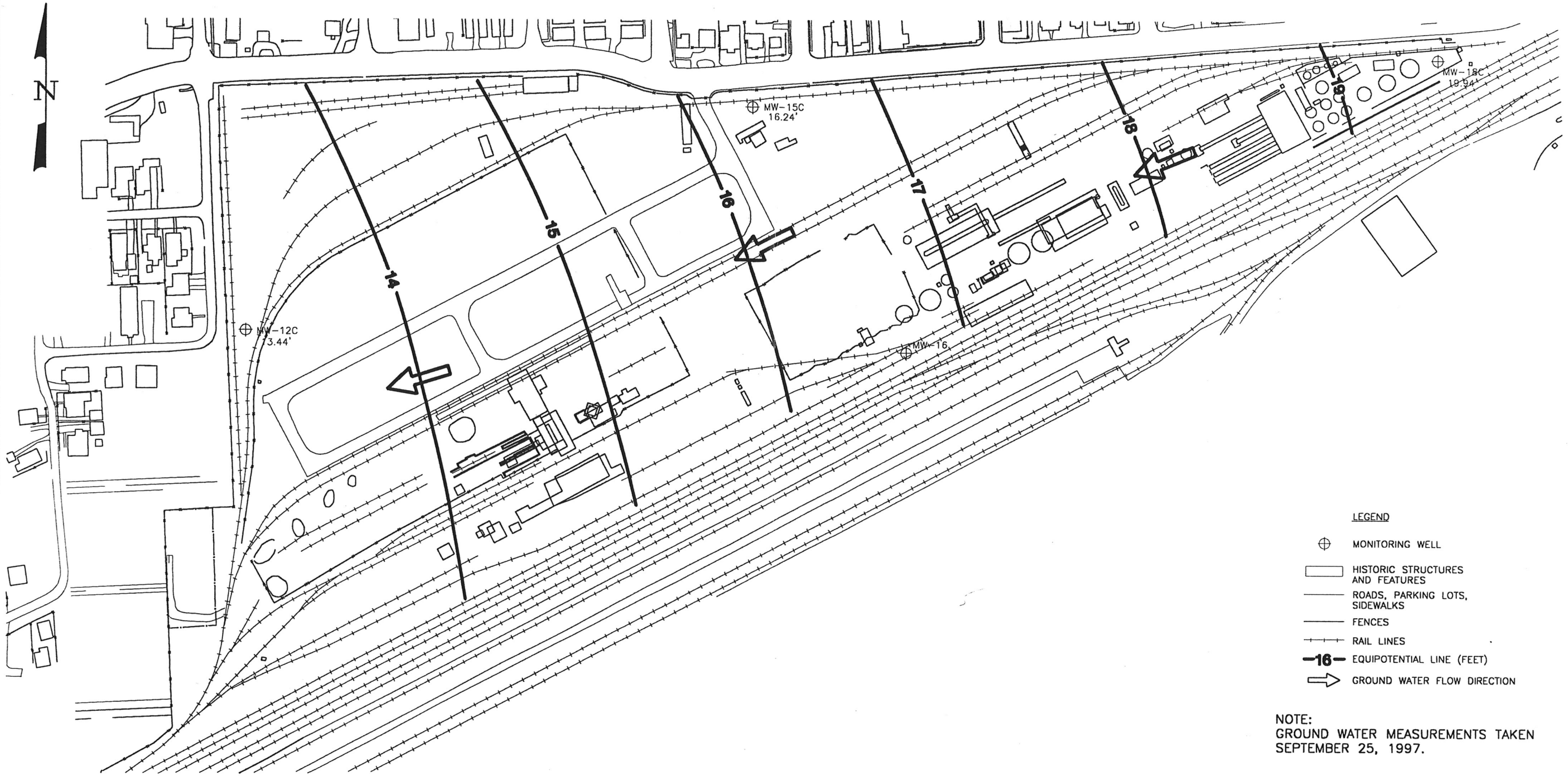
NOTE:
GROUND WATER MEASUREMENTS TAKEN SEPTEMBER 25, 1997.

0 200 400
SCALE APPROXIMATE FEET

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-7
STATIC WATER LEVEL ELEVATION - B-TZ
HOUSTON WOOD PRESERVING WORKS
Houston, Texas

DESIGN: RM	CHECKED:	DATE: 02/12/98	SHEET NO.
DRAWN: LMc	SCALE: AS SHOWN	W.O.NO.: 42209B15898	of



LEGEND

- MONITORING WELL
- HISTORIC STRUCTURES AND FEATURES
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- 16 EQUIPOTENTIAL LINE (FEET)
- GROUND WATER FLOW DIRECTION

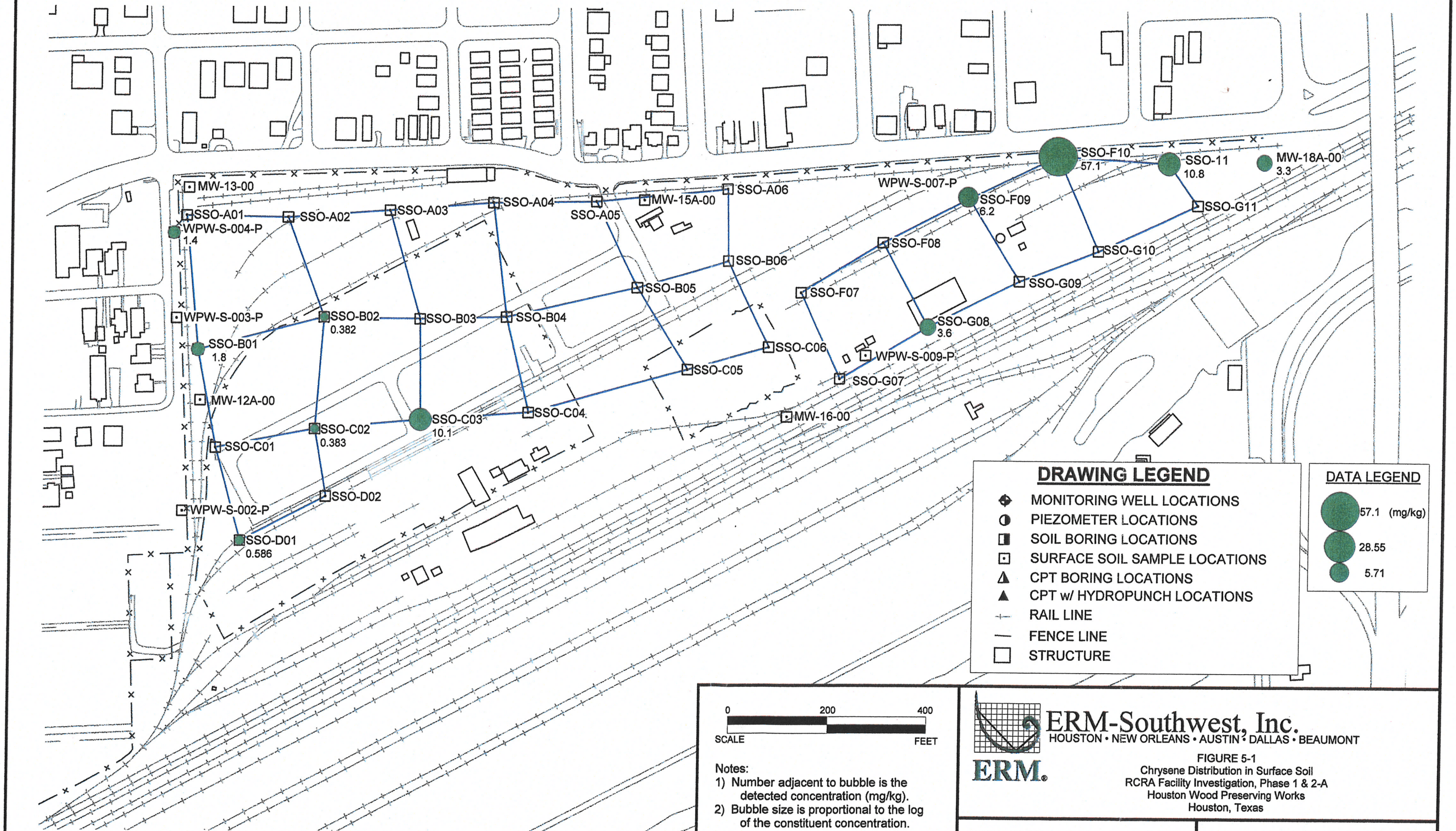
NOTE:
GROUND WATER MEASUREMENTS TAKEN SEPTEMBER 25, 1997.

0 200 400
SCALE APPROXIMATE FEET

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 4-8
STATIC WATER LEVEL ELEVATION – C-TZ
HOUSTON WOOD PRESERVING WORKS
Houston, Texas

DESIGN: RM	CHECKED:	DATE: 12/04/97	SHEET NO.
DRAWN: LMc	SCALE: AS SHOWN	W.O.NO.: 42209B17L97	of



Notes:
1) Number adjacent to bubble is the detected concentration (mg/kg).
2) Bubble size is proportional to the log of the constituent concentration.

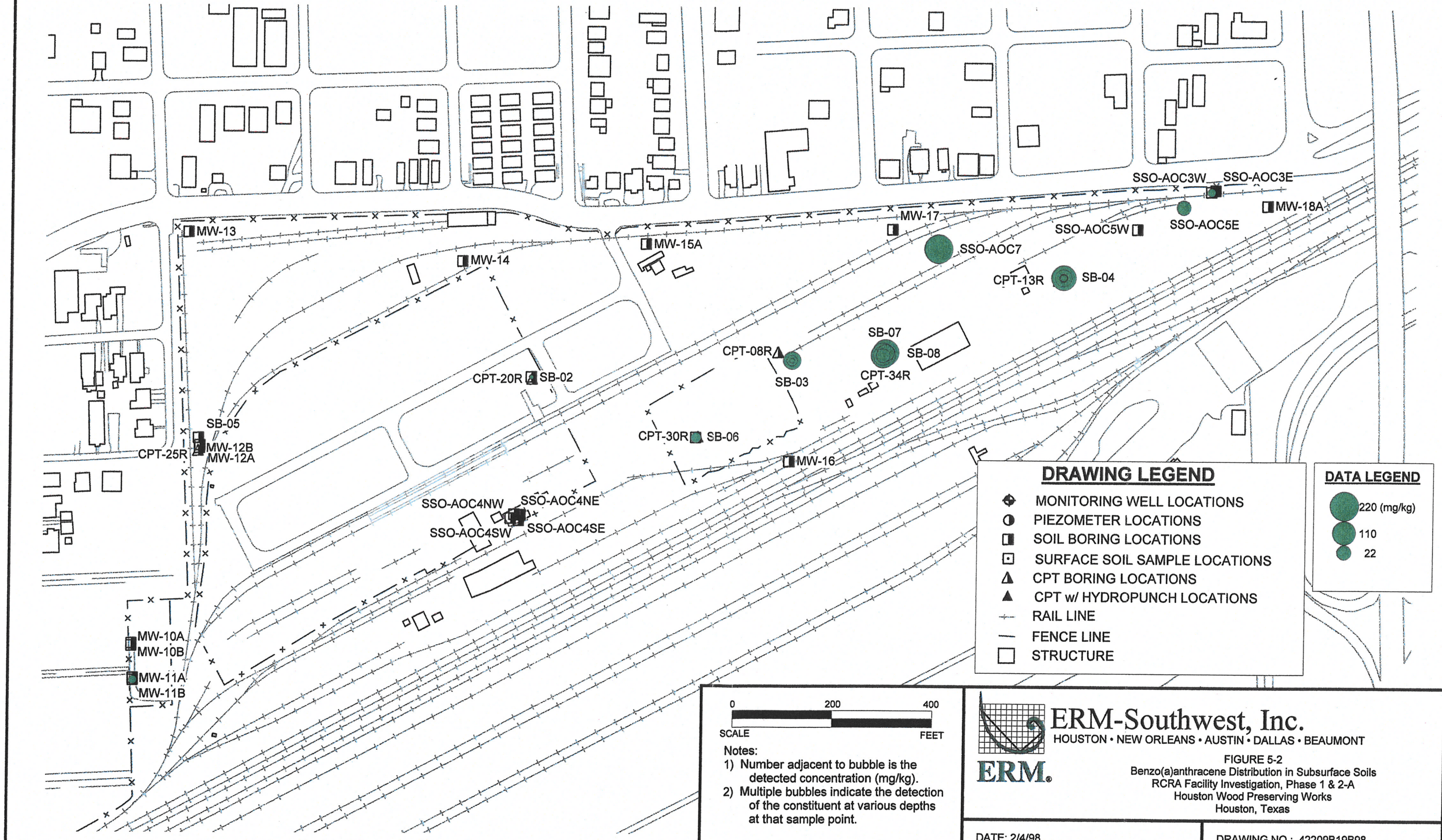
ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

ERM®

FIGURE 5-1
Chrysene Distribution in Surface Soil
RCRA Facility Investigation, Phase 1 & 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B18B98



Notes:

1) Number adjacent to bubble is the detected concentration (mg/kg).
2) Multiple bubbles indicate the detection of the constituent at various depths at that sample point.

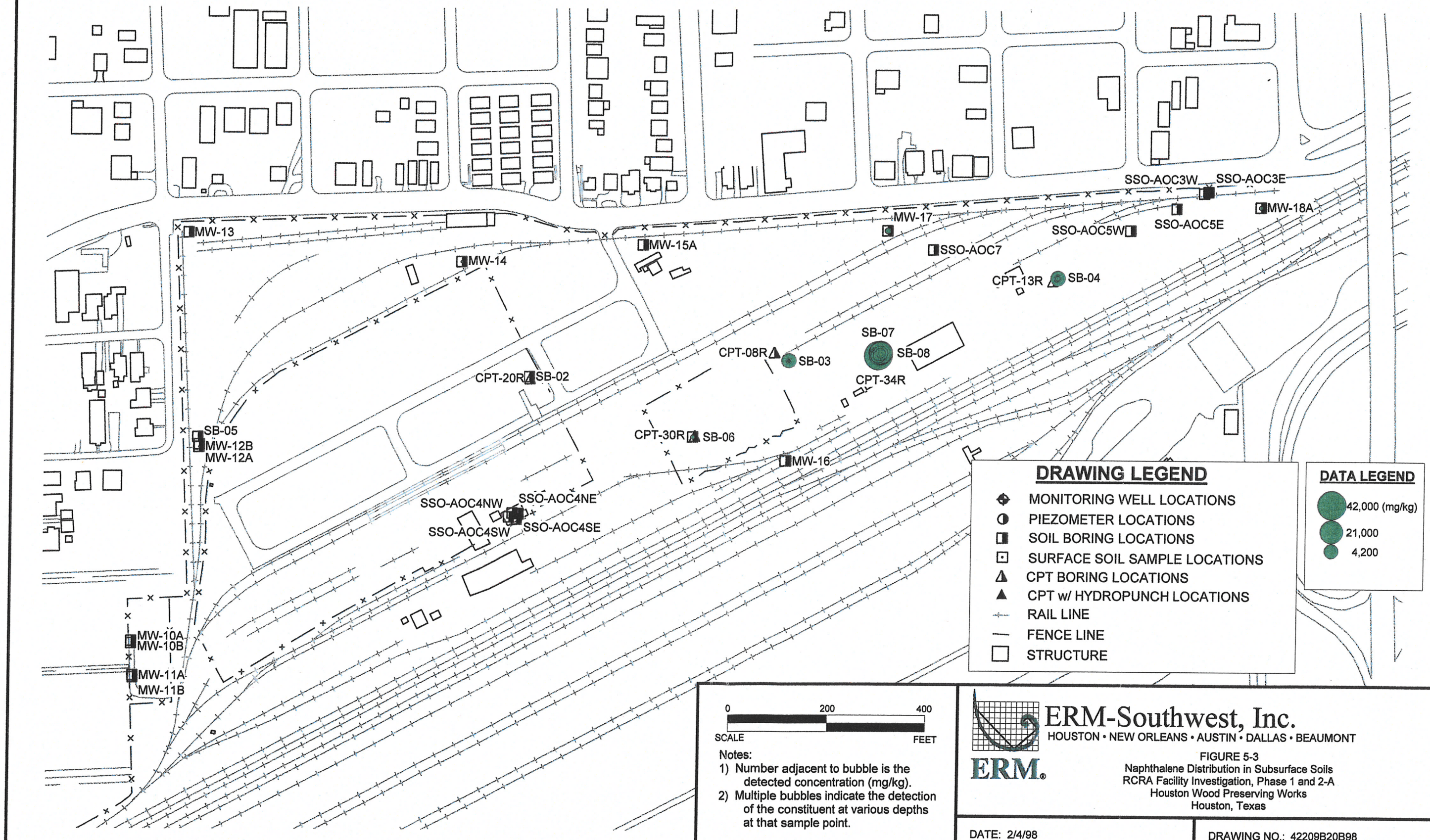
ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

ERM®

FIGURE 5-2
Benzo(a)anthracene Distribution in Subsurface Soils
RCRA Facility Investigation, Phase 1 & 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B19B98



Notes:
1) Number adjacent to bubble is the detected concentration (mg/kg).
2) Multiple bubbles indicate the detection of the constituent at various depths at that sample point.

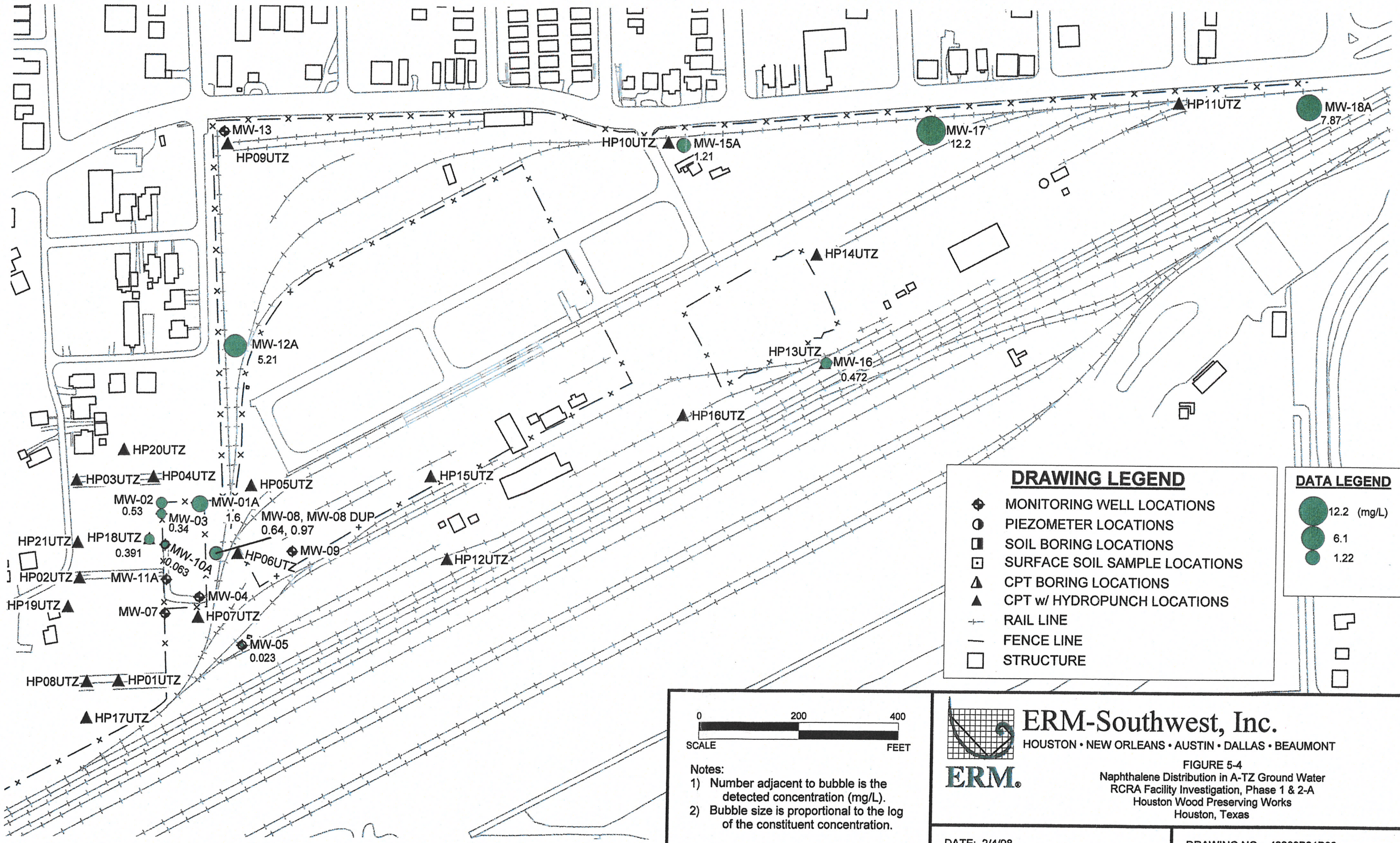
ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

ERM®

FIGURE 5-3
Naphthalene Distribution in Subsurface Soils
RCRA Facility Investigation, Phase 1 and 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B20B98



Notes:

1) Number adjacent to bubble is the detected concentration (mg/L).
2) Bubble size is proportional to the log of the constituent concentration.

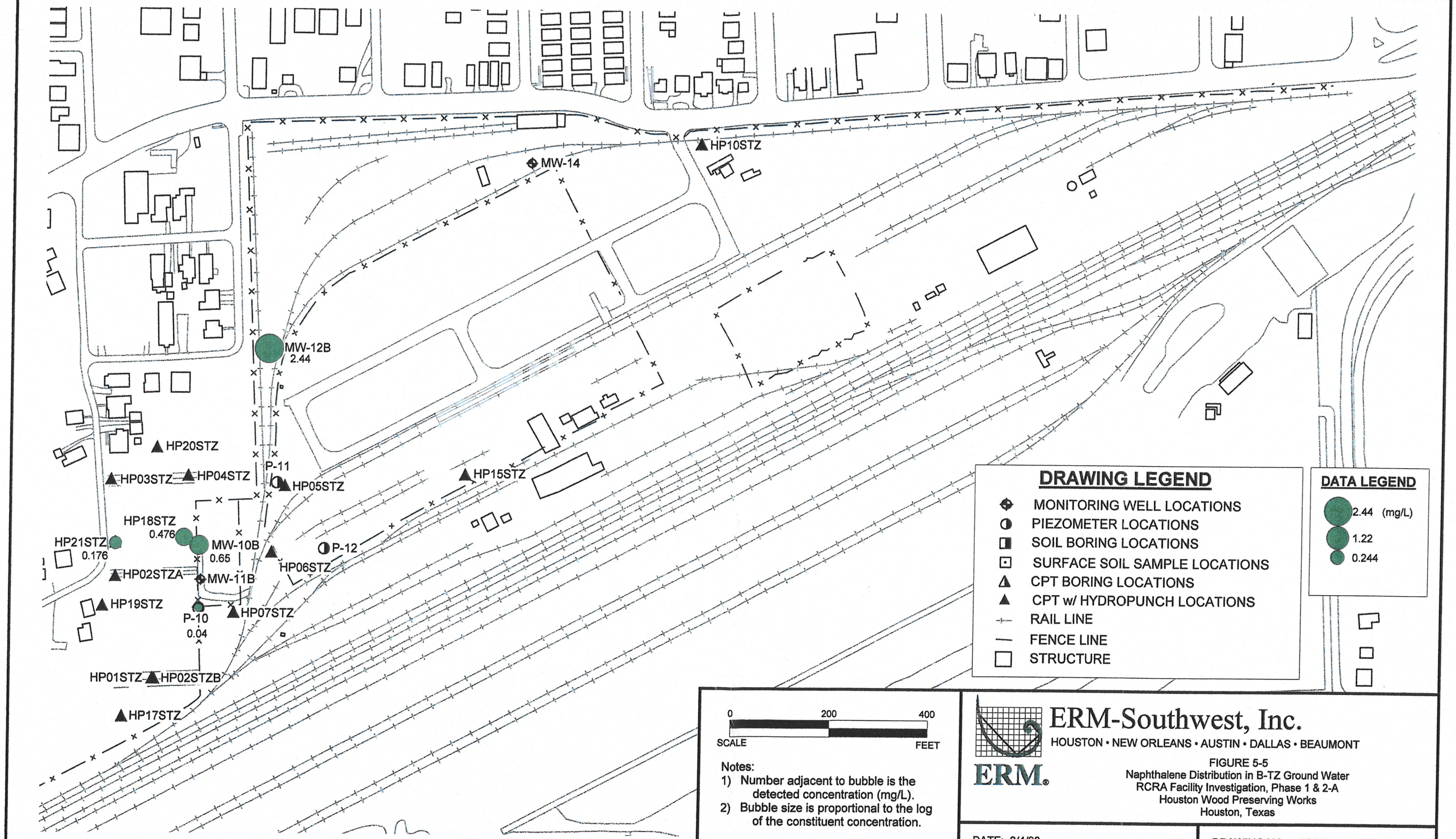
ERM-Southwest, Inc.

HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 5-4
Naphthalene Distribution in A-TZ Ground Water
RCRA Facility Investigation, Phase 1 & 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B21B98



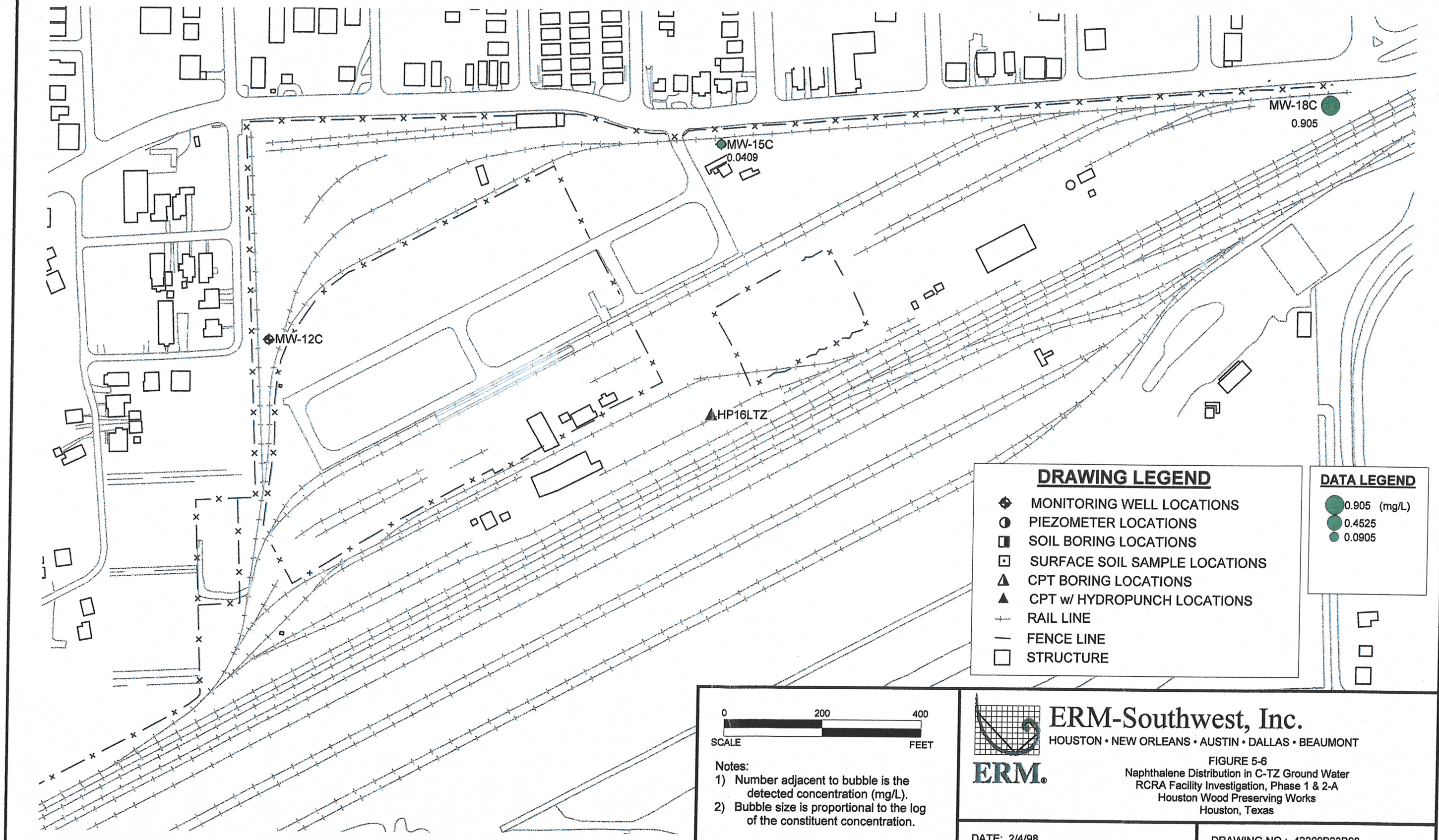
Notes:
1) Number adjacent to bubble is the detected concentration (mg/L).
2) Bubble size is proportional to the log of the constituent concentration.

ERM-Southwest, Inc.
HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

FIGURE 5-5
Naphthalene Distribution in B-TZ Ground Water
RCRA Facility Investigation, Phase 1 & 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B22B98



ERM-Southwest, Inc.

HOUSTON • NEW ORLEANS • AUSTIN • DALLAS • BEAUMONT

ERM®

FIGURE 5-6
Naphthalene Distribution in C-TZ Ground Water
RCRA Facility Investigation, Phase 1 & 2-A
Houston Wood Preserving Works
Houston, Texas

DATE: 2/4/98

DRAWING NO.: 42209B23B98

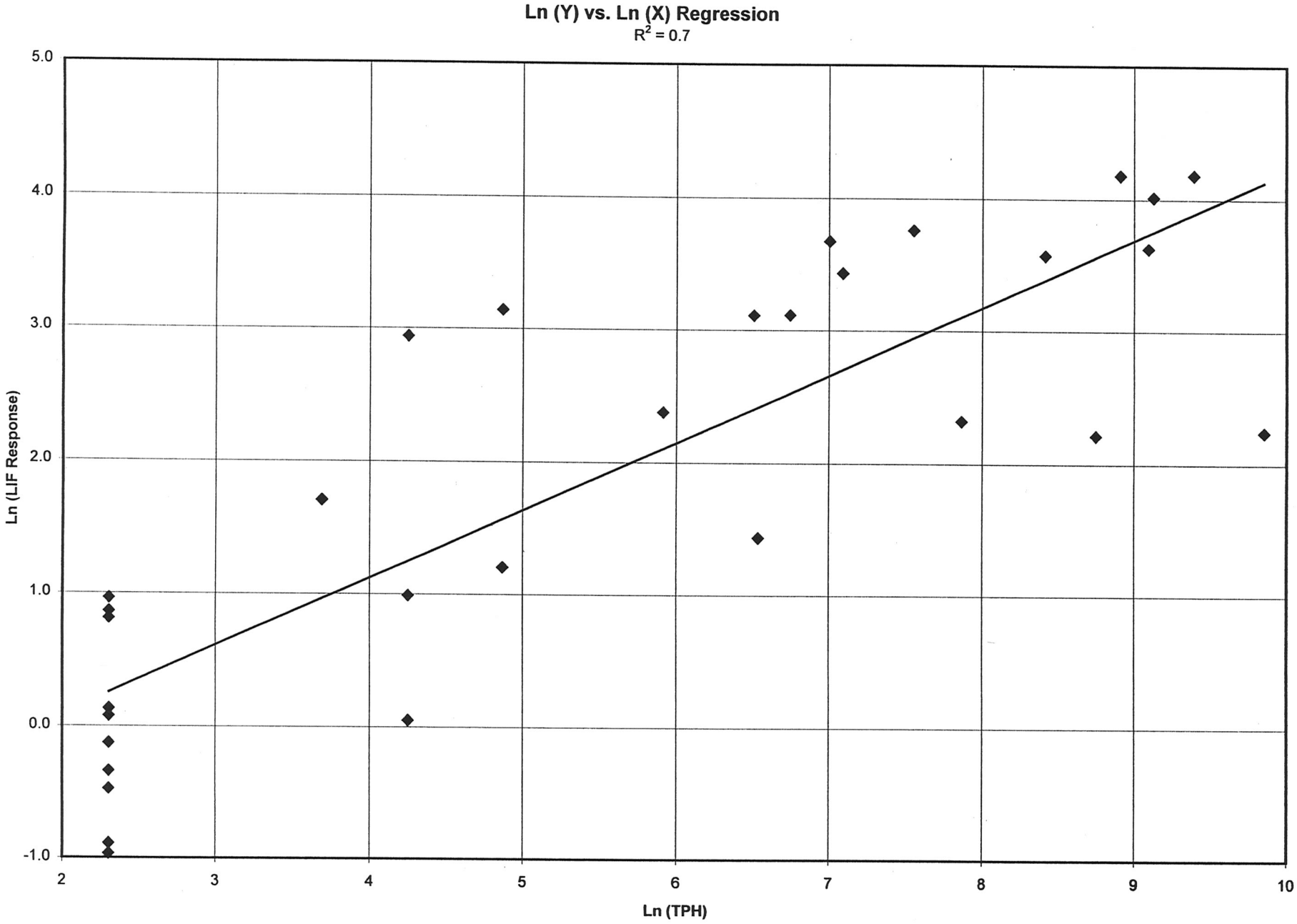


Figure 6-1. Logarithmic transformations and subsequent regression analysis of CPT/ROSTdata.

BM416422-B98

Tables

TABLE 5-1

Constituents of Interest

Houston Wood Preserving Works
Houston, Texas

Constituent	*Practical Quantitation*	*Method*
Acenaphthene	0.010	8270B
Acenaphthylene	0.010	8270B
Anthracene	0.010	8270B
Benzene	0.005	8260A
Benzo(a)anthracene	0.010	8270B
Benzo(a)pyrene	0.010	8270B
Bis(2-ethyl hexyl)phthalate	0.010	8270B
bis(2-Chloroethoxy)methane	0.010	8270B
Chlorobenzene	0.005	8260A
2-Chloronaphthalene	0.010	8270B
Chrysene	0.010	8270B
Dibenzofuran	0.010	8270B
1,2-Dichloroethane	0.005	8260A
Dichloromethane	0.005	8260A
2,4-Dimethylphenol	0.010	8270B
Di-n-butyl phthalate	0.010	8270B
4,6-Dinitro-o-cresol	0.050	8270B
2,4-Dinitrotoluene	0.010	8270B
2,6-Dinitrotoluene	0.010	8270B
1,2-Diphenylhydrazine	0.010	8270B
Ethylbenzene	0.005	8260A
Fluoranthene	0.010	8270B
Fluorene	0.010	8270B
2-Methylnaphthalene	0.010	8270B
Naphthalene	0.010	8270B
Nitrobenzene	0.010	8270B
4-Nitrophenol	0.050	8270B
N-Nitrosodiphenylamine	0.010	8270B
Pentachlorophenol	0.050	8270B
Phenanthrene	0.010	8270B
Phenol	0.010	8270B
Pyrene	0.010	8270B
Toluene	0.005	8260A
Xylenes	0.005	8260A

NOTE:

Practical Quantitation Limits are shown in mg/L.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	A01		A02		A03		A04		A05		A06	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)
Volatile Compounds												
Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (Total)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
2,4-Dimethylphenol	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
2,4-Dinitrotoluene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
2,6-Dinitrotoluene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
2-Chloronaphthalene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
2-Methylnaphthalene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
4,6-Dinitro-o-cresol	ND	12.80	ND	12.80	ND	6.40	ND	32.00	ND	1.60	ND	6.40
4-Nitrophenol	ND	12.80	ND	12.80	ND	6.40	ND	32.00	ND	1.60	ND	6.40
Acenaphthene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Acenaphthylene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Anthracene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Benzo(a)anthracene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Benzo(a)pyrene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
bis(2-Chloroethoxy)methane	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
bis(2-Ethylhexyl)phthalate	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Chrysene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Di-n-butyl phthalate	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Dibenzofuran	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Fluoranthene	ND	2.64	9.28	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Fluorene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
N-Nitrosodiphenylamine	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Naphthalene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Nitrobenzene	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Pentachlorophenol	ND	12.80	ND	12.80	ND	6.40	ND	32.00	ND	1.60	ND	6.40
Phenanthrene	ND	2.64	6.12	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Phenol	ND	2.64	ND	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32
Pyrene	ND	2.64	8.16	2.64	ND	1.32	ND	6.60	ND	0.33	ND	1.32

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	B01		B02		B03		B04		B05		B06	
Analytical Result	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Volatile Compounds												
Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (Total)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
2,4-Dimethylphenol	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
2,4-Dinitrotoluene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
2,6-Dinitrotoluene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
2-Chloronaphthalene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
2-Methylnaphthalene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
4,6-Dinitro-o-cresol	ND	6.40	ND	1.60	ND	1.60	ND	1.60	ND	6.40	ND	6.40
4-Nitrophenol	ND	6.40	ND	1.60	ND	1.60	ND	1.60	ND	6.40	ND	6.40
Acenaphthene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Acenaphthylene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Anthracene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Benzo(a)anthracene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Benzo(a)pyrene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
bis(2-Chloroethoxy)methane	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
bis(2-Ethylhexyl)phthalate	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Chrysene	1.80	1.32	0.38	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Di-n-butyl phthalate	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Dibenzofuran	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Fluoranthene	2.54	1.32	0.50	0.33	ND	0.33	0.67	0.33	ND	1.32	1.37	1.32
Fluorene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
N-Nitrosodiphenylamine	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Naphthalene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Nitrobenzene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Pentachlorophenol	ND	6.40	ND	1.60	ND	1.60	ND	1.60	ND	6.40	ND	6.40
Phenanthrene	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Phenol	ND	1.32	ND	0.33	ND	0.33	ND	0.33	ND	1.32	ND	1.32
Pyrene	ND	1.32	0.46	0.33	ND	0.33	0.62	0.33	ND	1.32	1.34	1.32

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	C01		C02		C03		C04		C05		C06	
Analytical Result	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Volatile Compounds												
Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (Total)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
2,4-Dimethylphenol	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
2,4-Dinitrotoluene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
2,6-Dinitrotoluene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
2-Chloronaphthalene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
2-Methylnaphthalene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
4,6-Dinitro-o-cresol	ND	12.80	ND	1.60	ND	32.00	ND	1.60	ND	1.60	ND	6.40
4-Nitrophenol	ND	12.80	ND	1.60	ND	32.00	ND	1.60	ND	1.60	ND	6.40
Acenaphthene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Acenaphthylene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Anthracene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Benzo(a)anthracene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Benzo(a)pyrene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
bis(2-Chloroethoxy)methane	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
bis(2-Ethylhexyl)phthalate	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Chrysene	ND	2.64	0.38	0.33	10.10	6.60	ND	0.33	ND	0.33	ND	1.32
Di-n-butyl phthalate	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Dibenzofuran	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Fluoranthene	ND	2.64	0.54	0.33	35.20	6.60	ND	0.33	ND	0.33	ND	1.32
Fluorene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
N-Nitrosodiphenylamine	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Naphthalene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Nitrobenzene	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Pentachlorophenol	ND	12.80	ND	1.60	ND	32.00	ND	1.60	ND	1.60	ND	6.40
Phenanthrene	ND	2.64	ND	0.33	12.80	6.60	ND	0.33	ND	0.33	ND	1.32
Phenol	ND	2.64	ND	0.33	ND	6.60	ND	0.33	ND	0.33	ND	1.32
Pyrene	ND	2.64	0.47	0.33	20.90	6.60	ND	0.33	ND	0.33	ND	1.32

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	D01		D02		F07		F08		F09		F10	
Analytical Result	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Volatile Compounds												
Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (Total)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
2,4-Dimethylphenol	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
2,4-Dinitrotoluene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
2,6-Dinitrotoluene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
2-Chloronaphthalene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
2-Methylnaphthalene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
4,6-Dinitro-o-cresol	ND	1.60	ND	1.60	ND	32.00	ND	6.40	ND	6.40	ND	160.00
4-Nitrophenol	ND	1.60	ND	1.60	ND	32.00	ND	6.40	ND	6.40	ND	160.00
Acenaphthene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Acenaphthylene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Anthracene	0.46	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Benzo(a)anthracene	0.39	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	44.60	33.00
Benzo(a)pyrene	0.47	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
bis(2-Chloroethoxy)methane	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Chrysene	0.59	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	57.10	33.00
Di-n-butyl phthalate	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Dibenzofuran	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Fluoranthene	1.06	0.33	ND	0.33	ND	6.60	1.46	1.32	ND	1.32	237.00	33.00
Fluorene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
N-Nitrosodiphenylamine	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Naphthalene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Nitrobenzene	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Pentachlorophenol	ND	1.60	ND	1.60	ND	32.00	ND	6.40	ND	6.40	ND	160.00
Phenanthrene	0.49	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Phenol	ND	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	ND	33.00
Pyrene	0.83	0.33	ND	0.33	ND	6.60	ND	1.32	ND	1.32	204.00	33.00

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	G07		G08		G09		G10		G11		11	
Analytical Result	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Volatile Compounds												
Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (Total)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
2,4-Dimethylphenol	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
2,4-Dinitrotoluene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
2,6-Dinitrotoluene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
2-Chloronaphthalene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
2-Methylnaphthalene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
4,6-Dinitro-o-cresol	ND	6.40	ND	8.00	ND	1.60	ND	1.60	ND	6.40	ND	40.00
4-Nitrophenol	ND	6.40	ND	8.00	ND	1.60	ND	1.60	ND	6.40	ND	40.00
Acenaphthene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Acenaphthylene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Anthracene	4.13	1.32	2.51	1.65	ND	0.33	ND	0.33	ND	1.32	13.00	8.25
Benzo(a)anthracene	ND	1.32	2.72	1.65	ND	0.33	ND	0.33	ND	1.32	10.80	8.25
Benzo(a)pyrene	ND	1.32	1.69	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
bis(2-Chloroethoxy)methane	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
bis(2-Ethylhexyl)phthalate	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Chrysene	ND	1.32	3.60	1.65	ND	0.33	ND	0.33	ND	1.32	10.80	8.25
Di-n-butyl phthalate	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Dibenzofuran	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Fluoranthene	ND	1.32	11.10	1.65	ND	0.33	ND	0.33	ND	1.32	57.80	8.25
Fluorene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
N-Nitrosodiphenylamine	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Naphthalene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Nitrobenzene	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Pentachlorophenol	ND	6.40	ND	8.00	ND	1.60	ND	1.60	ND	6.40	ND	40.00
Phenanthrene	ND	1.32	2.63	1.65	ND	0.33	ND	0.33	ND	1.32	60.20	8.25
Phenol	ND	1.32	ND	1.65	ND	0.33	ND	0.33	ND	1.32	ND	8.25
Pyrene	ND	1.32	8.93	1.65	ND	0.33	ND	0.33	1.51	1.32	40.00	8.25

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-2

Surface Soil Analytical Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location (a)	MW-12A		MW-13		MW-15		MW-16		MW-18	
Analytical Result	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
Volatile Compounds										
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.62
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.62
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	4.20	0.62
Methylene Chloride	ND	0.005	ND	0.005	0.005	0.005	ND	0.005	ND	0.62
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	1.40	0.62
Xylenes (Total)	ND	0.005	ND	0.005	ND	0.005	ND	0.005	42.00	3.12
Semivolatile Compound										
1,2-Diphenylhydrazine	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
2,4-Dimethylphenol	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
2,4-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
2,6-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
2-Chloronaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
2-Methylnaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	6.90	3.30
4,6-Dinitro-o-cresol	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	16.00
4-Nitrophenol	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	16.00
Acenaphthene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	6.30	3.30
Acenaphthylene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Anthracene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	9.20	3.30
Benzo(a)anthracene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Benzo(a)pyrene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
bis(2-Chloroethoxy)methane	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Chrysene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	3.30	3.30
Di-n-butyl phthalate	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Dibenzofuran	ND	0.33	ND	0.33	ND	0.33	ND	3.30	4.00	3.30
Fluoranthene	ND	0.33	0.40	0.33	ND	0.33	ND	3.30	16.00	3.30
Fluorene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	5.60	3.30
N-Nitrosodiphenylamine	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Naphthalene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	46.00	3.30
Nitrobenzene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Pentachlorophenol	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	16.00
Phenanthrene	ND	0.33	0.49	0.33	ND	0.33	ND	3.30	17.00	3.30
Phenol	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	3.30
Pyrene	ND	0.33	ND	0.33	ND	0.33	ND	3.30	9.90	3.30

NOTES:

Conc. = Reported Concentration ND = Non Detect

LOQ = Limit of Quantitation NS = Not Sampled

(a) Sample locations begin with the prefix 'SSO' on site maps.

(b) Surface soil samples were collected at a depth of 0 to 2 feet.

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	MW-12A				MW-12B				MW-13				MW-14[B]					
Sample depth	20 ft		25 ft		30 ft		40 ft		15 ft		21 ft		17 ft		35 ft		40 ft	
Analytical Result	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Compound																		
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes (total)	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Semivolatile Compound																		
1,2-Diphenylhydrazine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
2,4-Dimethylphenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
2,4-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
2,6-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
2-Chloronaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
2-Methylnaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	16.00	1.65	ND	0.33	ND	0.33
4,6-Dinitro-o-cresol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	8.00	ND	1.60	ND	1.60
4-Nitrophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	8.00	ND	1.60	ND	1.60
Acenaphthene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	9.90	1.65	ND	0.33	ND	0.33
Acenaphthylene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Anthracene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Benzo(a)anthracene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Benzo(a)pyrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
bis(2-Chloroethoxy)methane	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Chrysene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Di-n-butyl phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Dibenzofuran	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	7.80	1.65	ND	0.33	ND	0.33
Fluoranthene	ND	0.33	ND	0.33	0.62	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Fluorene	ND	0.33	ND	0.33	0.36	0.33	ND	0.33	ND	0.33	ND	0.33	10.00	1.65	ND	0.33	ND	0.33
N-Nitrosodiphenylamine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Naphthalene	ND	0.33	ND	0.33	0.33	0.33	ND	0.33	ND	0.33	ND	0.33	8.60	1.65	ND	0.33	ND	0.33
Nitrobenzene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Pentachlorophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	8.00	ND	1.60	ND	1.60
Phenanthrene	ND	0.33	ND	0.33	1.10	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Phenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33
Pyrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	1.65	ND	0.33	ND	0.33

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	MW-15				MW-16				MW-17				MW-18			
Sample depth	20 ft		25 ft		20 ft		25 ft		25 ft		30 ft		25 ft		30 ft	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Compound																
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.005	ND	0.005
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	0.05	0.025	ND	0.025	0.01	0.005	ND	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.005	ND	0.005
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	1.2	0.025	0.7	0.025	0.01	0.005	ND	0.005
Methylene chloride	0.01	0.005	0.01	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	1	0.025	0.46	0.025	0.01	0.005	ND	0.005
Xylenes (total)	0.01	0.005	ND	0.005	ND	0.005	0.01	0.005	3.5	0.025	2.4	0.025	0.04	0.005	ND	0.005
Semivolatile Compound																
1,2-Diphenylhydrazine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
2,4-Dimethylphenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
2,4-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
2,6-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
2-Chloronaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
2-Methylnaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	32.00	3.30	76.00	9.90	ND	0.33	ND	0.33
4,6-Dinitro-o-cresol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	48.00	ND	1.60	ND	1.60
4-Nitrophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	48.00	ND	1.60	ND	1.60
Acenaphthene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	27.00	3.30	26.00	9.90	ND	0.33	ND	0.33
Acenaphthylene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Anthracene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	17.00	3.30	21.00	9.90	ND	0.33	ND	0.33
Benzo(a)anthracene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Benzo(a)pyrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
bis(2-Chloroethoxy)methane	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Chrysene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	3.30	3.30	ND	9.90	ND	0.33	ND	0.33
Di-n-butyl phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Dibenzofuran	ND	0.33	ND	0.33	ND	0.33	ND	0.33	24.00	3.30	39.00	9.90	ND	0.33	ND	0.33
Fluoranthene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	23.00	3.30	30.00	9.90	ND	0.33	ND	0.33
Fluorene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	28.00	3.30	24.00	9.90	ND	0.33	ND	0.33
N-Nitrosodiphenylamine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Naphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	120.00	8.25	260.00	16.50	ND	0.33	ND	0.33
Nitrobenzene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Pentachlorophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	48.00	ND	1.60	ND	1.60
Phenanthrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	69.00	8.25	92.00	9.90	ND	0.33	ND	0.33
Phenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	9.90	ND	0.33	ND	0.33
Pyrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	14.00	3.30	17.00	9.90	ND	0.33	ND	0.33

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	SB02												SB03			
Sample depth	7 ft		21 ft		24 ft		37.5 ft		38.5 ft		49 ft		5ft		19 ft	
Analytical Result	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	20	20	70	20	ND	20	ND	20	130	20	ND	20	670	20	70	20
Volatile Compound																
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.005
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.005
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	0.01	0.005	0.01	0.005	ND	0.005	ND	0.025	0.04	0.005
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	0.01	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.005
Xylenes (total)	ND	0.005	ND	0.005	ND	0.005	0.01	0.005	0.01	0.005	ND	0.005	ND	0.025	0.1	0.005
Semivolatile Compound																
1,2-Diphenylhydrazine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
2,4-Dimethylphenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
2,4-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
2,6-Dinitrotoluene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
2-Chloronaphthalene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
2-Methylnaphthalene	ND	0.33	ND	0.33	ND	0.33	1.40	0.33	0.59	0.33	ND	0.33	78.00	16.50	11.00	1.65
4,6-Dinitro-o-cresol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	8.00
4-Nitrophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	8.00
Acenaphthene	ND	0.33	ND	0.33	ND	0.33	2.10	0.33	3.10	0.33	ND	0.33	50.00	3.30	6.10	1.65
Acenaphthylene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Anthracene	ND	0.33	ND	0.33	ND	0.33	1.40	0.33	2.00	0.33	ND	0.33	24.00	3.30	3.50	1.65
Benzo(a)anthracene	ND	0.33	ND	0.33	ND	0.33	0.40	0.33	0.56	0.33	ND	0.33	7.90	3.30	ND	1.65
Benzo(a)pyrene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
bis(2-Chloroethoxy)methane	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Chrysene	ND	0.33	ND	0.33	ND	0.33	0.40	0.33	0.53	0.33	ND	0.33	8.60	3.30	ND	1.65
Di-n-butyl phthalate	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Dibenzofuran	ND	0.33	ND	0.33	ND	0.33	1.70	0.33	2.60	0.33	ND	0.33	40.00	3.30	6.40	1.65
Fluoranthene	ND	0.33	ND	0.33	ND	0.33	2.80	0.33	4.00	0.33	ND	0.33	84.00	16.50	7.90	1.65
Fluorene	ND	0.33	ND	0.33	ND	0.33	1.90	0.33	3.10	0.33	ND	0.33	46.00	3.30	5.60	1.65
N-Nitrosodiphenylamine	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Naphthalene	ND	0.33	ND	0.33	ND	0.33	3.60	0.33	12.00	3.30	ND	0.33	180.00	16.50	30.00	1.65
Nitrobenzene	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Pentachlorophenol	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	16.00	ND	8.00
Phenanthrene	ND	0.33	ND	0.33	ND	0.33	8.60	0.33	17.00	3.30	ND	0.33	160.00	16.50	16.00	1.65
Phenol	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	3.30	ND	1.65
Pyrene	ND	0.33	ND	0.33	ND	0.33	1.20	0.33	1.80	0.33	ND	0.33	40.00	3.30	4.30	1.65

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	SB03								SB04					
Sample depth	24 ft		34 ft		52 ft		54 ft		2.5 ft		27 ft		29 ft	
Analytical Result	Conc. (mg/kg)	LOQ	Conc. (mg/kg)	LOQ	Conc. (mg/kg)	LOQ	Conc (mg/kg)	LOQ	Conc. (mg/kg)	LOQ	Conc. (mg/kg)	LOQ	Conc. (mg/kg)	LOQ
Petroleum Hydrocarbons	ND	20	7,400	1.000	ND	20	NA	NA	19,000	1000	130	20	70	20
Volatile Compound														
1,2-Dichloroethane	ND	0.005	ND	3.125	ND	0.005	ND	0.005	ND	0.025	ND	0.005	ND	0.005
Benzene	ND	0.005	ND	3.125	ND	0.005	ND	0.005	ND	0.025	0.013	0.005	0.01	0.005
Chlorobenzene	ND	0.005	ND	3.125	ND	0.005	ND	0.005	ND	0.025	ND	0.005	ND	0.005
Ethylbenzene	0.02	0.005	46	3.125	0.03	0.005	ND	0.005	ND	0.025	0.064	0.005	0.03	0.005
Methylene chloride	ND	0.005	ND	3.125	ND	0.005	ND	0.005	ND	0.025	0.007	0.005	0.01	0.005
Toluene	0.03	0.005	32	3.125	0.02	0.005	ND	0.005	ND	0.025	0.028	0.005	0.02	0.005
Xylenes (total)	0.05	0.005	170	3.125	0.08	0.005	ND	0.005	0.07	0.025	0.18	0.005	0.09	0.005
Semivolatile Compound														
1,2-Diphenylhydrazine	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2.08	ND	1.65	ND	1.65
2,4-Dimethylphenol	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2.08	2.30	1.65	ND	1.65
2,4-Dinitrotoluene	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2.08	ND	1.65	ND	1.65
2,6-Dinitrotoluene	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2.08	ND	1.65	ND	1.65
2-Chloronaphthalene	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2.08	ND	1.65	ND	1.65
2-Methylnaphthalene	1.10	0.33	2200.00	500.00	11.00	1.32	ND	0.33	320.00	247.50	53.00	8.25	17.00	8.25
4,6-Dinitro-o-cresol	ND	1.60	ND	120.00	ND	1.60	ND	1.60	ND	120.00	ND	8.00	ND	8.00
4-Nitrophenol	ND	1.60	ND	120.00	ND	1.60	ND	1.60	ND	120.00	ND	8.00	ND	8.00
Acenaphthene	1.10	0.33	270.00	24.75	2.90	0.33	ND	0.33	370.00	247.50	16.00	1.65	13.00	1.65
Acenaphthylene	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
Anthracene	0.86	0.33	160.00	24.75	1.80	0.33	ND	0.33	250.00	247.50	9.70	1.65	14.00	1.65
Benzo(a)anthracene	ND	0.33	42.00	24.75	0.56	0.33	ND	0.33	130.00	247.50	2.10	1.65	1.80	1.65
Benzo(a)pyrene	ND	0.33	ND	24750.00	ND	0.33	ND	0.33	44.00	247.50	ND	1.65	ND	1.65
bis(2-Chloroethoxy)methane	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
bis(2-Ethylhexyl)phthalate	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
Chrysene	ND	0.33	42.00	24.75	0.56	0.33	ND	0.33	130.00	247.50	2.10	1.65	1.70	1.65
Di-n-butyl phthalate	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
Dibenzofuran	1.20	0.33	240.00	24.75	2.60	0.33	ND	0.33	300.00	247.50	14.00	1.65	12.00	1.65
Fluoranthene	1.80	0.33	210.00	24.75	2.90	0.33	ND	0.33	ND	247.50	13.00	1.65	11.00	1.65
Fluorene	1.30	0.33	250.00	24.75	3.10	0.33	ND	0.33	370.00	247.50	16.00	1.65	14.00	1.65
N-Nitrosodiphenylamine	ND	0.33	ND	24750.00	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
Naphthalene	4.60	0.33	4000.00	500.00	13.00	1.32	0.82	0.33	540.00	2475.00	56.00	8.25	59.00	8.25
Nitrobenzene	ND	0.33	ND	24750.00	ND	0.33	ND	0.33	ND	247.50	ND	1.65	ND	1.65
Pentachlorophenol	ND	1.60	ND	120.00	ND	1.60	ND	1.60	ND	120.00	ND	8.00	ND	8.00
Phenanthrene	3.60	0.33	2500.00	500.00	10.00	1.32	ND	0.33	1600.00	250.00	47.00	8.25	46.00	8.25
Phenol	ND	0.33	ND	24.75	ND	0.33	ND	0.33	ND	2475.00	ND	1.65	ND	1.65
Pyrene	1.20	0.33	190.00	24.75	2.70	0.33	ND	0.33	ND	2475.00	10.00	1.65	9.80	1.65

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	SB04								SB05									
Sample depth	31 ft		39 ft		51 ft		59 ft		19.5 ft		24 ft		34.5 ft		39 ft		54 ft	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	120	20	NA	NA	40	20	NA	NA	ND	20	ND	20	ND	20	ND	20	NA	NA
Volatile Compound																		
1,2-Dichloroethane	ND	0.625	NA	NA	ND	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzene	ND	0.625	NA	NA	ND	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chlorobenzene	ND	0.625	NA	NA	ND	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethylbenzene	1.7	0.625	NA	NA	0.620	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Methylene chloride	ND	0.625	NA	NA	ND	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	0.200	0.625	NA	NA	0.2	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes (total)	1.9	0.625	NA	NA	1.9	0.025	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Semivolatile Compound																		
1,2-Diphenylhydrazine	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
2,4-Dimethylphenol	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
2,4-Dinitrotoluene	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
2,6-Dinitrotoluene	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
2-Chloronaphthalene	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
2-Methylnaphthalene	29.00	8.25	1100.00	660.00	51.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
4,6-Dinitro-o-cresol	ND	8.00	ND	16.00	ND	40.00	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	3.20
4-Nitrophenol	ND	8.00	ND	16.00	ND	40.00	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	3.20
Acenaphthene	23.00	1.65	750.00	660.00	12.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Acenaphthylene	ND	1.65	6800.00	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Anthracene	18.00	1.65	470.00	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Benzo(a)anthracene	4.40	1.65	38.00	33.00	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Benzo(a)pyrene	ND	1.65	11.00	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
bis(2-Chloroethoxy)methane	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
bis(2-Ethylhexyl)phthalate	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Chrysene	4.40	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Di-n-butyl phthalate	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Dibenzofuran	25.00	1.65	750.00	3.30	12.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Fluoranthene	20.00	1.65	590.00	660.00	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Fluorene	20.00	1.65	620.00	660.00	9.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
N-Nitrosodiphenylamine	ND	1.65	ND	33.00	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Naphthalene	200.00	8.25	4900.00	3.30	73.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Nitrobenzene	ND	1.65	ND	660.00	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Pentachlorophenol	ND	8.00	ND	3.30	ND	40.00	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	1.60	ND	3.20
Phenanthrene	56.00	8.25	ND	16.00	27.00	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Phenol	ND	1.65	ND	3.30	ND	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66
Pyrene	23.00	1.65	430.00	33.00	8.20	8.25	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.33	ND	0.66

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	SB06								SB07					
Sample depth	4 ft		19 ft		24 ft		49 ft		2.5 ft		19 ft		21 ft	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	690	20	370	20	ND	20	NA	NA	6,300	500	1,900	100	1,200	20
Volatile Compound														
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.025
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	0.033	0.025	0.23	0.025	0.67	0.025
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.025
Ethylbenzene	0.055	0.005	0.04	0.005	ND	0.005	ND	0.005	6.3	0.625	12	0.625	12	0.625
Methylene chloride	ND	0.005	0.01	0.005	ND	0.005	ND	0.005	ND	0.025	ND	0.025	ND	0.025
Toluene	0.005	0.005	ND	0.005	ND	0.005	ND	0.005	0.36	0.025	12	0.625	13	0.625
Xylenes (total)	0.14	0.005	0.07	0.005	ND	0.005	ND	0.005	22	0.625	40	0.625	38	0.625
Semivolatile Compound														
1,2-Diphenylhydrazine	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	33.00	ND	3.30
2,4-Dimethylphenol	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	33.00	ND	3.30
2,4-Dinitrotoluene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	33.00	ND	3.30
2,6-Dinitrotoluene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	33.00	ND	3.30
2-Chloronaphthalene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	33.00	ND	3.30
2-Methylnaphthalene	72.00	8.25	28.00	6.60	ND	0.33	ND	0.33	1300.00	500.00	1700.00	330.00	260.00	165.00
4,6-Dinitro-o-cresol	ND	40.00	ND	32.00	ND	1.60	ND	1.60	ND	120.00	ND	160.00	ND	16.00
4-Nitrophenol	ND	40.00	ND	32.00	ND	1.60	ND	1.60	ND	120.00	ND	160.00	ND	16.00
Acenaphthene	46.00	8.25	18.00	6.60	ND	0.33	ND	0.33	1700.00	500.00	460.00	330.00	400.00	6.60
Acenaphthylene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Anthracene	25.00	8.25	15.00	6.60	ND	0.33	ND	0.33	400.00	24.75	280.00	330.00	220.00	3.30
Benzo(a)anthracene	8.20	8.25	ND	6.60	ND	0.33	ND	0.33	130.00	24.75	59.00	330.00	17.00	3.30
Benzo(a)pyrene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	27.00	24.75	ND	330.00	5.00	3.30
bis(2-Chloroethoxy)methane	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
bis(2-Ethylhexyl)phthalate	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Chrysene	9.90	8.25	ND	6.60	ND	0.33	ND	0.33	130.00	24.75	56.00	330.00	17.00	3.30
Di-n-butyl phthalate	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Dibenzofuran	43.00	8.25	18.00	6.60	ND	0.33	ND	0.33	1100.00	500.00	360.00	330.00	300.00	66.00
Fluoranthene	52.00	8.25	20.00	6.60	0.36	0.33	ND	0.33	2500.00	500.00	330.00	330.00	240.00	3.30
Fluorene	41.00	8.25	21.00	6.60	ND	0.33	ND	0.33	1600.00	500.00	430.00	330.00	360.00	66.00
N-Nitrosodiphenylamine	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Naphthalene	132.00	8.25	61.00	6.60	ND	0.33	ND	0.33	3900.00	500.00	7600.00	1650.00	1000.00	165.00
Nitrobenzene	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Pentachlorophenol	ND	40.00	ND	32.00	ND	1.60	ND	1.60	ND	120.00	ND	160.00	ND	16.00
Phenanthrene	82.00	8.25	44.00	6.60	ND	0.33	ND	0.33	4100.00	500.00	2600.00	330.00	730.00	66.00
Phenol	ND	8.25	ND	6.60	ND	0.33	ND	0.33	ND	24.75	ND	330.00	ND	3.30
Pyrene	30.00	8.25	9.20	6.60	ND	0.33	ND	0.33	1500.00	500.00	280.00	330.00	200.00	3.30

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	SB07				SB08									
Sample depth	22 ft		24 ft		4 ft		14 ft		18 ft		21 ft		22 ft	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	1,100	20	9,200	1000	2,600	500	850	20	8,900	500	4,500	100	21,000	500
Volatile Compound														
1,2-Dichloroethane	ND	0.625	ND	6.250	ND	0.005	ND	0.005	ND	0.625	ND	0.005	ND	0.005
Benzene	ND	0.625	ND	6.250	ND	0.005	0.071	0.005	1.1	0.625	ND	0.005	0.057	0.005
Chlorobenzene	ND	0.625	ND	6.250	ND	0.005	ND	0.005	ND	0.625	ND	0.005	ND	0.005
Ethylbenzene	9.1	0.625	31	6.250	0.024	0.005	3.4	0.625	19	0.625	0.074	0.005	12	0.625
Methylene chloride	ND	0.625	ND	6.250	ND	0.005	ND	0.005	ND	0.625	ND	0.005	ND	0.005
Toluene	9.8	0.625	31	6.250	ND	0.005	2.6	0.625	13	0.625	0.036	0.005	7.5	0.625
Xylenes (total)	28	0.625	90	6.250	0.046	0.005	11	0.625	55	0.625	0.23	0.005	43	0.625
Semivolatile Compound														
1,2-Diphenylhydrazine	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
2,4-Dimethylphenol	ND	330.00	ND	2.48	ND	33.00	ND	330.00	25.00	2.48	ND	165.00	ND	247.50
2,4-Dinitrotoluene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
2,6-Dinitrotoluene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
2-Chloronaphthalene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
2-Methylnaphthalene	790.00	330.00	3.70	2.48	420.00	33.00	360.00	330.00	400.00	2.48	350.00	165.00	420.00	247.50
4,6-Dinitro-o-cresol	ND	1600.00	ND	12.00	ND	160.00	ND	1600.00	ND	12.00	ND	800.00	ND	1200.00
4-Nitrophenol	ND	1600.00	ND	12.00	ND	160.00	ND	1600.00	ND	12.00	ND	800.00	ND	1200.00
Acenaphthene	630.00	330.00	3.20	2.48	450.00	330.00	ND	330.00	320.00	2.48	200.00	165.00	400.00	247.50
Acenaphthylene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Anthracene	ND	330.00	ND	2.48	480.00	33.00	ND	330.00	200.00	2.48	580.00	165.00	ND	247.50
Benzo(a)anthracene	ND	330.00	ND	2.48	160.00	33.00	ND	330.00	37.00	2.48	ND	165.00	ND	247.50
Benzo(a)pyrene	ND	330.00	ND	2.48	62.00	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
bis(2-Chloroethoxy)methane	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
bis(2-Ethylhexyl)phthalate	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Chrysene	ND	330.00	ND	2.48	180.00	33.00	ND	330.00	37.00	2.48	ND	165.00	ND	247.50
Di-n-butyl phthalate	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Dibenzofuran	470.00	330.00	2.50	2.48	600.00	330.00	ND	330.00	270.00	2.48	230.00	165.00	300.00	247.50
Fluoranthene	380.00	330.00	2.50	2.48	430.00	33.00	ND	330.00	250.00	2.48	ND	165.00	300.00	247.50
Fluorene	560.00	330.00	2.70	2.48	460.00	330.00	330.00	330.00	300.00	2.48	180.00	165.00	350.00	247.50
N-Nitrosodiphenylamine	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Naphthalene	5300.00	330.00	42.00	2.48	970.00	33.00	4600.00	330.00	17000.00	990.00	20000.00	165.00	22000.00	1320.00
Nitrobenzene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Pentachlorophenol	ND	1600.00	ND	12.00	ND	160.00	ND	1600.00	ND	120.00	ND	800.00	ND	1200.00
Phenanthrene	1200.00	330.00	6.90	2.48	930.00	330.00	590.00	330.00	1400.00	99.00	610.00	165.00	840.00	247.50
Phenol	ND	330.00	ND	2.48	ND	33.00	ND	330.00	ND	2.48	ND	165.00	ND	247.50
Pyrene	ND	330.00	ND	2.48	ND	33.00	ND	330.00	160.00	2.48	ND	165.00	ND	247.50

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-3
Subsurface Soil Analytical Results
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location	AOC3-W		AOC3-E		AOC4-SE		AOC4-SW		AOC4-NE		AOC4-NW		AOC5-E		AOC7	
Sample depth	5 FT		5 FT		5 FT		5 FT		5 FT		5 FT		5 FT		5 FT	
Analytical Result	Conc. (mg/kg)	LOQ (mg/kg)	Con (mg/kg)	LOQ (mg/kg)	Conc (mg/kg)	LOQ (mg/kg)	Con (mg/kg)	LOQ (mg/kg)	Con (mg/kg)	LOQ (mg/kg)	Con (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)	Conc. (mg/kg)	LOQ (mg/kg)
Petroleum Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000
Volatile Compound																
1,2-Dichloroethane	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005
Benzene	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005
Chlorobenzene	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005
Ethylbenzene	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.625	NA	0.005
Methylene chloride	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005
Toluene	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005
Xylenes (total)	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.005	NA	0.625	NA	0.005
Semivolatile Compound																
1,2-Diphenylhydrazine	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
2,4-Dimethylphenol	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
2,4-Dinitrotoluene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
2,6-Dinitrotoluene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
2-Chloronaphthalene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
2-Methylnaphthalene	5.00	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
4,6-Dinitro-o-cresol	ND	16.00	ND	1.60	ND	3.20	ND	1.60	ND	1.60	ND	3.20	ND	16.00	ND	800.00
4-Nitrophenol	ND	16.00	ND	1.60	ND	3.20	ND	1.60	ND	1.60	ND	3.20	ND	16.00	ND	800.00
Acenaphthene	8.80	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	270.00	165.00
Acenaphthylene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Anthracene	8.60	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	460.00	165.00
Benzo(a)anthracene	3.60	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	21.50	3.30	220.00	165.00
Benzo(a)pyrene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	17.80	3.30	ND	165.00
bis(2-Chloroethoxy)methane	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
bis(2-Ethylhexyl)phthalate	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Chrysene	3.50	3.30	ND	0.33	0.92	0.66	ND	0.33	ND	0.33	ND	0.66	34.00	3.30	210.00	165.00
Di-n-butyl phthalate	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Dibenzofuran	6.70	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	190.00	165.00
Fluoranthene	20.00	3.30	ND	0.33	2.80	0.66	ND	0.33	ND	0.33	ND	0.66	50.90	3.30	1100.00	165.00
Fluorene	12.00	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	330.00	165.00
N-Nitrosodiphenylamine	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Naphthalene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	220.00	165.00
Nitrobenzene	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Pentachlorophenol	ND	16.00	ND	1.60	ND	3.20	ND	1.60	ND	1.60	ND	3.20	ND	16.00	ND	800.00
Phenanthrene	36.00	3.30	ND	0.33	1.10	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	950.00	165.00
Phenol	ND	3.30	ND	0.33	ND	0.66	ND	0.33	ND	0.33	ND	0.66	ND	3.30	ND	165.00
Pyrene	13.00	3.30	ND	0.33	3.60	0.66	ND	0.33	ND	0.33	ND	0.66	58.30	3.30	880.00	165.00

NOTES:
(a) Subsurface soil samples were collected from greater than 2 feet below ground surface.
(b) Conc. = reported concentration; LOQ = limit of quantitation.
(c) N/A = not analyzed; ND = non detect

TABLE 5-4

Soil Leachate Testing Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location	SB03			SB04	SB06
Sample depth	5 ft	19 ft	24 ft	51 ft	19 ft
Analytical Result	Conc. (mg/L)	Conc. (mg/L)	Conc. (mg/L)	Conc. (mg/L)	Conc. (mg/L)
Volatile Compound					
1,2-Dichloroethane	ND	ND	ND	ND	ND
Benzene	ND	ND	0.024	ND	0.016
Chlorobenzene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	0.036	ND
Methylene chloride	ND	ND	0.03	ND	ND
Toluene	ND	ND	0.26	0.12	ND
Xylenes (total)	ND	ND	0.011	0.10	ND
Semivolatile Compound					
1,2-Diphenylhydrazine	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	0.041	0.044	1.6	0.1
4,6-Dinitro-o-cresol	ND	ND	ND	ND	ND
4-Nitrophenol	ND	ND	ND	ND	ND
Acenaphthene	ND	0.04	0.085	0.38	0.1
Acenaphthylene	ND	ND	ND	ND	ND
Anthracene	ND	ND	0.031	ND	0.026
Benzo(a)anthracene	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	ND	ND
Dibenzofuran	ND	0.035	0.06	0.35	0.096
Fluoranthene	ND	0.01	0.032	ND	0.035
Fluorene	ND	0.028	0.088	0.28	0.09
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND
Naphthalene	ND	0.075	ND	2.2	0.36
Nitrobenzene	ND	ND	ND	ND	ND
Pentachlorophenol	ND	ND	ND	ND	ND
Phenanthrene	ND	0.054	0.17	0.82	0.14
Phenol	ND	ND	ND	ND	ND
Pyrene	ND	ND	0.015	0.25	0.018

TABLE 5-5

Geotechnical Sample Results
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Lithologic Unit	Sample Location	Sample Depth (bgs)	Dry Density (lb/ft^3)	Moisture Content (%)	Specific Gravity (g/cm^3)	Fraction Organic Carbon (%)	pH
A-CZ	MW-14[B]	5	115.0	15.6	2.667	3.0	7.3
A-TZ	MW-14[B]	15	105.8	20.4	2.673	0.4	7.5
	SB02	21	97.4	25.9	2.653	0.3	7.8
	Average A-TZ	18	101.6	23.15	2.663	0.3	7.6
B-CZ	MW-12B	30	102.6	19.7	2.680	0.6	7.7
	MW-14	28	109.9	18.6	2.686	1.7	7.3
	SB06	55	99.3	25.3	2.779	2.1	7.5
	SB02	38	96.9	25.9	2.695	1.9	7.9
	Average B-CZ	38	102.2	22.4	2.710	1.6	7.6
B-TZ	MW-14	35	99.2	23.4	2.675	0.6	7.8
C-CZ	MW-12B	43	102.7	23.0	2.754	2.5	7.3
	MW-14	43.5	101.8	24.4	2.755	2.6	7.5
	Average C-CZ	43	101.2	23.7	2.754	2.5	7.4

NOTE:

ft btgs = feet below ground surface

TABLE 5-6

Summary of Well Completion Data

Houston Wood Preserving Works
Houston, Texas

Well Designation	*Transmissive Zone*	*Top Of Casing Elev. (ft MSL)*	*Installation Date*	*Top of Screen (ft bgs)*	*Bottom of Screen (ft bgs)*	*Total Depth of Boring (ft bgs)*
MW-01	A-TZ	47.95	4/17/84	8.5	18.5	18.5
MW-02	A-TZ	48.03	4/17/84	8.5	18.5	18.5
MW-03	A-TZ	48.55	4/17/84	8.5	18.5	18.5
MW-04	A-TZ	49.85	4/18/84	11	21	21
MW-05	A-TZ	49.35	3/27/91	10	25	26
MW-07	A-TZ	48.86	3/27/91	14.1	19.1	23
MW-08	A-TZ	49.37	3/27/91	14.2	19.2	24
MW-09	A-TZ	49.29	3/26/91	14.8	19.8	24
MW-10A	A-TZ	49.90	9/13/94	11	20.5	23
MW-10B	B-TZ	49.97	9/14/94	27.1	41.6	46
MW-11A	A-TZ	50.04	9/15/94	10	19.3	22
MW-11B	B-TZ	50.19	9/19/94	27.5	41.2	44
MW-12A	A-TZ	49.96	2/27/97	13	27.5	30
MW-12B	B-TZ	50.02	2/27/97	28	42.5	45
MW-12C	C-TZ	50.14	4/21/97	69	73.5	75.3
MW-13	A-TZ	50.65	2/25/97	9	22.5	25
MW-14	A-TZ	50.66	2/27/97	28	42.5	45
MW-15A	A-TZ	50.41	2/25/97	12	26.1	30
MW-15C	C-TZ	50.01	4/25/97	64	73.5	75
MW-16	A-TZ	51.51	2/26/97	12.5	27	30
MW-17	A-TZ	50.92	3/25/97	18	32.5	35
MW-18A	A-TZ	51.57	2/26/97	18	32.5	35
MW-18C	C-TZ	51.47	4/25/97	62	76.5	80.2
P-10	B-TZ	47.72	6/13/91	36.2	38.2	50
P-11	B-TZ	49.02	6/13/91	36.2	38.2	50
P-12	B-TZ	48.82	6/13/91	36.3	38.3	50

NOTES:
bgs = below ground surface
MSL = mean sea level

TABLE 5-7
Gound Water Analytical Results - Monitor Wells
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location:	MW12						MW13		MW14[B]	
Transmissive Zone:	A-TZ		B-TZ		C-TZ		A-TZ		A-TZ	
Analytical Result:	Conc. (mg/L)	LOQ (mg/L)	Conc. (mg/L)	LOQ (mg/L)	Conc. (mg/L)	LOQ (mg/L)	Conc. (mg/L)	LOQ (mg/L)	Conc. (mg/L)	LOQ (mg/L)
Total Disolved Solids	705	5	1088	5	1,566	10	738	5	1020	5
Volatile Compound										
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzene	ND	0.005	0.0065	0.005	ND	0.005	ND	0.005	ND	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethylbenzene	0.0171	0.005	0.0276	0.005	ND	0.005	ND	0.005	ND	0.005
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	0.0085	0.005	0.0065	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes (total)	0.0281	0.005	0.0287	0.005	ND	0.005	ND	0.005	ND	0.005
Semivolatile Compound										
1,2-Diphenylhydrazine	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2,4-Dimethylphenol	0.012	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2,4-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2,6-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2-Chloronaphthalene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2-Methylnaphthalene	0.397	0.100	0.233	0.100	ND	0.100	ND	0.100	ND	0.100
4,6-Dinitro-o-cresol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050
4-Nitrophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050
Acenaphthene	0.186	0.100	0.216	0.100	ND	0.010	ND	0.100	ND	0.100
Acenaphthylene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Anthracene	0.016	0.010	0.020	0.010	ND	0.010	ND	0.010	ND	0.010
Benzo(a)anthracene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Benzo(a)pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
bis(2-Chloroethoxy)methane	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
bis(2-Ethylhexyl)phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Chrysene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Di-n-butyl phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Dibenzofuran	0.148	0.100	0.158	0.100	ND	0.010	ND	0.100	ND	0.100
Fluoranthene	0.018	0.010	0.022	0.010	ND	0.010	ND	0.010	ND	0.010
Fluorene	0.125	0.100	0.154	0.100	ND	0.010	ND	0.100	ND	0.100
N-Nitrosodiphenylamine	ND	0.100	ND	0.100	ND	0.010	ND	0.100	ND	0.100
Naphthalene	5.210	2.000	2.440	1.000	ND	0.010	ND	0.100	ND	0.100
Nitrobenzene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Pentachlorophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050
Phenanthrene	0.133	0.100	0.144	0.100	ND	0.100	ND	0.100	ND	0.100
Phenol	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Pyrene	ND	0.010	0.010	0.010	ND	0.010	ND	0.010	ND	0.010

NOTES:
(a) Samples collected on May 13 and 14, 1997.
(b) Conc. = reported concentration; LOQ = limit of quantiation; ND = non detect

TABLE 5-7
Gound Water Analytical Results - Monitor Wells
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location:	MW15		MW15		MW16		MW17	
Transmissive Zone:	A-TZ		C-TZ		A-TZ		A-TZ	
Analytical Result:	Conc. (mg/L)	LOQ	Conc. (mg/L)	LOQ	Conc. (mg/L)	LOQ	Conc. (mg/L)	LOQ
Total Disolved Solids	945	5	705	5	538	5	758	5
Volatile Compound								
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.025
Benzene	0.0068	0.005	ND	0.005	0.0101	0.005	0.580	0.025
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.025
Ethylbenzene	0.0151	0.005	ND	0.005	0.0321	0.005	0.205	0.025
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.025
Toluene	ND	0.005	ND	0.005	0.0083	0.005	0.780	0.025
Xylenes (total)	0.0238	0.005	0.02	0.005	0.0666	0.005	0.105	0.025
Semivolatile Compound								
1,2-Diphenylhydrazine	ND	0.010	ND	0.010	ND	0.010	ND	0.500
2,4-Dimethylphenol	ND	0.010	ND	0.010	0.029	0.010	7.140	2.500
2,4-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
2,6-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
2-Chloronaphthalene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
2-Methylnaphthalene	0.138	0.100	0.020	0.100	0.039	0.100	0.711	0.500
4,6-Dinitro-o-cresol	ND	0.050	ND	0.050	ND	0.050	ND	2.500
4-Nitrophenol	ND	0.050	ND	0.050	ND	0.050	ND	2.500
Acenaphthene	0.142	0.100	0.038	0.100	0.139	0.100	ND	0.500
Acenaphthylene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Anthracene	ND	0.010	ND	0.010	0.016	0.010	ND	0.500
Benzo(a)anthracene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Benzo(a)pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
bis(2-Chloroethoxy)methane	ND	0.010	ND	0.010	ND	0.010	ND	0.500
bis(2-Ethylhexyl)phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Chrysene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Di-n-butyl phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Dibenzofuran	0.042	0.100	0.104	0.020	0.080	0.020	ND	0.500
Fluoranthene	ND	0.010	ND	0.010	0.026	0.010	ND	0.500
Fluorene	0.043	0.100	ND	0.100	0.083	0.010	ND	0.500
N-Nitrosodiphenylamine	ND	0.100	ND	0.100	ND	0.010	ND	0.500
Naphthalene	1.210	0.100	0.041	0.100	0.472	0.100	12.200	2.500
Nitrobenzene	ND	0.010	ND	0.010	ND	0.010	ND	0.500
Pentachlorophenol	ND	0.050	ND	0.050	ND	0.050	ND	2.500
Phenanthrene	0.019	0.100	0.019	0.100	0.097	0.050	ND	0.500
Phenol	ND	0.010	ND	0.010	ND	0.010	29.700	10.000
Pyrene	ND	0.010	ND	0.010	0.015	0.010	ND	0.500

NOTES:
(a) Samples collected on May 13 and 14, 1997.
(b) Conc. = reported concentration; LOQ = limit of quantiation; ND = non detect

TABLE 5-7
Gound Water Analytical Results - Monitor Wells
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample Location:	MW18			
Transmissive Zone:	A-TZ		C-TZ	
Analytical Result:	Conc. (mg/L)	LOQ	Conc. (mg/L)	LOQ
Total Disolved Solids	1480	10	1050	5
Volatile Compound				
1,2-Dichloroethane	ND	50	ND	0.005
Benzene	0.700	50	ND	0.005
Chlorobenzene	ND	50	ND	0.005
Ethylbenzene	0.919	50	0.028	0.005
Methylene chloride	ND	50	ND	0.005
Toluene	0.805	50	0.012	0.005
Xylenes (total)	0.218	50	0.067	0.005
Semivolatile Compound				
1,2-Diphenylhydrazine	ND	0.200	ND	0.010
2,4-Dimethylphenol	9.210	2.000	ND	0.010
2,4-Dinitrotoluene	ND	0.200	ND	0.010
2,6-Dinitrotoluene	ND	0.200	ND	0.010
2-Chloronaphthalene	ND	0.200	ND	0.010
2-Methylnaphthalene	0.617	0.200	0.125	0.100
4,6-Dinitro-o-cresol	ND	1.000	ND	0.050
4-Nitrophenol	ND	1.000	ND	0.050
Acenaphthene	0.350	0.200	0.054	0.100
Acenaphthylene	ND	0.200	ND	0.010
Anthracene	ND	0.200	ND	0.010
Benzo(a)anthracene	ND	0.200	ND	0.010
Benzo(a)pyrene	ND	0.200	ND	0.010
bis(2-Chloroethoxy)methane	ND	0.200	ND	0.010
bis(2-Ethylhexyl)phthalate	ND	0.200	ND	0.010
Chrysene	ND	0.200	ND	0.010
Di-n-butyl phthalate	ND	0.200	ND	0.010
Dibenzofuran	ND	0.200	0.049	0.020
Fluoranthene	ND	0.200	ND	0.010
Fluorene	ND	0.200	0.032	0.010
N-Nitrosodiphenylamine	ND	0.200	ND	0.010
Naphthalene	7.870	2.000	0.905	0.010
Nitrobenzene	ND	0.200	ND	0.200
Pentachlorophenol	ND	1.000	ND	0.050
Phenanthrene	ND	0.200	0.053	0.010
Phenol	1.410	1.000	ND	0.010
Pyrene	ND	0.200	ND	0.010

NOTES:
(a) Samples collected on May 13 and 14, 1997.
(b) Conc. = reported concentration; LOQ = limit of quantiation; ND = non detect

TABLE 5-8

Ground Water Analytical Results - Hydropunch
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location:	HP17				HP18				HP19			
Transmissive Zone:	A-TZ		B-TZ		A-TZ		B-TZ		A-TZ		B-TZ	
Analytical Result:	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc	LOQ
	(mg/L)		(mg/L)		(mg/L)		(mg/L)		(mg/L)		(mg/L)	
Total Disolved Solids	NA	NA	NA	NA	914	5	881	5	748	5	NA	NA
Volatile Compound												
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes (total)	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Semivolatile Compound												
1,2-Diphenylhydrazine	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
2,4-Dimethylphenol	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
2,4-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
2,6-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
2-Chloronaphthalene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
2-Methylnaphthalene	ND	0.010	ND	0.010	ND	0.010	0.064	0.010	ND	0.010	NA	NA
4,6-Dinitro-o-cresol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	NA	NA
4-Nitrophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	NA	NA
Acenaphthene	0.033	0.010	ND	0.010	0.218	0.050	0.185	0.050	ND	0.010	NA	NA
Acenaphthylene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Anthracene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Benzo(a)anthracene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Benzo(a)pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
bis(2-Chloroethoxy)methane	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
bis(2-Ethylhexyl)phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.010	0.032	0.010	NA	NA
Chrysene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Di-n-butyl phthalate	ND	0.010	0.014	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Dibenzofuran	ND	0.010	ND	0.010	0.110	0.050	0.145	0.050	ND	0.010	NA	NA
Fluoranthene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Fluorene	0.016	0.010	ND	0.010	0.116	0.050	0.126	0.050	ND	0.010	NA	NA
N-Nitrosodiphenylamine	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Naphthalene	ND	0.010	ND	0.010	0.391	0.050	0.476	1.000	ND	0.010	NA	NA
Nitrobenzene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA
Pentachlorophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050	ND	0.050	NA	NA
Phenanthrene	ND	0.010	ND	0.010	0.013	0.010	0.078	0.010	ND	0.010	NA	NA
Phenol	0.018	0.010	0.021	0.010	ND	0.010	0.013	0.010	ND	0.010	NA	NA
Pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.010	ND	0.010	NA	NA

NOTES:
(a) NA = Not Applicable
(b) Conc. = reported concentration; LOQ = limit of quanitation; ND = non detect

TABLE 5-8

Ground Water Analytical Results - Hydropunch
Phase 2-A Investigation

Houston Wood Preserving Works
Houston, Texas

Sample Location:	HP20				HP21			
Transmissive Zone:	A-TZ		B-TZ		A-TZ		B-TZ	
Analytical Result:	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ	Conc.	LOQ
	(mg/L)		(mg/L)		(mg/L)		(mg/L)	
Total Disolved Solids	912	5	1310	10	1119	5	1054	5
Volatile Compound								
1,2-Dichloroethane	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Benzene	ND	0.005	ND	0.005	ND	0.005	0.0067	0.005
Chlorobenzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethylbenzene	ND	0.005	ND	0.005	ND	0.005	0.0643	0.005
Methylene chloride	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes (total)	ND	0.005	ND	0.005	ND	0.005	0.0158	0.005
Semivolatile Compound								
1,2-Diphenylhydrazine	ND	0.010	ND	0.010	ND	0.010	1.054	0.010
2,4-Dimethylphenol	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2,4-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2,6-Dinitrotoluene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2-Chloronaphthalene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
2-Methylnaphthalene	ND	0.010	ND	0.010	ND	0.010	0.118	0.050
4,6-Dinitro-o-cresol	ND	0.050	ND	0.050	ND	0.050	ND	0.050
4-Nitrophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050
Acenaphthene	ND	0.010	ND	0.010	ND	0.010	0.212	0.050
Acenaphthylene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Anthracene	ND	0.010	ND	0.010	ND	0.010	0.010	0.010
Benzo(a)anthracene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Benzo(a)pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
bis(2-Chloroethoxy)methane	ND	0.010	ND	0.010	ND	0.010	ND	0.010
bis(2-Ethylhexyl)phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Chrysene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Di-n-butyl phthalate	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Dibenzofuran	ND	0.010	ND	0.010	ND	0.010	0.026	0.010
Fluoranthene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Fluorene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
N-Nitrosodiphenylamine	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Naphthalene	ND	0.010	ND	0.010	ND	0.010	0.176	0.050
Nitrobenzene	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Pentachlorophenol	ND	0.050	ND	0.050	ND	0.050	ND	0.050
Phenanthrene	ND	0.010	ND	0.010	ND	0.010	0.045	0.010
Phenol	ND	0.010	ND	0.010	ND	0.010	ND	0.010
Pyrene	ND	0.010	ND	0.010	ND	0.010	ND	0.010

NOTES:
(a) NA = Not Applicable
(b) Conc. = reported concentration; LOQ = limit of quanitation; ND = non detect

TABLE 6-1
ROST/TPH Correlation Data
Phase 2-A Investigation
Houston Wood Preserving Works
Houston, Texas

Sample ID	Soil Type	TPH Result (X)	LIF Response (Y)	LIF Result[a]	TPH Result[b]	Flag[c]	Ln (X)	Ln (Y)	1/(X)	1/(Y)
SB06-S4	FILL	690	4.21	D	D		6.53669	1.43746	0.00145	0.23753
SB07-S2.5	FILL	6,300	9.19	D	D		8.74830	2.21812	0.00016	0.10881
SB04-S2.5	SAND	19,000	9.44	D	D		9.85219	2.24496	0.00005	0.10593
SB02-37.5	Clayey SILT	ND	2.37	ND	ND		2.30259	0.86289	0.10000	0.42194
SB07-S19	Clayey SILT	1,900	42.95	D	D		7.54961	3.76004	0.00053	0.02328
SB07-S21	Clayey SILT	1,200	31.07	D	D		7.09008	3.43624	0.00083	0.03219
SB08-S18	Clayey SILT	8,900	37.60	D	D		9.09381	3.62700	0.00011	0.02660
SB08-S21	Clayey SILT	4,500	35.54	D	D		8.41183	3.57066	0.00022	0.02814
SB08-S22	Clayey SILT	12,000	65.33	D	D		9.39266	4.17945	0.00008	0.01531
SB02-49	SILT	ND	0.71	ND	ND		2.30259	-0.34249	0.10000	1.40845
SB03-S19	SILT	70	2.69	D	D		4.24850	0.98954	0.01429	0.37175
SB04-S51	SILT	40	5.51	D	D		3.68888	1.70656	0.02500	0.18149
SB05-S19.5	SILT	ND	0.62	ND	ND		2.30259	-0.47804	0.10000	1.61290
SB05-S34.5	SILT	ND	0.41	ND	ND		2.30259	-0.89160	0.10000	2.43902
SB08-S4	Silty CLAY	2,600	10.23	D	D		7.86327	2.32532	0.00038	0.09775
SB02-38.5	Silty CLAY	130	3.34	D	D		4.86753	1.20597	0.00769	0.29940
SB03-S5	Silty CLAY	670	22.49	D	D		6.50728	3.11307	0.00149	0.04446
SB03-S34	Silty CLAY	7,400	65.06	D	D		8.90924	4.17531	0.00014	0.01537
SB03-S52	Silty CLAY	ND	2.62	ND	ND		2.30259	0.96317	0.10000	0.38168
SB06-S19	Silty CLAY	370	10.85	D	D		5.91350	2.38417	0.00270	0.09217
SB08-S14	Silty CLAY	850	22.55	D	D		6.74524	3.11574	0.00118	0.04435
SB02-21	Silty SAND	70	1.05	ND	D	X	4.24850	0.04879	0.01429	0.95238
SB02-24	Silty SAND	ND	1.08	ND	ND		2.30259	0.07696	0.10000	0.92593
SB03-S24	Silty SAND	ND	2.25	ND	ND		2.30259	0.81093	0.10000	0.44444
SB04-S27	Silty SAND	130	23.17	D	D		4.86753	3.14286	0.00769	0.04316
SB04-S29	Silty SAND	70	18.91	D	D		4.24850	2.93969	0.01429	0.05288
SB05-S24	Silty SAND	ND	0.88	ND	ND		2.30259	-0.12783	0.10000	1.13636
SB05-S39	Silty SAND	ND	0.38	ND	ND		2.30259	-0.96758	0.10000	2.63158
SB06-S24	Silty SAND	ND	1.14	ND	ND		2.30259	0.13103	0.10000	0.87719
SB07-S22	Silty SAND	1,100	39.48	D	D		7.00307	3.67579	0.00091	0.02533
SB07-S24	Silty SAND	9,200	55.38	D	D		9.12696	4.01422	0.00011	0.01806

NOTES:

(a) Background response estimated at 2.65. Any result greater than background is a detect (D), less than background is a non-detect (ND).
(b) D - Detect, result greater than the laboratory detection limit of 10 mg/kg. ND - Non-detect, result below laboratory detection limit.
(c) Flag denotes when a TPH result is in disagreement with an LIF result at the given background level.

Field Procedures Report

Appendix A

February 13, 1998
W.O. #422-09

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

PHASE 2 RFI/EOC FIELD PROCEDURES

Southern Pacific Transportation Company
Houston Wood Preserving Works
4910 Liberty Road
Houston, Texas

Terranext Project No. 17101961

Prepared For:

ERM-Southwest, Inc.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611

December 8, 1997

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Site Description 2
1.2 Phase 2 Investigation Overview 3
1.3 Previous Site Studies 3
1.4 Ground Water Monitoring 4
1.5 Offsite Access 5

1.5.1 Private Properties 5
1.5.2 City of Houston Property 5

1.6 Wetlands Permit 6

2.0 PHASE 2 INVESTIGATION ACTIVITIES 7

2.1 Objectives 7
2.2 Investigation Procedures 8
2.3 Cone Penetrometer Testing Program 8

2.3.1 CPT Sounding Procedure 9
2.3.2 CPT Data Analysis 10

2.4 Soil Boring and Sampling Program 11

2.4.1 Scope and Objectives 11
2.4.2 Soil Boring Locations 12
2.4.3 Soil Borings in AOCs 14
2.4.4 Monitoring Well Borings 15
2.4.5 Soil Analytical Program 16

2.5 Monitoring Well Program 20

2.5.1 Objectives 20
2.5.2 UTZ Monitoring Wells 21
2.5.3 STZ Monitoring Wells 22
2.5.4 LSU Monitoring Wells 23
2.5.5 Drilling Procedures 24

2.5.5.1 UTZ Well Construction 25
2.5.5.2 STZ and LSU Well Construction 25

2.5.6 Monitoring Well Development 26
2.5.7 Ground Water Sampling Procedures 27

2.5.7.1 Sampling Equipment 27
2.5.7.2 Sampling Procedures 27

2.6 Hydropunch™ Sampling Program 28
2.7 Slug Tests 31
2.8 Surface Soil Sampling Program 32

3.0 REFERENCES 34

FIGURES

Figure 1-1 Site Vicinity Map
Figure 3-1 Phase 2 CPT & Soil Boring Locations
Figure 3-2 Phase 2 Monitoring Well Locations
Figure 3-3 Phase 2 Hydropunch Locations
Figure 3-4 Phase 2 Surface Soil Locations

ATTACHMENTS

Attachment I CPT Logs - Fugro Geosciences
Attachment II Soil Boring Logs
Attachment III Monitoring Well Construction Details

1.0 INTRODUCTION

Pursuant to the Texas Natural Resource Conservation Commission (TNRCC) Corrective Action and Permits Section's approval of the Phase 2 scope of work as described in the Phase 1 RCRA Facility Investigation (RFI)/Extent of Contamination (EOC) Investigation Report (Terranext, May 23, 1996), Terranext performed field investigation activities on behalf of Southern Pacific Transportation Company (SPTCo) at the former Houston Wood Preserving Works (HWPW) site at 4910 Liberty Road; Houston, Texas.

Post-closure Care Permit Number HW-50343-000 (hereinafter, Permit) and Compliance Plan Number CP-50343 (hereinafter, Compliance Plan), issued by the TNRCC on June 20, 1994, required SPTCo to prepare two work plans to investigate the extent of affected soil and ground water at the HWPW site (Figure 1-1). Provision VIII of the Permit requires the completion of an RFI. The purpose of the RFI is to determine whether hazardous substances have been released into the environment from the industrial Solid Waste Management Units (SWMUs) and Areas of Concern (AOC) identified in the Permit. Pursuant to the Permit, an RFI Work Plan was prepared and submitted by SPTCo to the TNRCC on October 14, 1994. The RFI Work Plan was approved by TNRCC with modifications on October 16, 1995.

The EOC Work Plan was prepared by SPTCo to comply with the requirements of the Permit and to a greater extent, the Compliance Plan. The Compliance Plan requires assessment of the extent of contamination offsite in ground water attributable to past operation of the closed surface impoundment, TNRCC Permit Unit No. II.B.1, located in the southwest corner of the site and, based on the results of the investigation, an assessment of the necessity and feasibility of ground water remediation. The EOC Work Plan was submitted by SPTCo on May 19, 1995, and was approved by the TNRCC on September 29, 1995.

Phase 1 of the combined RFI/EOC Investigation was performed in November and December 1995, and the results are documented in the aforementioned Phase 1 RFI/EOC Report. The purpose of this report is to document the field procedures and activities conducted under the Phase 2 RFI/EOC investigation at the site in February through May 1997, in accordance with the approved RFI and EOC Work Plans and the Phase 2 scope of work.

1.1 Site Description

The site consists of a 33-acre tract of land that was formerly operated as SPTCo's Houston Wood Preserving Works, including the closed surface impoundment (TNRCC Permit Unit No. II.B.1) located in the southwest portion of the site. The facility is located at 4910 Liberty Road, Houston, Harris County, Texas, approximately 2 miles northeast of the intersection of Highway 59 and Interstate Highway 10. The property to the north and west is mixed residential and light industrial, with heavy industry further to the west. The adjacent property to the east and south is owned by SPTCo and is presently used for railroad and intermodal operations.

The closed surface impoundment is approximately 180 feet long and 106 feet wide and is currently flat, grass-covered vacant property. The southern side of the impoundment is bordered by an earthen berm, approximately 2 feet high, 3 feet wide, and 100 feet long. A portion of the property boundary contains a chain-link security fence, located along the northern and western sides of the closed surface impoundment. The permitted unit is fully enclosed by fencing and required signs are posted. The original surface impoundment dimensions were approximately 106 by 180 feet at the surface, and extended to a depth of approximately 7 feet below ground surface, yielding a potential capacity of approximately 4,950 cubic yards. A clay liner was installed during the original impoundment construction; during closure, after contaminated materials were removed, the impoundment was filled and revegetated.

1.2 Phase 2 Investigation Overview

The scope of work for the Phase 2 RFI/EOC Investigation is described in detail in Section 5.0 of the Phase 1 RFI/EOC Investigation Report. As an amendment to the Phase 2 scope of work outlined in the Phase 1 report, three monitoring wells were installed in a third water bearing zone at approximately 70 feet below ground surface with the prior approval of the TNRCC.

The EOC investigation portion of Phase 2 involved the use of the Hydropunch™ method to collect ground water samples offsite to delineate the extent of impacted ground water attributable to the closed surface impoundment. The onsite/RFI portion of the Phase 2 investigation involved the installation of a total of eleven ground water monitoring wells, deep CPT soundings to define the lithology below 60 feet, and a subsurface and surface soil sampling and analyses program.

1.3 Previous Site Studies

Two studies were performed prior to the Phase 1 RFI/EOC investigation conducted in November and December 1995, in the vicinity of the closed surface impoundment. The first investigation was performed in 1984 by Professional Service Industries, Inc. This investigation involved the installation of four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, and collection of ground water samples for chemical analysis.

In 1991, to establish a ground water monitoring network to meet the requirements for the RCRA Part B closure permit application, Geo Associates installed four ground water monitoring wells (designated MW-5, MW-7, MW-8, and MW-9), three piezometers (designated P-10, P-11, and P-12), and drilled seven exploratory borings. Geo Associates also performed three slug tests and collected ground water and soil samples for chemical analysis.

In September 1994, pursuant to Paragraph XI the Compliance Plan, SPTCo installed two nested point of compliance (POC) wells (MW-10A, MW-10B, MW-11A, MW-11B) within the two water bearing zones, the upper transmissive zone (UTZ) and second transmissive zone (STZ), at the downgradient boundary of the surface impoundment. These wells were monitored quarterly for a one-year period, and have been integrated into the current semi-annual ground water monitoring program. Boring logs and well construction details were provided to the TNRCC in October 1994.

Pursuant to TNRCC approval of the RFI and EOC Work Plan, SPTCo contracted Terranext to perform the combined Phase 1 RFI/EOC Investigation beginning in November 1995.

1.4 Ground Water Monitoring

In accordance with the provisions of Paragraph VI of the Compliance Plan, SPTCo has conducted periodic ground water monitoring for potential contaminants of concern listed in Table I of the Compliance Plan for all existing on-site wells. Having previously completed quarterly ground water monitoring for all on-site wells for approximately two years, SPTCo conducted the first semi-annual period of 1996 ground water sampling related to the closed surface impoundment area on January 23 and 24, 1996. The ground water monitoring network includes ten ground water monitor wells: MW-1a, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10A, and MW-11A completed in the UTZ, and two monitor wells (MW-10B and MW-11B) and three piezometers (P-10, P-11, and P-12) completed in the STZ.

The results of the semi-annual ground water monitoring events are documented in Compliance Plan Semi-annual Reports due January 21, and July 21, each year. Annual Reports due each year by January 25, include a summary of ground water compliance monitoring.

1.5 Offsite Access

Written authorization to access offsite areas was required prior to conducting activities under the EOC Investigation. Private property owners and the City of Houston were contacted to obtain access to areas to perform the required investigation. Access was granted to some parcels adjacent to the closed impoundment by some of the private property owners.

1.5.1 Private Properties

Permission to access private properties adjacent to the HWPW site was solicited by SPTCo from approximately 48 individual property owners. SPTCo hired a Houston, Texas consulting firm (Allen, Williford, and Seale) to assist SPTCo in the identification of owners of adjacent properties along the western portion of the site near the closed surface impoundment. Since June 1995, Terranext has conducted three complete mailings on behalf of SPTCo to all non-responsive property owners. Through December 1995, a total of only 15 private property owners had granted permission for SPTCo to access their property for the environmental investigation.

1.5.2 City of Houston Property

The City of Houston possesses several rights-of-way (ROW) in the EOC investigation area which currently exist as platted but unpaved streets. The pertinent ROWs consist of Ranch Street, First Street, and Second Street shown on Figure 1-2 (page 5). Permit applications to access city ROWs for environmental test borings or permanent installations (e.g., monitoring wells) were completed and submitted to the City of Houston Department of Public Works and Engineering.

The City of Houston access permits were issued on January 1997 for the work to be performed on in the offsite area west of the closed surface impoundment. These permits are

valid for one calendar year from the date of issue. Any additional work in the ROWs will require additional permits.

Prior to performing the CPT/Hydropunch™ work for the EOC Investigation, the ROWs were located by a licensed surveyor. Survcon, Inc. (Survcon) of Houston, Texas was contracted to locate and stake the ROW boundaries for Ranch Street, First Street, and Second Street. After locating the ROWs, clearing of overgrown vegetation was subcontracted and completed to allow access by the CPT vehicle. Ranch Street and First Street were accessed directly from Amboy Street. Second Street was accessed from SPTCo property.

1.6 Wetlands Permit

The 0.28-acre area offsite along the southwest corner of the HWPW site, referred to as Inactive Wastewater Lagoon (AOC 6), is frequently saturated with ponding storm water. A wetlands delineation was conducted by Terranext on behalf of SPTCo in September 1994, to characterize the nature and extent of the wetlands. On May 22, 1995, SPTCo filed a permit application with the U.S. Army Corps of Engineers, Galveston District, for Nationwide Permits No. 5, 6, and 26. On June 13, 1995, the Corps of Engineers provided authorization to conduct investigation activities in this area.

The wetland area is comprised of the City of Houston ROWs (for 2nd Street and Amboy Street) and five to six privately-owned parcels of land, from which only two access agreements have been executed (as of March 1996). This area is a natural topographic depression within the local drainage basin, and was not constructed as a containment pond, wastewater lagoon or any other designed structure. In November 1995, at the start of the EOC Investigation, the lagoon area was completely dry and covered with grassy vegetation.

2.0 PHASE 2 INVESTIGATION ACTIVITIES

The scope of work and technical approach to the Phase 2 RFI/EOC Investigation was developed based on the findings of Phase 1. Under Phase 2, quantitative soil, ground water and hydrogeologic data were obtained. The objectives, rationale, scope, and procedures conducted under the Phase 2 investigation are described in the following sections.

2.1 Objectives

The objectives of the Phase 2 Investigation as described in Section 5 of the Phase I Report (Terranext, 1996) were to:

- determine the vertical extent of BTEX, PAH, and creosote migration in soil within areas shown to be most significantly impacted from past releases;
- confirm, compare and, if possible, correlate soil borings and soil sampling data with existing CPT and ROST™ data;
- determine lateral extent of offsite impact attributable to the Inactive Wastewater Lagoon (AOC 6);
- determine if AOC's 3, 4, 5, 6 and 7 are sources of onsite contamination;
- collect representative ground water samples and obtain hydrogeologic data across the entire site;
- develop and apply fate and transport analyses to predict possible contaminant levels offsite and support natural attenuation of contaminants in the subsurface;
- collect data to assess natural attenuation processes in soil and ground water;
- obtain an understanding of the relationship between concentrations of contaminants in soil, and how these concentrations have or may affect ground water quality;
- derive risk-based concentrations through risk assessment using available site data; and,

- subsequently modify the Compliance Plan and the Permit as necessary to assure that site-specific elements form the basis for any further investigation, corrective measures, and post-closure activities required under the Permit.

2.2 Investigation Procedures

The Phase 2 investigation consisted of the following: 1) eight deep CPT soundings onsite and offsite to attempt to identify the lithology to approximately 100 feet; 2) an onsite soil boring and sampling program to provide quantitative soil data for AOCs and investigation units, and comparison to Phase 1 CPT and ROST™ data; 3) installation of eleven ground water monitoring wells (six UTZ wells, two STZ wells and three wells in the Lower Sand Unit-LSU) and collection of ground water samples from these wells to provide quantitative chemical data for onsite ground water; 4) an offsite Hydropunch ground water sampling program; 5) an aquifer slug testing program; and 6) a surface soil sampling program to collect data needed for risk analysis.

2.3 Cone Penetrometer Testing Program

Prior to drilling the soil borings, a total of eight CPT soundings was performed to depths below the extent of creosote contamination as indicated by existing ROST™ fluorescence data, or to a maximum depth of approximately 100 feet. The purpose of the CPT soundings was to: 1) confirm the previous site lithology based upon CPT soundings, and 2) define the site lithology at depths below the previous CPT soundings.

Four CPT soundings were proposed to be advanced to a maximum depth of 100 feet under the Phase 2 scope of work at locations CPT35, CPT36, CPT37, and CPT38. The four proposed CPT soundings were located to further investigate the following areas:

- CPT35 - Inactive Wastewater Lagoon (AOC 6)
- CPT36 - Tie Storage Area (SWMU 12)

- CPT37 - Original Process Area (SWMU 5)
- CPT38 - Recent Process Area (SWMU 4)

During the execution of the Phase 2 CPT sounding program, a dense sand layer was encountered at a depth of approximately 65 feet below ground surface in all four CPT locations. This sand was not anticipated; therefore, additional CPTs (CPT39, 40, 41, and 42) were completed to determine if this 65-foot sand layer was laterally continuous across the site and impoundment areas.

As shown in Figure 3-1, eight CPT sounding locations were completed, both onsite and offsite. Due to inclement weather and wet soil conditions, the CPTs were performed in two separate mobilizations. Soundings CPT36 through CPT41, associated with the onsite RFI investigation activities, were completed between February 25 and 26, 1997. Upon the improvement of previously very wet soil and access conditions in the area adjacent (offsite) to the closed surface impoundment, the two offsite CPTs soundings (CPT35 and CPT42) were completed between May 8 and 9, 1997.

2.3.1 CPT Sounding Procedure

The CPT soundings were performed in accordance with the procedures used in the previous Phase 1 investigation as outlined in the approved EOC and RFI Work Plans. Six of the eight CPTs encountered refusal between 64.5 and 70.5 feet, corresponding to the dense sand encountered at that depth interval. Consequently, total depths of the CPT soundings ranged from 64.5 to 100 feet.

Since shallow subsurface obstructions were encountered during the previous Phase 1 CPT sounding program, a 4-inch diameter hole was pre-drilled to approximately 3 feet below surface to allow to the CPT to be advanced without damaging the equipment.

The CPT system was housed in the cabin of a 20-ton truck. The penetrometer cone was pushed into the subsurface at a constant, controlled rate of 2 centimeters per second (cm/sec) while the data acquisition system recorded and plotted the data from the instrument. The data acquisition system had a total of four recording channels to record the cone tip resistance, sleeve friction resistance, depth, and pore pressure. The electrical signals were plotted in milli-volts (mv) during the sounding and recorded to the hard drive of a lap top portable computer.

The CPT cones were laboratory-calibrated before the field activities and field-checked before each sounding. The laboratory calibration procedure consisted of applying a series of known loads and hydraulic pressures to the probe and recording the transducer outputs. The field check consisted of a zero load check and a vacuum check on the piezometer during the de-airing procedure. After each sounding, the cone was decontaminated and the tip disassembled for cleaning and de-airing.

Preliminary decontamination of the CPT equipment was performed as the rods were extracted from the ground. After removal, the rods were steam-cleaned with a high-pressure washer. Wash water was stored in the temporary decontamination pad during the day and stored in 55-gallon drums at the end of each day. All open CPT holes were tremie-grouted with a bentonite cement grout from total depth to surface.

2.3.2 CPT Data Analysis

Field plots of the cone tip resistance, sleeve friction resistance, friction ratio, and pore pressure versus depth were made in the field and immediately interpreted so that adjustments could be made in the field, if necessary. The CPT logs produced by Fugro Geosciences, Inc. are provided in Attachment I.

Lithologic interpretations of the CPT data were performed in the field using a computer program that incorporates the Campanella and Robertson Classification method. To verify that the lithologic interpretations prepared by the computer program were consistent with site conditions, soil borings were advanced adjacent to the previous CPT soundings. A comparison of the computer's lithologic interpretation of the CPTs with the soil boring logs, indicated that the CPT sounding program correctly identified the cohesive soils (clays and silts) and granular soils (sand and silty sand) that underlie the site.

2.4 Soil Boring and Sampling Program

The following sections describe the soil boring program. Soil boring logs are provided in Attachment II.

2.4.1 Scope and Objectives

Seven exploratory soil borings, exclusive of the eleven borings related to well installation, were drilled to delineate the vertical extent of creosote impact in soils. These seven borings (SB02 through SB-08), plus one STZ monitoring well boring (well MW-12B, near CPT25R), were drilled to accomplish the following objectives:

- define the vertical extent of soil contamination;
- determine the lithology below a depth of 60 feet;
- determine the distribution of creosote with depth and within the five hydrologic units;
- confirm, compare, and possibly correlate the CPT and ROST™ fluorescence data collected during the Phase 1 investigation with data collected from the soil borings;
- determine the potential for natural attenuation; and,
- define the hydrogeologic characterization of the site.

Prior to drilling the soil borings, the CPT sounding program revealed a sand layer encountered at approximately 65 feet below grade. To minimize the potential for cross-contamination of this sand unit, the exploratory borings were terminated at depths less than 60 feet. The four soil borings (SB05, SB06, SB07, and SB08) in addition to the borings in the proposed Phase 2 scope of work were advanced to correlate the soil lithology with the additional CPT soundings added to the Phase 2 program (CPT39, CPT40, and CPT41).

2.4.2 Soil Boring Locations

A total of seven soil borings, including the boring for monitoring well MW-12B, was completed from March 3 to March 6, 1997 as shown on Figure 3-1. The borings were continuously sampled and lithologic descriptions recorded. To determine the vertical extent of creosote-impacted soil, soil samples were collected from select intervals throughout each boring, depending on the objective for specific areas of investigation.

The rationale for each soil boring location is described below.

Boring SB01

Soil boring SB01 and CPT35 were proposed to be located in the offsite drainage area [Inactive Wastewater Lagoon (AOC 6)]. However, due to the wet soil conditions in this area, soil boring SB-01 was not completed.

Boring SB02

Boring SB02 and CPT36 were completed in the Tie Storage Area (SWMU 12) adjacent to CPT20R. A total of six soil samples was collected from boring SB02 for chemical analysis.

Boring SB03

Boring SB03 and CPT37 were completed in the Original Process Area (SWMU 5) adjacent to CPT08R. A total of six soil samples was collected from boring SB03 for chemical analysis.

Boring SB04

Boring SB04 and CPT38 were completed in the Recent Process Area (SWMU 4) adjacent to Phase 1 CPT/ROST™ CPT13R. A total of seven soil samples was collected from boring SB04 for chemical analysis.

Boring MW-12B

Soil boring MW-12B was installed in the Tie Storage Area adjacent to CPT25R near the North Drainage Ditch (SWMU 2), and to further characterize the hydrogeology and extent of contamination in this area of the site. Two soil samples were collected from boring MW-12B for chemical analysis.

Boring SB05

Soil boring SB05 and CPT40 were advanced in close proximity to the MW-12 well nest. This boring and CPT were added to the boring program following the discovery of the third sand unit. The purpose of these investigations was to assess if the sand unit was laterally continuous across the site, determine the depth of the sand unit, if present, and establish the soil lithology below 60 feet. A total of five soil samples was collected from boring SB05 for chemical analysis.

Boring SB06

SB06 was completed in the southeast portion of the Tie Storage Area, adjacent to CPT30. A total of three soil samples was collected from boring SB06 for chemical analysis.

Boring SB07 and SB08

Borings SB07 and SB08 were completed in the Original Process Area to provide soil analytical data for comparison with high ROST™ responses detected in Phase 1 CPT/ROST™ locations CPT32R and CPT34R. Both borings were drilled to a depth of 25 feet. A total of five soil samples was collected for chemical analysis from each boring (ten total samples).

2.4.3 Soil Borings in AOCs

In January 1997, the TNRCC requested that SPTCo address investigation activities for Areas of Concern: AOC3 - Contaminated Portion of the City Water Line; AOC5 - City Storm Sewer; AOC4 - Location of Former Incinerator; and AOC7 - Location of Former UST No. 44-023-21. During the onsite Phase 2 investigation in March 1997, the following scope of work was conducted specific to the AOCs.

AOC3 - Contaminated Portion of City Water Line

SPTCo located the area of the water line leak, and drilled two soil borings to a depth 1 foot below the bottom of the water line. From these borings, two composite soil samples (AOC3W-S00 and AOC3E-S00) were collected from 0 to 5 feet below ground surface for PAH by EPA Method 8270 and select volatile organic compounds (VOC) analyses by EPA Method 8270 at the offsite laboratory.

AOC4 - Location of Former Incinerator

The area occupied by the former incinerator within Unit/Tie Storage Area was delineated into four quadrants. From these quadrants, a total of four composite soil samples (AOC4-SE, SW, NE, and NW - S00) was collected from the depth interval of 0 to 5 feet below ground surface. The four soil samples were analyzed for PAH and VOC at the offsite laboratory.

AOC5 - City Storm Sewer

SPTCo located the subject storm sewer, and one sample of sediment (AOC5E-S00) from the bottom of a storm sewer drainage basin was collected for PAH analysis at the offsite laboratory. In addition, one soil boring was drilled to a total depth of 7 feet approximately 100 feet southwest of the storm drain inlet. One soil sample (AOC5W-S00) was composited from the depth interval of 0 to 7 feet below ground surface for PAH and VOC analyses at the offsite laboratory.

AOC 7 Location of Former UST No. 44-023-21

One soil boring was drilled to a depth of 10 feet below ground surface in the area where the former 200-gallon capacity UST was removed. One soil sample was collected and composited from the depth interval of 0 to 5 feet for PAH and VOC analyses at the offsite laboratory.

2.4.4 Monitoring Well Borings

The ground water monitoring well installation program included the installation of six 2-inch PVC monitoring wells in the UTZ (MW-12A, MW-13, MW-15, MW-16, MW-17, and MW-18) and two 2-inch monitoring wells in the STZ (MW-12B and MW-14). The discovery of the lower sand unit following the completion of the CPT sounding and soil boring programs prompted a follow-up boring and well installation program for three additional wells, designated MW-12C, MW-15C, and MW-18C. These three wells were installed to characterize the lithology, contaminant concentrations, and ground water flow direction in the lower sand unit. All monitoring well locations and elevations were surveyed by a licensed professional land surveyor (Survcon, Inc.) as shown on Figure 3-2.

2.4.5 Soil Analytical Program

Select soil samples were collected from each soil boring for VOC analysis by EPA Method 8260 and PAH analyses by EPA Method 8270. Five soil samples were collected for the SPLP Leaching procedure to determine the potential for creosote constituents in soil to leach to ground water.

For ROST™ correlation and assessment of potential spatial variations in the creosote chemistry, the soil sample collection depths were targeted to intervals of low fluorescence (0 to 30%), medium fluorescence (30% to 70%), and high fluorescence (>70%) as determined from the Phase 1 investigation within all five lithologic units. Each soil sample collected for ROST™ correlation was homogenized and split for concurrent testing by bench scale ROST™ and modified EPA Method 418.1 for total recoverable petroleum hydrocarbons (TRPH).

PAH and VOC Analyses

The following soil samples were collected from the designated borings for PAH and VOC analyses. The soil boring number (e.g., MW-13) precedes the depth intervals from which soil samples were collected for analyses. The soil samples were identified by the soil boring number, followed by "S" for soil, and the depth interval from which the soil sample was collected, for example: SB03-S52 or MW-13-S021.

Soil Borings:

SB02-S07/21/24/37.5/38.5/49 (sample depths; "00" - composite 0-5 ft.)
SB03-S05/19/24/34/52/54
SB04-S2.5/29/27/31/39/51/59
SB05-S19.5/24/34.5/39/54
SB06-S04/19/24/49
SB07-S2.5/19/21/22/24
SB08-S04/14/18/21/22

Monitoring well Borings:

MW-12A-S00/20/25
MW-12B-S30/40/
MW-13-S00/15/21
MW-14-S17/35/40
MW-15-S00/20/25
MW-16-S00/20/25
MW-17-S25/30
MW-18-S00/25/30

AOC Borings:

AOC-3W/00 (composite soil sample 0-5 ft.)
AOC-3E/00
AOC4-SE/00
AOC4-SW/00
AOC4-NE/00
AOC4-NW/00
AOC-5W/00 (composite soil sample 0-7 ft.)
AOC7/00 (composite soil sample 0-10 ft.)
A0C5E (grab sediment sample from storm water inlet - analyzed for PAH only)

TRPH and ROST™ Bench-scale Analyses

The following soil samples were analyzed for TRPH and ROST™ bench-scale analyses in an attempt to provide correlation of ROST™ to quantitative data.

Soil boring SB02:

SB02-S21 (sample collected at depth of 21 ft. below ground surface)
SB02-S24
SB02-S37.5
SBO2-S38.5
SB02-S49

Soil boring SB03

SB03-S19
SB03-S24
SB03-S34
SB03-S39
SB03-S52

Soil boring SB04:	SB04-S2.5
	SB04-S27
	SB04-S29
	SB04-S51
Soil boring SB05:	SB05-S19.5
	SB05-S24
	SB05-S34.5
	SB05-S39
Soil boring SB06:	SB06-S4
	SB06-S19
	SB06-S24
Soil boring SB07:	SB07-S2.5
	SB07-S19
	SB07-S21
	SB07-S22
	SB07-S24
Soil boring SB08:	SB08-S4
	SB08-S14
	SB08-S18
	SB08-21
	SB08-22

SPLP Leaching Procedure

The following soil samples were collected for the SPLP Leaching Procedure. The leachate from each laboratory test was analyzed for PAHs by EPA Method 8270.

- SB03-S5 (Soil boring SB03 at depth of 5 feet below ground surface)
- SB06-S19
- SB04-S51
- SB03-S19
- SB03-S24

PAH Analysis - Surface Soil Samples

The following surface soil samples were collected and analyzed offsite for PAH constituents of concern.

Surface soil samples				
Tie Storage Area:	A1-SS0	B1-SS0	C1-SS0	D1-SS0
	A2-SS0	B2-SS0	C2-SS0	D2-SS0
	A3-SS0	B3-SS0	C3-SS0	
	A4-SS0	B4-SS0	C4-SS0	
	A5-SS0	B5-SS0	C5-SS0	
	A6-SS0	B6-SS0	C6-SS0	
Surface soil samples				
Former Process Areas:	7F-SS0	7G-SS0	11-SS0	
	8F-SS0	8G-SS0		
	9F-SS0	9G-SS0		
	10F-SS0	10G-SS0		
		11G-SS0		

Geotechnical Analyses

Select soil samples were collected for geotechnical analyses which included dry density, pH, and total organic carbon (TOC) for the purpose of soil characterization and preliminary assessment of natural attenuation potential in soils.

MW12B-S030
MW12B-S043
MW14-S05
MW14-S015
MW14-S028
MW14-S043.5

SBO2-S021
SB02-S038
SB06-S055

2.5 Monitoring Well Program

The monitoring well installation program was performed as described in Section 5.4 of the Phase 1 Investigation Report. Best Drilling Services, Inc. (Best) of Friendswood, Texas under subcontract to Terranext, provided drilling services for all of monitoring well installation activities conduct during the Phase 2 investigation. Based on the findings of the Phase 2 investigations, Terranext designated the lower sand unit present at 65-70 feet below grade as the LSU. For ease of discussion and mutual understanding, this designation is used throughout this Terranext report. The UTZ and STZ wells were installed between February 25, and March 3, 1997. The three LSU wells, installed during the follow-up drilling program, were completed between April 21 and 24, 1997. Monitoring well completion diagrams are provided in Attachment III.

2.5.1 Objectives

The objectives of the monitoring well installation program were to:

- characterize the soil lithology by collecting soil samples from monitor well borings;
- determine the ground water flow direction and hydraulic gradient of each water-bearing zone;
- collect representative ground water samples;
- provide an understanding of the relationship between contaminant concentrations in soil and partitioning of compounds in ground water;
- estimate the hydraulic conductivity of the UTZ, STZ, and LSU through slug testing;
- provide reproducible data over a period of time to allow for statistical evaluation of data, if warranted;
- provide ground water chemistry data near the property boundaries on the east, west, and northern portions of the site for indications of possible impact to ground water offsite; and,

- gather data for possible use in fate and transport analyses to help identify the potential degree and extent of possible offsite impact.

2.5.2 UTZ Monitoring Wells

The six UTZ monitoring wells were installed in locations across the site to provide information relative to the hydraulic gradient, hydraulic conductivity, geology, contaminant concentrations in the UTZ, and to assess the potential for offsite migration of contaminants.

Monitoring well MW-12A was installed adjacent to the west-central property boundary near Phase 1 CPT/ROST™, CPT25R. Well MW-12A was drilled to a total depth of 30 feet and screened in the UTZ from 25 to 15 feet bgs. Three soil samples were collected from the MW-12A boring and analyzed for VOCs by EPA Method 8260 and PAHs by EPA Method 8270.

Monitoring well MW-13 was installed in the northwest corner of the site near Phase 1 CPT/ROST™, CPT23R to provide hydrogeologic information in the Tie Storage Area. MW-13 was drilled to a total depth of 25 feet and was screened in the UTZ from 21 to 11 feet bgs. Three soil samples were collected from the MW-13 boring and analyzed for VOCs and PAH.

Monitoring well MW-15 was installed in the UTZ near the north property boundary adjacent to Phase 1 CPT/ROST™, CPT19R. The well was located in the assumed hydraulic downgradient direction from the Original Process Area (SWMU 5) and Phase 1 Hydropunch™ ground water sample HP14UTZ, which contained the highest detected concentration of dissolved PAHs. Monitoring well MW-15 was drilled to a total depth of 27 feet and screened in the UTZ from 24 to 14 feet bgs. Three soil samples were collected from the MW-15 boring and analyzed for VOCs and PAH.

Monitoring well MW-16 was installed near the south property boundary within the Original Process Area (SWMU 5) adjacent to Phase 1 CPT/ROST™, CPT07R. Monitoring well MW-16 was drilled to a total depth of 30 feet and screened in the UTZ from 24.5 to 14.5 feet bgs. Three soil samples were collected from the MW-16 boring and analyzed for VOCs and PAH.

Monitoring well MW-17 was installed near the north property boundary in the assumed hydraulic downgradient direction from the Recent Process Area. Monitoring well MW-17 was drilled to a total depth of 35 feet and screened in the UTZ from 30 to 20 feet bgs. Two soil samples were collected from the MW-17 boring and analyzed for VOCs and PAH.

Monitoring well MW-18 was installed near the east property boundary within the Recent Process Area adjacent to Phase 1 CPT/ROST™, CPT17R. Monitoring well MW-18 was drilled to a total depth of 35 feet and screened from 30 to 20 feet bgs. Three soil samples were collected from the MW-18 boring for VOCs and PAH analyses.

2.5.3 STZ Monitoring Wells

Monitoring well MW-12B was installed adjacent to the west-central property boundary near Phase 1 CPT/ROST™, CPT25R to provide information relative to the hydraulic gradient, hydraulic conductivity, geology, and contaminant concentrations in the STZ on the west property boundary. Affected soils based on field screening was observed through the entire depth of the MW-12B soil boring; therefore, surface isolation casing was not installed. Monitoring well MW-12B was drilled from surface to a total depth of 45 feet and screened in the STZ from 40 to 30 feet bgs. Two soil samples were collected from the MW-12B boring for VOCs and PAH analyses.

Monitoring well MW-14 was installed near the north property boundary adjacent to Phase 1 CPT/ROST™, CPT28R to obtain information on the hydraulic gradient, hydraulic conductivity, geology, and contaminant concentrations in the center of the STZ channel at the property boundary. Isopach maps indicated that the thickness of the STZ is greatest in this area onsite. A 10-inch diameter isolation casing was installed from surface to 56 feet bgs to minimize the potential for cross-contamination. Monitoring well MW-14 was drilled to a total depth of 45 feet and screened in the STZ from 40 to 30 feet bgs. Three soil samples were collected from the MW-14 boring and analyzed for VOCs and PAH.

2.5.4 LSU Monitoring Wells

The purpose for the installation of the LSU wells is to characterize the soil lithology below 60 feet, determine the relative depth, thickness, and lateral continuity of the sand, obtain information regarding contaminant concentrations between 60 feet and the base of the LSU, and determine the direction of ground water flow. To accomplish this, three wells were installed onsite in the LSU. The wells were installed in locations in close proximity to impacted wells completed in the UTZ to provide information relative to the possible attenuation of creosote constituents with depth.

Monitoring well MW-12C was installed adjacent to the MW-12A/MW-12B well nest on the western property boundary. A 10-inch diameter isolation casing was installed from surface to 56 feet bgs to minimize the potential for cross-contamination. The well was drilled to a total depth of 75 feet and screened from 74 to 69 feet bgs. No soil samples were collected for laboratory analyses.

Monitoring well MW-15C was installed adjacent to UTZ monitoring well MW-15 on the north central property boundary. A 10-inch diameter isolation casing was installed from surface to 55 feet bgs to minimize the potential for cross-contamination. The well was

drilled to a total depth of 75 feet and screened from 74 to 64 feet bgs. No soil samples were collected for laboratory analyses.

Monitoring well MW-18C was installed adjacent to UTZ monitoring well MW-18 on the extreme northeast corner of property. A 10-inch diameter isolation casing was installed from surface to 55 feet bgs to minimize the potential for cross-contamination. The well was drilled to a total depth of 80 feet and screened from 77 to 62 feet bgs. No soil samples were collected for laboratory analyses.

2.5.5 Drilling Procedures

Drilling associated with the installation of wells completed in the UTZ was conducted using standard 4¼-inch inside diameter (I.D.) hollow-stem augers from surface to total depth. Due to the presence of affected soil in the upper soil horizons, surface isolation casing was installed in the wells completed in the STZ and the LSU with wet rotary techniques using a nominal 16-inch diameter bit. Well installation in the STZ and LSU monitoring wells was conducted using standard 4¼-inch hollow-stem augers by drilling through the base of the surface casing to total depth. All well materials were installed inside the augers.

Continuous soil samples were collected from each boring using 5-foot long split-barrel sampling devices. The soil samples were obtained for lithologic description and classification using the Unified Soil Classification System (USCS). Upon completion of each boring, the drilling equipment and tools were decontaminated using a high-pressure steam-cleaner at the on-site temporary decontamination pad.

Contaminated soil cuttings, drilling mud and decontamination wastewaters were transported offsite for treatment or disposal as listed hazardous wastes (F001 or F032 contaminated media).

2.5.5.1 UTZ Well Construction

Each permanent well was constructed of 2-inch ID, Schedule 40, flush-threaded, PVC casing and screen. The well screen was constructed of factory-slotted, Schedule 40, PVC screen with 0.010-inch slots. The well casing was cut off approximately 5 feet above the surface grade to facilitate the installation of steel protective covers.

A 20 to 40 sieve silica sand filter pack was installed around the screen to a minimum of 2 feet above the screened interval. A 2-foot thick bentonite pellet seal was installed above the filter pack and hydrated with potable water. The remaining annular space to the ground surface was filled with a tremied cement/bentonite grout. Surface completions consisted of a steel protective surface casing with lockable cap, a 4-foot by 4-foot concrete pad constructed around the base of the well riser, and four protective steel guard posts installed around each well to minimize the potential for damage to the wells.

Well construction details are provided in Attachment III.

2.5.5.2 STZ and LSU Well Construction

A nominal 16-inch diameter borehole was drilled to approximately 5 feet above the STZ or LSU. To prevent downward migration of potentially contaminated material during the drilling operations, the upper soil water-bearing zones (UTZ and STZ) were isolated using 10-inch ID, Schedule 80, flush-threaded PVC casing. A plaster of paris plug was placed in the base of the surface casing to keep contaminated formation water from entering the casing and to facilitate drilling below the surface casing to install the well materials. A cement/bentonite grout was tremied into the annular space from the base of the casing to surface grade and allowed to cure for a minimum of 24 hours following placement.

From the base of the surface casing, the borings for the STZ and LSU wells were advanced from inside the 10-inch surface casing to the total depth using standard 4¼-inch augers. Soil below the surface casing was continuously sampled using 5-foot barrel samplers.

The STZ and LSU wells were constructed of 2-inch ID, Schedule 40, flush-threaded, PVC casing and screen. The well screen consisted of factory-slotted screen with 0.010-inch slots. The well casing was cut off approximately 5 feet above the surface grade to facilitate the installation of steel protective covers.

A 20 to 40 sieve silica sand filter pack was installed around the screen to a minimum of 2 feet above the screened interval. A 2-foot thick bentonite pellet seal was installed above the filter pack and hydrated with potable water. The remaining annular space to the ground surface was filled with a tremied cement/bentonite grout. Surface completions consisted of a steel protective surface casing with lockable cap, a 4-foot by 4-foot concrete pad constructed around the base of the well riser, and four protective steel bollards installed around each well to minimize the potential for damage to the wells.

Well construction details for the STZ and LSU wells are provided in Attachment III.

2.5.6 Monitoring Well Development

Development of the new monitoring wells was initially performed using a disposable bailer to purge the well and remove the majority of sediment remaining in the well following drilling activities. Bailing was continued until the ground water in each well appeared to be relatively free of sediment. Following bailing, the new monitoring wells were further developed using a submersible pump to purge an additional three casing volumes of ground water. Purged ground water was contained in DOT-approved 55-gallon drums and was disposed offsite as hazardous waste.

2.5.7 Ground Water Sampling Procedures

On May 6, 1997, QED Environmental Systems, Inc. (QED) dedicated Micropurge® bladder pumps were installed in each of the 11 new onsite wells. Ground water sampling using low flow technique provided by the dedicated bladder pumps was selected to help provide ground water samples representative of the actual dissolved-phase concentrations of contaminants. Typical bailing or pumping methods may create turbid samples that could result in false positive interferences during analytical testing due to the presence of contaminants adsorbed to colloidal material. The Micropurge® pumps are designed for low flow rate purging to minimize the turbidity of the samples and eliminate the need for purging large volumes of stagnated water from the well casing.

Ground water sampling using the Micropurge® pumps was performed on all of the new wells installed during the Phase 2 investigation between May 13 and 14, 1997. The ground water samples were submitted to Pace under standard chain-of-custody procedures. The primary objective of the sampling event was to collect ground water samples to evaluate the contaminant concentrations in the newly installed wells.

2.5.7.1 Sampling Equipment

Each well was equipped with a QED bladder pump, air-line and discharge tubing, and a well head cap with quick-connect fittings and access port for water level measurements. Each pump was positioned within the screened interval of each well. Nitrogen gas, regulated through a pump controller, was used to actuate the Teflon® bladder within the pump housing.

2.5.7.2 Sampling Procedures

Water level measurements were recorded in each well on May 13, 1997. Using the length and diameter of the discharge tubing, sampling personnel calculated the amount of water necessary to purge three volumes from the discharge tubing.

Ground water sampling was initiated on May 14, 1997. At each well, the pump controller was connected to the nitrogen bottle regulator and the well head and the discharge tubing connected from the well head into a 55-gallon drum. The nitrogen bottle valve was then opened, feeding gas to the pump controller. The flow was regulated through the pump controller at rates between approximately 100 and 200 milli-liters per minute (ml/min). Three tube volumes of water were purged from the well to help ensure collection of a representative sample.

If the discharge water was turbid or cloudy during evacuation of the tubing, purging was continued until the discharge water appeared to be clear and sediment free. Also during tubing evacuation, sampling personnel regulated (reduced) the flow rate if air bubbles were present in the discharge to minimize aeration of the sample.

Ground water samples were collected directly into clean glass sample jars provided and prepared by the laboratory. Each ground water sample was submitted to Pace and analyzed for Compliance Plan Table I constituents including VOCs by EPA Method 8260, PAHs by EPA Method 8270, TDS, and TSS.

Once the ground water samples were collected from each well, the nitrogen bottle valve was closed and the tubing disconnected from the well head. Dedicated ground water discharge tubing was used for each individual well to minimize the possibility for cross-contamination.

2.6 Hydropunch™ Sampling Program

The objective of the Hydropunch™ sampling program under the Phase 2 investigation was to assess if the ground water impact in the offsite area west of the site. A minimum of four Hydropunch™ locations were proposed to be collected from accessible property in the offsite area west and northwest of AOC 6. Two Hydropunch™ locations (HP17 and HP19) were

positioned to assess AOC 6. The remaining two locations would be determined in the field based upon access to city right-of-ways (ROWs) and/or private property.

On May 8, 1997, Phase 2 Hydropunch™ sampling activities were initiated and the field work was completed on May 12. A total of five Hydropunch™ locations were completed in the offsite area as shown on Figure 3-3. The following provides the rationale for each Hydropunch™ location:

- Hydropunch™ HP17 was located within the footprint of the Inactive Wastewater Lagoon (AOC 6), at the extreme southwest portion of the accessible property.
- Hydropunch™ HP18 was located on private property immediately adjacent to impoundment wells MW-10A and MW-10B.
- Hydropunch™ HP19 was placed in the apparent downgradient direction from the Inactive Wastewater Lagoon.
- Hydropunch™ HP20 was located in a City of Houston ROW, approximately 200 feet west of HP18.
- Hydropunch™ HP21, was located on private property north of the Ranch Street ROW.

Two ground water samples were collected at each of the five Hydropunch™ locations. One ground water sample was collected from the UTZ at each location, ranging in depth from 16.5 to 18 feet bgs. Once the UTZ sample was obtained, the Hydropunch™ was pulled from the ground, the boring was tremie-grouted to surface, and the CPT rig moved approximately 5 feet in order to obtain a sample from the STZ in a separate direct-push hole following equipment decontamination. This method was utilized to minimize the possibility for cross-contamination. Hydropunch™ samples collected from the STZ were obtained at depths ranging from 32.5 to 37 feet bgs. The following procedures were implemented in obtaining each Hydropunch™ sample.

The sampling was performed using the CPT vehicle with a 14-ton hydraulic system. Fugro utilized 1¾-inch I.D., 12-inch long stainless steel screens and 1¼-inch I.D. steel rods. Ground water samples were collected using 18-inch long stainless steel bailers.

Target intervals were selected for ground water collection based on CPT/ROST™ logs. The rig was positioned over the location and the sampler was pushed to the target interval. When the desired depth was reached, the push rods were retracted to expose the screen to the water-bearing zone. Following a short waiting period, a small-diameter bailer was lowered through the push rods to collect a ground water sample. The bailer was pulled to the surface and the ground water transferred into laboratory-supplied sample containers.

If the water-bearing zone would not recharge enough to enable collection of the required volume of ground water for the samples, the Hydropunch™ location was abandoned. Of the ten Hydropunch™ samples attempted, one sample collected from the UTZ (HP17) and one sample from the STZ (HP19) did not yield sufficient water volume to fill the appropriate sample containers for separate PAH, TDS and TSS analyses.

Immediately upon retrieval of the bailer from the Hydropunch™ sampler, the water sample was transferred from the bailer to the sample containers which were labeled and placed in ice filled coolers. Under chain-of-custody (COC) control, the ground water samples were submitted to the PACE, Inc. (Pace) laboratory located in Houston, Texas. All Hydropunch™ samples, except as noted above, were analyzed for VOCs by EPA Method 8260, PAHs by EPA Method 8270, total dissolved solids (TDS) by EPA Method 160.1, and total suspended solids (TSS) by EPA Method 160.2.

Immediately following the collection of ground water samples, the sampler and push rods were pulled and each hole was tremie-grouted to surface. Following collection of each Hydropunch™ sample, the rods and sampler used to obtain the water sample were transported

to the decontamination pad on the SPTCo property for decontamination. The equipment was washed with a high pressure steam cleaner using potable water and Alconox®. The samplers were then rinsed with potable water.

2.7 Slug Tests

Slug tests were proposed in the EOC Investigation and the RFI Work Plans to be performed at monitoring wells MW-10A, MW-10B, MW-11A, and MW-11B. The purpose of the slug testing was to provide information on the hydraulic conductivity of the deposits screened in the UTZ and STZ. To provide a larger population of data, the slug testing program was modified to include additional wells completed during the Phase 2 investigation. Slug tests were performed on a total of ten monitoring wells between May 1 and May 2, 1997, consisting of seven UTZ wells: MW-10A, MW-12A, MW-13, MW-15, MW-16, MW-17, and MW-18; two STZ wells: MW-12B and MW-14; and one LSU well, MW-12C. The slug tests were performed using the following procedure.

The static water level in each monitoring well was measured using an electric sounding device. A transducer was placed in the monitoring well to a depth of 10 feet below the static water level and was connected to a Hermit 2000 data logger. After setting the transducer in the well, the water level was measured the monitoring well. Once the water level returned to the static level, the slug was lowered to approximately 1-foot above the static water level. The slug was completely submersed below the water while simultaneously starting the data logger. The data logger was operated for a period of ten minutes to collect falling-head data.

After stopping the data logger, the water level was again measured in the well. When the water level returned to static conditions, the slug was elevated above the water level and the data logger simultaneously restarted. The data logger was operated for a period of ten minutes to collect rising-head data.

At the completion of each test, the transducer and slug were removed from the well. The transducer and slug were decontaminated with a brush using an Alconox® and distilled water solution. The equipment was then rinsed twice with distilled water.

Each slug test was analyzed using the Bouwer and Rice Method (Bouwer and Rice, 1976).

2.8 Surface Soil Sampling Program

Surface soil samples were collected onsite to provide necessary data to determine the distribution and concentrations of PAHs in surface soils and to allow for risk-based analyses of the data. The objectives for the collection of surface soil samples were to:

- define the nature and extent of creosote and BTEX contaminants in surface soils in the Tie Storage Area and the Former Process Areas;
- provide sufficient soil data for conducting a baseline risk assessment; and,
- provide a basis to identify areas of surface soils that meet or attain risk-based cleanup levels as calculated in the risk assessment.

In accordance with EPA RFI Guidance document EPA 530/SW89-031, a systematic grid established at 200-foot centers was used for the collection of surface soil samples from within the Former Process Area and the Tie Storage Area. Figure 3-4 shows the surface soil sample locations collected at each grid node.

A total of 20 surface soil samples were collected within the Tie Storage Area. Surface soil samples were collected at each grid node at a depth of approximately 6 inches bgs.

A total of ten surface soil samples were collected within the Former Process Areas at each grid node at a depth of approximately 6 inches bgs.

Each surface sample location was prepared by removing the asphalt or gravel surface and the upper 5 inches of soil using a pick. The soil samples were obtained from approximately 5.5 to 6 inches bgs using a decontaminated stainless steel spoon. Each soil sample was placed directly into laboratory-supplied glass soil jars with Teflon® lined lids and filled as completely as possible to minimize headspace. Upon collection, each sample was labeled and placed directly on ice in a laboratory supplied cooler. The soil samples were transported under COC control to Pace for PAH analysis.

Prior to collecting each sample, the stainless steel spoon and pick were decontaminated with a brush using an Alconox® and distilled water solution. The spoon was rinsed twice with distilled water.

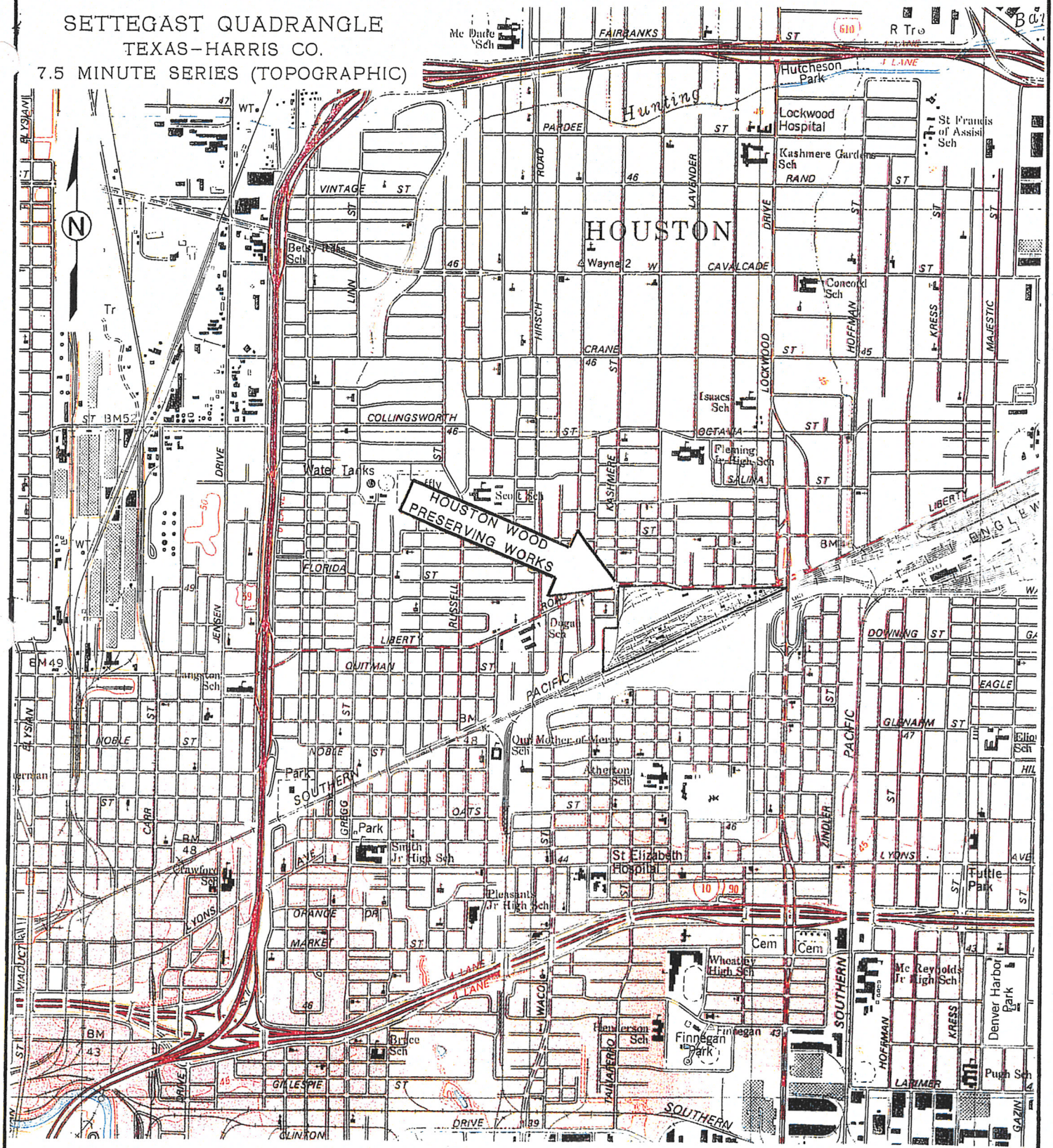
3.0 REFERENCES

Bouwer, H., and Rice, R.C., 1976, A Slug Test For Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells; Water Resources Research, v. 12, n. 3, p. 423-428.

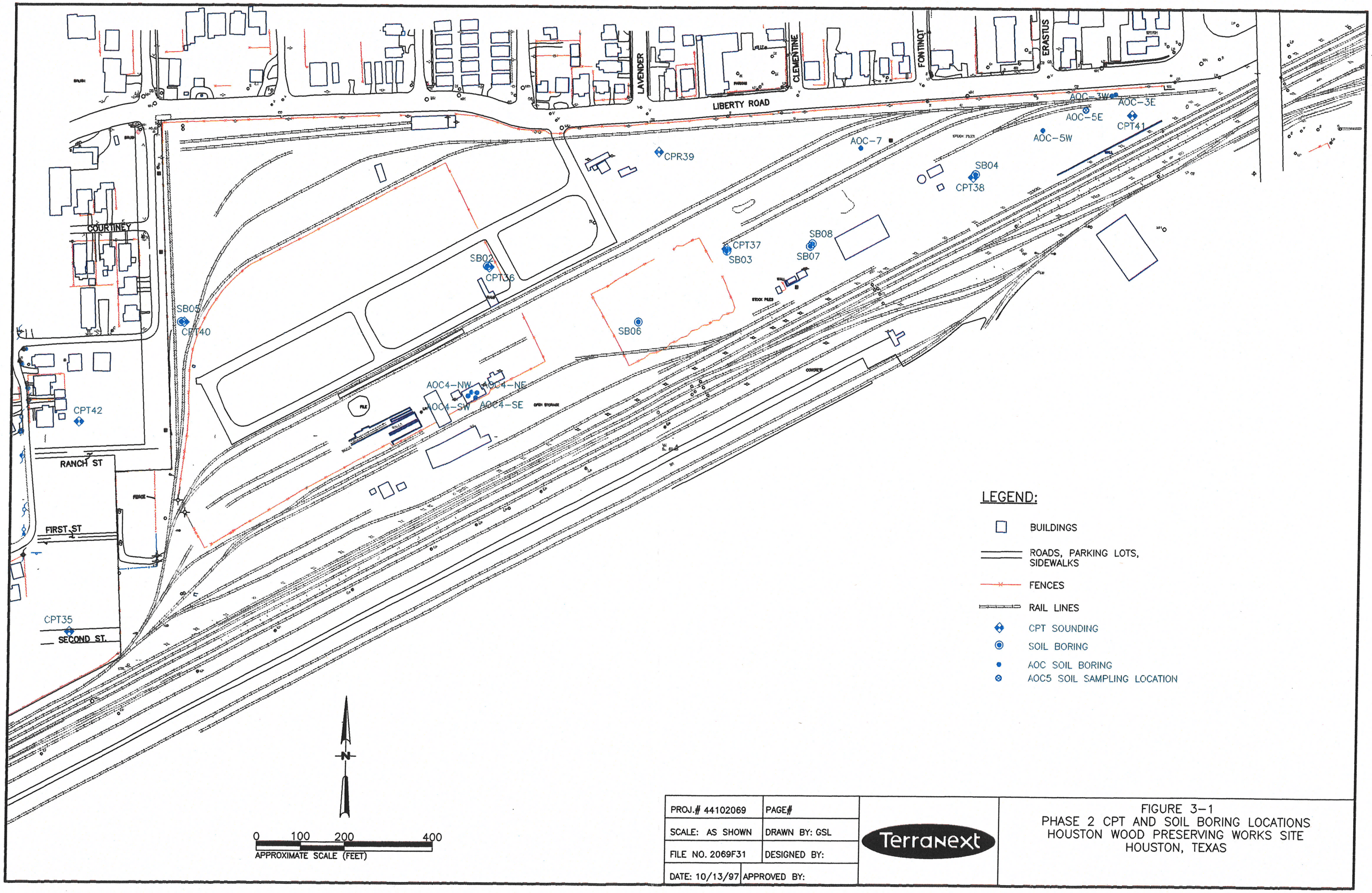
Terranext, Phase 1 RFI/Extent of Contamination Investigation Report, May 1996.

USEPA "Interim Final RCRA Facility Investigation Guidance; "Volume I of IV, EPA 530/SW-89-031; May, 1989.

Figures



PROJ.# 44102069	PAGE#	TerraNext	FIGURE 1-1 SITE VICINITY MAP SPTCo WOOD PRESERVING WORKS 4910 LIBERTY ROAD HOUSTON, TEXAS
SCALE: 1" = 2000'	DRAWN BY: AP		
FILE NO. FIG1-1	DESIGNED BY:		
DATE: 3/26/96	APPROVED BY: WRG		



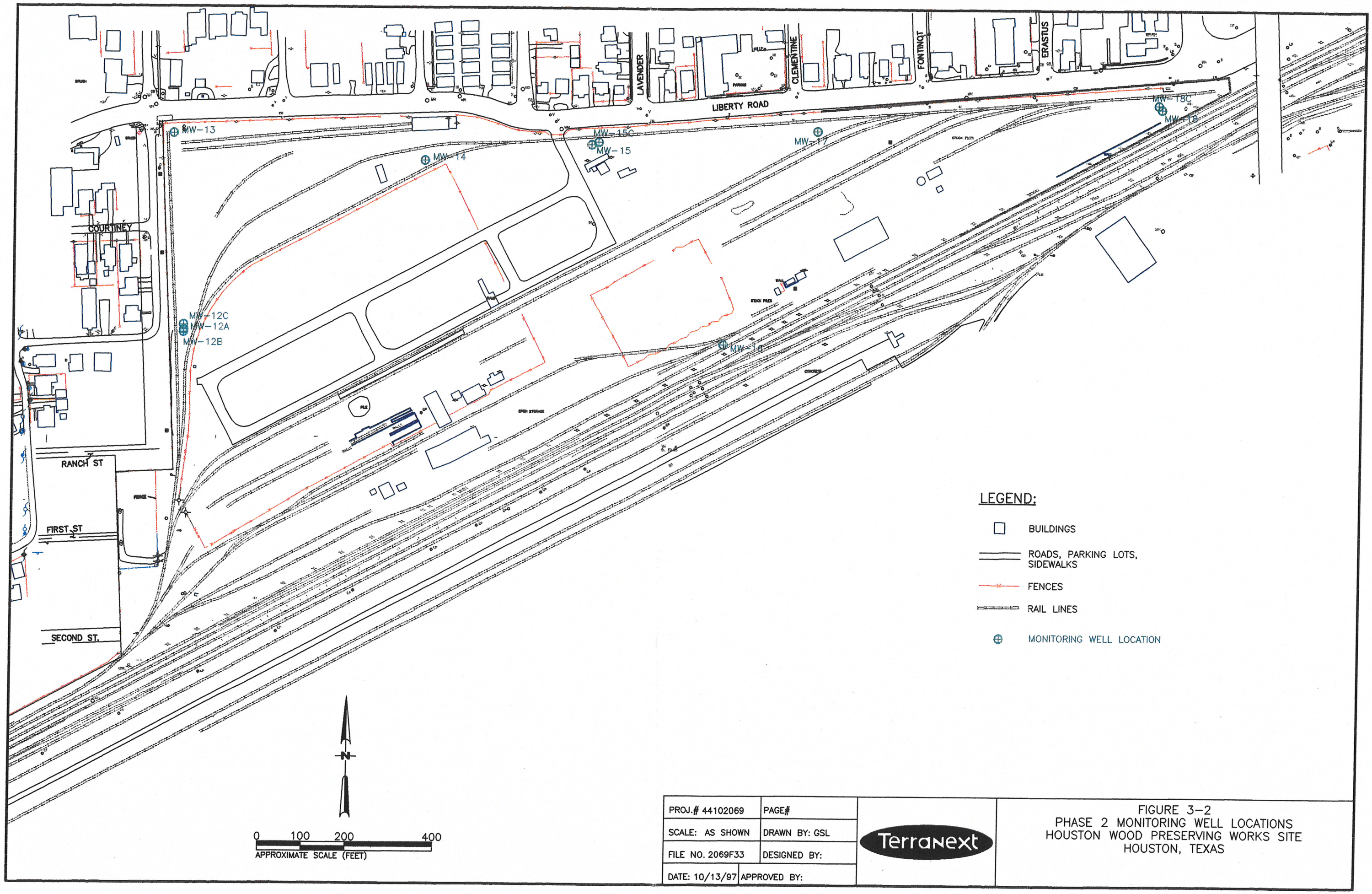
LEGEND:

- BUILDINGS
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- CPT SOUNDING
- SOIL BORING
- AOC SOIL BORING
- AOC5 SOIL SAMPLING LOCATION

PROJ.# 44102069	PAGE#
SCALE: AS SHOWN	DRAWN BY: GSL
FILE NO. 2069F31	DESIGNED BY:
DATE: 10/13/97	APPROVED BY:

TerraNext

FIGURE 3-1
PHASE 2 CPT AND SOIL BORING LOCATIONS
HOUSTON WOOD PRESERVING WORKS SITE
HOUSTON, TEXAS



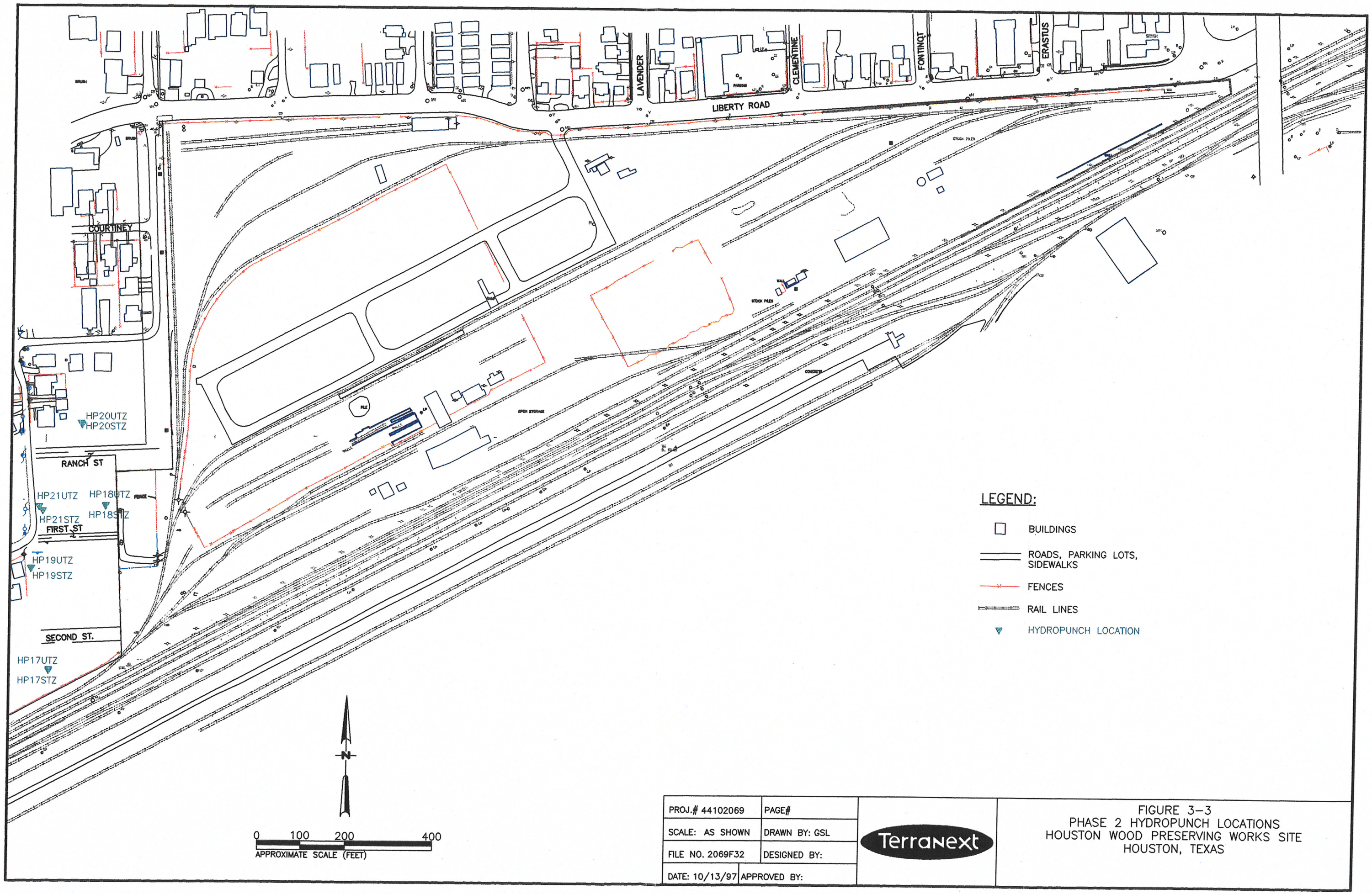
LEGEND:

- BUILDINGS
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- MONITORING WELL LOCATION

PROJ.# 44102069	PAGE#
SCALE: AS SHOWN	DRAWN BY: GSL
FILE NO. 2069F33	DESIGNED BY:
DATE: 10/13/97	APPROVED BY:

TerraNext

FIGURE 3-2
PHASE 2 MONITORING WELL LOCATIONS
HOUSTON WOOD PRESERVING WORKS SITE
HOUSTON, TEXAS



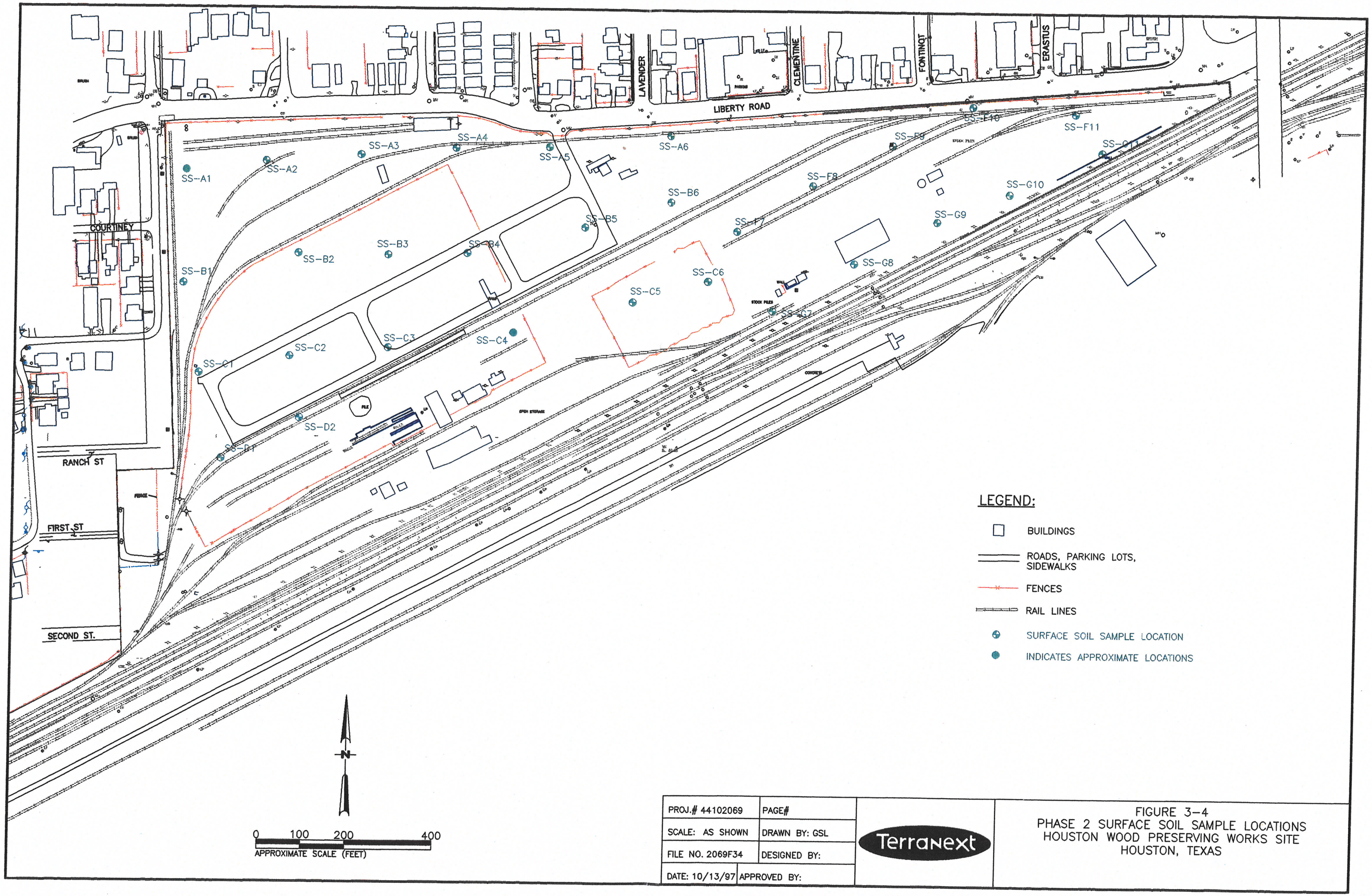
LEGEND:

- BUILDINGS
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- HYDROPUNCH LOCATION

PROJ.# 44102069	PAGE#
SCALE: AS SHOWN	DRAWN BY: GSL
FILE NO. 2069F32	DESIGNED BY:
DATE: 10/13/97	APPROVED BY:

TerraNext

FIGURE 3-3
PHASE 2 HYDROPUNCH LOCATIONS
HOUSTON WOOD PRESERVING WORKS SITE
HOUSTON, TEXAS



LEGEND:

- BUILDINGS
- ROADS, PARKING LOTS, SIDEWALKS
- FENCES
- RAIL LINES
- SURFACE SOIL SAMPLE LOCATION
- INDICATES APPROXIMATE LOCATIONS

PROJ.# 44102069	PAGE#
SCALE: AS SHOWN	DRAWN BY: GSL
FILE NO. 2069F34	DESIGNED BY:
DATE: 10/13/97	APPROVED BY:

Terranext

FIGURE 3-4
PHASE 2 SURFACE SOIL SAMPLE LOCATIONS
HOUSTON WOOD PRESERVING WORKS SITE
HOUSTON, TEXAS

ATTACHMENT I

CPT LOGS - FUGRO GEOSCIENCES

FUGRO GEOSCIENCES, INC.

6105 Rookin
Houston, TX 77074
Phone : 713-778-5580
Fax : 713-778-5501

April 7, 1997
Report Number 0301-7031

RECEIVED
APR - 9 1997

Terranext
6200 Rothway, Suite 190
Houston, Texas 77040

Attention: Mr. Robert Coffman

**PIEZOCONE PENETRATION TESTING
AND RELATED SERVICES
FORMER WOOD PRESERVING WORKS
HOUSTON, TEXAS**

Dear Mr. Coffman:

Please find enclosed herewith the final results of the piezocone penetration tests conducted at the above referenced location.

For your information, the soil stratigraphy was identified using Campanella and Robertson's Simplified Soil Behavior Chart. Please note that because of the empirical nature of the soil behavior chart, the soil identification should be verified locally.

Fugro Geosciences appreciates the opportunity to be of service to your organization. If you should have any questions, or if we can be of further assistance, please do not hesitate to contact us. We look forward to working with you in the future.

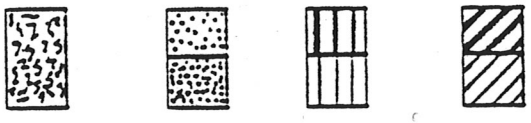
Very truly yours,
FUGRO GEOSCIENCES, INC.

Recep Yilmaz
President

RY/mdt
Diskette Enclosed

Key To Soil Classification and Symbols

SOIL TYPE
(Shown in Symbol Column)



Predominant Type Shown Heavy

SAMPLE TYPE
(Shown in Samples Column)

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (Major portion Retained on No. 200 Sieve)
Includes (1) clean gravels and sand described as fine, medium or course, depending on distribution of grain sizes (2) silty or clayey gravels and sands and (3) fine grained low plasticity soils (PI < 10) such as sandy silts. Condition is rated according to relative density, as determined by lab tests or estimated from resistance to sampler penetration.

Descriptive Term	Penetration Resistance*	Relative Density
Loose	0 - 10	0 to 40%
Medium Dense	10 - 30	40 to 70%
Dense	30 - 50	70 to 90%
Very Dense	Over 50	90 to 100%

* Blows/Foot, 140# Hammer, 30" Drop

FINE GRAINED SOILS (Major Portion Passing No. 200 Sieve)
Includes (1) inorganic and organic silts and clays, (2) sandy, gravelly or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests for soils with PI $\geq$ 10.

Descriptive Term	Cohesive Shear Strength Tons/Square Foot
Very Soft	Less Than 0.125
Soft	0.125 to 0.25
Firm	0.25 to 0.50
Stiff	0.50 to 1.00
Very Stiff	1.00 to 2.00
Hard	2.00 and Higher

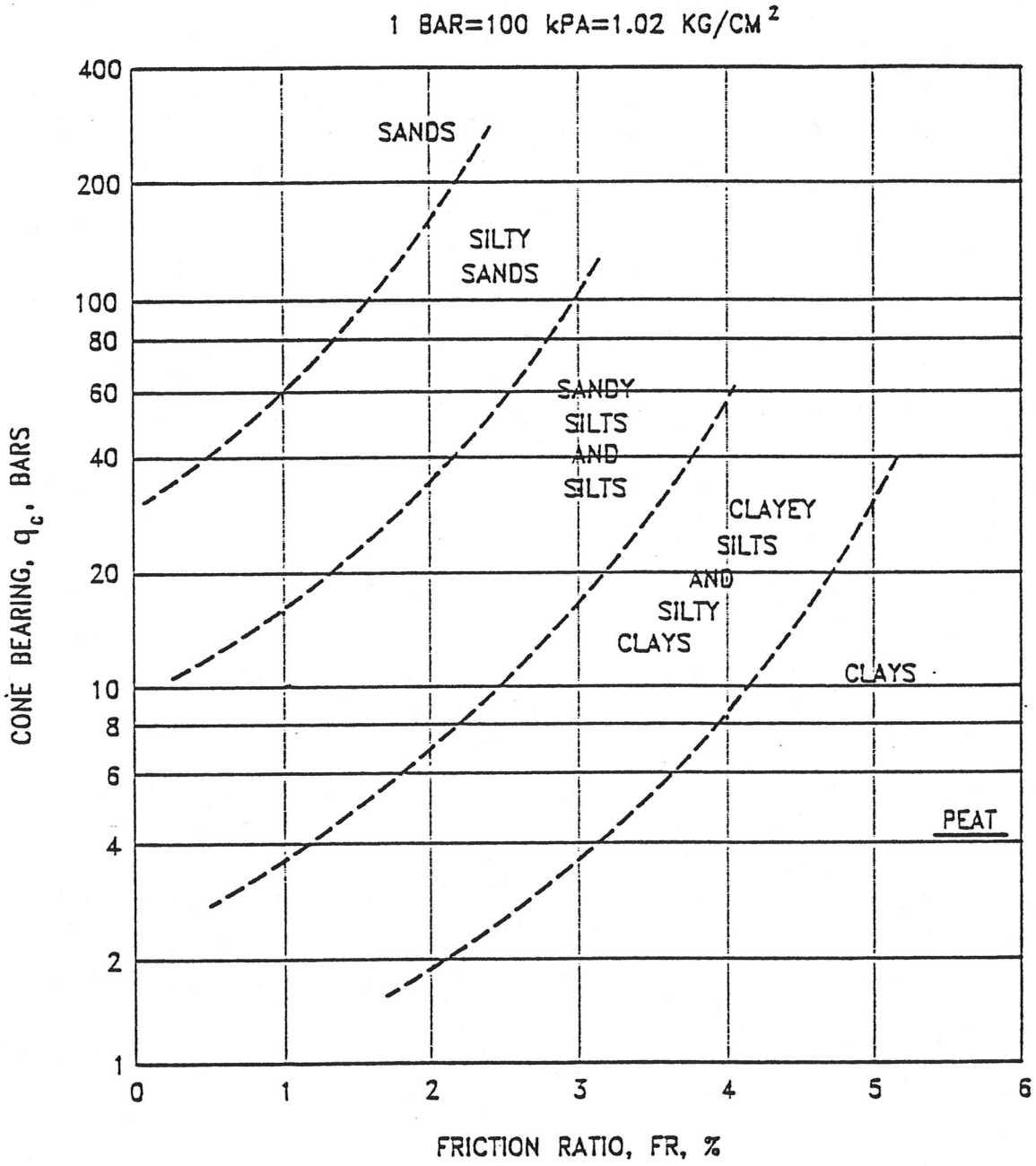
Note: Slickensided and fissured clay may have lower unconfined compressive strengths than shown above because of planes of weakness or shrinkage cracks; consistency ratings of such soils are based on hand penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

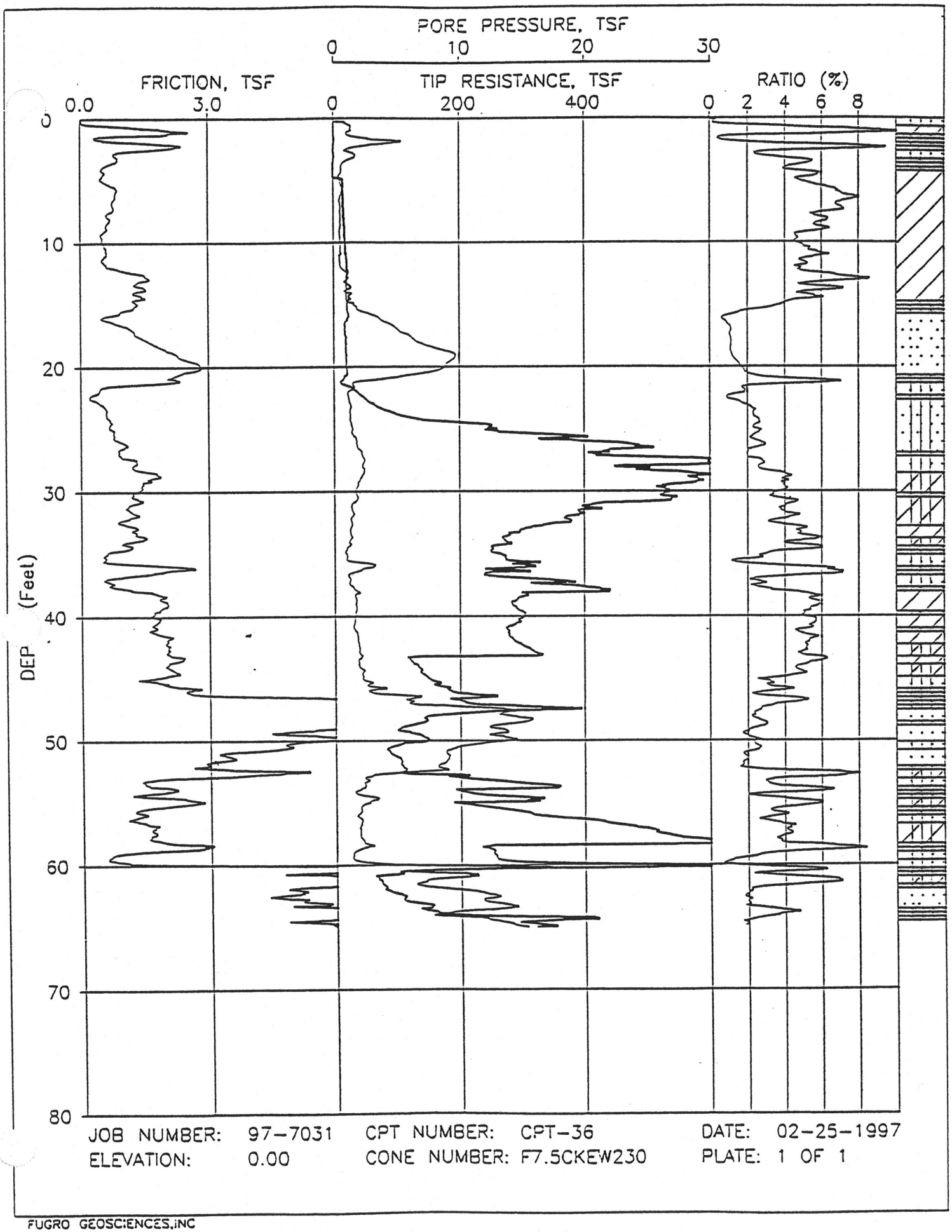
Parting:	paper thin in size
Seam:	1/8" to 3" thick
Layer:	greater than 3"
Fissured:	containing shrinkage cracks, frequently filled with fine sand or silt, usually more or less vertical
Sensitive:	pertaining to cohesive soils that are subject to appreciable loss of strength when remolded
Interbedded:	composed of alternate layers of different soil types
Laminated:	composed of thin layers of varying color and texture
Calcareous:	containing appreciable quantities of calcium carbonate
Well Graded:	having wide range in grain sizes and substantial amounts of all intermediate particle sizes
Poorly Graded:	predominantly of one grain size, or having a range of sizes with some intermediate size missing
Flocculated:	pertaining to cohesive soils that exhibit a loose knit or flakey structure
Slickensided:	having inclined planes of weakness that are slick and glossy in appearance.

Degree of Slickensided Development

Slightly Slickensided:	slickensides present at intervals of 1' to 2', soil does not easily break along these plates
Moderately Slickensided:	slickensides spaced at intervals of 1' to 2', soil breaks easily along these planes
Extremely Slickensided:	continuous and interconnected slickensides spaced at intervals of 4" to 12", soil breaks along the slickensides into pieces 3" to 6" in size
Intensely Slickensided:	slickensides spaced at intervals of less than 4", continuous in all directions; soil breaks down along planes into nodules 1/4" to 2" in size.



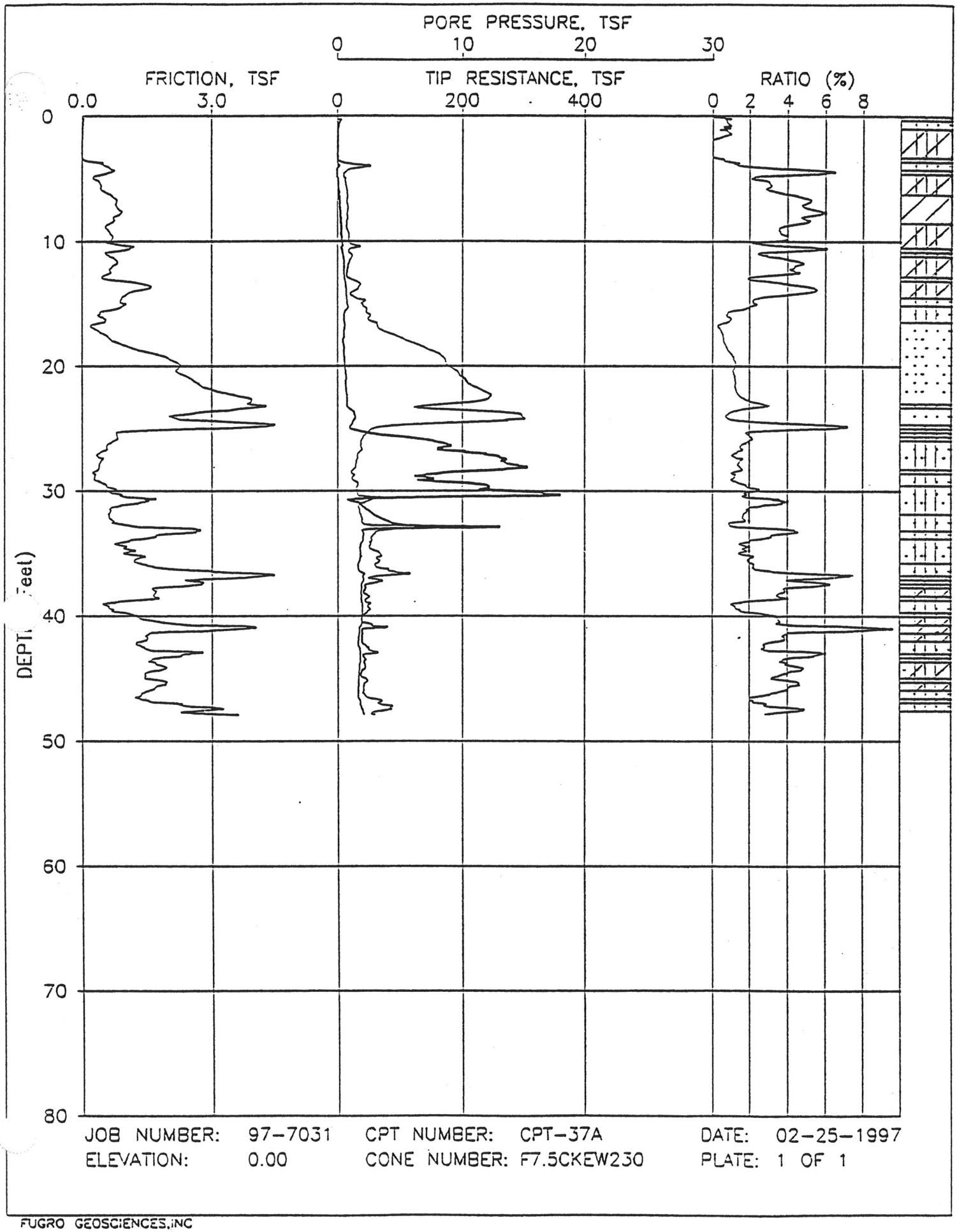
CAMPANELLA AND ROBERTSON CLASSIFICATION CHART (1983)



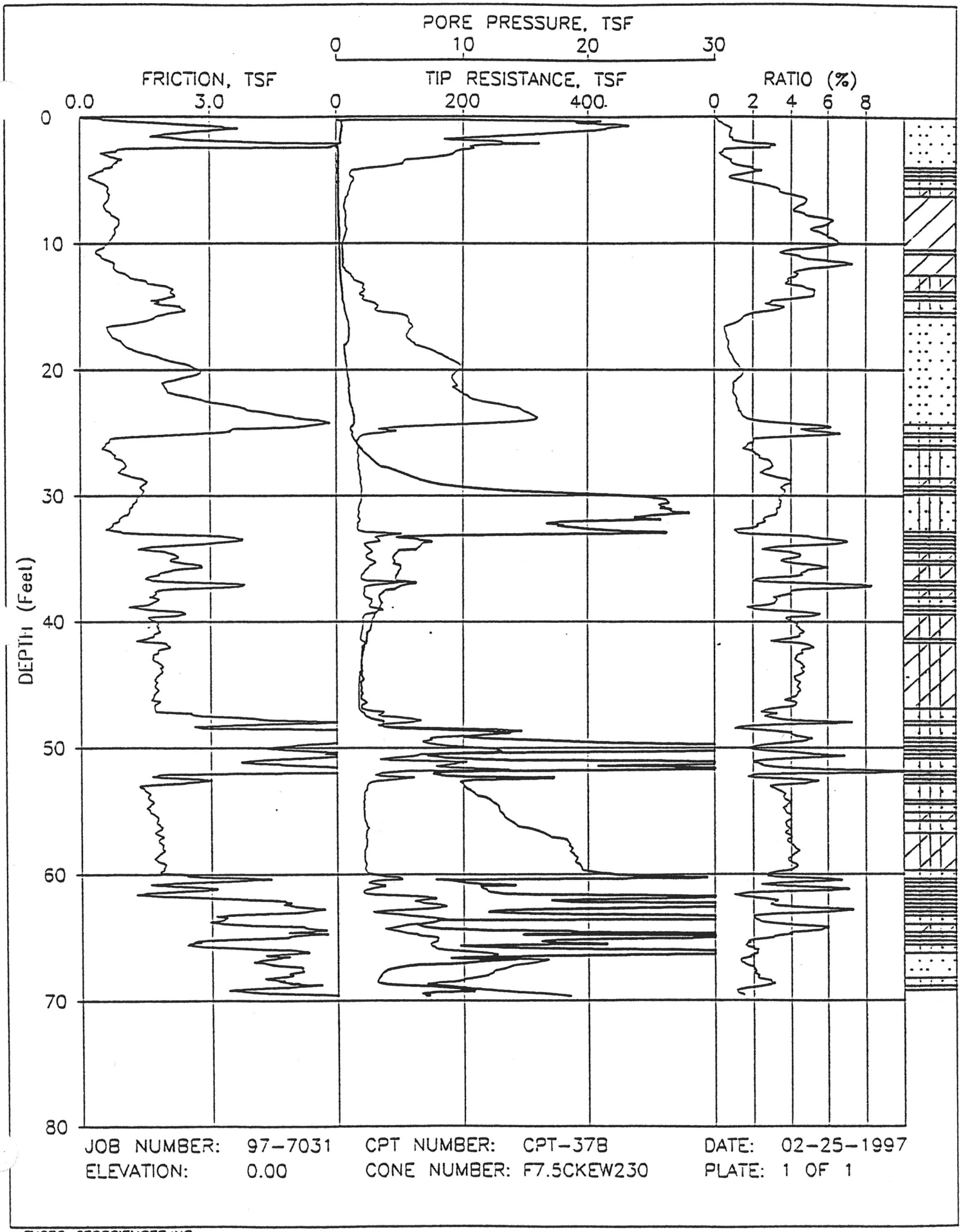
JOB NUMBER: 97-7031 CPT NUMBER: CPT-36 DATE: 02-25-1997

ELEVATION: 0.00 CONE NUMBER: F7.5CKEW230 PLATE: 1 OF 1

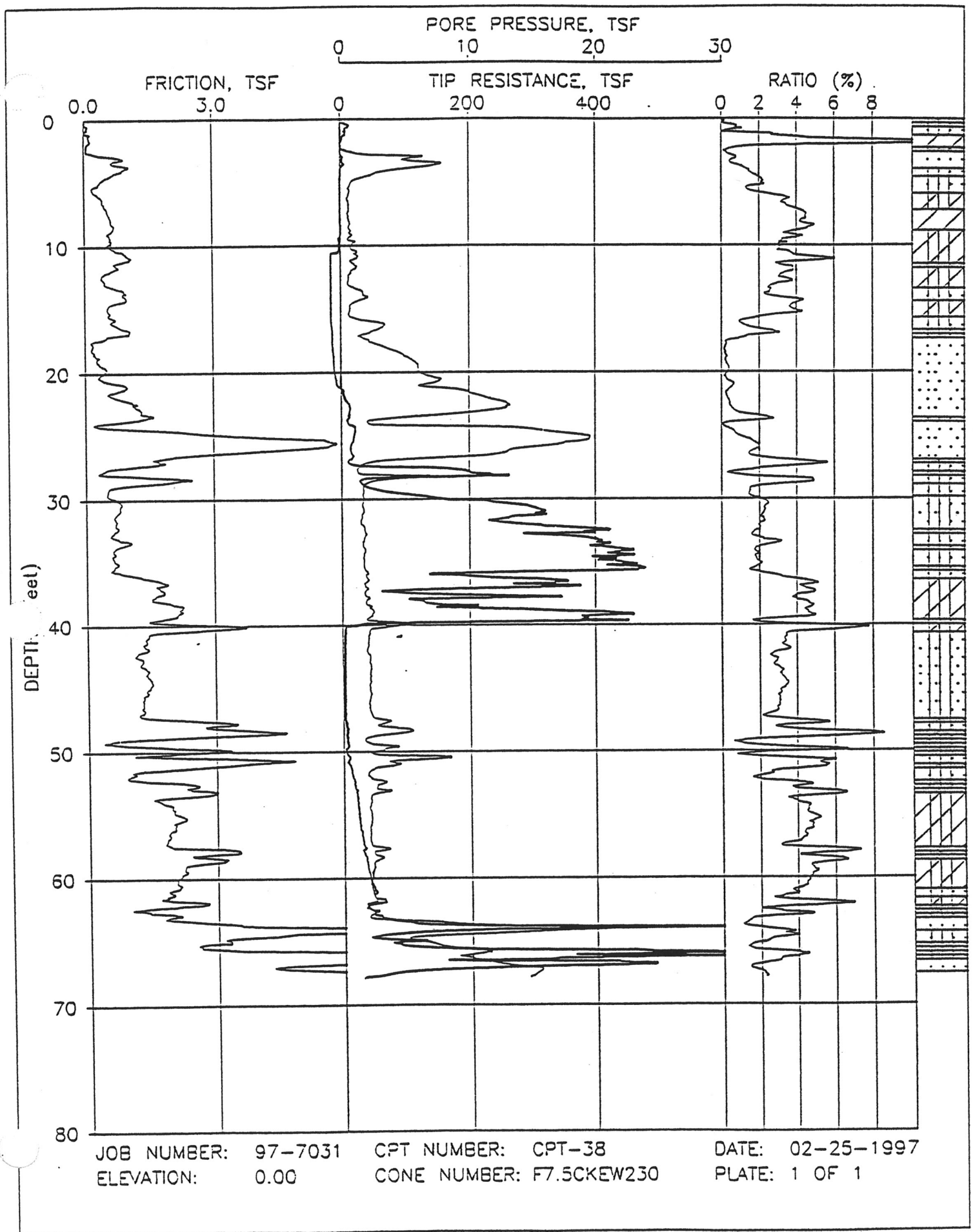
FUGRO GEOSCIENCES,INC



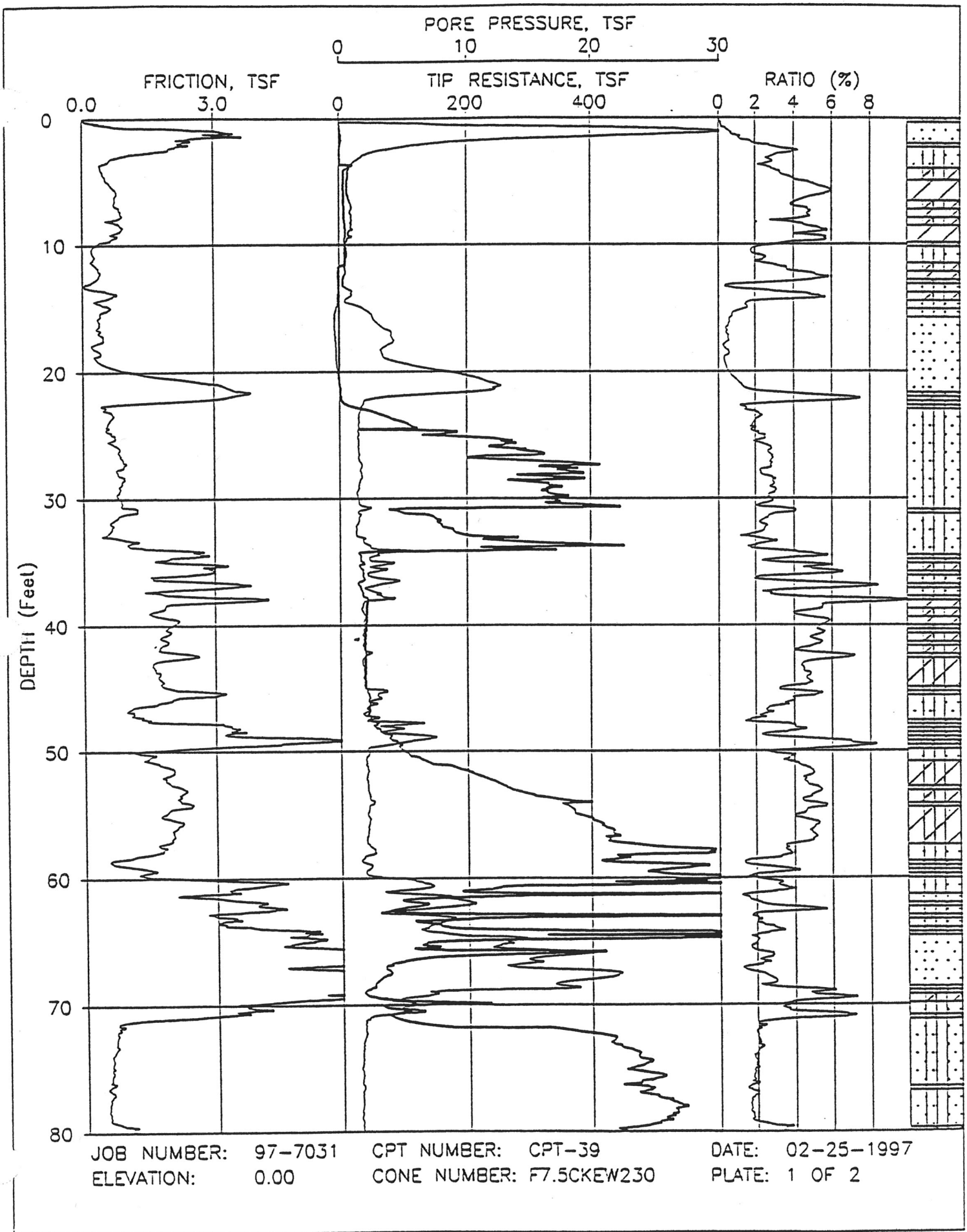
FUGRO GEOSCIENCES,INC



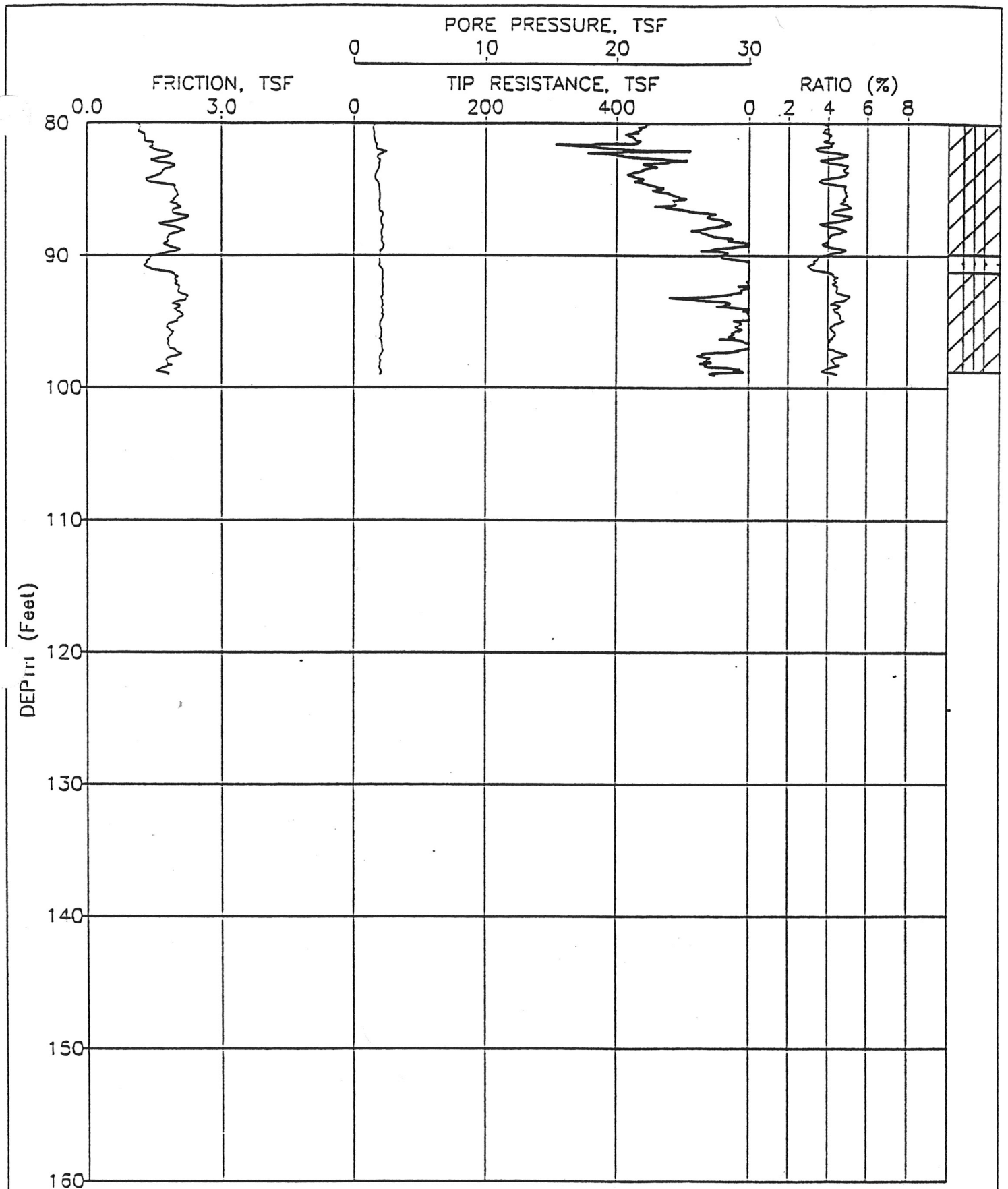
FUGRO GEOSCIENCES,INC



FUGRO GEOSCIENCES, INC



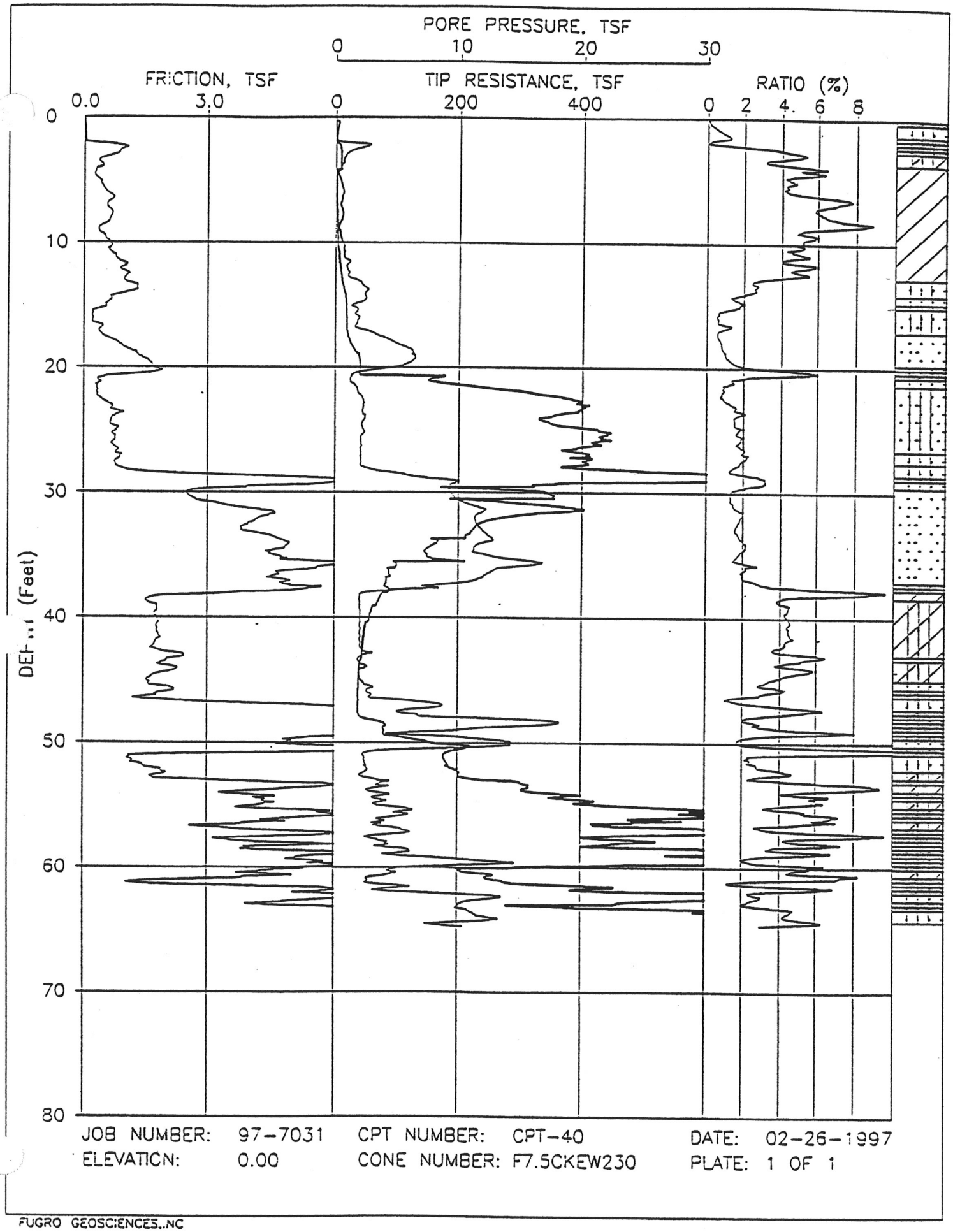
FUGRO GEOSCIENCES,INC



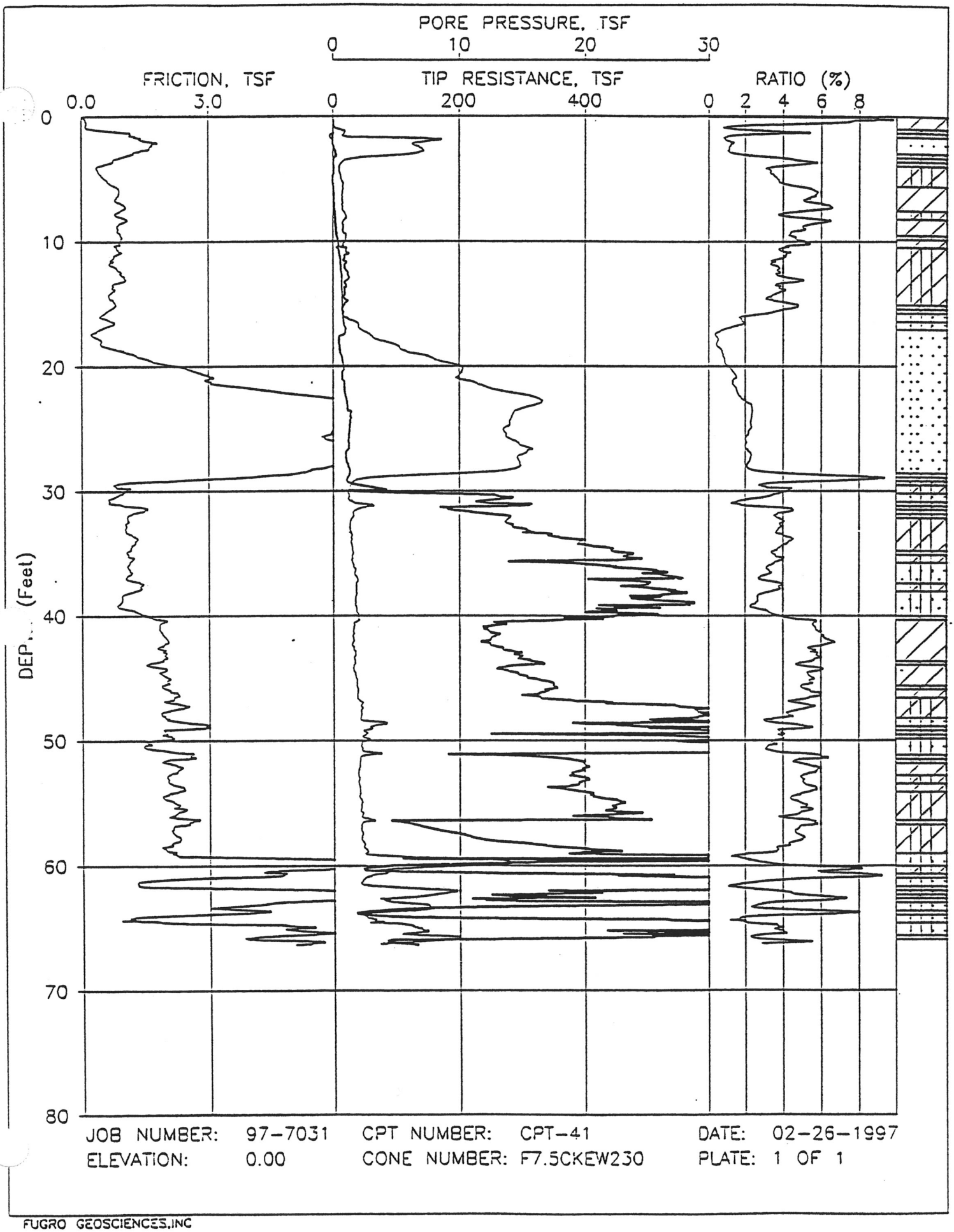
JOB NUMBER: 97-7031 CPT NUMBER: CPT-39 DATE: 02-25-1997

ELEVATION: 0.00 CONE NUMBER: F7.5CKEW230 PLATE: 2 OF 2

FUGRO GEOSCIENCES,INC



FUGRO GEOSCIENCES..NC



FUGRO GEOSCIENCES,INC

ORIGINAL

RECEIVED
MAY 15 1997

FUGRO GEOSCIENCES, INC.

6105 Rookin
Houston, TX 77074
Phone : 713-778-5580
Fax : 713-778-5501

May 14, 1997
Report Number 0301-7096

FILE COPY

Terra Next
6200 Rothway, Suite 190
Houston, Texas 77040

Attention: Mr. Robert Coffman

**PIEZOCONE PENETRATION TESTING
AND RELATED SERVICES
FORMER WOOD PRESERVING WORKS
HOUSTON, TEXAS**

Dear Mr. Coffman:

Please find enclosed herewith the final results of the cone penetration tests conducted at the above referenced location.

For your information, the soil stratigraphy was identified using Campanella and Robertson's Simplified Soil Behavior Chart. Please note that because of the empirical nature of the soil behavior chart, the soil identification should be verified locally.

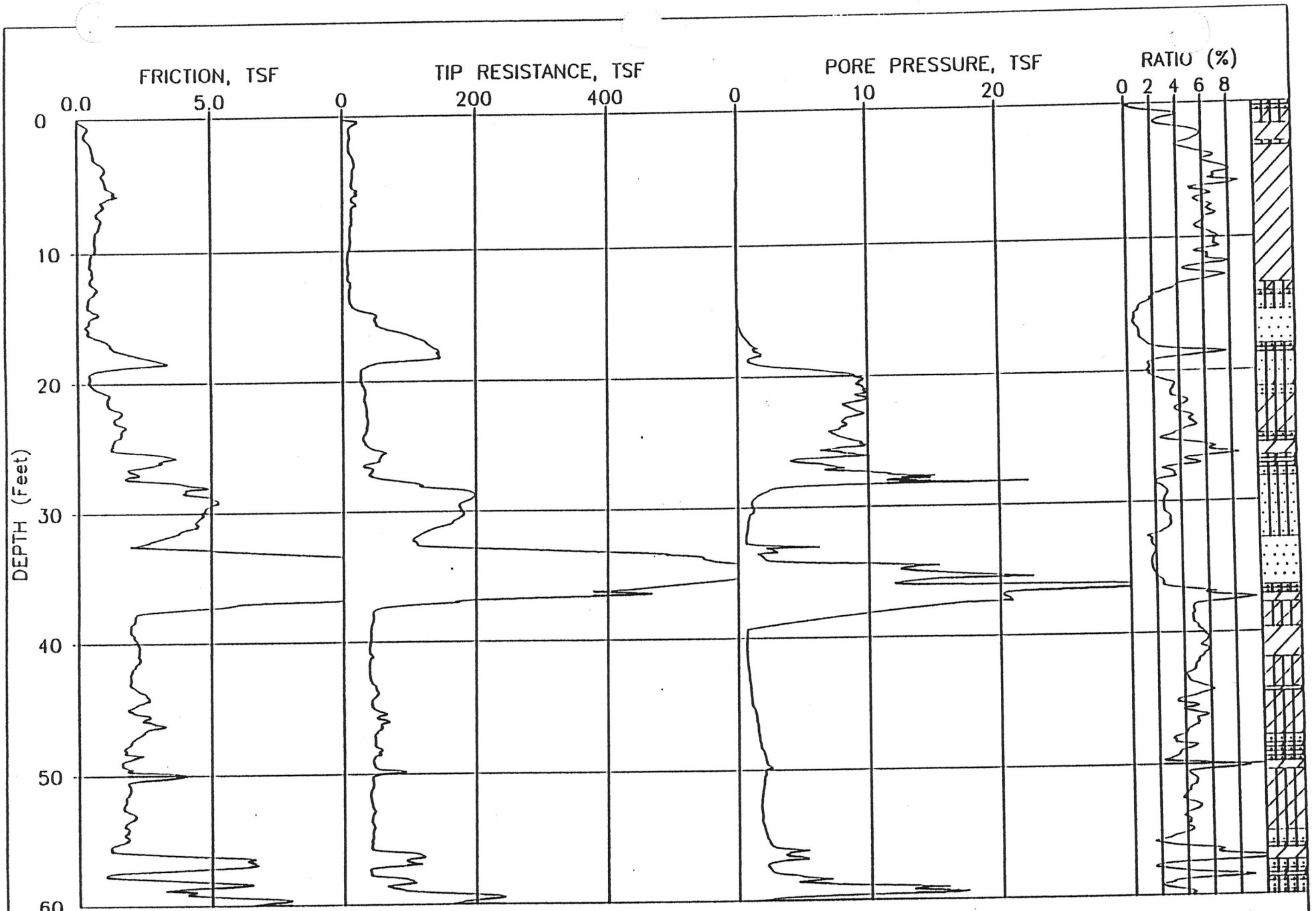
Fugro Geosciences appreciates the opportunity to be of service to your organization. If you should have any questions, or if we can be of further assistance, please do not hesitate to contact us. We look forward to working with you in the future.

Very truly yours,
FUGRO GEOSCIENCES, INC.

Jeffery L. Ness

Jeffery L. Ness
General Manager
CPT Operations

JLN/mw
1 Diskette Enclosed



JOB NUMBER: 97-7096

ELEVATION: 0.00

CPT NUMBER: 35

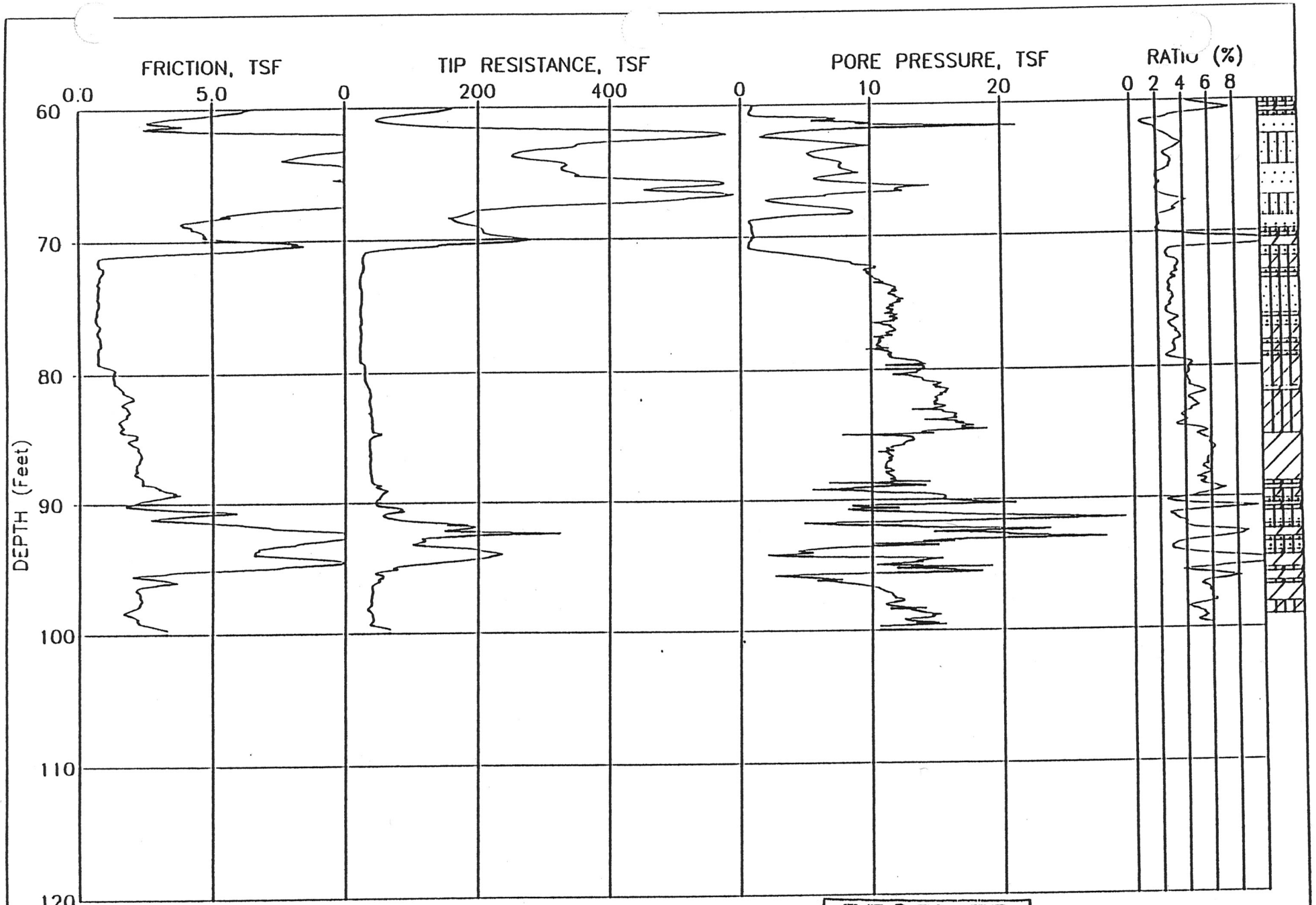
CONE NUMBER: F7.5CKEW230

RECEIVED
MAY 1 5 1997

DATE: 05-08-1997

PLATE: 1 OF 2

FUGRO GEOSCIENCES,INC



JOB NUMBER: 97-7096

ELEVATION: 0.00

CPT NUMBER: 35

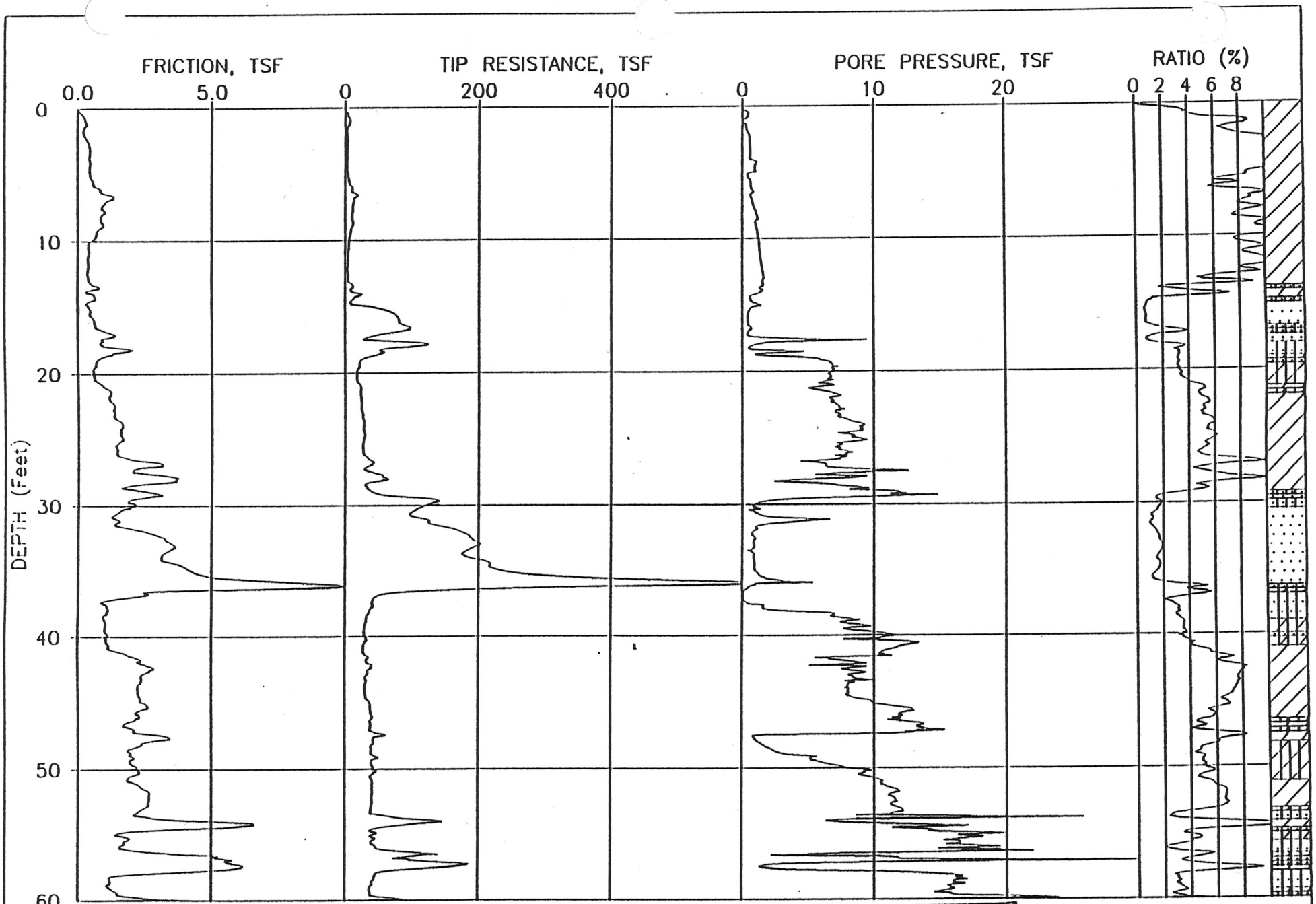
CONE NUMBER: F7.5CKEW230

RECEIVED
MAY 1 5 1997

DATE: 05-08-1997

PLATE: 2 OF 2

FUGRO GEOSCIENCES,INC



JOB NUMBER: 97-7096

ELEVATION: 0.00

CPT NUMBER: 36

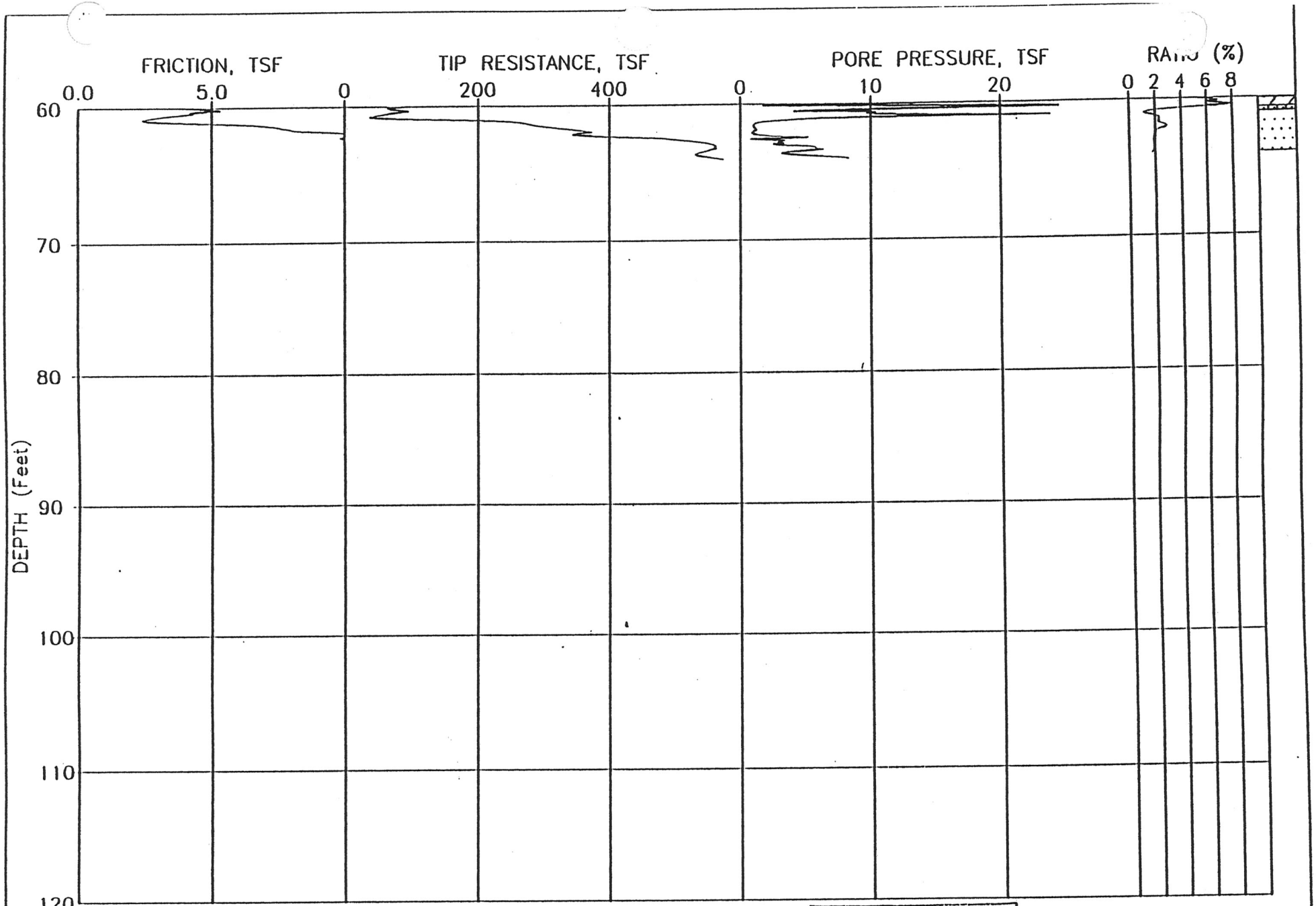
CONE NUMBER: F7.5CKEW230

RECEIVED
MAY 1 5 1997

DATE: 05-09-1997

PLATE: 1 OF 2

FUGRO GEOSCIENCES,INC



JOB NUMBER: 97-7096

ELEVATION: 0.00

CPT NUMBER: 36

CONE NUMBER: F7.5CKEW230

RECEIVED
MAY 1 5 1997

DATE: 05-09-1997

PLATE: 2 OF 2

FUGRO GEOSCIENCES,INC

ATTACHMENT II

SOIL BORING LOGS

TerraNext

LOG OF BORING No.: AOC3-E

SHEET NUMBER 1 OF 1

NT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC3 Area of Contaminated Portion of Water Line
START DATE:	03/04/97
FINISH DATE:	03/04/97
START TIME:	08:39
FINISH TIME:	08:50
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, moist, 10YR5/4, yellowish, brown, ballast	Sample Composited And Retained For Chemical Analysis
				2	CL		CLAY, silty, slightly moist, 10YR4/1, dark gray	PP = 1.5
				3	FILL		FILL, moist, 10YR2/1, black, layer of charred material, rocks, brick	
				4	ML		SILT, very slightly moist 10YR3/2, very dark grayish brown >50% limestone & granite	
				5				
				6			Boring TD @ 5.0'	
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

eologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC3-W

SHEET NUMBER 1 OF 1

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC3 Area of Contaminated Portion of Water Line
START DATE:	03/04/97
FINISH DATE:	03/04/97
START TIME:	08:18
FINISH TIME:	08:39
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, slightly moist, 10YR3/3, dark brown, ballast	Sample Composited And Retained For Chemical Analysis
					ML		SILT, moist, 10YR8/4, very pale brown	
				2	CL		CLAY, silty, moist, 10YR4/1, dark gray	
					FILL		FILL, moist, 10YR2/1, black, slight odor	
				3				
					CL		CLAY, silty, slightly moist, 10YR3/1, very dark gray	PP = 2.0
				4				
				5				
				6			Boring TD @ 5.0'	
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

eologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC4-NE

SHEET NUMBER 1 OF 1

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC4 Former Incinerator Area
START DATE:	03/03/97
FINISH DATE:	03/03/97
START TIME:	11:39
FINISH TIME:	12:00
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
					FILL		FILL, moist, 10YR3/6, dark yellowish brown	Sample Composited And
SS	0 - 5	—	5.0	1	ML		0.5-0.75' - ASH, burned material, 10YR2/1, black	Retained For Chemical
							0.75-1.00' - SILT, moist, 10YR5/3, brown	Analysis
				2	SP		1.00-1.50' - SHELL, moist, crushed up	
							1.50-2.00 - SAND, silty, moist,	
				3			10YR5/8, yellowish brown	
				4	CL		2.00 - 5.00 - CLAY, silty, 10YR2/2,	PP = 2.0
							very dark brown, wood pieces	
				5				
							Boring TD @ 5.0'	
				6				
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC4-NW

SHEET NUMBER 1 OF 1

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC4 Former Incinerator Area
START DATE:	03/03/97
FINISH DATE:	03/03/97
START TIME:	12:00
FINISH TIME:	12:25
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, moist, 10YR3/6, dark yellowish brown	Sample Composited And Retained For Chemical Analysis
				2	SP		SAND, silty, moist, 10YR5/8 yellowish brown, pieces of crushed shell & gravel	
				3	ML / SP		2.00 - 2.25' - SILT, sandy, moist, 10YR3/3 dark brown	
				4	CL		2.25 - 3.00' - SAND, silty, moist 10YR5/8, yellowish brown	
				5			3.00 - 5.00' - CLAY, silty, very slightly moist, 10YR2/2, very dark brown	PP = 2.0
				6			Boring TD @ 5.0'	
				7				
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC4-SE

SHEET NUMBER 1 OF 1

ENT:	Southern Pacific Lines	DRILLING CONTRACTOR:	Best Drilling Services
PROJECT NAME:	Houston Wood Preserving Works	DRILLING METHOD:	Hollow Stem Auger
PROJECT NUMBER:	44102069.07	SAMPLING METHOD:	Split Spoon
PROJECT LOCATION:	4910 Liberty Road Houston, TX		
		SURFACE ELEVATION:	
BORING LOCATION:	AOC4 - Former Incinerator Area	TOC ELEVATION:	
		WATER LEVEL:	
START DATE:	03/03/97 FINISH DATE: 03/03/97	WATER ELEVATION:	
START TIME:	11:00 FINISH TIME: 11:20	DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, slightly moist, 10YR3/6, dark yellowish brown, gravel, sand, wood debris	Sample Composited And Retained For Chemical Analysis
				2	SP		SAND, moist, 10YR6/1, gray, coarse grained with gravel	
				3	ML / SP		2.5-2.75' SILT, sandy, moist, 10YR3/3 dark brown 2.75 - 3.00' SAND, very moist, 10YR6/2 light brownish gray, fine grained	
				4				
				5	CL		3.00 - 5.00' CLAY, slightly silty, very slightly moist, 10YR2/2, very dark brown	PP = 2.0
				6				
				7			Boring TD @ 5.0'	
				8				
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC4-SW

SHEET NUMBER 1 OF 1

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC4 - Former Incinerator Area
START DATE:	03/03/97
FINISH DATE:	03/03/97
START TIME:	11:20
FINISH TIME:	11:39
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL	FILL, slightly moist, 10YR3/6, dark yellowish brown, gravel, sand, wood debris	Sample Composited And Retained For Chemical Analysis
				2	SP	SAND, moist, 10YR6/1, gray, coarse grained with gravel	
				3	ML / SP	2.5-2.75' SILT, sandy, moist, 10YR3/3 dark brown 2.75 - 3.00' SAND, very moist, 10YR6/2 light brownish gray, fine grained	
				4	CL		
				5		3.00 - 5.00' CLAY, slightly silty, very slightly moist, 10YR2/2, very dark brown	
				6			
				7		Boring TD @ 5.0'	
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			
				18			
				19			
				20			

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC5-W

SHEET NUMBER 1 OF 1

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC5 - Storm Sewer West
START DATE:	03/04/97
FINISH DATE:	03/04/97
START TIME:	09:24
FINISH TIME:	06:44
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, very slightly moist, gravel, crushed limestone	Sample Composited And Retained For Chemical Analysis
				2	FILL		Charred material, moist, 10YR6/1, gray, brick, rock	
				3	ML		SILT, moist, 10YR5/3, brown	
					SP		3.00 - 3.25' - SAND, moist, 10YR7/3,	
				4	ML		very pale brown	
							3.25 - 3.50' SILT, sandy, moist	
				5			3.50 - 7.00' - CLAY, silty, slightly moist,	PP = 2.0
					CL		10YR3/2, very dark	
SS	5 - 7	—	2.0	6			grayish brown	
				7				
				8			Boring TD @ 7.0'	
				9				
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: AOC7

SHEET NUMBER 1 OF 1

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	AOC7 Former UST No. 44-023-21 Area
START DATE:	03/03/97
FINISH DATE:	03/03/97
START TIME:	13:25
FINISH TIME:	14:00
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL		FILL, slightly moist, 10YR3/3, dark brown, gravel and brick pieces	Sample 0 - 5' And 5 - 10' Composited And Retained For Chemical Analysis
				2	ML		SILT, sandy, moist, 10YR3/3, dark brown	
				3			CLAY, silty, very slightly moist, 10YR2/2, very dark brown,	PP = 2.0
				4			3" layer of treated wood @ 2.5'	
				5				
SS	5 - 10	—	5.0	6	CL		No silt, slightly moist, 10YR6/1, gray, mottling with 10YR6/8, brownish yellow, and 10YR3/1, very dark gray	
				7				
				8				
				9				
				10				
				11			Boring TD @ 10.0'	
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB02

SHEET NUMBER 1 OF 3

NT:	Southern Pacific Lines
JECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB02 HWPW
START DATE:	3/3/97
FINISH DATE:	3/3/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
							Asphalt - very weathered	Boring Advanced with
CB1	1-5		3.8	1				8 1/4" O.D., 4 1/4" I.D.
					FILL		Gravel, dk. brown, loose with trace sand and	hollow stem augers
				2			silt and cinders (Fill)	
				3				
					CL		Gravelly CLAY; dk. gray; firm; moist (Fill)	
				4				
					CL		Silty CLAY; lt. gray; very stiff; low plasticity;	
	5.0			5			moist; grades dk. gray at 4.7'	
CB2	5-10		4.8	6			Grades lt. gray	Collect soil sample for
							with sparse 1/2" dia. CaC03 nodules	chemical analysis at 7-8'
				7				
				8			Grades with numerous peasize CaC03	
							nodules and trace sand	
				9				
							CaC03 nodules grade out	
	10.0			10				
CB3	10-15		5.0	11			Iron oxide staining in fractures	
				12				
				13				
				14				
					ML		Clayey SILT; lt. gray; firm; low plasticity; moist	
	15.0			15			with trace sand	
CB4	15-20		0.8	16				
				17				
					ML		SILT; lt. gray; firm; low plasticity; moist with	
				18			trace sand; lt. gray; fine grained	
				19	SP		Silty SAND; lt. gray; very fine grained; wet	
	20.0			20				

eologist: R. Lamb
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB02

SHEET NUMBER 2 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB02 HWPW
START DATE:	3/3/97
FINISH DATE:	3/3/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				20				
CB5			4.5	21				Mild Creosote odor; collect soil sample from 21.0-21.5'
				22			Grades very fine to fine grained; wet with mild creosote odor	
				23				
				24				
	25.0			25				Collect soil sample 24.0-24.5' for chemical analysis
				26	ML		Silty CLAY; lt. gray; v.stiff; low plasticity; moist with some sand with iron oxide staining	
CB6			4.7	27			Grading hard; lt. brown sand grades out	
				28			Grades lt. gray and lt. brown mottled	
				29				
	30.0			30				
CB7			3.7	31				
				32				
				33				
				34				
	35.0			35				
CB8			5.0	36				
				37				
				38	ML		Clayey SILT; lt. reddish brown; firm; low plasticity moist; creosote odor and oil sheen	Collected sample 37.5-38.0' for chemical analysis
				39				Collect soil sample for chemical analysis from 38.5-39.0'
	40.0			40	CL		Silty CLAY; reddish brown; very stiff; low plasticity; moist	

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB02

SHEET NUMBER 3 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB02 HWPW
START DATE:	3/3/97
FINISH DATE:	3/3/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB9			4.9	41				
				42				
				43				
				44				
	45.0			45				
CB10			4.0	46				
				47				
				48				
				49				
	50.0			50			SILT; reddish brown; firm non-plastic; moist	Collect soil sample for chemical analysis 49.- 49.5'
CB11			3.2	51				
				52				
				53				
				54				
	55.0			55				
				56				Bottom of boring at 55.0'
				57				Backfilled with cement/ bentonite grout on 3/3/97
				58				
				59				
				60				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB03

SHEET NUMBER 1 OF 3

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

NT: Southern Pacific Lines

DRILLING METHOD: Hollow Stem Auger

PROJECT NAME: Houston Wood Perserving Works

PROJECT NUMBER: 44102069.07

SAMPLING METHOD: CME Sampler

PROJECT LOCATION: 4910 Liberty Road Houston, TX

SURFACE ELEVATION:

BORING LOCATION:

TOC ELEVATION:

WATER LEVEL:

START DATE: 03/05/97 FINISH DATE: 03/05/97

WATER ELEVATION:

START TIME: FINISH TIME:

DATE:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
							Gravel	Boring Advanced with 8 1/4-inch O.D., 4 1/4-inch I.D. HSA
CB1	1 - 5		3.1	1				
				2	SM		SAND, brown, fine grained creosote impacted moist	
				3	FILL		CINDERS: black:	
				4	CL		Silty CLAY; dark brown, low plasticity, moist, with creosote odor	
	5.0			5				Collect sample for chemical analysis for 5 - 6 feet
CB2			5.0	6				
				7				
				8				
				9			grades gray and brown, mottled	
	10.0			10			light trace CaCO3 nodules	
CB3			5.0	11			grades with iron oxide staining	
				12				
				13			~ 1/2" sandy silt lens containing creosote	
				14			~ 1/2" sandy silt lens containing creosote	
				15			~ 1/4" sandy silt lens containing creosote	
CB4			3.9'	16				
				17	ML		SILT, gray and reddish brown, mottled, low plasticity, moist, varved	
				18			with ~0.1" thick sand seams creosote odor	
				19				Collect sample for chemical analysis at 19 - 20 feet
	20.0			20				

eologist: R. Lamb

hecked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB03

SHEET NUMBER 2 OF 3

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

CLIENT: Southern Pacific Lines

PROJECT NAME: Houston Wood Perserving Works

PROJECT NUMBER: 44102069.07

PROJECT LOCATION: 4910 Liberty Road, Houston, TX

DRILLING METHOD: Hollow Stem Auger

SAMPLING METHOD: CME Sampler

SURFACE ELEVATION:

TOC ELEVATION:

BORING LOCATION:

WATER LEVEL:

START DATE: 03/05/97 FINISH DATE: 03/05/97

WATER ELEVATION:

START TIME: FINISH TIME:

DATE:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				21				
CB5			3.9		SP		Silty SAND, grayish brown, very fined grained,	
				22			wet, with creosote odor	
				23				
							~ 1/2" diameter clay nodules	
				24			clay nodules grade out	Collect soil sample for
								chemical analysis @ 24 - 25'
	25.0			25				
CB6			3.8	26				
				27				
				28	CL		Silty CLAY, gray and brown mottled;	
				29			very stiff, low plasticity, moist	
	30.0			30			creosote odor	
CB7			5.0	31				
				32				
				33				
				34				
	35.0			35				
CB8				36			grading with creosote in hairline fractures	
				37			comprises ~ 1% of sample	
				38				
				39				
	40.0			40			0.1" thick silt/sand lenses contain creosote	Collect soil sample for
								chemical analysis @ 39.5 - 40'

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB03

SHEET NUMBER 3 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	03/05/97
FINISH DATE:	03/05/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB9			4.2	41			silt/sand lenses grade out	
				42				
				43				
				44				
	45			45				
CB10			5.0	46				
				47				
				48				
				49				
	50.0			50	ML		SILT, reddish brown; non-plastic	
CB11			5.0	51			firm, wet; with trace of sand; creosote odor	
				52				
				53	CL		Silty CLAY; reddish brown; low plasticity, very stiff, creosote odor	
				54			3" thick sandy silt, lens @ ~ 52' contains oil sheen & creosote odor	
				55			3" thick sandy silt, lens @ ~ 54' contains oil sheen & creosote odor	Collected soil sample for
ST12			1.5	56			grading with creosote in fractures ~ 1% of mass	chemical analysis from silt lenses
				57				
				58				Bottom of boring @ 57.0'
				59				Borehole backfilled with cement/bentonite grout on 3/5/97
				60				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB04

SHEET NUMBER 1 OF 3

DRILLING CONTRACTO: Best Drilling Services

Location Diagram

CLIENT: Southern Pacific Lines

DRILLING METHOD: Hollow Stem Auger

PROJECT NAME: Houston Wood Perserving Works

PROJECT NUMBER: 44102069.07

SAMPLING METHOD: CME Sampler

PROJECT LOCATION: 4910 Liberty Road, Houston, TX

SURFACE ELEVATION:

BORING LOCATION:

TOC ELEVATION:

WATER LEVEL:

START DATE: 03/05/97 FINISH DATE: 03/05/97

WATER ELEVATION:

START TIME: FINISH TIME:

DATE:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
							Clayey GRAVEL	Boring Advanced with 8 1/4-inch O.D., 4 1/4-inch I.D. HSA
CB1	1 - 5		38.0	1				
				2				
				3	SM		SAND, black, medium grained, moist, contains creosote	Collect soil sample for chemical analysis @ 2' - 3'
					FILL		CINDERS, black, creosote odor	
				4	SM		SAND; lt. brown, fine grained; moist, creosote odor	
	5.0			5	CL		Silty CLAY; black, stiff, low plasticity; moist, creosote creosote odor, grading black and dark brown, mottled	
CB2			5.0	6				
				7				
				8				
				9			grading - gray and dark brown, mottled with slight creosote odor	
	10.0			10			grading light gray and gray, mottled with iron oxide staining, creosote odor, grades out	
CB3			5.0	11			grading with 1/10" diameter CaCO3 nodules	
				12				
				13				
				14				
	15.0			15				
CB4			2.5	16				
				17				
				18				
				19	ML		Clayey SILT; gray and reddish brown mottled, low plasticity; firm with trace sand, moist	
	20			20				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB04

SHEET NUMBER 2 OF 3

DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	03/05/97
FINISH DATE:	03/05/97
START TIME:	
FINISH TIME:	
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB5			32	21				
				22	SP		Silty SAND; light gray, very fine to fine grained, wet, with mild creosote odor	
				23				
				24				
				25			clay lens ~ 3" thick @ ~ 24.5	
	25						creosote in sand lens ~ 2" thick @ ~ 24.8'	
CB6			4.5	26			grading with strong creosote odor	collect sample not submitted 25.5 - 26.0' for bio analysis
				27			oil sheen	
				28				collect soil sample for chemical analysis from 27 - 30 feet
				29				collect sample for chemical analysis @ 29.0 - 30.0'
				30				
CB7			5.0	31	CL		Silty CLAY; reddish brown & gray, mottled, low plasticity; moist with creosote in hairline fractures ~ 0.1% at mass	collect sample for chemical analysis @ 31.0 - 32.0'
				32				
				33				
				34			creosote grades out	
	35			35			mild creosote odor	
CB8			5.0	36				
				37				
				38			grading with creosote in hairline fractures ~1% at mass	
				39				collect soil sample for chemical analysis from
	40.0			40			0.1" thick silt/sand lenses contains creosote	39.5 - 40.0'

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB04

SHEET NUMBER 3 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	03/05/97
FINISH DATE:	03/05/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB9			5.0	41				
				42	CL		Silty CLAY reddish brown; stiff; low plasticity; moist; with creosote odor	
				43				
				44			grading very stiff	
	45.0			45	CH		CLAY; reddish brown; medium plasticity; hard;	
CB10			5.0	46			moist; with creosote in fractures ~0.5% of mass	
				47				
				48				
				49				
	50.0			50			SILT; reddish brown; low plasticity; firm; moist	collected sample @ 51-52'
CB11			5.0	51	ML		with creosote ~5% of mass in fractures and trace clay	for chemical analysis
				52				
				53			CLAY; reddish brown, medium plasticity; hard;	
				54	CH		moist, with creosote in fractures ~0.1% of mass	
	55.0			55				
CB12			5.0	56				
				57				
				58				
				59				
	60.0			60			Bottom of boring @ 60' Boring with cement/bentonite grout	Collect soil samples for chemical analysis 58 - 60'

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB05

SHEET NUMBER 1 OF 3

DRILLING CONTRACTOR: Best Drilling Services

DRILLING METHOD: Hollow Stem Auger

SAMPLING METHOD: CME Sampler

SURFACE ELEVATION:

TOC ELEVATION:

WATER LEVEL:

WATER ELEVATION:

DATE:

Location Diagram

ENT: Southern Pacific Lines

PROJECT NAME: Houston Wood Perserving Works

PROJECT NUMBER: 44102069.07

PROJECT LOCATION: 4910 Liberty Road Houston, TX

BORING LOCATION: SB05 HWPW

START DATE: 3/4/97 FINISH DATE: 3/4/97

START TIME: FINISH TIME:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
					F		Gravel; brown and dk. brown; loose; moist;	Boring Advanced with
CB1	1-5		4.0	1	I		with some sand and silt (Fill)	8 1/4" O.D., 4 1/4" I.D.
					L			hollow stem augers
				2	L			
				3	CL		Silty CLAY; dk. brown; very stiff; low plasticity;	
							moist; grading brownish gray with iron oxide	
				4			staining; trace CaC03 nodules	
	5.0			5	ML		Clayey SILT; brownish gray; firm; low plasticity;	
							moist	
CB2	5 - 10		5.0	6			Silty CLAY; brownish gray; stiff; low plasticity;	
					CL		moist with trace sand CaC03 nodules at approx.	
				7			6.5'	
				8				
							2" layer of CaC03 nodules at approx. 8'	
				9			Grading lt. brownish gray	
							3" layer of CaCO3 nodules at 10'	
	10.0			10				
CB3	10 - 15		5.0	11			2" thick clayey silt lens	
							Grading soft	
				12			Grading stiff	
							Grading soft	
				13				
							Approx. 1" thick clayey silt lens	
				14			Grading very stiff	
	15.0			15			Grading firm	
CB4	15 - 20		5.0	16	ML		SILT; brownish gray, soft, non-plastic; wet w/	
							trace sand and clay	
				17				
							Trace clay nodules	
				18				
				19				Collect soil sample for
					SP		Silty SAND; loose; lt. gray; with fine grained	chemical analysis from
	20.0			20			wet with creosote odor	19.5-20'

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB05

SHEET NUMBER 2 OF 3

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

CLIENT: Southern Pacific Lines

PROJECT NAME: Houston Wood Perserving Works

DRILLING METHOD: Hollow Stem Auger

PROJECT NUMBER: 44102069.07

SAMPLING METHOD: CME Sampler

PROJECT LOCATION: 4910 Liberty Road Houston, TX

SURFACE ELEVATION:

BORING LOCATION: SB05 HWPW

TOC ELEVATION:

WATER LEVEL:

START DATE: 3/4/97 FINISH DATE: 3/4/97

WATER ELEVATION:

START TIME: FINISH TIME:

DATE:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB5			5.0	21				
							Grades very fine to fine grained	
				22				
				23				
								Collect soil sample at
				24				24.0-24.5' for chemical
								analysis
	5.0			25				
CB6	5 - 10		5.0	26				
				27				
				28				
				29				
	10.0			30	ML		Clayey SILT; gray and reddish brown; stiff;	
							low plasticity; moist with sandy silt lens approx.	
CB7	10 -15		3.5	31			0.1" thick	
							Varved	
				32				
					ML		SILT; reddish brown with gray mottling; non-	
				33			plastic; wet with trace sand	
				34				Collect soil sample for
								chemical analysis from
	15.0			35				34.5-35.0'
CB8	15 - 20		4.0	36	SP		Silty SAND; reddish brown; loose; very fine	
							to fine grained; wet	
				37				
				38				
				39				Collect soil sample for
								chemical analysis from
	40.0			40				39-40'

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB05

SHEET NUMBER 3 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB05 HWPW
START DATE:	3/4/97
FINISH DATE:	3/4/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB9			5.0	41				
				42				
				43	CH		CLAY; reddish brown; hard; medium plasticity; moist	Collect soil sample at 24.0-24.5' for chemical analysis
				44				
	45.0			45				
CB10			2.0	46			Possible sand lens (no recovery)	
				47				
				48				
				49			2" thick silt lens at approx. 49.0	
	50.0			50				
CB11			2.5	51				
				52				
				53	ML		SILT; reddish brown non-plastic, wet; with trace sand	
				54				Collect soil sample for chemical analysis 54-55'
				55				
CB12			3.2	56	CH		CLAY; reddish brown; medium plasticity; firm: moist	
				57				
				58				Bottom of boring at 60'
				59	ML		Clayey SILT; reddish brown; low plasticity; firm; wet	Boring backfilled with cement/grout bentonite
	60.0			60				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB06

SHEET NUMBER 1 OF 3

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB06 HWPW
START DATE:	3/4/97
FINISH DATE:	3/4/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
					FILL		Gravel	Boring Advanced with
CB1	1-5		3.5	1				8 1/4" O.D., 4 1/4" I.D.
					SM		SAND - lt. brown; loose, moist; mild creosote	hollow stem augers
				2			odor	
				3				
				4	FILL		Cinders	Collect samples from 4' to 5'
					CL		Silty CLAY; black; stiff; low plasticity; moist;	for chemical analysis
	5.0			5			creosote odor	
							Grading dark gray	
CB2	5 -10		5.0	6				
							Grading lt. gray with iron oxide staining; creosote	
				7			odor	
							Grades out	
				8				
				9				
	10.0			10				
CB3			5.0	11			Silt lens approx. 2" creosote impacted	
				12				
				13			Silt lens approx. 3" creosote impacted	
				14			Silt lens approx. 2" creosote impacted	
	15.0			15				
CB4			4.5	16			Sand lens approx. 1" creosote impacted	
				17				
				18			Silt lens approx. 2" creosote impacted	
							Silt lens approx. 3" creosote impacted	
				19				Collected soil sample from
					ML		SILT; gray; firm; non-plastic; moist with trace sand	19.5-20' for chemical
	20.0			20			creosote impacted	analysis

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB06

SHEET NUMBER 2 OF 3

DRILLING CONTRACTOR: Best Drilling Services

DRILLING METHOD: Hollow Stem Auger

SAMPLING METHOD: CME Sampler

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB06 HWPW
START DATE:	FINISH DATE:
START TIME:	FINISH TIME:

SURFACE ELEVATION:

TOC ELEVATION:

WATER LEVEL:

WATER ELEVATION:

DATE:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB5			4.2	21	SP		Silty SAND; lt. gray; loose; very fine to fine grained; wet with mild creosote odor	
				22				
				23				
				24				Collect samples from 24' to 25' for chemical analysis
				25	CL			
CB6	5 - 10		3.1	26				
				27	CL		Silty CLAY; light gray; very stiff; low plasticity; moist with iron oxide staining	
				28				
				29				
				30				
CB7			2.0	31				
				32				
				33	SP		Silty SAND; lt. gray; very fine to fine grained; wet; with creosote odor	Collect soil sample for geotech analysis
				34				
				35				
CB8			5.0	36	CH		CLAY; reddish brown; hard; medium plasticity; moist; with trace hairline fractures; creosote in fractures	
				37				
				38			1" thick lens CaC03 nodules	
				39				
	40.0			40			Creosote in fractures grades out	

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB06

SHEET NUMBER 3 OF 3

DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB06 HWPW
START DATE:	FINISH DATE:
START TIME:	FINISH TIME:

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB9			5.0	41			Grading with creosote in hairline fractures	
				42				
				43				
				44				
	45.0'			45			Approx. 2" thick layer of CaC03 nodules	
CB10			4.7	46			Creosote in fractures grades out	
				47				
				48				
				49	ML		Clayey SILT; reddish brown; low plasticity; moist	Collect soil sample from 49 to 50' for chemical analysis
	50.0			50				
				51				
				52				
				53				
				54				
				55				
ST11			2.0	56				Collect soil sample for geotech analysis
	57.0'			57				
				58				
				59				Bottom of boring at 57' Backfilled with bentonite
	60.0			60				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB07

SHEET NUMBER 1 OF 2

DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB07 HWPW
START DATE:	3/06/97
FINISH DATE:	3/06/97
START TIME:	
FINISH TIME:	

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				1			Gravel (Fill)	Boring advanced with 8 1/4" O.D. 4 1/4" I.D. hollow stem augers
				2			Railroad Ties (Fill)	
CB1			2.8'	3			Gravel (Fill)	Collect soil sample for
				4	SM		SAND; Black; fine grained; moist with creosote odor; grading brown (Fill)	chemical analysis 2.5-3.0'
	5.0			5	CL		Silty CLAY; dk. brown/black mottled; stiff; low plasticity; moist; creosote odor	
CB2			3.4'	6				
				7			Grading black very stiff	
				8				
				9			Grading - gray with iron oxide staining	
	10.0			10				
CB3			4.1'	11				
				12			Grading lt. gray; stiff	
				13				
				14				
	15.0			15				
CB4			3.5	16				
				17				
				18				
				19	ML		Clayey SILT; lt. gray; firm; low plasticity; moist; contains oil sheen; creosote odor	Collect soil sample 19-20' for chemical analysis
	20.0			20				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB07

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB07 HWPW
START DATE:	3/06/97
FINISH DATE:	3/06/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB5			4.2	21				Collect soil sample at 21-22' for chemical analysis
				22	SP		Silty SAND; brownish gray; fine grained; wet	Collect soil sample at 22-23'
							Contains creosote	for chemical analysis
				23				
				24				
								Collect soil sample at 24-25'
	25.0			25			2" laver cemented sand - contains creosote	for chemical analysis
								Bottom of boring @ 25.0'
				26				
				27				boring backfilled with cement/bentonite grout
				28				
				29				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB08

SHEET NUMBER 1 OF 2

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	SB08 HWPW
START DATE:	3/6/97
FINISH DATE:	3/6/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				1	FILL		Gravel; Railroad ties	Boring advanced with 8 1/4" O.D. 4 1/4" I.D. hollow stem augers
				2				
					SM		SAND; black; fine grained; moist, creosote odor	
CB1	2-5		2.5	3				
				4	CL		Silty SANDY CLAY; black; firm; low plasticity;	
							moist; strong creosote odor	Collect soil sample at 4-5'
	5.0			5				for chemical analysis
CB2	5 - 10		5.0	6	CL		Silty CLAY; black; very stiff;	
							low plasticity; moist; strong creosote odor	
				7				
				8				
				9			Grading gray with iron oxide staining	
	10.0			10				
CB3	10 - 15		4.5	11			Grading with creosote in hairline fractures	
				12			Grading with pea to gravel size CaC03 nodules	
				13				
							grading with varved bedding	
				14				Collect soil sample 14-15' for
	15.0			15				chemical analysis
CB4	15 - 20		4.2	16				
							Clayey SILT; brownish gray; firm; low plasticity;	
				17	ML		moist; creosote odor	
								Collect soil sample 18-19' for
				18				chemical analysis
				19				
	20.0			20				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: SB08

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines	DRILLING CONTRACTOR:	Best Drilling Services
PROJECT NAME:	Houston Wood Perserving Works	DRILLING METHOD:	Hollow Stem Auger
PROJECT NUMBER:	44102069.07	SAMPLING METHOD:	CME Sampler
PROJECT LOCATION:	4910 Liberty Road Houston, TX		
		SURFACE ELEVATION:	
BORING LOCATION:	SB08 HWPW	TOC ELEVATION:	
		WATER LEVEL:	
START DATE:	3/6/97 FINISH DATE: 3/6/97	WATER ELEVATION:	
START TIME:	FINISH TIME:	DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB5			4.1'	21				
				22				
				23	SP		Silty SAND; lt. gray; very fine to fine grained; wet; with creosote odor and oil sheen	
				24				
				25				
				26				Bottom of boring at 25.0'
				27				Boring backfilled with cement/bentonite grout
				28				
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-12A

SHEET NUMBER 1 OF 2

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	West Side
START DATE:	02/27/97
FINISH DATE:	02/27/97
START TIME:	07:45
FINISH TIME:	09:40
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	5.52'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	3.75	1	FILL		FILL, moist, 10YR3/1, very dark gray, gravel, roots, brick, slight odor	Sample Retained For Chemical Analysis
				2				
				3			Slightly moist	
				4			CLAY, silty, slightly moist, 10YR4/1, dark gray, calcareous nodules	PP = 2.0
				5				
SS	5 - 10	—	5.0	6			Moist, 10YR5/1, gray, silt seams	
				7				
				8	CL		Silt content decreases, 25% calcareous nodules 10YR7/1	
				9			Light gray with 10YR6/8 brownish yellow and 10YR4/1 dark gray mottling, silt seams	
				10				
SS	10 - 15	—	5.0	11			silt seams	
				12				
				13				
				14				
				15	ML		SILT, clayey, slightly moist, 10YR5/1, gray, odor, clay seams	
SS	15 - 20	—	3.75	16				
				17	SP		SAND, wet, 10YR7/1, light gray with greenish tint, fine grained,	
				18			odor, staining with 10YR2/1, black,	
				19			and 10YR3/3 dark brown	
				20				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-12A

SHEET NUMBER 2 OF 2

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	West Side
START DATE:	02/27/97
FINISH DATE:	02/27/97
START TIME:	07:45
FINISH TIME:	09:40

DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	5.52'
WATER ELEVATION:	
DATE:	03/25/97

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	—	5.0	21	SP		SAND, wet, 10YR7/1, light gray, with greenish tint, fine grained, odor, staining with 10YR2/1 black and 10YR3/3 dark brown	Sample Retained For Chemical Analysis
				22				
				23				
				24				
				25				
SS	25 - 30	—	5.0	26	CL		CLAY, slightly silty, very slightly moist, 10YR7/1, light gray, >25% mottling with 10YR6/8, brownish yellow, green and black staining, odor	PP = 4.0 Sample Retained For Chemical Analysis
				27				
				28				
				29				
				30			Silt content = 50%, strong odor	
				31			Boring TD @ 30.0'	
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-12B

SHEET NUMBER 1 OF 1

CLIENT:	Southern Pacific Lines	DRILLING CONTRACTOR:	Best Drilling Services
PROJECT NAME:	Houston Wood Preserving Works	DRILLING METHOD:	Hollow Stem Auger
PROJECT NUMBER:	44102069.07	SAMPLING METHOD:	Split Spoon
PROJECT LOCATION:	4910 Liberty Road Houston, TX		
		SURFACE ELEVATION:	
BORING LOCATION:	West Side	TOC ELEVATION:	
		WATER LEVEL:	5.60'
START DATE:	02/27/97	FINISH DATE:	02/27/97
START TIME:	10:15	FINISH TIME:	13:10
		WATER ELEVATION:	
		DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	25 - 30	—	5.0	26	CL		CLAY, slightly silty, very slightly moist, 10YR7/1, light gray, >25% mottling with 10YR6/8 brownish yellow, green and black staining, creosote @ 30', strong odor	0 - 25' not logged because of close proximity to MW-12A
				27				
				28				
				29				
				30				
ST	30 - 35	—	2.5	31	SP		SAND, saturated, 7.5YR4/6, strong brown with 7.5YR6/1 gray, fine grained, silt nodules, sheen, strong odor	Sample Retained For Chemical and Geotechnical Analysis
				32				
				33				
				34				
				35				
SS	35 - 40	—	5.0	36				
				37				
				38				
				39				
				40				
SS	40 - 45	—	5.0	41	CH		CLAY, very slightly moist, 10R4/6, red, hard, firm, fat, scattered small calcareous nodules	Sample Retained For Chemical and Geotechnical Analysis
				42				
				43				PP = 4.5
				44				
				45			Boring TD @45.0'	

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-12C

SHEET NUMBER 1 OF 1

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	MW-12C
START DATE:	4/21/97
FINISH DATE:	4/21/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger through 10" PVC casing
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
								Boring Advanced with 8 1/4-inch O.D., 4 1/4-inch I.D. HSA
CB1			4.2	61	ML		Clayey SILT; reddish brown; firm; low plasticity; moist	
				62				
				63				
				64				
	65.0			65			grading with trace sand	
CB2			1.5	66	SP		Silty SAND; reddish brown; very fine grained; wet with nodules of cemented sand.	Sand heaves ~ 1.0 foot into auger
				67				
				68				
				69				
	70.0			70				
CB3			2.7	71				
				72				
				73				
				74	CH		CLAY; reddish brown; hard; medium plasticity	
	75.0			75				
				76				Bottom of boring @ 75.0 Install MW-12C
				77				
				78				
				79				
				80				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-12C

SHEET NUMBER 2 OF 2

NT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	MW-12C
START DATE:	FINISH DATE:
START TIME:	FINISH TIME:
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger through 10" PVC casing
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
								Boring Advanced with 8 1/4-
CB1			4.2	61	ML		Clayey SILT; reddish brown; firm;	inch O.D., 4 1/4-inch I.D. HSA
							low plasticity; moist	
				62				
				63				
				64				
	65.0			65			grading with trace sand	
CB2			1.5	66	SP		Silty SAND; reddish brown; very fine grained;	
							wet with nodules of cemented sand.	Sand heaves ~ 1.0 foot
				67				into auger
				68				
				69				
	70.0			70				
CB3			2.7	71				
				72				
				73				
					CH		CLAY; reddish brown; hard;	
				74			medium plasticity	
	75.0			75				
								Bottom of boring @ 75.0
				76				Install MW-12C
				77				
				78				
				79				
				80				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-13

SHEET NUMBER 1 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	NW Corner of Site
START DATE:	02/25/97
FINISH DATE:	02/25/97
START TIME:	10:00
FINISH TIME:	12:00
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	9.43'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	ML		0 - 4" Fill, asphalt gravel	Sample Submitted For
							SILT, very slightly moist, odor,	Chemical Analysis
				2			10YR3/1 very dark gray	
				3				
				4				
				5	CL		CLAY, silty, very slightly moist,	PP = 2.5
							10YR3/1 very dark gray, firm odor	
SS	5 - 10	—	5.0	6				
				7				
				8			10YR6/1 Gray with dark green staining;	
							1/4" - 1/2" calcium nodules	
				9				
				10				
SS	10 - 15	—	5.0	11				
				12				
				13				
				14				
				15				
SS	15 - 20	—	5.0	16	SP		SAND, wet, loose, fine-grained,	Sample Submitted For
							10YR7/1 - light gray	Chemical Analysis
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-13

SHEET NUMBER 2 OF 2

NT:	Southern Pacific Lines
CT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road, Houston, TX
BORING LOCATION:	NW Corner of Site
START DATE:	02/25/97
FINISH DATE:	02/25/97
START TIME:	10:00
FINISH TIME:	12:00
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	9.43'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	—	5.0	21	SP		SAND, wet, loose, fine-grained, 10YR7/1 gray	
				22	CH		CLAY, slightly moist, 10YR7/1	PP = 4.0
							Light gray, mottling with 10YR6/8	Sample Submitted For
				23			brownish yellow, firm	Chemical Analysis
				24				
				25			DRY	
				26			Boring TD = 25.0 Feet	
				27				
				28				
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

eologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-14

SHEET NUMBER 1 OF 3

NT:	Southern Pacific Lines	DRILLING CONTRACTOR:	Best Drilling Services
PROJECT NAME:	Houston Wood Preserving Works	DRILLING METHOD:	Hollow Stem Auger
PROJECT NUMBER:	44102069.07	SAMPLING METHOD:	Split Spoon
PROJECT LOCATION:	4910 Liberty Road Houston, TX		
		SURFACE ELEVATION:	
BORING LOCATION:		TOC ELEVATION:	
		WATER LEVEL:	7.71'
START DATE:	02/27/97 FINISH DATE: 02/27/97	WATER ELEVATION:	
START TIME:	13:45 FINISH TIME: 15:30	DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				1	FILL		FILL, moist, 10YR4/6 dark yellowish brown	
SS	0 - 5	—	3.75				grades to 10YR3/1 very dark gray, wood pieces	
				2	SP		1.5 - 1.75' SAND, slightly moist, 10YR6/4 light yellowish brown, fine-grained	
							1.75 - 5 CLAY, silty, very slightly moist,	PP = 2.75
				3			10YR2/2 very dark brown grades to	
					CL		10YR4/1 dark gray, odor	
				4				
				5				
							CLAY	Sample Collected In A
ST	5 - 7	—	2.0	6				Shelby Tube For
				7				Geotechnical Analysis
							CLAY, silty, moist, 10YR6/2 light yellowish gray,	PP = 2.5
SS	7 - 10	—	3.0	8			mottling with 10YR6/8 brownsih yellow and	
				9			10YR4/1 dark gray, calcareous nodules, Fe nodules, greenish tint, interbedded	
				10			silt lenses	
SS	10 - 15	—	5.0	11				
					CL			
				12				
				13				
				14				
				15			ODOR	
							SAND	Sample Collected In A
ST	15 - 17	—	2.0	16				Shelby Tube For
				17				Geotechnical Analysis
							SAND, wet, 10YR6/1, gray, odor, sheen,	Sampe Retained For
SS	17 - 20	—	3.0	18			greenish tint	Chemical Analysis
				19	SP			
							2" Clay seam with creosote staining	
				20			and globules	

eologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-14

SHEET NUMBER 2 OF 3

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	02/27/97
FINISH DATE:	02/27/97
START TIME:	13:45
FINISH TIME:	15:30
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	7.71'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	—	5.0	21			SAND, wet, 10YR6/1, gray, slight odor, no staining	
				22				
				23	SP			
				24				
				25				
SS	25 - 30	—	5.0	26			CLAY, silty, slightly moist 10YR7/2, light gray, with 10YR6/8 brownish yellow mottling, firm, hard	PP = 4.0
				27	CL			
				28				
				29			CLAY	Sample Retained For Geotechnical Analysis
				30				
SS	30 - 35	—	5.0	31			CLAY, slightly moist, 10R4/8, red with 10YR7/1; light gray mottling, calcareous seams, 1/2 - 3/4" thick, moist @ 31', 32', 33', and 34'. Very silty 31 - 35'	PP = 2.0
				32				
				33	CL			
				34				
				35				
SS	35 - 40	—	2.5	36			SAND, slightly silty, wet, 2.5 YR5/8, red, fine grained, clay nodules. 2" clay @ bottom, then 2" hard cemented sandstone or claystone, 2.5YR5/8, red, with 10YR7/2, light gray mottling	Sample Retained For Chemical Analysis
				37				
				38	SP			
				39				
				40				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-14

SHEET NUMBER 3 OF 3

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	02/27/97
FINISH DATE:	02/27/97
START TIME:	13:45
FINISH TIME:	15:30

DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	7.71'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
ST	40 - 43	—	3.0	41	CH		CLAY, dry, 2.5YR5/8, red, mottling with 10YR7/2, light gray, fractures, black staining (probably manganese oxide) scattered throughout.	
				42				
				43				
ST	43 - 45	—	2.0	44			CLAY	Sample Collected In A Shelby Tube For Geotechnical Analysis
				45				
				46			Boring TD @ 45.0'	
				47				
				48				
				49				
				50				
				51				
				52				
				53				
				54				
				55				
				56				
				57				
				58				
				59				
				60				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-15

SHEET NUMBER 1 OF 2

DRILLING CONTRACTOR: Best Drilling Services

Location Diagram

CLIENT: Southern Pacific Lines

DRILLING METHOD: Hollow Stem Auger

PROJECT NAME: Houston Wood Preserving Works

PROJECT NUMBER: 44102069.07

SAMPLING METHOD: Split Spoon

PROJECT LOCATION: 4910 Liberty Road Houston, TX

SURFACE ELEVATION:

BORING LOCATION: East of Entrance Gate North Side of Office

TOC ELEVATION:

WATER LEVEL: 8.22'

START DATE: 02/25/97 FINISH DATE: 02/25/97

WATER ELEVATION:

START TIME: 13:30 FINISH TIME: 15:00

DATE: 03/25/97

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
							Fill, moist, sandy, 10YR5/3 brown	
SS	0 - 5	—	3.5	1	CL		CLAY, silty, slightly moist,	PP = 1.0
				2			10YR3/1 very dark gray	Sample Submitted For Chemical Analysis
				3				
				4				
				5	CH		CLAY, very slightly moist, 10YR3/1 Very dark gray	PP = 1.0
SS	5 - 10	—	5.0	6				PP = 1.5
				7				
				8			10YR6/1 Gray with 10YR6/8 brownish yellow mottling + 10YR4/1 dark gray Fe nodules;	
				9			8.5 - 9.0 calcareous nodule seam	PP = 3.0
				10				
SS	10 - 15	—	3.5	11				
				12				
				13	CL		Very silty	
				14				
				15				
SS	15 - 20	—	5.0	16	SP		SAND, saturated, 10YR7/1 light gray	
				17				
				18				
				19				
				20				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-15

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East of Entrance Gate North Side of Office
START DATE:	02/25/97
FINISH DATE:	02/25/97
START TIME:	13:30
FINISH TIME:	15:00
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	8.22'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	—	5.0	21	SP		SAND, saturated, 10YR7/1, light gray	Sample Submitted For Chemical Analysis
				22				
				23				
				24				
				25	CH		CLAY, very slightly moist, 10YR 7/1 Light gray with 10YR6/8 Browish yellow mottling, firm	PP = 3.0
SS	25 - 27	—	2.0	26				Sample Submitted For Chemical Analysis
				27				
				28			Boring TD @ 27'	
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-15C

SHEET NUMBER 1 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	FINISH DATE:
START TIME:	FINISH TIME:

DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				50				Boring advanced with 14-inch rotary bit using water as drilling fluid
				51				
				52				
				53	CH		CLAY, reddish brown; hard; medium plasticity	
				54				
				55				
				56				
				57				
				58	ML		SILT, reddish brown; firm; non-plastic; wet with trace clay and sand	Boring advanced with 8 1/4-inch O.D., 4 1/4-inch I.D. HSA
				59				
CB1			4.2	60				
				61				
				62				
				63			2" thick layer at CaCO3	
				64			cemented sand @ 63.5'	
	65.0			65			grades with some sand	
CB2				66	SP		Silty SAND; reddish brown, very fine grained; wet	
				67				
				68			grading very fine to fine grained	
				69				
	70.0			70			~2" thick layer CaCO3 cemented sand @ 70.0'	

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-15C

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	
START DATE:	4/25/97
FINISH DATE:	04/25/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	C I	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB3			4.2	70				For geolog, to 50 feet, see log of boring MW-15
				71				
				72				
				73				
				74	CL		Silty CLAY; reddish brown; hard low plasticity; moist	
	75.0			75				Bottom of boring @ 75.0' Install MW-15C on 4/28/97
				76				
				77				
				78				
				79				
				80				
				81				
				82				
				83				
				84				
				85				
				86				
				87				
				88				
				89				

Geologist: R. Lamb

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-16

SHEET NUMBER 1 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	Adjacent to Main Line
START DATE:	02/26/97
FINISH DATE:	02/26/97
START TIME:	13:50
FINISH TIME:	15:30
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	7.41'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	1.5	1	ML		SILT, moist, 10YR3/3, dark brown, gravel	Sample Retained For Chemical Analysis
				2				
				3				
				4				
				5				
SS	5 - 10	—	5.0	6	CL		CLAY, silty, moist, 10YR3/3, dark brown, calcareous nodules throughout	
				7				
				8				
				9				
				10				
SS	10 - 15	—	5.0	11				
				12				
				13				
				14				
				15				
SS	15 - 20	—	5.0	16	ML		SILT, sandy, wet, 10YR7/1 light gray, green tint,odor	
				17				
				18				
				19	SM		SAND, silty, wet, 10YR7/1 light gray, green tint, odor	
				20				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-16

SHEET NUMBER 2 OF 2

IENT:	Southern Pacific Lines
ROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road, Houston, TX
BORING LOCATION:	Adjacent to Main Line
START DATE:	02/26/97
FINISH DATE:	02/26/97
START TIME:	13:50
FINISH TIME:	15:30
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	7.41'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
				21			SAND, silty, wet, 10YR7/1, light gray, odor	Sample Retained For Chemical Analysis
				22	SM			
				23				
				24				
				25			CLAY, silty, slightly moist,	
				26			10YR4/8 red with 10YR7/1 light gray mottling, firm, odor	Sample Retained For Chemical Analysis
				27	CL			
				28				
				29				
				30				
				31			Boring TD = 30.0'	
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-17

SHEET NUMBER 1 OF 2

DRILLING CONTRACTOR: Best Drilling Services

DRILLING METHOD: Hollow Stem Auger

SAMPLING METHOD: Split Spoon

SURFACE ELEVATION:

TOC ELEVATION:

WATER LEVEL: 9.97'

WATER ELEVATION:

DATE: 03/25/97

Location Diagram

CLIENT: Southern Pacific Lines

PROJECT NAME: Houston Wood Preserving Works

PROJECT NUMBER: 44102069.07

PROJECT LOCATION: 4910 Liberty Road Houston, TX

BORING LOCATION: East of Entrance Gate

START DATE: 02/25/97 FINISH DATE: 02/25/97

START TIME: 15:30 FINISH TIME: 17:45

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	1.5	1	CL	Fill, moist, gravel, CLAY, silty, slightly moist, 10YR3/1 very dark gray	
				2			
				3			
				4			
				5	CH	CLAY; very slightly moist	
SS	5 - 10	—	5.0	6	CL	CLAY; silty; 10YR6/1; gray, very slightly moist; mottling with 10YR6/8 brownish yellow and 10YR3/1 very dark gray; scattered Fe nodules, scattered calcareous nodules (1/4" - 3/4")	PP = 3.0
				7			
				8			
				9			
				10			
SS	10 - 15	—	3.5	11		Silt content increases	PP = 3.0
				12			
				13			
				14	SM	SAND, moist, very silty, 10YR6/1 gray, greenish tint, odor	
				15			
SS	15 - 20	—	5.0	16		Saturated, slightly silty	
				17			
				18			
				19			
				20			

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-17

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East of Entrance Gate
START DATE:	02/25/97
FINISH DATE:	02/25/97
START TIME:	15:30
FINISH TIME:	17:45
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	9.97'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	1.5	2.5	21			SAND, saturated, 10YR6/1 gray, odor, brown staining	
				22				
				23				
				24				
				25				
SS	25 - 30	—	2.5	26	SP		10YR7/3 very pale brown	Sample Submitted For Chemical Analysis
				27				
				28				
				29				
				30				
SS	30 - 35	—	5.0	31			CLAY, moist, 10YR4/8 red with 5YR7/1 light gray mottling, Highly fractured, odor, contaminant staining	Sample Submitted For Chemical Analysis
				32				
				33	CH			
				34				
				35				
				36			Boring TD @ 35 Feet	
				37				
				38				
				39				
				40				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-18

SHEET NUMBER 1 OF 2

ENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East End
START DATE:	02/26/97
FINISH DATE:	02/26/97
START TIME:	10:10
FINISH TIME:	12:30
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	15.41'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	0 - 5	—	5.0	1	FILL	Fill, slightly moist, 10YR3/1, very dark gray to 10YR2/1, black, gravel, brick, roots	Sample Retained For Chemical Analysis
				2			
				3		CLAY, silty, very slightly moist, very dark gray 10YR3/1	
				4			
				5			
SS	5 - 10	—	5.0	6		Silt decreases, 10YR6/1 gray, odor	PP = 3.0
				7			
				8		50% calcareous nodules	
				9	CL	Calcareous nodules decrease, mottling with 10YR6/8 brownish yellow and 10YR4/1 dark gray	PP = 2.5
				10			
SS	10 - 15	—	5.0	11		Scattered calcareous and FE nodules	PP = 2.5
				12			
				13			
				14			
				15		Very silty	PP = 1.0
SS	15 - 20	—	5.0	16		SILT, clayey, moist, 10YR6/1, gray, mottling with 10YR4/1, dark gray, and 2.5R4/8, red, scattered	
				17		calcareous and Fe nodules, green	
				18	ML	staining, no odor.	
				19			
				20	SM	SAND, silty, moist, 10YR6/1 gray, green tint, odor	

Geologist: B. Goldsby

Checked By:

LEGEND:

SS - Split Spoon

CI - Completion Interval

OVM - Organic Vapor Meter

PP - Pocket Penetrometer

TOC - Top Of Casing

TerraNext

LOG OF BORING No.: MW-18

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Preserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East End
START DATE:	02/26/97
FINISH DATE:	02/26/97
START TIME:	10:10
FINISH TIME:	12:30
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	Split Spoon
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	15.41'
WATER ELEVATION:	
DATE:	03/25/97

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
SS	20 - 25	—	5.0	21	SP		SAND, saturated, 10YR6/2, light brownish gray, greenish staining, odor, calcareous material at bottom.	Sample Retained For Chemical Analysis
				22				
				23				
				24				
				25				
SS	25 - 30	—	3.75	26				
				27				
				28				
				29				
				30				
SS	30 - 35	—	5.0	31	CH		CLAY, slightly moist, 2.5R4/8, red, with mottling 10YR7/1, light gray, firm, hard, fractures, odor.	PP = 3.0 Sample Retained For Chemical Analysis
				32				
				33			Very slightly moist, 5YR6/6 reddish yellow with light gray 10YR7/1 mottling, hard, firm, no fractures, no odor, silt content increases, calcareous nodules.	PP = 4.0
				34				
				35				
				36			Boring TD = 35'	
				37				
				38				
				39				
				40				

Geologist: B. Goldsby
Checked By:

LEGEND:
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

Terranext

LOG OF BORING No.: MW-18C

SHEET NUMBER 1 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East corner of site
START DATE:	04/24/97
FINISH DATE:	04/25/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	SOIL DESCRIPTION AND DRILLING CONDITIONS
				51		
				52		
				53		
				54		
CB1			4.7'	55	CH	CLAY; reddish brown; hard; medium plasticity; moist
				56		
				57		
				58		
				59		
	60.0			60		
CB 2			3.7	61		
				62		
				63		
				64	ML	SILT; reddish brown; firm; non-plastic; dilatent; moist
	65.0			65	CL	Silty CLAY; reddish brown; very stiff; low plasticity; moist with CaCO3 nodules, pea size
CB 3			3.4	66	SP	Silty SAND; reddish brown; mild creosote odor very fine grained; wet

NOTES:

Boring Advanced with 8 1/4-inch O.D., 4 1/4-inch I.D. HSA

See log of MW-18 for geology from 0 to 50 feet.

TerraNext

LOG OF BORING No.: MW-18C

SHEET NUMBER 2 OF 2

CLIENT:	Southern Pacific Lines
PROJECT NAME:	Houston Wood Perserving Works
PROJECT NUMBER:	44102069.07
PROJECT LOCATION:	4910 Liberty Road Houston, TX
BORING LOCATION:	East corner of site
START DATE:	04/23/97
FINISH DATE:	04/24/97
START TIME:	
FINISH TIME:	
DRILLING CONTRACTOR:	Best Drilling Services
DRILLING METHOD:	Hollow Stem Auger
SAMPLING METHOD:	CME 5-foot Sampler
SURFACE ELEVATION:	
TOC ELEVATION:	
WATER LEVEL:	
WATER ELEVATION:	
DATE:	

Location Diagram

SAMPLER TYPE	SAMPLE DEPTH	OVM (PPM)	RECOVERY (FT)	DEPTH IN FEET	SOIL GRAPH	CI	SOIL DESCRIPTION AND DRILLING CONDITIONS	NOTES:
CB 4			3.2	71			grading fine to very fine grained	
				72			3" thick clay lens @ 71.5'	
				73			grading fine to medium grained; creosote odor	
				74			grading with trace gravel and oil sheen	
	75.0			75			and creosote odor grading fine to very fine grained; oil sheen grades out	
CB 5			4.1	76	CH		CLAY; reddish brown; hard; medium plasticity	
				77				
				78				
				79			grading reddish brown; and light gray	
	80.0			80			grading light gray	
				81				Bottom of boring @ 80.0'
				82				Install monitoring well 18C on 4/24/97
				83				
				84				
				85				
				86				
				87				
				88				
				89				
				90				

Geologist: R. Lamb

Checked By:

LEGEND:

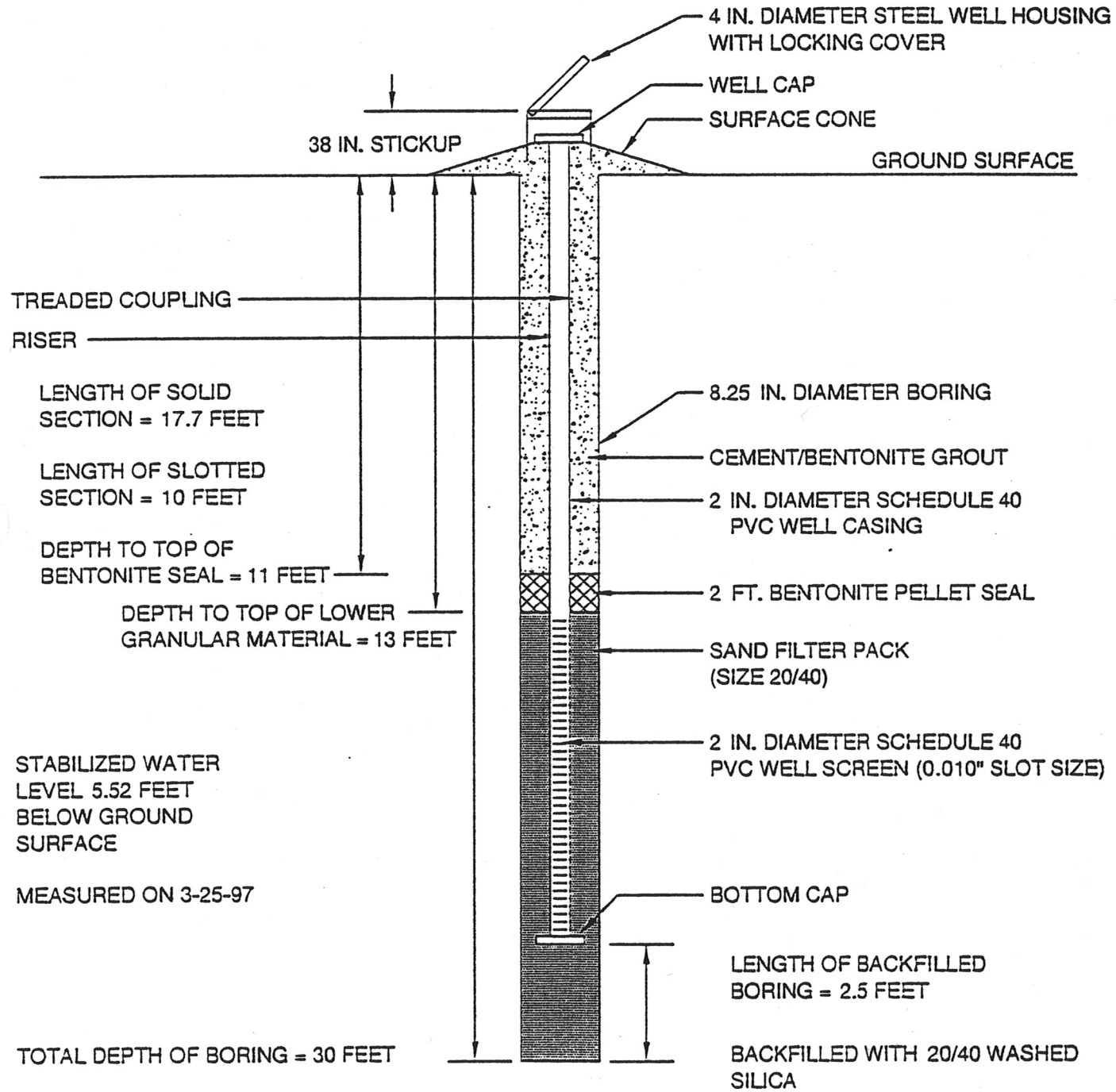
SS - Split Spoon

CI - Completion Interval
OVM - Organic Vapor Meter
PP - Pocket Penetrometer
TOC - Top Of Casing

ATTACHMENT III

MONITORING WELL CONSTRUCTION DETAILS

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-12A
JOB NUMBER: 44102069 INSTALLATION DATE: 2-27-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
ER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
TER PACK MATERIAL: 20/40 Washed Silica Sand REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



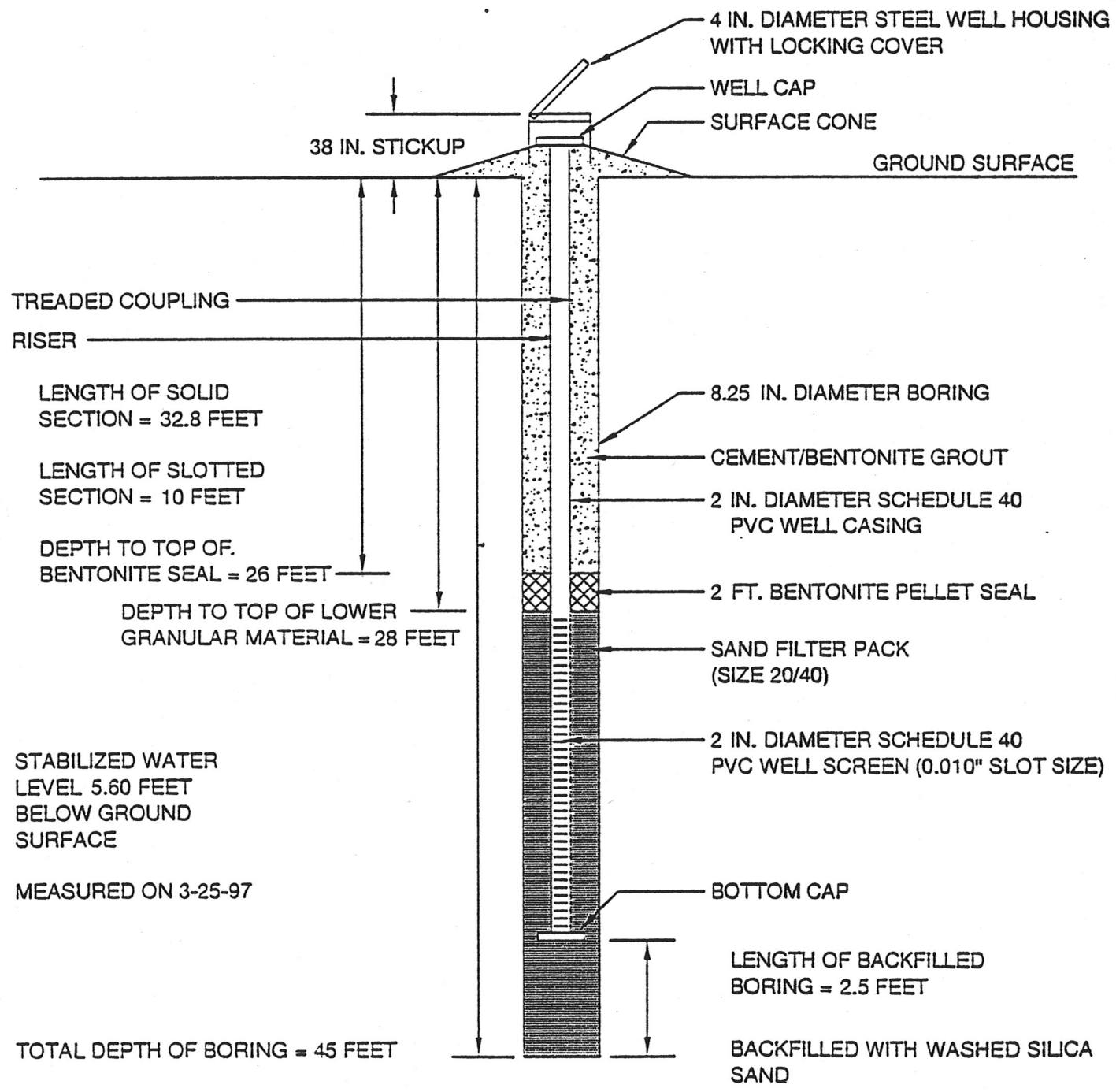
GROUT

BENTONITE

GRANULAR BACKFILL

Terranext

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-12B
JOB NUMBER: 44102069 INSTALLATION DATE: 2-27-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
SER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
_TER PACK MATERIAL: Washed Silica Sand REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling

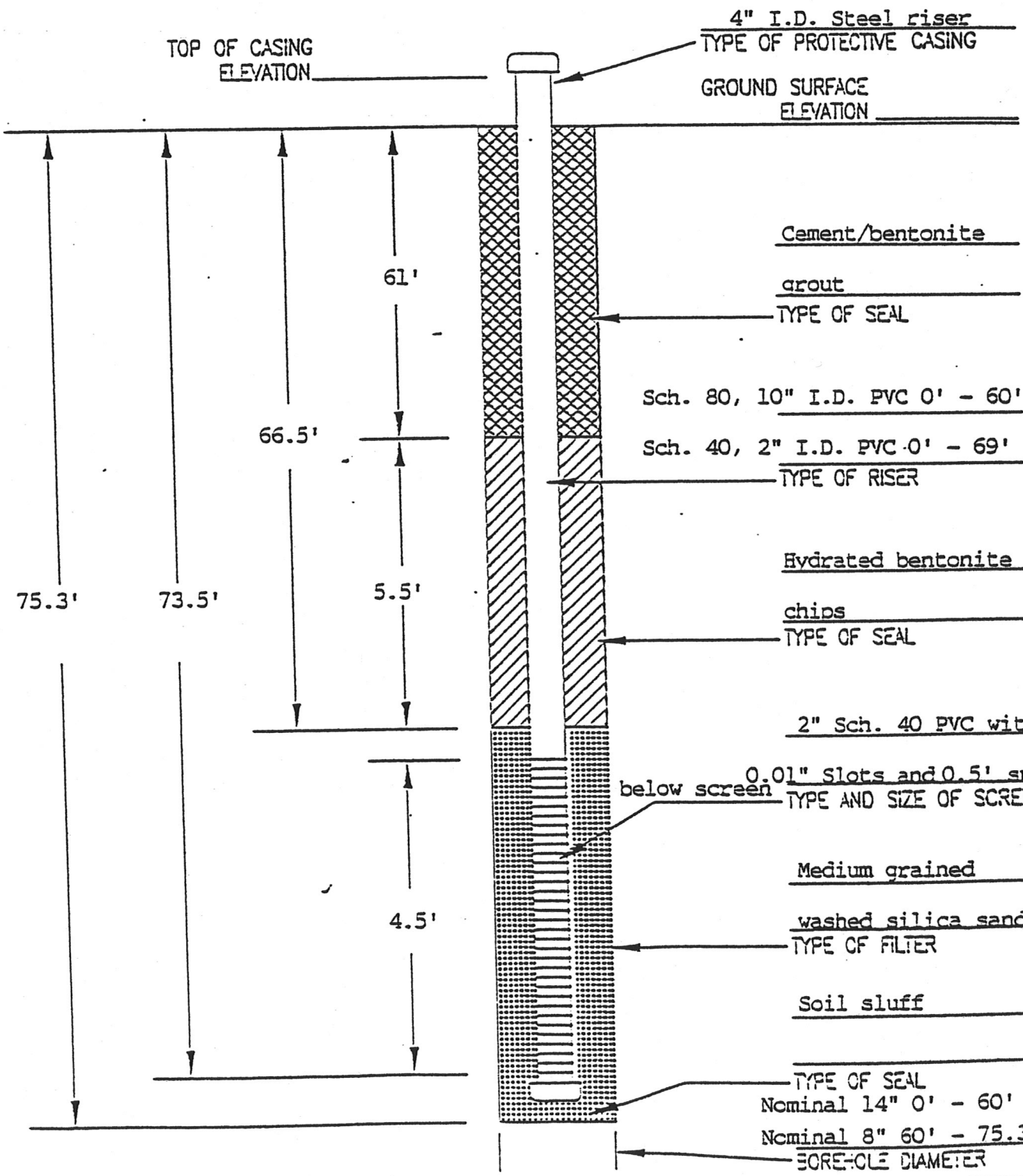


TerraNext

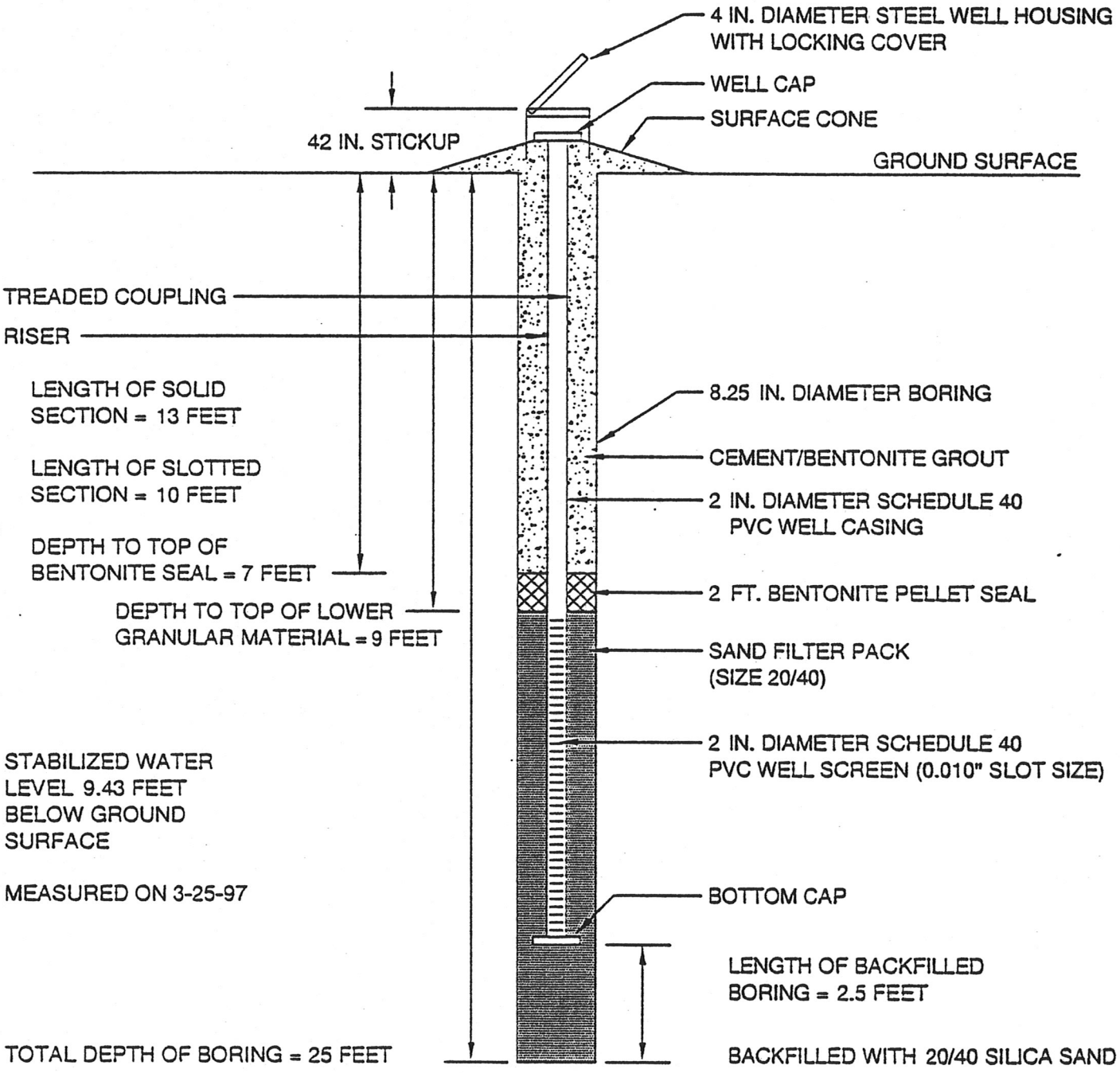
MW 12C CLIENT Union Pacific Railroad

JOB # 44102069 PROJECT Houston Wood Preserving Works

MONITORING WELL INSTALLATION DIAGRAM



JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-13
JOB NUMBER: 44102069 INSTALLATION DATE: 2-25-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
RISER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
FILTER PACK MATERIAL: 20/40 Washed Silica REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



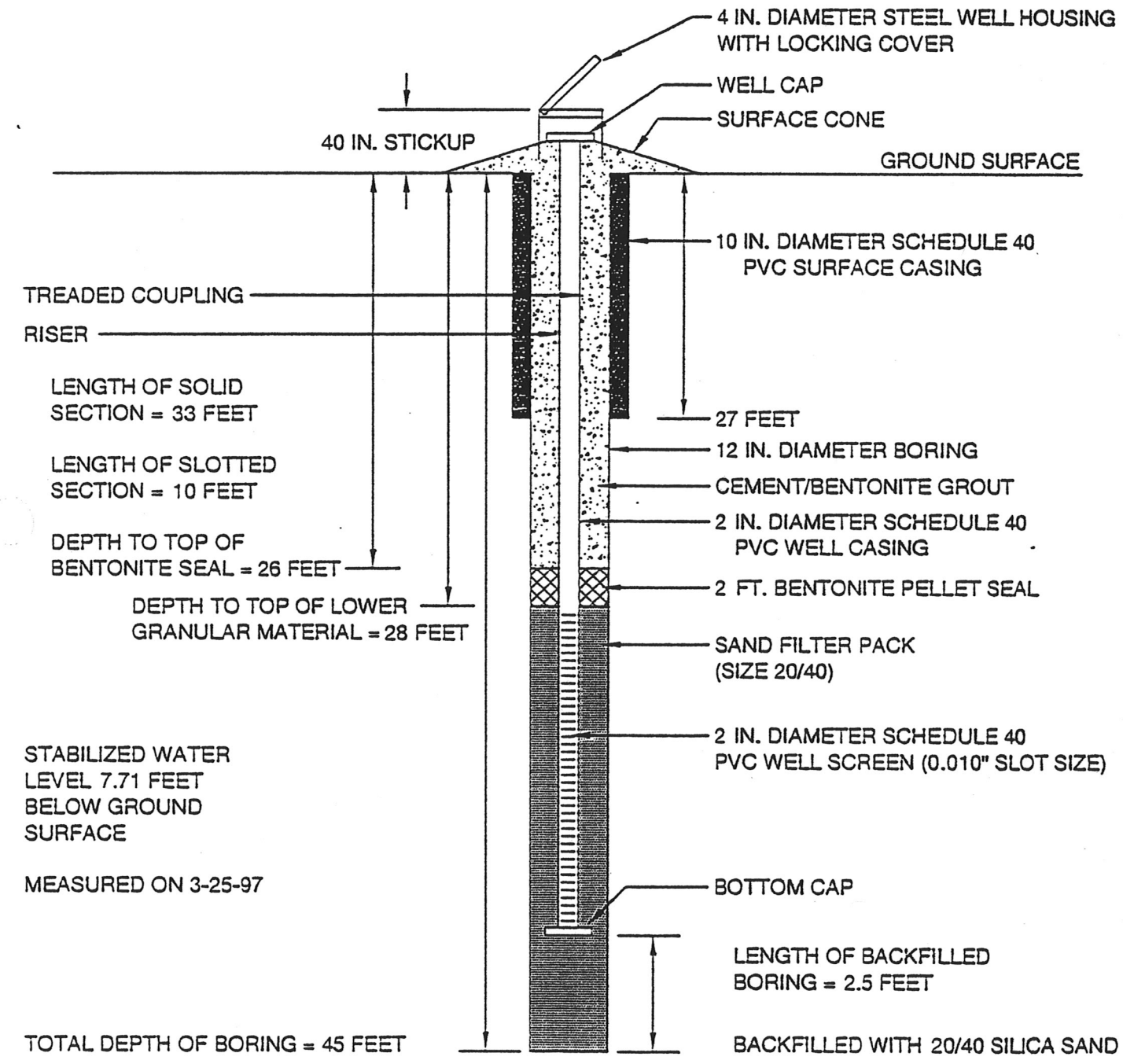
GROUT

BENTONITE

GRANULAR BACKFILL

TerraNext

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-14
JOB NUMBER: 44102069 INSTALLATION DATE: 2-27-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
RISER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
FILTER PACK MATERIAL: Washed Silica Sand REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



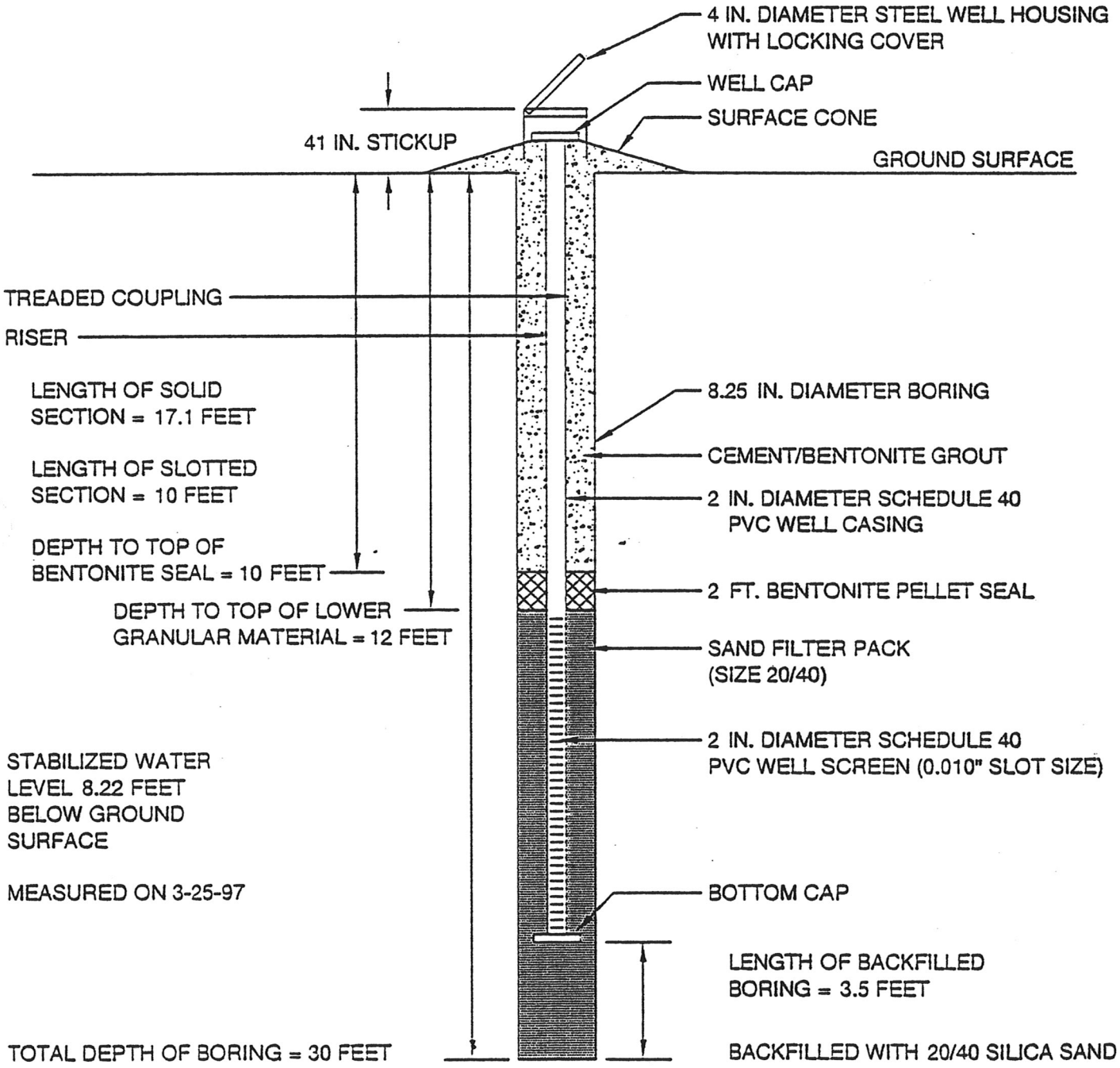
GROUT

BENTONITE

GRANULAR BACKFILL

TerraNext

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-15
JOB NUMBER: 44102069 INSTALLATION DATE: 2-25-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
[illegible]ER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
[illegible]ER PACK MATERIAL: 20/40 Washed Silica REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



GROUT

BENTONITE

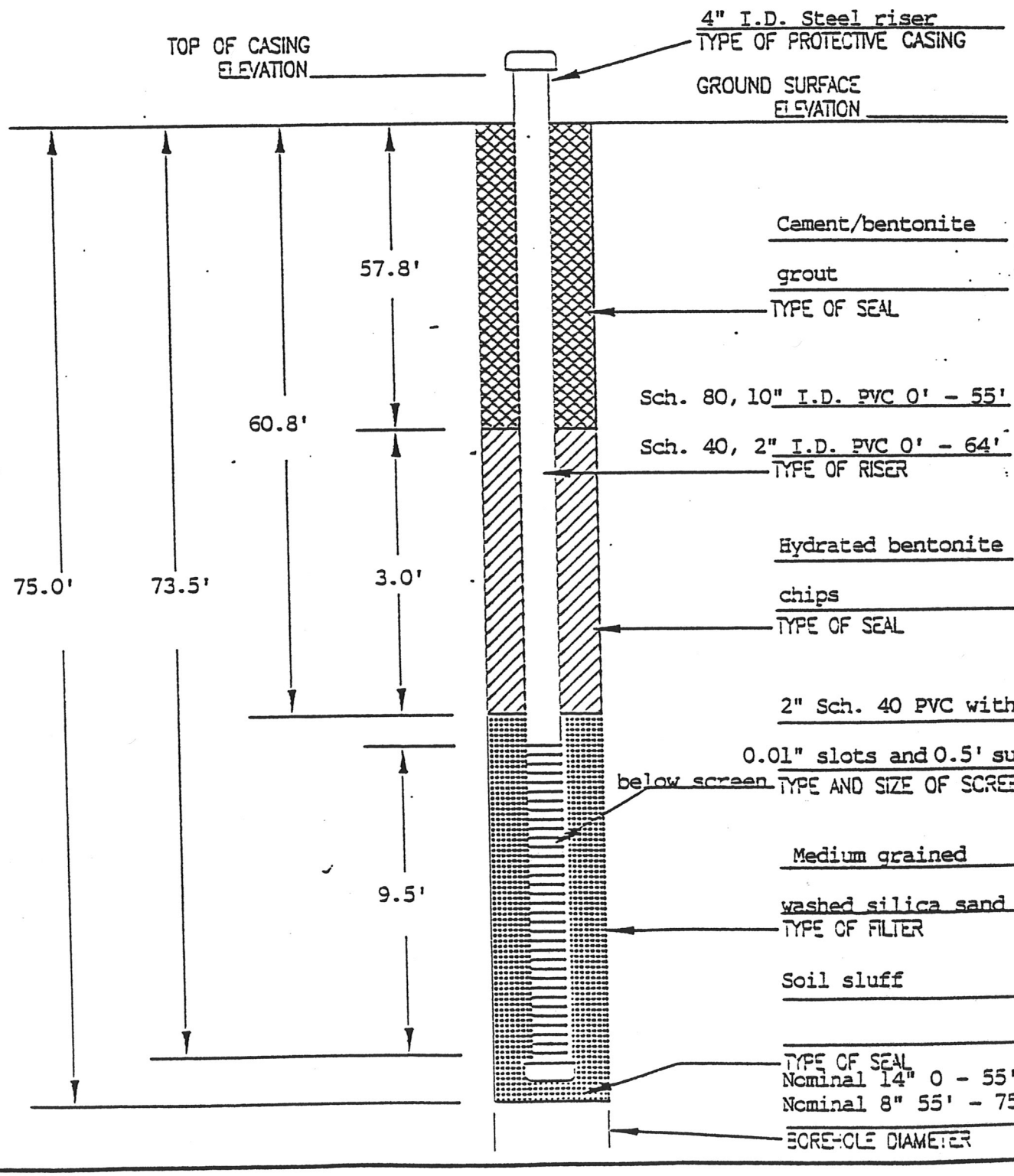
GRANULAR BACKFILL

Terranext

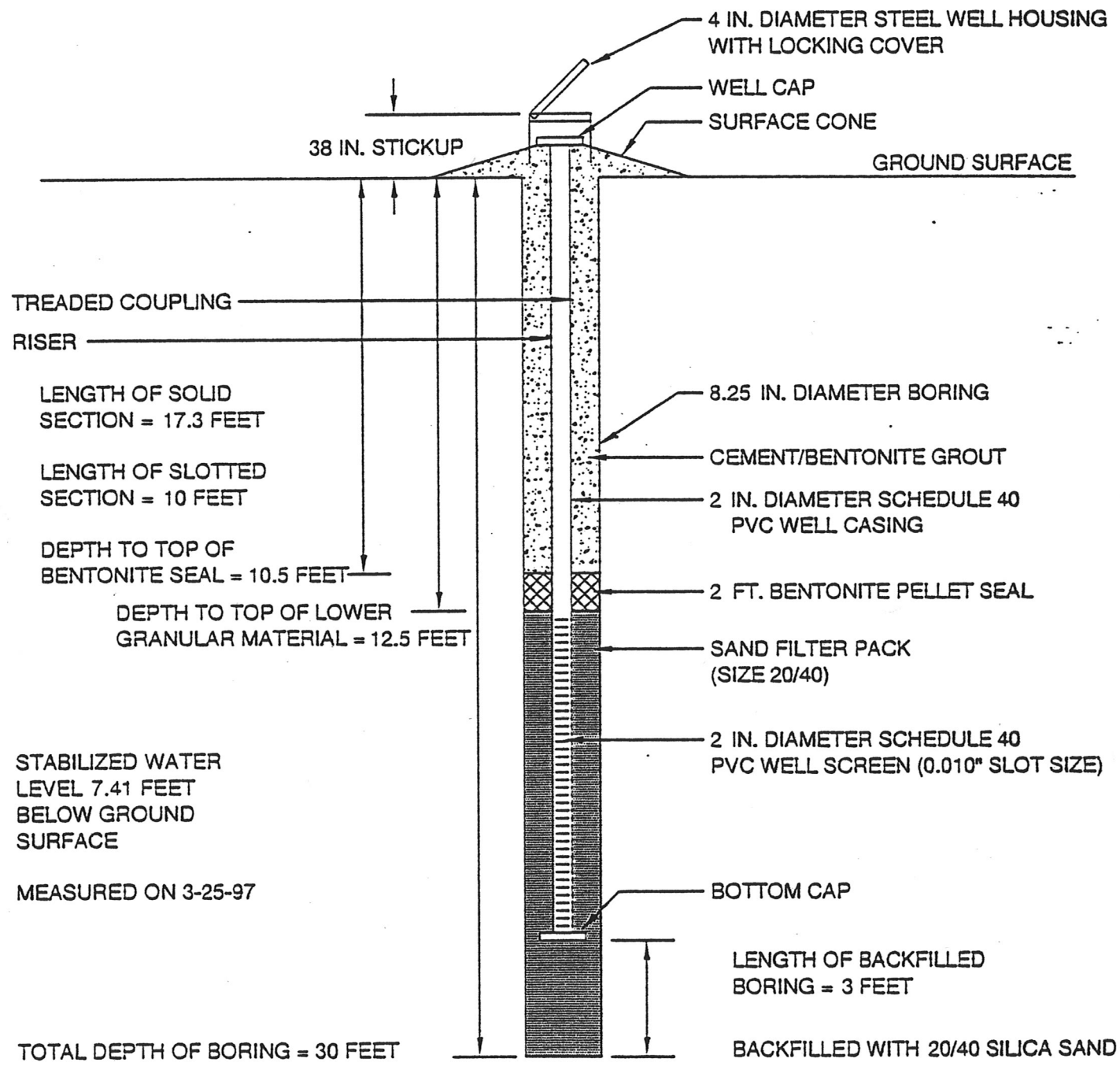
MW 15C CLIENT Union Pacific Railroad

JOB # 44102069 PROJECT Houston Wood Preserving Works

MONITORING WELL INSTALLATION DIAGRAM



JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-16
JOB NUMBER: 44102069 INSTALLATION DATE: 2-26-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
RISER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
FILTER PACK MATERIAL: 20/40 Washed Silica Sand REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



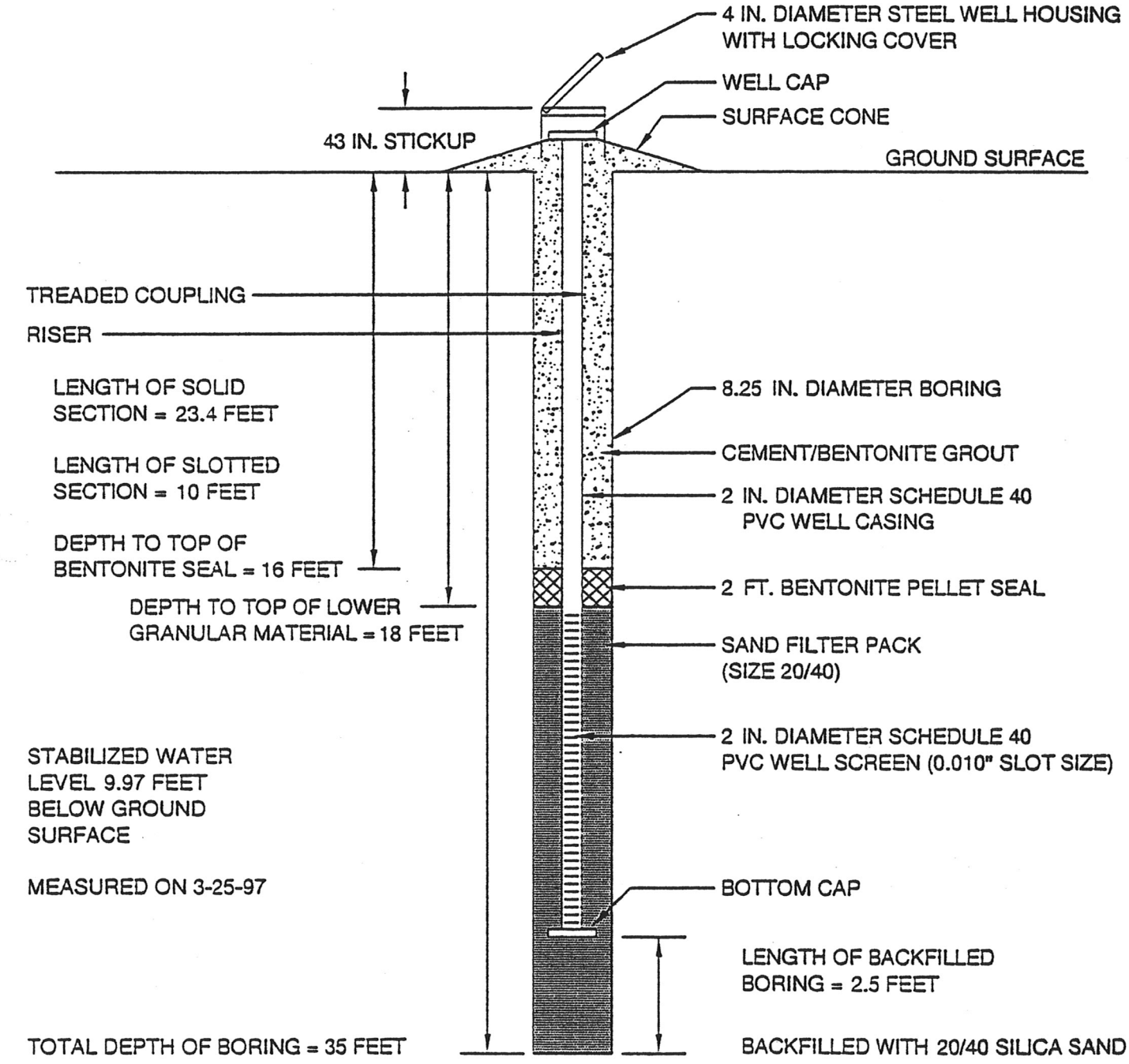
GROUT

BENTONITE

GRANULAR BACKFILL

Terranext

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-17
JOB NUMBER: 44102069 INSTALLATION DATE: 3-25-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
RISER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER: 8 1/4"
ER PACK MATERIAL: 20/40 Washed Silica Sand REPRESENTATIVE: Goldsby
LLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



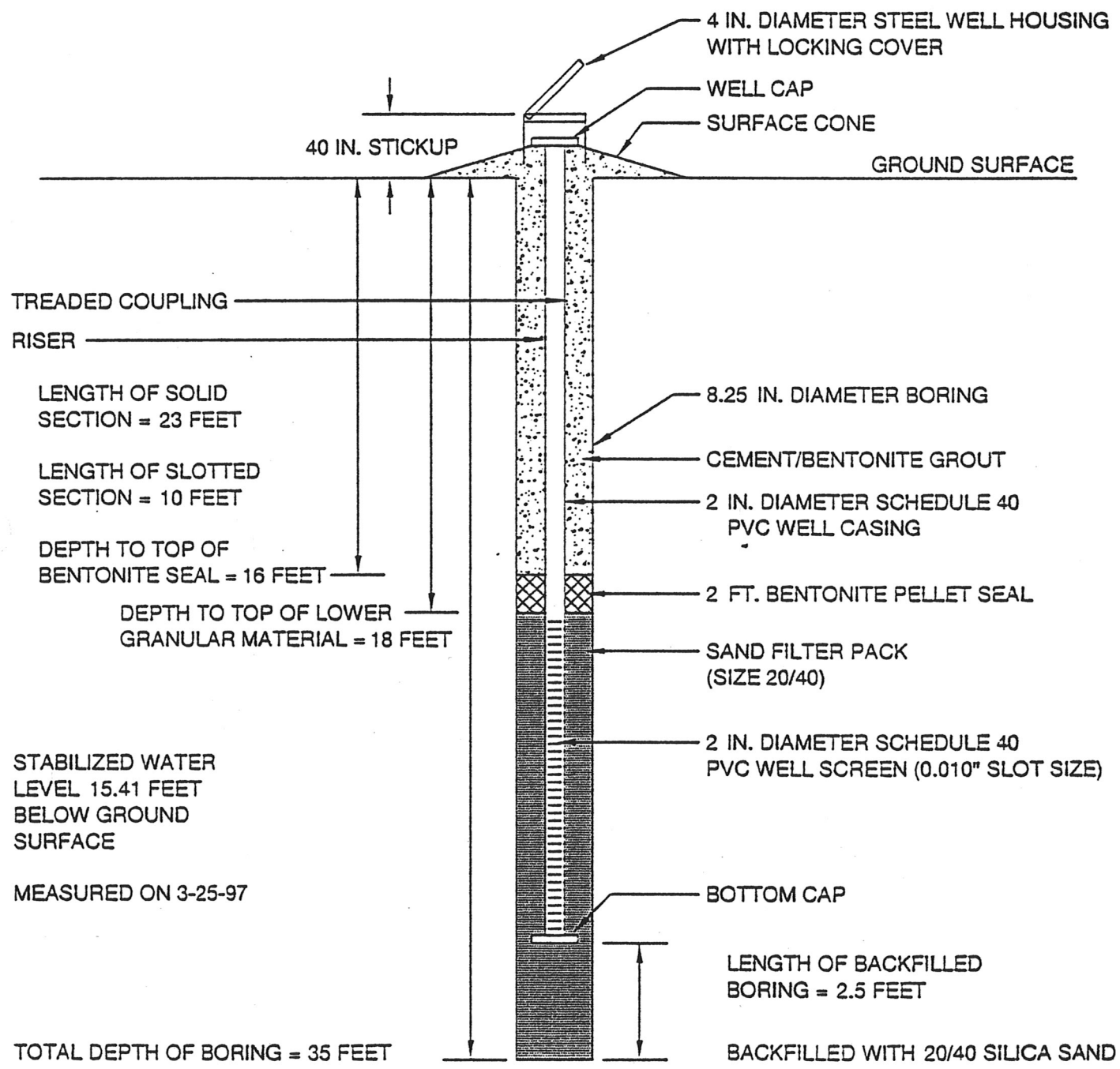
GROUT

BENTONITE

GRANULAR BACKFILL

TerraNext

JOB NAME: Houston Wood Preserving Works WELL NUMBER: MW-18
JOB NUMBER: 44102069 INSTALLATION DATE: 2-26-97 LOCATION:
DATUM FOR WATER LEVEL MEASUREMENT: Top of PVC Casing
DATUM ELEVATION: GROUND SURFACE ELEVATION:
SCREEN DIAMETER AND MATERIAL: 2" Schedule 40 PVC SLOT SIZE: 0.010"
RISER DIAMETER AND MATERIAL: 2" Schedule 40 PVC BOREHOLE DIAMETER:
FILTER PACK MATERIAL: 20/40 Washed Silica REPRESENTATIVE: Goldsby
DRILLING TECHNIQUE: Hollow Stem Auger DRILLING CONTRACTOR: Best Drilling



GROUT

BENTONITE

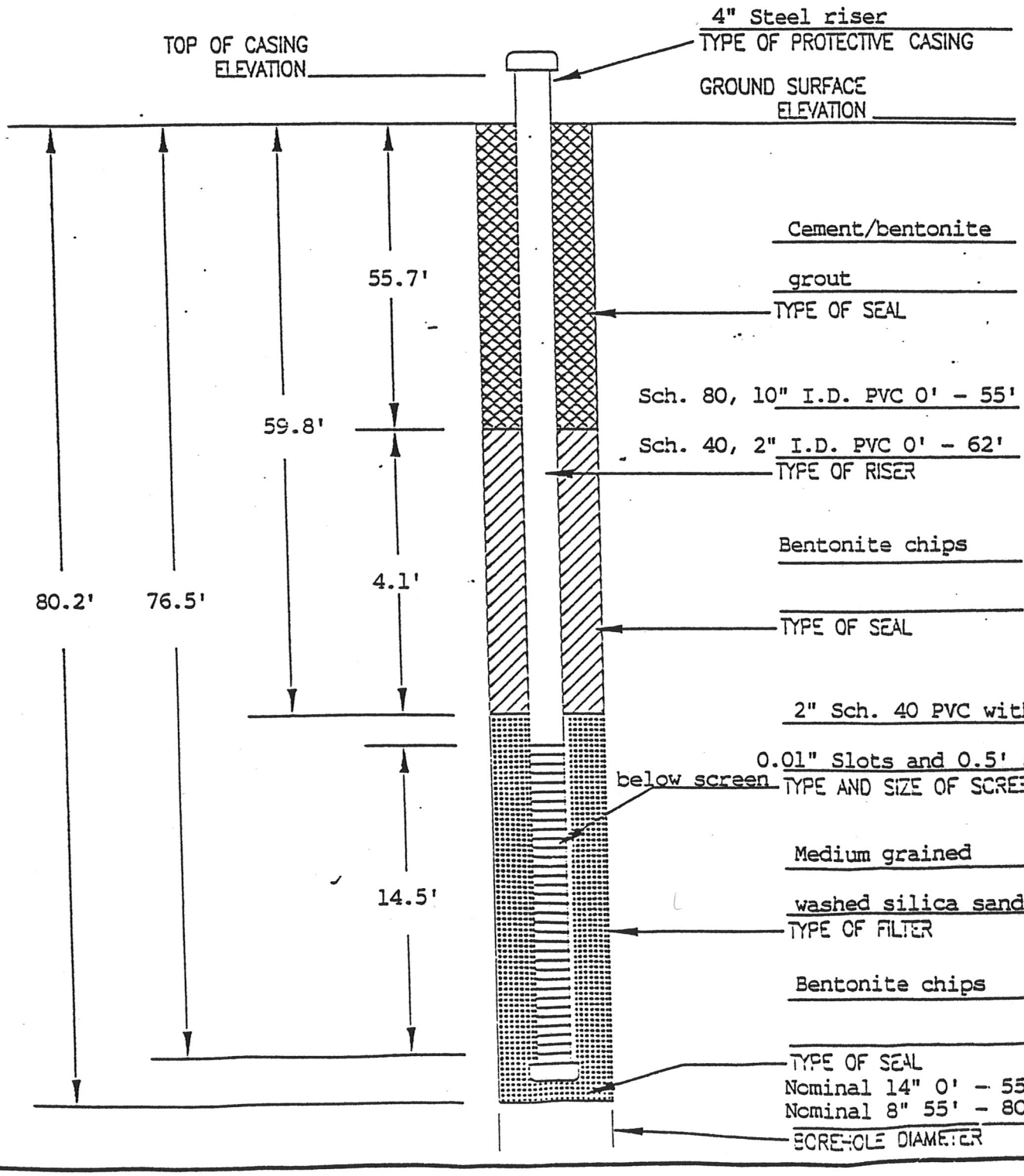
GRANULAR BACKFILL

TerraNext

MW 18C CLIENT Union Pacific Railroad

JOB # 44102069 PROJECT Houston Wood Preserving Works

MONITORING WELL INSTALLATION DIAGRAM



Laboratory Analytical Reports

Appendix B

February 13, 1998

W.O. #422-09

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

ON-SITE SOIL BORINGS

COPY

April 07, 1997
Report No.: 00060264
Section A Page 1

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW13-S00
SAMPLE NO: H446071
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 25-FEB-97 1020
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	400	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	490	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW13-S00
SAMPLE NO: H446071

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 07, 1997
Report No.: 00060264

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW13-S015
SAMPLE NO: H446072
SAMPLE MATRIX: SOIL

DATE SAMPLED: 25-FEB-97 1032
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW13-S015
SAMPLE NO: H446072

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW13-S021
SAMPLE NO: H446073
SAMPLE MATRIX: SOIL

DATE SAMPLED: 25-FEB-97 1034
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW13-S021
SAMPLE NO: H446073

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 07, 1997
Report No.: 00060264
Section A Page 7

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW15-S00
SAMPLE NO: H446074
SAMPLE MATRIX: SOIL

DATE SAMPLED: 25-FEB-97 1330
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW15-S00
SAMPLE NO: H446074

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 9

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW15-S020
SAMPLE NO: H446075
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 25-FEB-97 1345
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	6	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	6	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW15-S020
SAMPLE NO: H446075

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 11

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW15-S025
SAMPLE NO: H446076
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 25-FEB-97 1347
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	6	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW15-S025
SAMPLE NO: H446076

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 13

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW17-S025
SAMPLE NO: H446077
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 25-FEB-97 1622
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25 *	ug/kg
		Benzene	5	50	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	125	1,200	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	125	1,000	ug/kg
		Xylenes (total)	125	3,500	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300 *	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	10	32,000	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	10	27,000	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	17,000	ug/kg
		Benzo(a)anthracene	10	< 3,300	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	3,300	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	24,000	ug/kg
		Fluoranthene	10	23,000	ug/kg
		Fluorene	10	28,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	25	120,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	25	69,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	14,000	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW17-S025
SAMPLE NO: H446077

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: * The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 15

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW17-S030
SAMPLE NO: H446078
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 25-FEB-97 1640
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25 *	ug/kg
		Benzene	5	< 25	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	5	700	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	5	460	ug/kg
		Xylenes (total)	5	2,400	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	30	< 9,900*#	ug/kg
		2,4-Dimethylphenol	30	< 9,900	ug/kg
		2,4-Dinitrotoluene	30	< 9,900	ug/kg
		2,6-Dinitrotoluene	30	< 9,900	ug/kg
		2-Chloronaphthalene	30	< 9,900	ug/kg
		2-Methylnaphthalene	30	76,000	ug/kg
		4,6-Dinitro-o-cresol	30	< 50,000	ug/kg
		4-Nitrophenol	30	< 50,000	ug/kg
		Acenaphthene	30	26,000	ug/kg
		Acenaphthylene	30	< 9,900	ug/kg
		Anthracene	30	21,000	ug/kg
		Benzo(a)anthracene	30	< 9,900	ug/kg
		Benzo(a)pyrene	30	< 9,900	ug/kg
		Chrysene	30	< 9,900	ug/kg
		Di-n-butyl phthalate	30	< 9,900	ug/kg
		Dibenzofuran	30	39,000	ug/kg
		Fluoranthene	30	30,000	ug/kg
		Fluorene	30	24,000	ug/kg
		N-Nitrosodiphenylamine	30	< 9,900	ug/kg
		Naphthalene	50	260,000	ug/kg
		Nitrobenzene	30	< 9,900	ug/kg
		Pentachlorophenol	30	< 50,000	ug/kg
		Phenanthrene	30	92,000	ug/kg
		Phenol	30	< 9,900	ug/kg
		Pyrene	30	17,000	ug/kg
		bis(2-Chloroethoxy)methane	30	< 9,900	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW17-S030
SAMPLE NO: H446078

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	30	< 9,900	ug/kg

COMMENTS: * The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.
The internal standard recoveries were outside of QC acceptance limits due to matrix interferences, which was confirmed by re-analysis.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW18-S00
SAMPLE NO: H446079
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 26-FEB-97 1010
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	125	< 620 *	ug/kg
		Benzene	125	< 620	ug/kg
		Chlorobenzene	125	< 620	ug/kg
		Ethylbenzene	125	4,200	ug/kg
		Methylene chloride	125	< 620	ug/kg
		Toluene	125	1,400	ug/kg
		Xylenes (total)	625	42,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300 *	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	10	6,900	ug/kg
		4,6-Dinitro-o-cresol	10	< 3,300	ug/kg
		4-Nitrophenol	10	< 3,300	ug/kg
		Acenaphthene	10	6,300	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	9,200	ug/kg
		Benzo(a)anthracene	10	< 3,300	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	3,300	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	4,000	ug/kg
		Fluoranthene	10	16,000	ug/kg
		Fluorene	10	5,600	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	10	46,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 3,300	ug/kg
		Phenanthrene	10	17,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	9,900	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 18

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW18-S00
SAMPLE NO: H446079

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: * The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW18-S025
SAMPLE NO: H446080
SAMPLE MATRIX: SOIL

DATE SAMPLED: 26-FEB-97 1042
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	9	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	13	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	6	ug/kg
		Xylenes (total)	1	39	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW18-S025
SAMPLE NO: H446080

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW18-S030
SAMPLE NO: H446081
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 26-FEB-97 1050
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW18-S030
SAMPLE NO: H446081

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 23

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW16-S00
SAMPLE NO: H446082
SAMPLE MATRIX: SOIL

DATE SAMPLED: 26-FEB-97 1355
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300*	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	10	< 3,300	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	10	< 3,300	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	< 3,300	ug/kg
		Benzo(a)anthracene	10	< 3,300	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	< 3,300	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	< 3,300	ug/kg
		Fluoranthene	10	< 3,300	ug/kg
		Fluorene	10	< 3,300	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	10	< 3,300	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	10	< 3,300	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	< 3,300	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW16-S00
SAMPLE NO: H446082

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: * The reporting limits are elevated due to the dilution required because of matrix interferences.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW16-S020
SAMPLE NO: H446083
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 26-FEB-97 1415
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 26

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW16-S020
SAMPLE NO: H446083

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW16-S025
SAMPLE NO: H446084
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 26-FEB-97 1420
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	6	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 28

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW16-S025
SAMPLE NO: H446084

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW12A-S00
SAMPLE NO: H446085
SAMPLE MATRIX: SOIL

DATE SAMPLED: 27-FEB-97 0808
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW12A-S00
SAMPLE NO: H446085

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 31

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW12A-S020
SAMPLE NO: H446086
SAMPLE MATRIX: SOIL

DATE SAMPLED: 27-FEB-97 0830
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW12A-S020
SAMPLE NO: H446086

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW12A-S025
SAMPLE NO: H446087
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 27-FEB-97 0843
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW12A-S025
SAMPLE NO: H446087

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW12B-S030
SAMPLE NO: H446088
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 27-FEB-97 1025
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	620	ug/kg
		Fluorene	1	360	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	1,100	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW12B-S030
SAMPLE NO: H446088

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 37

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44042
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW12B-S040
SAMPLE NO: H446089
SAMPLE MATRIX: SOIL

DATE SAMPLED: 27-FEB-97 1053
DATE RECEIVED: 27-FEB-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section A Page 38

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW12B-S040
SAMPLE NO: H446089

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 07, 1997
Report No.: 00060264
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW13-S00								SAMPLE NO: H446071		
1	OVTCS2	71950	72083	NA			19-8260A	04-MAR-97 2015	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	17-MAR-97 0758	EAY	GCMSA
SAMPLE ID: HWPW-MW13-S015								SAMPLE NO: H446072		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1254	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	17-MAR-97 0848	EAY	GCMSA
SAMPLE ID: HWPW-MW13-S021								SAMPLE NO: H446073		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1328	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	17-MAR-97 0936	EAY	GCMSA
AMPLE ID: HWPW-MW15-S00								SAMPLE NO: H446074		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1359	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	17-MAR-97 1115	EAY	GCMSA
SAMPLE ID: HWPW-MW15-S020								SAMPLE NO: H446075		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1433	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	17-MAR-97 1204	EAY	GCMSA
SAMPLE ID: HWPW-MW15-S025								SAMPLE NO: H446076		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1506	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 1546	EAY	GCMSA
SAMPLE ID: HWPW-MW17-S025								SAMPLE NO: H446077		
1	OVTCS2	72161	72083	NA			19-8260A	09-MAR-97 1839	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	03-APR-97 1355	EAY	GCMSA
SAMPLE ID: HWPW-MW17-S030								SAMPLE NO: H446078		
1	OVTCS2	72083	72083	NA			19-8260A	07-MAR-97 1912	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	22-MAR-97 1837	EAY	GCMSA

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW18-S00								SAMPLE NO: H446079		
1	OVTCS2	72161	72083	NA			19-8260A	09-MAR-97 1945	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	22-MAR-97 1926	EAY	GCMSA
SAMPLE ID: HWPW-MW18-S025								SAMPLE NO: H446080		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1539	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 1814	EAY	GCMSA
SAMPLE ID: HWPW-MW18-S030								SAMPLE NO: H446081		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1613	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 1903	EAY	GCMSA
AMPLE ID: HWPW-MW16-S00								SAMPLE NO: H446082		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1646	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	03-APR-97 1445	EAY	GCMSA
SAMPLE ID: HWPW-MW16-S020								SAMPLE NO: H446083		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1719	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	19-MAR-97 0353	EAY	GCMSA
SAMPLE ID: HWPW-MW16-S025								SAMPLE NO: H446084		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1752	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 1952	EAY	GCMSA
SAMPLE ID: HWPW-MW12A-S00								SAMPLE NO: H446085		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1826	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 2042	EAY	GCMSA
SAMPLE ID: HWPW-MW12A-S020								SAMPLE NO: H446086		
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1859	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	21-MAR-97 2131	EAY	GCMSA

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW12A-S025									SAMPLE NO: H446087	
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 1932	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	18-MAR-97 2132	EAY	GCMSA
SAMPLE ID: HWPW-MW12B-S030									SAMPLE NO: H446088	
1	OVTCS2	72004	72083	NA			19-8260A	05-MAR-97 2005	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	19-MAR-97 0303	EAY	GCMSA
SAMPLE ID: HWPW-MW12B-S040									SAMPLE NO: H446089	
1	OVTCS2	72083	72083	NA			19-8260A	07-MAR-97 1413	JC	GCMSY
3	OSVTCS	72149	72149	19-3550A	11-MAR-97 1030	RDQ	19-8270B	19-MAR-97 0214	EAY	GCMSA

'R Method Literature Reference

19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section C Page 1

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW13-S00				SAMPLE NO: H446071	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	98	-	
		Dibromofluoromethane	110	-	
		Toluene-d8	91	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	9*	-	
		2-Fluorobiphenyl	33	-	
		2-Fluorophenol	30	-	
		Nitrobenzene-d5	33	-	
		Phenol-d5	32	-	
		p-Terphenyl-d14	33	-	
		* The recovery of the surrogate was outside of QC acceptance limits due to matrix interference.			
SAMPLE ID: HWPW-MW13-S015				SAMPLE NO: H446072	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	97	-	
		Dibromofluoromethane	97	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	28	-	
		2-Fluorobiphenyl	32	-	
		2-Fluorophenol	28	-	
		Nitrobenzene-d5	30	-	
		Phenol-d5	30	-	
		p-Terphenyl-d14	34	-	
SAMPLE ID: HWPW-MW13-S021				SAMPLE NO: H446073	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	100	-	
		Dibromofluoromethane	105	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	28	-	
		2-Fluorobiphenyl	34	-	
		2-Fluorophenol	27	-	
		Nitrobenzene-d5	30	-	
		Phenol-d5	30	-	
		p-Terphenyl-d14	28	-	

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW15-S00				SAMPLE NO: H446074	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	107	-	
		Dibromofluoromethane	114	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	36	-	
		2-Fluorobiphenyl	41	-	
		2-Fluorophenol	34	-	
		Nitrobenzene-d5	41	-	
		Phenol-d5	38	-	
		p-Terphenyl-d14	44	-	
SAMPLE ID: HWPW-MW15-S020				SAMPLE NO: H446075	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	99	-	
		Dibromofluoromethane	110	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	30	-	
		2-Fluorobiphenyl	48	-	
		2-Fluorophenol	42	-	
		Nitrobenzene-d5	47	-	
		Phenol-d5	43	-	
		p-Terphenyl-d14	43	-	
SAMPLE ID: HWPW-MW15-S025				SAMPLE NO: H446076	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	101	-	
		Dibromofluoromethane	104	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	43	-	
		2-Fluorobiphenyl	61	-	
		2-Fluorophenol	55	-	
		Nitrobenzene-d5	63	-	
		Phenol-d5	60	-	
		p-Terphenyl-d14	60	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW17-S025				SAMPLE NO: H446077	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	101	-	
		Dibromofluoromethane	103	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required because of high analyte concentrations.			
AMPLE ID: HWPW-MW17-S030				SAMPLE NO: H446078	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	111	-	
		Dibromofluoromethane	115	-	
		Toluene-d8	94	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		* The surrogates were not recovered due to the dilution required because of high analyte concentrations.			
SAMPLE ID: HWPW-MW18-S00				SAMPLE NO: H446079	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	103	-	
		Dibromofluoromethane	98	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW18-S00				SAMPLE NO: H446079	
		p-Terphenyl-d14	*	-	
		* The surrogates were not recovered due to the dilution required because of high analyte concentrations.			
SAMPLE ID: HWPW-MW18-S025				SAMPLE NO: H446080	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	97	-	
		Toluene-d8	110	-	
4	$BNAS	GC/MS BNA Surrogates	93	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	19	-	
		2-Fluorophenol	50	-	
		Nitrobenzene-d5	41	-	
		Phenol-d5	47	-	
		p-Terphenyl-d14	49	-	
			49	-	
SAMPLE ID: HWPW-MW18-S030				SAMPLE NO: H446081	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	95	-	
		Toluene-d8	107	-	
4	$BNAS	GC/MS BNA Surrogates	93	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	43	-	
		2-Fluorophenol	49	-	
		Nitrobenzene-d5	41	-	
		Phenol-d5	50	-	
		p-Terphenyl-d14	47	-	
			50	-	
SAMPLE ID: HWPW-MW16-S00				SAMPLE NO: H446082	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	102	-	
		Toluene-d8	108	-	
4	$BNAS	GC/MS BNA Surrogates	91	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
			*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW16-S00				SAMPLE NO: H446082	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required because of matrix interferences.			
SAMPLE ID: HWPW-MW16-S020				SAMPLE NO: H446083	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	97	-	
		Dibromofluoromethane	107	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	34	-	
		2-Fluorobiphenyl	44	-	
		2-Fluorophenol	33	-	
		Nitrobenzene-d5	40	-	
		Phenol-d5	37	-	
		p-Terphenyl-d14	44	-	
SAMPLE ID: HWPW-MW16-S025				SAMPLE NO: H446084	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	95	-	
		Dibromofluoromethane	107	-	
		Toluene-d8	91	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	50	-	
		2-Fluorobiphenyl	69	-	
		2-Fluorophenol	60	-	
		Nitrobenzene-d5	74	-	
		Phenol-d5	65	-	
		p-Terphenyl-d14	61	-	
SAMPLE ID: HWPW-MW12A-S00				SAMPLE NO: H446085	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	98	-	
		Dibromofluoromethane	109	-	
		Toluene-d8	92	-	

This report shall not be reproduced, except in full.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW12A-S00				SAMPLE NO: H446085	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	34	-	
		2-Fluorobiphenyl	46	-	
		2-Fluorophenol	30	-	
		Nitrobenzene-d5	36	-	
		Phenol-d5	36	-	
		p-Terphenyl-d14	50	-	
SAMPLE ID: HWPW-MW12A-S020				SAMPLE NO: H446086	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	95	-	
		Dibromofluoromethane	101	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	35	-	
		2-Fluorobiphenyl	40	-	
		2-Fluorophenol	28	-	
		Nitrobenzene-d5	35	-	
		Phenol-d5	36	-	
		p-Terphenyl-d14	48	-	
SAMPLE ID: HWPW-MW12A-S025				SAMPLE NO: H446087	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	97	-	
		Dibromofluoromethane	111	-	
		Toluene-d8	94	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	50	-	
		2-Fluorobiphenyl	30	-	
		2-Fluorophenol	55	-	
		Nitrobenzene-d5	68	-	
		Phenol-d5	60	-	
		p-Terphenyl-d14	55	-	
SAMPLE ID: HWPW-MW12B-S030				SAMPLE NO: H446088	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	101	-	
		Dibromofluoromethane	111	-	
		Toluene-d8	93	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW12B-S030				SAMPLE NO: H446088	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	34	-	
		2-Fluorobiphenyl	39	-	
		2-Fluorophenol	32	-	
		Nitrobenzene-d5	35	-	
		Phenol-d5	35	-	
		p-Terphenyl-d14	42	-	
SAMPLE ID: HWPW-MW12B-S040				SAMPLE NO: H446089	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	100	-	
		Dibromofluoromethane	104	-	
		Toluene-d8	94	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	29	-	
		2-Fluorobiphenyl	39	-	
		2-Fluorophenol	32	-	
		Nitrobenzene-d5	40	-	
		Phenol-d5	37	-	
		p-Terphenyl-d14	38	-	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section D Page 1

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 71950			SAMPLE NO: H383013
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	99	-
	Benzene	101	-
	Chlorobenzene	103	-
	Toluene	101	-
	Trichloroethene	87	-
BATCH NO: 72004			SAMPLE NO: H383087
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	98	-
	Benzene	105	-
	Chlorobenzene	105	-
	Toluene	108	-
	Trichloroethene	84	-
BATCH NO: 72083			SAMPLE NO: H383201
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	99	-
	Benzene	104	-
	Chlorobenzene	102	-
	Toluene	105	-
	Trichloroethene	82	-
BATCH NO: 72149			SAMPLE NO: H383310
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	54	-
	1,4-Dichlorobenzene	53	-
	2,4-Dinitrotoluene	73	-
	2-Chlorophenol	55	-
	4-Nitrophenol	50	-
	Acenaphthene	59	-
	Pentachlorophenol	65	-
	Phenol	55	-
	Pyrene	76	-
	n-Nitrosodi-n-propylamine	55	-
	p-Chloro-m-cresol	62	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 72161			SAMPLE NO: H383328
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethane	100	-
	Benzene	104	-
	Chlorobenzene	102	-
	Toluene	104	-
	Trichloroethene	86	-

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 71950		SAMPLE NO: H383014	
OVTCS2	8260A TCL Volatiles in Soil		
	1,1,1,2-Tetrachloroethane	< 5	ug/kg
	1,1,1-Trichloroethane	< 5	ug/kg
	1,1,2,2-Tetrachloroethane	< 5	ug/kg
	1,1,2-Trichloroethane	< 5	ug/kg
	1,1-Dichloroethane	< 5	ug/kg
	1,1-Dichloroethene	< 5	ug/kg
	1,1-Dichloropropene	< 5	ug/kg
	1,2,3-Trichlorobenzene	< 5	ug/kg
	1,2,3-Trichloropropane	< 5	ug/kg
	1,2,4-Trichlorobenzene	< 5	ug/kg
	1,2,4-Trimethylbenzene	< 5	ug/kg
	1,2-Dibromo-3-chloropropane	< 5	ug/kg
	1,2-Dibromoethane	< 5	ug/kg
	1,2-Dichlorobenzene	< 5	ug/kg
	1,2-Dichloroethane	< 5	ug/kg
	1,2-Dichloropropane	< 5	ug/kg
	1,3,5-Trimethylbenzene	< 5	ug/kg
	1,3-Dichlorobenzene	< 5	ug/kg
	1,3-Dichloropropane	< 5	ug/kg
	1,4-Dichlorobenzene	< 5	ug/kg
	2,2-Dichloropropane	< 5	ug/kg
	2-Chlorotoluene	< 5	ug/kg
	4-Chlorotoluene	< 5	ug/kg
	Acetone	< 10	ug/kg
	Benzene	< 5	ug/kg
	Bromobenzene	< 5	ug/kg
	Bromochloromethane	< 5	ug/kg
	Bromodichloromethane	< 5	ug/kg
	Bromoform	< 5	ug/kg
	Bromomethane	< 10	ug/kg
	Carbon tetrachloride	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Chlorodibromomethane	< 5	ug/kg
	Chloroethane	< 10	ug/kg
	Chloroform	< 5	ug/kg
	Chloromethane	< 10	ug/kg
	Dibromomethane	< 5	ug/kg
	Dichlorodifluoromethane	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Hexachlorobutadiene	< 5	ug/kg
	Isopropylbenzene	< 5	ug/kg

This report shall not be reproduced

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	Methylene chloride	< 5	ug/kg
	Naphthalene	< 10	ug/kg
	Styrene	< 5	ug/kg
	Tetrachloroethene	< 5	ug/kg
	Toluene	< 5	ug/kg
	Trichloroethene	< 5	ug/kg
	Trichlorofluoromethane	< 5	ug/kg
	Vinyl chloride	< 10	ug/kg
	Xylenes (total)	< 5	ug/kg
	cis-1,2-Dichloroethene	< 5	ug/kg
	m-Xylene	< 5	ug/kg
	n-Butylbenzene	< 5	ug/kg
	n-Propylbenzene	< 5	ug/kg
	o-Xylene	< 5	ug/kg
	p-Isopropyltoluene	< 5	ug/kg
	p-Xylene	< 5	ug/kg
	sec-Butylbenzene	< 5	ug/kg
	tert-Butylbenzene	< 5	ug/kg
	trans-1,2-Dichloroethene	< 5	ug/kg
BATCH NO: 72004		SAMPLE NO: H383088	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72083		SAMPLE NO: H383202	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 72149		SAMPLE NO: H383311	
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2-Diphenylhydrazine	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg
BATCH NO: 72161		SAMPLE NO: H383329	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 07, 1997
Report No.: 00060264
Section H Page 1

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72083						SAMPLE NO: H446089	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	42.9	43.9	ug/kg	2.37	107	110
	Benzene	43.4	43.0	ug/kg	1.02	108	107
	Chlorobenzene	41.1	41.0	ug/kg	0.12	103	102
	Toluene	44.3	43.5	ug/kg	1.73	111	109
	Trichloroethene	38.7	38.3	ug/kg	1.06	97	96
BATCH NO: 72149						SAMPLE NO: H446083	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	38.0*	43.6	ug/kg	13.7	38	44
	1,4-Dichlorobenzene	47.4	45.3	ug/kg	4.52	47	45
	2,4-Dinitrotoluene	46.1	48.0	ug/kg	4.03	46	48
	2-Chlorophenol	67.6	60.1	ug/kg	11.8	34	30
	4-Nitrophenol	67.1	64.0	ug/kg	4.72	34	32
	Acenaphthene	43.8*	42.4*	ug/kg	3.25	44	42
	N-Nitrosodi-n-propylamine	33.2	29.2	ug/kg	12.8	33	29
	Pentachlorophenol	70.9	66.9	ug/kg	5.81	36	34
	Phenol	70.7	73.4	ug/kg	3.74	36	37
	Pyrene	50.4*	46.6*	ug/kg	7.84	50	47
	p-Chloro-m-cresol	87.2	91.6	ug/kg	4.92	44	46

* Recovery outside of QC acceptance limits due to matrix interference.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

TerraNext

303/914-1700

PROJECT NAME: Houston Wood Preserving Works

SITE LOCATION: 4910 Liberty Rd Houston

PROJECT #: 44102069.07

CHAIN OF CUSTODY RECORD

2-27-97-1 C.O.C. #

SHIP TO: PACE ANALYTICAL

LAB. CONTACT & PHONE: E. Sommers 488-1810

SAMPLERS NAME & SIGNATURE: Bill Goldsby / Bill Goldsby

CONTACT & PHONE: (713)460-4730

SAMPLE #	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	# OF CONTAINERS	ANALYSIS METHOD 8260	ANALYSIS METHOD 8270	PRESERVATIVES YES	PRESERVATIVES NO	CUSTODY SEALS YES	CUSTODY SEALS NO	*REMARKS:
HWPW-MW13-S00	2/25/97	10:20	X		MW13	4	X	X		X			1-44116.071
HWPW-MW13-S015	↓	10:32	↓		↓	↓	↓	↓		↓			072
HWPW-MW13-S021		10:34											073
HWPW-MW15-S00		13:30			MW15								074
HWPW-MW15-S020		13:45			↓								075
HWPW-MW15-S025		13:47											076
HWPW-MW17-S025		16:22			MW17								May have 077 high analytes
HWPW-MW17-S030	↓	16:40			↓								078
HWPW-MW18-S00	2/26/97	10:10			MW18								079
HWPW-MW18-S025		10:42											080
HWPW-MW18-S030		10:50											081
HWPW-MW16-S00		13:55			MW16								082
HWPW-MW16-S020		14:15											083
HWPW-MW16-S025	↓	14:20	↓		↓	↓	↓	↓		↓			084

RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
William R Goldsby	2/27/97 14:20	C Jackson			
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED AT LAB. BY	METHOD OF SHIPMENT		

*REMARKS:

TerraNext

303/914-1700

PROJECT NAME: Houston Wood Preserving Works

SITE LOCATIC: 4910 Liberty Rd Houston, TX

PROJECT #: 44102069.07

CHAIN OF CUSTODY RECORD

2-C1-97-2

C.O.C. #

SHIP TO: Pace Analytical

SAMPLERS NAME & SIGNATURE: Bill Goldsby / Bill Goldsby

CONTACT & PHONE: (713)460-4230

LAB. CONTACT & PHONE: E. Sommers 488-1810

SAMPLE #	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	# OF CONTAINERS	ANALYSIS METHOD 8260	ANALYSIS METHOD 8270	PRESERVATIVES YES	PRESERVATIVES NO	CUSTODY SEALS YES	CUSTODY SEALS NO	*REMARKS:
HWPW-MW12A-S00	2/27/96	08:08	X		MW12A	4	X	X		X			H1446085
HWPW-MW12A-S020		08:30											086
HWPW-MW12A-S025		08:43											087
HWPW-MW12B-S030		10:25			MW12B								088
HWPW-MW12B-S040		10:53	X										089

last WRG Liner

RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY	*REMARKS:
William R Goldsby	2/27/97 14:20	C Jackson				
Mary Quinn Fuller	2/27/97 15:55					
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED AT LAB. BY	METHOD OF SHIPMENT			

Pace Analytical

COPY

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 1

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW14-S017
SAMPLE NO: H446213
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 27-FEB-97 1428
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1,600	ug/kg
		2,4-Dimethylphenol	5	< 1,600	ug/kg
		2,4-Dinitrotoluene	5	< 1,600	ug/kg
		2,6-Dinitrotoluene	5	< 1,600	ug/kg
		2-Chloronaphthalene	5	< 1,600	ug/kg
		2-Methylnaphthalene	5	16,000	ug/kg
		4,6-Dinitro-o-cresol	5	< 8,200	ug/kg
		4-Nitrophenol	5	< 8,200	ug/kg
		Acenaphthene	5	9,900	ug/kg
		Acenaphthylene	5	< 1,600	ug/kg
		Anthracene	5	< 1,600	ug/kg
		Benzo(a)anthracene	5	< 1,600	ug/kg
		Benzo(a)pyrene	5	< 1,600	ug/kg
		Chrysene	5	< 1,600	ug/kg
		Di-n-butyl phthalate	5	< 1,600	ug/kg
		Dibenzofuran	5	7,800	ug/kg
		Fluoranthene	5	< 1,600	ug/kg
		Fluorene	5	10,000	ug/kg
		N-Nitrosodiphenylamine	5	< 1,600	ug/kg
		Naphthalene	5	8,600	ug/kg
		Nitrobenzene	5	< 1,600	ug/kg
		Pentachlorophenol	5	< 8,200	ug/kg
		Phenanthrene	5	< 1,600	ug/kg
		Phenol	5	< 1,600	ug/kg
		Pyrene	5	< 1,600	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW14-S017
SAMPLE NO: H446213

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	5	< 1,600	ug/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-MW14-S035
SAMPLE NO: H446214
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 27-FEB-97 1500
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW14-S035
SAMPLE NO: H446214

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 5

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-MW14-S040
SAMPLE NO: H446215
SAMPLE MATRIX: SOIL

DATE SAMPLED: 27-FEB-97 1510
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW14-S040
SAMPLE NO: H446215

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-AOC4-SE-S00
SAMPLE NO: H446216
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 03-MAR-97 1110
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	2	< 660	ug/kg
		2,4-Dimethylphenol	2	< 660	ug/kg
		2,4-Dinitrotoluene	2	< 660	ug/kg
		2,6-Dinitrotoluene	2	< 660	ug/kg
		2-Chloronaphthalene	2	< 660	ug/kg
		2-Methylnaphthalene	2	< 660	ug/kg
		4,6-Dinitro-o-cresol	2	< 3,200	ug/kg
		4-Nitrophenol	2	< 3,200	ug/kg
		Acenaphthene	2	< 660	ug/kg
		Acenaphthylene	2	< 660	ug/kg
		Anthracene	2	< 660	ug/kg
		Benzo(a)anthracene	2	< 660	ug/kg
		Benzo(a)pyrene	2	< 660	ug/kg
		Chrysene	2	920	ug/kg
		Di-n-butyl phthalate	2	< 660	ug/kg
		Dibenzofuran	2	< 660	ug/kg
		Fluoranthene	2	2,800	ug/kg
		Fluorene	2	< 660	ug/kg
		N-Nitrosodiphenylamine	2	< 660	ug/kg
		Naphthalene	2	< 660	ug/kg
		Nitrobenzene	2	< 660	ug/kg
		Pentachlorophenol	2	< 3,200	ug/kg
		Phenanthrene	2	1,100	ug/kg
		Phenol	2	< 660	ug/kg
		Pyrene	2	3,600	ug/kg
		bis(2-Chloroethoxy)methane	2	< 660	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC4-SE-S00
SAMPLE NO: H446216

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	2	< 660	ug/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 9

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC4-SW-S00
SAMPLE NO: H446217
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1130
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC4-SW-S00
SAMPLE NO: H446217

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 11

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC4-NE-S00
SAMPLE NO: H446218
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1150
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC4-NE-S00
SAMPLE NO: H446218

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 13

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC4-NW-S00
SAMPLE NO: H446219
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1209
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	2	< 660	ug/kg
		2,4-Dimethylphenol	2	< 660	ug/kg
		2,4-Dinitrotoluene	2	< 660	ug/kg
		2,6-Dinitrotoluene	2	< 660	ug/kg
		2-Chloronaphthalene	2	< 660	ug/kg
		2-Methylnaphthalene	2	< 660	ug/kg
		4,6-Dinitro-o-cresol	2	< 3,300	ug/kg
		4-Nitrophenol	2	< 3,300	ug/kg
		Acenaphthene	2	< 660	ug/kg
		Acenaphthylene	2	< 660	ug/kg
		Anthracene	2	< 660	ug/kg
		Benzo(a)anthracene	2	< 660	ug/kg
		Benzo(a)pyrene	2	< 660	ug/kg
		Chrysene	2	< 660	ug/kg
		Di-n-butyl phthalate	2	< 660	ug/kg
		Dibenzofuran	2	< 660	ug/kg
		Fluoranthene	2	< 660	ug/kg
		Fluorene	2	< 660	ug/kg
		N-Nitrosodiphenylamine	2	< 660	ug/kg
		Naphthalene	2	< 660	ug/kg
		Nitrobenzene	2	< 660	ug/kg
		Pentachlorophenol	2	< 3,300	ug/kg
		Phenanthrene	2	< 660	ug/kg
		Phenol	2	< 660	ug/kg
		Pyrene	2	< 660	ug/kg
		bis(2-Chloroethoxy)methane	2	< 660	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 14

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC4-NW-S00
SAMPLE NO: H446219

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	2	< 660	ug/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of matrix interferences.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 15

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC7-S00
SAMPLE NO: H446220
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1335
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	7	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	46	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	11	ug/kg
		Xylenes (total)	1	82	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	500	< 165,000	ug/kg
		2,4-Dimethylphenol	500	< 165,000	ug/kg
		2,4-Dinitrotoluene	500	< 165,000	ug/kg
		2,6-Dinitrotoluene	500	< 165,000	ug/kg
		2-Chloronaphthalene	500	< 165,000	ug/kg
		2-Methylnaphthalene	500	< 165,000	ug/kg
		4,6-Dinitro-o-cresol	500	< 820,000	ug/kg
		4-Nitrophenol	500	< 820,000	ug/kg
		Acenaphthene	500	270,000	ug/kg
		Acenaphthylene	500	< 165,000	ug/kg
		Anthracene	500	460,000	ug/kg
		Benzo(a)anthracene	500	220,000	ug/kg
		Benzo(a)pyrene	500	< 165,000	ug/kg
		Chrysene	500	210,000	ug/kg
		Di-n-butyl phthalate	500	< 165,000	ug/kg
		Dibenzofuran	500	190,000	ug/kg
		Fluoranthene	500	1,100,000	ug/kg
		Fluorene	500	330,000	ug/kg
		N-Nitrosodiphenylamine	500	< 165,000	ug/kg
		Naphthalene	500	220,000	ug/kg
		Nitrobenzene	500	< 165,000	ug/kg
		Pentachlorophenol	500	< 820,000	ug/kg
		Phenanthrene	500	950,000	ug/kg
		Phenol	500	< 165,000	ug/kg
		Pyrene	500	880,000	ug/kg
		bis(2-Chloroethoxy)methane	500	< 165,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC7-S00
SAMPLE NO: H446220

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	500	< 165,000	ug/kg
5	I685S	Petroleum Hydrocarbons	50	21,000	mg/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 17

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB02-S7
SAMPLE NO: H446221
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 03-MAR-97 1430
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S7
SAMPLE NO: H446221

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
10	I685S	Petroleum Hydrocarbons	1	20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 19

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB02-S21
SAMPLE NO: H446222
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 03-MAR-97 1440
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S21
SAMPLE NO: H446222

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	70	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 21

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB02-S24
SAMPLE NO: H446223
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 03-MAR-97 1445
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S24
SAMPLE NO: H446223

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section A Page 23

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB02-S37.5
SAMPLE NO: H446224
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1500
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	8	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	1,400	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	2,100	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	1,400	ug/kg
		Benzo(a)anthracene	1	400	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	400	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	1,700	ug/kg
		Fluoranthene	1	2,800	ug/kg
		Fluorene	1	1,900	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	3,600	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	2	8,600	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	1,200	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 24

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S37.5
SAMPLE NO: H446224

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section A Page 25

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB02-S38.5
SAMPLE NO: H446225
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1505
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	7	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	6	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	590	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	3,100	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	2,000	ug/kg
		Benzo(a)anthracene	1	560	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	530	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	2,600	ug/kg
		Fluoranthene	1	4,000	ug/kg
		Fluorene	1	3,100	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	10	12,000	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	10	17,000	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	1,800	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S38.5
SAMPLE NO: H446225

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	130	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 27

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB02-S49
SAMPLE NO: H446226
SAMPLE MATRIX: SOIL

DATE SAMPLED: 03-MAR-97 1525
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB02-S49
SAMPLE NO: H446226

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC3W-S00
SAMPLE NO: H446227
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 0825
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	10	5,000	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	10	8,800	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	8.600	ug/kg
		Benzo(a)anthracene	10	3,600	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	3,500	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	6,700	ug/kg
		Fluoranthene	10	20,000	ug/kg
		Fluorene	10	12,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	10	< 3,300	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	10	36,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	13,000	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC3W-S00
SAMPLE NO: H446227

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 31

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-AOC3E-S00
SAMPLE NO: H446228
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 0843
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC3E-S00
SAMPLE NO: H446228

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section A Page 33

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC5W-S00
SAMPLE NO: H446229
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 0928
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	20	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	125	6,100	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	85	ug/kg
		Xylenes (total)	125	26,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	10	9,200	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	10	4,300	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	< 3,300	ug/kg
		Benzo(a)anthracene	10	< 3,300	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	< 3,300	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	< 3,300	ug/kg
		Fluoranthene	10	5,300	ug/kg
		Fluorene	10	4,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	10	11,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	10	12,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	5,900	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC5W-S00
SAMPLE NO: H446229

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 35

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB05-S19.5
SAMPLE NO: H446230
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 1020
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S19.5
SAMPLE NO: H446230

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB05-S24
SAMPLE NO: H446231
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1033
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S24
SAMPLE NO: H446231

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB05-S34.5
SAMPLE NO: H446232
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 1050
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S34.5
SAMPLE NO: H446232

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 39

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB05-S34.5
SAMPLE NO: H446232
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 1050
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 41

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB05-S39
SAMPLE NO: H446233
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1103
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S39
SAMPLE NO: H446233

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section A Page 43

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB05-S54
SAMPLE NO: H446234
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1128
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S54
SAMPLE NO: H446234

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
5	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 45

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB06-S4
SAMPLE NO: H446235
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44082
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1433
DATE RECEIVED: 04-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	55	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	5	ug/kg
		Xylenes (total)	1	140	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	25	< 8,200	ug/kg
		2,4-Dimethylphenol	25	< 8,200	ug/kg
		2,4-Dinitrotoluene	25	< 8,200	ug/kg
		2,6-Dinitrotoluene	25	< 8,200	ug/kg
		2-Chloronaphthalene	25	< 8,200	ug/kg
		2-Methylnaphthalene	25	72,000	ug/kg
		4,6-Dinitro-o-cresol	25	< 41,000	ug/kg
		4-Nitrophenol	25	< 41,000	ug/kg
		Acenaphthene	25	46,000	ug/kg
		Acenaphthylene	25	< 8,200	ug/kg
		Anthracene	25	25,000	ug/kg
		Benzo(a)anthracene	25	8,200	ug/kg
		Benzo(a)pyrene	25	< 8,200	ug/kg
		Chrysene	25	9,900	ug/kg
		Di-n-butyl phthalate	25	< 8,200	ug/kg
		Dibenzofuran	25	43,000	ug/kg
		Fluoranthene	25	52,000	ug/kg
		Fluorene	25	41,000	ug/kg
		N-Nitrosodiphenylamine	25	< 8,200	ug/kg
		Naphthalene	25	132,000	ug/kg
		Nitrobenzene	25	< 8,200	ug/kg
		Pentachlorophenol	25	< 41,000	ug/kg
		Phenanthrene	25	82,000	ug/kg
		Phenol	25	< 8,200	ug/kg
		Pyrene	25	30,000	ug/kg
		bis(2-Chloroethoxy)methane	25	< 8,200	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section A Page 46

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB06-S4
SAMPLE NO: H446235

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	25	< 8,200	ug/kg
5	1685S	Petroleum Hydrocarbons	1	690	mg/kg

COMMENTS: The detection limits reported for semi-volatiles were elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW14-S017									SAMPLE NO: H446213	
1	OVTCS2	72083	72083	NA			19-8260A	07-MAR-97 1446	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	A M	19-8270B	30-MAR-97 2323	EAY	GCMSZ
SAMPLE ID: HWPW-MW14-S035									SAMPLE NO: H446214	
1	OVTCS2	72083	72257	NA			19-8260A	07-MAR-97 1520	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	22-MAR-97 2154	EAY	GCMSX
SAMPLE ID: HWPW-MW14-S040									SAMPLE NO: H446215	
1	OVTCS2	72083	72257	NA			19-8260A	07-MAR-97 1553	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	22-MAR-97 2244	EAY	GCMSX
SAMPLE ID: HWPW-AOC4-SE-S00									SAMPLE NO: H446216	
1	OVTCS2	72083	72257	NA			19-8260A	07-MAR-97 1626	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	06-APR-97 2208	EAY	GCMSA
SAMPLE ID: HWPW-AOC4-SW-S00									SAMPLE NO: H446217	
1	OVTCS2	72083	72257	NA			19-8260A	07-MAR-97 1659	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	23-MAR-97 2208	EAY	GCMSA
SAMPLE ID: HWPW-AOC4-NE-S00									SAMPLE NO: H446218	
1	OVTCS2	72161	72257	NA			19-8260A	09-MAR-97 2131	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	23-MAR-97 1449	EAY	GCMSA
SAMPLE ID: HWPW-AOC4-NW-S00									SAMPLE NO: H446219	
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1228	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	05-APR-97 1726	EAY	GCMSA
SAMPLE ID: HWPW-AOC7-S00									SAMPLE NO: H446220	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 0948	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	02-APR-97 0308	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section B Page 2

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB02-S7									SAMPLE NO: H446221	
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1334	JC	GCMSY
3	OSVTCS	72203	72203	19-3550A	12-MAR-97 0900	RDQ	19-8270B	23-MAR-97 1528	EAY	GCMSA
10	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB02-S21									SAMPLE NO: H446222	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1021	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 1615	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB02-S24									SAMPLE NO: H446223	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1137	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 2038	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB02-S37.5									SAMPLE NO: H446224	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1201	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 2128	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB02-S38.5									SAMPLE NO: H446225	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1244	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 1705	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB02-S49									SAMPLE NO: H446226	
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1404	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 1949	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-AOC3W-S00									SAMPLE NO: H446227	
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1440	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	04-APR-97 2249	EAY	GCMSA

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section B Page 3

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-AOC3E-S00								SAMPLE NO: H446228		
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1513	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 1754	EAY	GCMSA
SAMPLE ID: HWPW-AOC5W-S00								SAMPLE NO: H446229		
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1759	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	01-APR-97 1754	EAY	GCMSZ
SAMPLE ID: HWPW-SB05-S19.5								SAMPLE NO: H446230		
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1317	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 2218	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB05-S24								SAMPLE NO: H446231		
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1905	JC	GCMSY
3	OSVTCS	72449	72449	19-3550A	17-MAR-97 1300	RDQ	19-8270B	23-MAR-97 2356	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB05-S34.5								SAMPLE NO: H446232		
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 1938	JC	GCMSY
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	24-MAR-97 0045	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB05-S39								SAMPLE NO: H446233		
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 2011	JC	GCMSY
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	24-MAR-97 0135	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT
SAMPLE ID: HWPW-SB05-S54								SAMPLE NO: H446234		
1	OVTCS2	72257	72257	NA			19-8260A	10-MAR-97 2044	JC	GCMSY
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	24-MAR-97 0224	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

Pace Analytical

April 08, 1997
Report No.: 00060278
Section B Page 4

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB06-S4									SAMPLE NO: H446235	
1	OVTCS2	72194	72257	NA			19-8260A	11-MAR-97 1350	JC	GCMSY
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	24-MAR-97 1348	EAY	GCMSA
5	I685S	72360	72360	19-3550A			02-418.1	14-MAR-97 1200	JLJ	302WAT

LR Method Literature Reference

02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section C Page 1

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW14-S017				SAMPLE NO: H446213	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	96	-	
		Dibromofluoromethane	104	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	60	-	
		2-Fluorobiphenyl	100	-	
		2-Fluorophenol	62	-	
		Nitrobenzene-d5	55	-	
		Phenol-d5	80	-	
		p-Terphenyl-d14	85	-	
SAMPLE ID: HWPW-MW14-S035				SAMPLE NO: H446214	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	98	-	
		Dibromofluoromethane	112	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	35	-	
		2-Fluorobiphenyl	47	-	
		2-Fluorophenol	35	-	
		Nitrobenzene-d5	41	-	
		Phenol-d5	41	-	
		p-Terphenyl-d14	42	-	
SAMPLE ID: HWPW-MW14-S040				SAMPLE NO: H446215	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	97	-	
		Dibromofluoromethane	114	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	44	-	
		2-Fluorobiphenyl	57	-	
		2-Fluorophenol	44	-	
		Nitrobenzene-d5	49	-	
		Phenol-d5	48	-	
		p-Terphenyl-d14	50	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-AOC4-SE-S00				SAMPLE NO: H446216	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	103	-	
		Dibromofluoromethane	110	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	32	-	
		2-Fluorobiphenyl	50	-	
		2-Fluorophenol	25	-	
		Nitrobenzene-d5	38	-	
		Phenol-d5	27	-	
		p-Terphenyl-d14	40	-	
SAMPLE ID: HWPW-AOC4-SW-S00				SAMPLE NO: H446217	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	102	-	
		Dibromofluoromethane	112	-	
		Toluene-d8	91	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	43	-	
		2-Fluorobiphenyl	30	-	
		2-Fluorophenol	24	-	
		Nitrobenzene-d5	35	-	
		Phenol-d5	19*	-	
		p-Terphenyl-d14	44	-	
		* The surrogate recovery was outside of QC acceptance limits due to matrix interference.			
SAMPLE ID: HWPW-AOC4-NE-S00				SAMPLE NO: H446218	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	109	-	
		Dibromofluoromethane	113	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	27	-	
		2-Fluorobiphenyl	31	-	
		2-Fluorophenol	8*	-	
		Nitrobenzene-d5	27	-	
		Phenol-d5	5*	-	
		p-Terphenyl-d14	31	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		* The surrogate recovery was outside of QC acceptance limits due to matrix interference.			
SAMPLE ID: HWPW-AOC4-NW-S00				SAMPLE NO: H446219	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	106	-	
		Dibromofluoromethane	105	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	53	-	
		2-Fluorobiphenyl	88	-	
		2-Fluorophenol	43	-	
		Nitrobenzene-d5	50	-	
		Phenol-d5	50	-	
		p-Terphenyl-d14	80	-	
SAMPLE ID: HWPW-AOC7-S00				SAMPLE NO: H446220	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	116	-	
		Dibromofluoromethane	118	-	
		Toluene-d8	93	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		* The surrogate was not recovered due to the dilution taken as a result of the high concentration of target analytes.			
SAMPLE ID: HWPW-SB02-S7				SAMPLE NO: H446221	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	100	-	
		Dibromofluoromethane	109	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	49	-	
		2-Fluorobiphenyl	61	-	
		2-Fluorophenol	43	-	
		Nitrobenzene-d5	53	-	

This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB02-S7				SAMPLE NO: H446221	
		Phenol-d5	50	-	
		p-Terphenyl-d14	59	-	
SAMPLE ID: HWPW-SB02-S21				SAMPLE NO: H446222	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	102	-	
		Toluene-d8	102	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	48	-	
		2-Fluorophenol	57	-	
		Nitrobenzene-d5	44	-	
		Phenol-d5	58	-	
		p-Terphenyl-d14	55	-	
			594	-	
SAMPLE ID: HWPW-SB02-S24				SAMPLE NO: H446223	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	103	-	
		Toluene-d8	100	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	47	-	
		2-Fluorophenol	53	-	
		Nitrobenzene-d5	25	-	
		Phenol-d5	52	-	
		p-Terphenyl-d14	16*	-	
		* The surrogate recovery was outside of QC acceptance limits due to matrix interference.	50	-	
SAMPLE ID: HWPW-SB02-S37.5				SAMPLE NO: H446224	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	106	-	
		Toluene-d8	110	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	43	-	
			51	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB02-S37.5				SAMPLE NO: H446224	
		2-Fluorophenol	38	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	44	-	
		p-Terphenyl-d14	51	-	
SAMPLE ID: HWPW-SB02-S38.5				SAMPLE NO: H446225	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	107	-	
		Dibromofluoromethane	104	-	
		Toluene-d8	98	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	46	-	
		2-Fluorobiphenyl	54	-	
		2-Fluorophenol	38	-	
		Nitrobenzene-d5	56	-	
		Phenol-d5	45	-	
		p-Terphenyl-d14	55	-	
SAMPLE ID: HWPW-SB02-S49				SAMPLE NO: H446226	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	100	-	
		Dibromofluoromethane	102	-	
		Toluene-d8	98	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	39	-	
		2-Fluorobiphenyl	44	-	
		2-Fluorophenol	43	-	
		Nitrobenzene-d5	40	-	
		Phenol-d5	39	-	
		p-Terphenyl-d14	46	-	
SAMPLE ID: HWPW-AOC3W-S00				SAMPLE NO: H446227	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	109	-	
		Dibromofluoromethane	110	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-AOC3W-S00				SAMPLE NO: H446227	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution taken as a result of the high concentration of target analytes.			
SAMPLE ID: HWPW-AOC3E-S00				SAMPLE NO: H446228	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	107	-	
		Dibromofluoromethane	112	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	48	-	
		2-Fluorobiphenyl	57	-	
		2-Fluorophenol	45	-	
		Nitrobenzene-d5	50	-	
		Phenol-d5	49	-	
		p-Terphenyl-d14	55	-	
SAMPLE ID: HWPW-AOC5W-S00				SAMPLE NO: H446229	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	99	-	
		Dibromofluoromethane	108	-	
		Toluene-d8	95	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution taken as a result of the high concentration of target analytes.			
SAMPLE ID: HWPW-SB05-S19.5				SAMPLE NO: H446230	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	103	-	
		Dibromofluoromethane	102	-	

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB05-S19.5				SAMPLE NO: H446230	
		Toluene-d8	100	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	49	-	
		2-Fluorobiphenyl	54	-	
		2-Fluorophenol	44	-	
		Nitrobenzene-d5	58	-	
		Phenol-d5	50	-	
		p-Terphenyl-d14	48	-	
SAMPLE ID: HWPW-SB05-S24				SAMPLE NO: H446231	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	102	-	
		Dibromofluoromethane	100	-	
		Toluene-d8	104	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	55	-	
		2-Fluorobiphenyl	70	-	
		2-Fluorophenol	50	-	
		Nitrobenzene-d5	67	-	
		Phenol-d5	65	-	
		p-Terphenyl-d14	60	-	
SAMPLE ID: HWPW-SB05-S34.5				SAMPLE NO: H446232	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	106	-	
		Dibromofluoromethane	99	-	
		Toluene-d8	101	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	49	-	
		2-Fluorobiphenyl	59	-	
		2-Fluorophenol	41	-	
		Nitrobenzene-d5	70	-	
		Phenol-d5	49	-	
		p-Terphenyl-d14	54	-	
SAMPLE ID: HWPW-SB05-S39				SAMPLE NO: H446233	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	103	-	
		Dibromofluoromethane	94	-	

This report shall not be reproduced, except in full,
without the written

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section C Page 8

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB05-S39				SAMPLE NO: H446233	
		Toluene-d8	105	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	43	-	
		2-Fluorobiphenyl	58	-	
		2-Fluorophenol	47	-	
		Nitrobenzene-d5	50	-	
		Phenol-d5	50	-	
		p-Terphenyl-d14	53	-	
SAMPLE ID: HWPW-SB05-S54				SAMPLE NO: H446234	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	102	-	
		Dibromofluoromethane	96	-	
		Toluene-d8	101	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	50	-	
		2-Fluorobiphenyl	58	-	
		2-Fluorophenol	48	-	
		Nitrobenzene-d5	53	-	
		Phenol-d5	55	-	
		p-Terphenyl-d14	53	-	
SAMPLE ID: HWPW-SB06-S4				SAMPLE NO: H446235	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	107	-	
		Dibromofluoromethane	109	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	

*The surrogates were not recovered due to the dilution taken as a result of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section D Page 1

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 72083			SAMPLE NO: H383201
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	99	-
	Benzene	104	-
	Chlorobenzene	102	-
	Toluene	105	-
	Trichloroethene	82	-
BATCH NO: 72161			SAMPLE NO: H383328
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethane	100	-
	Benzene	104	-
	Chlorobenzene	102	-
	Toluene	104	-
	Trichloroethene	86	-
BATCH NO: 72194			SAMPLE NO: H383390
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	94	-
	Benzene	98	-
	Chlorobenzene	96	-
	Toluene	98	-
	Trichloroethene	84	-
BATCH NO: 72203			SAMPLE NO: H383408
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	51 ✓	-
	1,4-Dichlorobenzene	45 ✓	-
	2,4-Dinitrotoluene	50 ✓	-
	2-Chlorophenol	49 ✓	-
	4-Nitrophenol	29 ✓	-
	Acenaphthene	44 ✓	-
	N-Nitrosodi-n-propylamine	45 ✓	-
	Pentachlorophenol	60 ✓	-
	Phenol	39 ✓	-
	Pyrene	52 ✓	-
	p-chloro-m-cresol	44 ✓	-

This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section D Page 2

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 72257			SAMPLE NO: H383486
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	90	-
	Benzene	92	-
	Chlorobenzene	92	-
	Toluene	98	-
	Trichloroethene	75	-
BATCH NO: 72360			SAMPLE NO: H383623
I685S	Petroleum Hydrocarbons	100.7	-
BATCH NO: 72449			SAMPLE NO: H383779
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	76	-
	1,4-Dichlorobenzene	72	-
	2,4-Dinitrotoluene	86	-
	2-Chlorophenol	70	-
	4-Nitrophenol	55	-
	Acenaphthene	79	-
	Pentachlorophenol	90	-
	Phenol	65	-
	Pyrene	82	-
	n-Nitrosodi-n-propylamine	72	-
	p-Chloro-m-cresol	75	-
BATCH NO: 72450			SAMPLE NO: H383781
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	59	-
	1,4-Dichlorobenzene	48	-
	2,4-Dinitrotoluene	80	-
	2-Chlorophenol	55	-
	4-Nitrophenol	80	-
	Acenaphthene	67	-
	Pentachlorophenol	70	-
	Phenol	47	-
	Pyrene	66	-
	n-Nitrosodi-n-propylamine	74	-
	p-Chloro-m-cresol	55	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 72083			
		SAMPLE NO:	H383202
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72161			
		SAMPLE NO:	H383329
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72194			
		SAMPLE NO:	H383391
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72203			
		SAMPLE NO:	H383409
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	< 330	ug/kg
	1,2-Dichlorobenzene	< 330	ug/kg
	1,2-Diphenylhydrazine	< 330	ug/kg
	1,3-Dichlorobenzene	< 330	ug/kg
	1,4-Dichlorobenzene	< 330	ug/kg
	2,4,5-Trichlorophenol	< 330	ug/kg
	2,4,6-Trichlorophenol	< 330	ug/kg
	2,4-Dichlorophenol	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrophenol	< 1,600	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg
	2-Chlorophenol	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	2-Methylphenol	< 330	ug/kg
	2-Nitroaniline	< 1,600	ug/kg
	2-Nitrophenol	< 330	ug/kg
	3,3'-Dichlorobenzidine	< 660	ug/kg
	3-Nitroaniline	< 1,600	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Bromophenylphenylether	< 330	ug/kg
	4-Chloro-3-methylphenol	< 330	ug/kg
	4-Chloroaniline	< 330	ug/kg
	4-Chlorophenylphenylether	< 330	ug/kg
	4-Methylphenol	< 330	ug/kg
	4-Nitroaniline	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Benzo(b)fluoranthene	< 330	ug/kg
	Benzo(g,h,i)perylene	< 330	ug/kg
	Benzo(k)fluoranthene	< 330	ug/kg
	Benzoic acid	< 1,600	ug/kg
	Benzyl alcohol	< 330	ug/kg
	Butylbenzylphthalate	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Di-n-butylphthalate	< 330	ug/kg
	Di-n-octylphthalate	< 330	ug/kg
	Dibenzo(a,h)anthracene	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Diethylphthalate	< 330	ug/kg
	Dimethylphthalate	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	Hexachlorobenzene	< 330	ug/kg
	Hexachlorobutadiene	< 330	ug/kg
	Hexachlorocyclopentadiene	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	Hexachloroethane	< 330	ug/kg
	Indeno(1,2,3-cd)pyrene	< 330	ug/kg
	Isophorone	< 330	ug/kg
	N-Nitrosodi-n-propylamine	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 330	ug/kg
	Phenanthrene	< 1,600	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Chloroethyl)ether	< 330	ug/kg
	bis(2-Chloroisopropyl)ether	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg
BATCH NO: 72257			
		SAMPLE NO:	H383487
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72360			
		SAMPLE NO:	H383624
I685S	Petroleum Hydrocarbons	< 20	mg/kg
BATCH NO: 72449			
		SAMPLE NO:	H383780
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2-Diphenylhydrazine	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg

BATCH NO: 72450 SAMPLE NO: H383782

OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2-Diphenylhydrazine	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 08, 1997
Report No.: 00060278
Section H Page 1

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72083						SAMPLE NO: H446089	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	42.9	43.9	ug/kg	2.37	107	110
	Benzene	43.4	43.0	ug/kg	1.02	108	107
	Chlorobenzene	41.1	41.0	ug/kg	0.12	103	102
	Toluene	44.3	43.5	ug/kg	1.73	111	109
	Trichloroethene	38.7	38.3	ug/kg	1.06	97	96
BATCH NO: 72203						SAMPLE NO: H446221	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	59.7	54.1	ug/kg	9.84	60	54
	1,4-Dichlorobenzene	53.5	47.3	ug/kg	12.3	54	47
	2,4-Dinitrotoluene	66.1	58.9	ug/kg	11.5	66	59
	2-Chlorophenol	102	92.1	ug/kg	9.71	51	46
	4-Nitrophenol	117	106	ug/kg	10.5	59	53
	Acenaphthene	64.6	58.0	ug/kg	10.8	65	58
	N-Nitrosodi-n-propylamine	56.6	51.8	ug/kg	8.86	57	52
	Pentachlorophenol	111	93.6	ug/kg	17.1	56	47
	Phenol	100	97.1	ug/kg	2.94	50	48
	Pyrene	70.6	64.9	ug/kg	8.40	71	65
	p-Chloro-m-cresol	126	120	ug/kg	4.80	63	60
BATCH NO: 72257						SAMPLE NO: H446226	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	35.7	37.5	ug/kg	5.00	89	94
	Benzene	38.4	39.2	ug/kg	2.09	96	98
	Chlorobenzene	36.6	37.6	ug/kg	2.48	92	94
	Toluene	38.6	39.0	ug/kg	1.06	96	97
	Trichloroethene	37.0	39.4	ug/kg	6.18	92	98
BATCH NO: 72257						SAMPLE NO: H446232	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	39.5	38.2	ug/kg	3.32	99	96
	Benzene	40.0	39.6	ug/kg	1.03	100	99
	Chlorobenzene	38.3	39.1	ug/kg	2.17	96	98
	Toluene	38.5	40.8	ug/kg	5.77	96	102
	Trichloroethene	38.8	34.7	ug/kg	11.2	97	87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72360						SAMPLE NO: H446223	
I685S	Petroleum Hydrocarbons	370	350	mg/kg	4.1	98.9	93.5
BATCH NO: 72360						SAMPLE NO: H446294	
I685S	Petroleum Hydrocarbons	23,000	24,000	mg/kg	5.5	*	*
	* The concentration of the analyte prevented accurate determination of the matrix spike.						
BATCH NO: 72449						SAMPLE NO: H446230	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	56	54	ug/kg	3.6	56	54
	1,4-Dichlorobenzene	59	60	ug/kg	1.7	59	54
	2,4-Dinitrotoluene	53	56	ug/kg	5.6	53	54
	2-Chlorophenol	100	110	ug/kg	9.5	50	54
	4-Nitrophenol	82	68	ug/kg	19	41	54
	Acenaphthene	56	53	ug/kg	5.6	56	54
	N-Nitrosodi-n-propylamine	55	59	ug/kg	7.0	55	54
	Pentachlorophenol	100	130	ug/kg	26	50	54
	Phenol	110	110	ug/kg	0	55	55
	Pyrene	56	59	ug/kg	5.2	56	54
	p-Chloro-m-cresol	120	110	ug/kg	9.1	60	54
BATCH NO: 72450						SAMPLE NO: H446424	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	2,600	2,300	ug/kg	12.2	79	70
	1,4-Dichlorobenzene	2,600	2,600	ug/kg	0	79	79
	2,4-Dinitrotoluene	2,300	2,300	ug/kg	0	70	70
	2-Chlorophenol	4,000	4,300	ug/kg	7.22	61	65
	4-Nitrophenol	990	990	ug/kg	0	15	15
	Acenaphthene	4,300	3,600	ug/kg	17.7	130	109
	N-Nitrosodi-n-propylamine	1,600	1,600	ug/kg	0	48	48
	Pentachlorophenol	2,000	1,600	ug/kg	22.2*	30	24
	Phenol	4,600	4,000	ug/kg	14.0	70	61
	Pyrene	4,000	3,600	ug/kg	10.5	121	109
	p-Chloro-m-cresol	5,000	4,600	ug/kg	8.33	76	70
	* RPD outside of QC acceptance limits.						

This report shall not be reproduced, except in full

TerraNext

303/914-1700

PROJECT NAME

SITE LOCATION

PROJECT #

CONTACT & PHONE

SAMPLERS NAME & SIGNATURE

CHAIN OF CUSTODY RECORD

C.O.C. #

SHIP TO:

LAB. CONTACT & PHONE

SAMPLE #	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	# OF CONTAINERS	ANALYSIS METHOD 8260	8270	418.1	H446	PRESERVATIVES YES	NO	CUSTODY SEALS YES	NO	*REMARKS:
HWPW-MW14-S017	2/27/97	14:28	X		MW14	4	X	X		H446					
HWPW-MW14-S035		15:00								213		X		X	
HWPW-MW14-S040		15:10								214					
HWPW-AOC4-SE-S00	3/3/97	11:10			AOC 4					215					
HWPW-AOC4-SW-S00		11:30								216					
HWPW-AOC4-NE-S00		11:50								217					
HWPW-AOC4-NW-S00		12:09								218					
HWPW-AOC7-S00		13:35			AOC 7				X	219					
HWPW SB02 [S17] 7-8 Feet	3/3/97	14:30			SB02		X	X	X	220					
HWPW SB02 [S23] 21.0-21.5 feet		14:40			SB02		X	X	X	221	X		X		labels do not Have HWPW on them date is also 3/4 rather than 3/3
HWPW SB02 [S24] 24.0-24.5		14:45			SB02		X	X	X	222					
HWPW SB02 [S37.5] 37.5-38.0		15:00			SB02		X	X	X	223					
HWPW SB02 [S38.5] 38.5-39.0		15:05			SB02		X	X	X	224					
HWPW SB02 [S49] 49.0-49.5		15:25			SB02		X	X	X	225					
										226					

RELINQUISHED BY (Signature) William R Goldberg — DATE & TIME 3/4/97 11:50 — RECEIVED BY Cliff Johnson — RELEASED BY — DATE & TIME — RECEIVED BY

RELINQUISHED BY (Signature) — DATE & TIME — RECEIVED BY — RELEASED BY — DATE & TIME — RECEIVED BY

RELINQUISHED BY (Signature) — DATE & TIME 3/4/97 — RECEIVED AT LAB. BY — METHOD OF SHIPMENT Cliffs Courier Service

*REMARKS:

Also SB02 labels do not show TPH but data is required

01-07

TerraNext

303/914-1700

PROJECT NAME: Houston Wood Preserving Works

SITE LOCATION: 4910 Liberty Rd Houston, Tx

PROJECT #: 741020G9

CHAIN OF CUSTODY RECORD

C.O.C. #

SHIP TO: Pace Analytical

LAB. CONTACT & PHONE: E. Sommers 488-1810

SAMPLERS NAME & SIGNATURE: William R Goldsby / William R Goldsby

CONTACT & PHONE: B. Goldsby 460-4230

SAMPLE #	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	# OF CONTAINERS	ANALYSIS METHOD 8260	8270	418.1	PRESERVATIVES YES	PRESERVATIVES NO	CUSTODY SEALS YES	CUSTODY SEALS NO	*REMARKS:
HWPW-AOC3W-S00	3/4/97	08:25	X		AOC3	4	X	X			X		X	227
HWPW-AOC3E-S00		08:43	X		AOC3	↓	X	X			X		X	228
HWPW-AOC5W-S00		09:28	X		AOC5		X	X			X		X	229
HWPW-SB05-S19.5		10:20	X		SB05	↓	X	X	X		X		X	230
HWPW-SB05-S24		10:33	X			5	X	X	X		X		X	231
HWPW-SB05-S34.5		10:50	X				X	X	X		X		X	232
HWPW-SB05-S39		11:03	X				X	X	X		X		X	233
HWPW-SB05-S54		11:28	X		↓	↓	X	X	X		X		X	234
HWPW-SB06-S4		14:33	X		SB06	5	X	X	X		X		X	235

RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
William R Goldsby	3/4/97 14:50	Cliff Dunn			
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED AT LAB. BY	METHOD OF SHIPMENT		
	3/4/97		Cliff Courier Service		

*REMARKS:

-07

Pace Analytical

COPY

Same As May 28 report having same No.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 1

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB05-S54
SAMPLE NO: H446419
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1125
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	2	< 660	ug/kg
		2,4-Dimethylphenol	2	< 660	ug/kg
		2,4-Dinitrotoluene	2	< 660	ug/kg
		2,6-Dinitrotoluene	2	< 660	ug/kg
		2-Chloronaphthalene	2	< 660	ug/kg
		2-Methylnaphthalene	2	< 660	ug/kg
		4,6-Dinitro-o-cresol	2	< 3,300	ug/kg
		4-Nitrophenol	2	< 3,300	ug/kg
		Acenaphthene	2	< 660	ug/kg
		Acenaphthylene	2	< 660	ug/kg
		Anthracene	2	< 660	ug/kg
		Benzo(a)anthracene	2	< 660	ug/kg
		Benzo(a)pyrene	2	< 660	ug/kg
		Chrysene	2	< 660	ug/kg
		Di-n-butyl phthalate	2	< 660	ug/kg
		Dibenzofuran	2	< 660	ug/kg
		Fluoranthene	2	< 660	ug/kg
		Fluorene	2	< 660	ug/kg
		N-Nitrosodiphenylamine	2	< 660	ug/kg
		Naphthalene	2	< 660	ug/kg
		Nitrobenzene	2	< 660	ug/kg
		Pentachlorophenol	2	< 3,300	ug/kg
		Phenanthrene	2	< 660	ug/kg
		Phenol	2	< 660	ug/kg
		Pyrene	2	< 660	ug/kg
		bis(2-Chloroethoxy)methane	2	< 660	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB05-S54
SAMPLE NO: H446419

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	2	< 660	ug/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of matrix interferences.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB06-S19
SAMPLE NO: H446420
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 1452
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	44	ug/kg
		Methylene chloride	1	5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	74	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	20	< 6,600	ug/kg
		2,4-Dimethylphenol	20	< 6,600	ug/kg
		2,4-Dinitrotoluene	20	< 6,600	ug/kg
		2,6-Dinitrotoluene	20	< 6,600	ug/kg
		2-Chloronaphthalene	20	< 6,600	ug/kg
		2-Methylnaphthalene	20	28,000	ug/kg
		4,6-Dinitro-o-cresol	20	< 33,000	ug/kg
		4-Nitrophenol	20	< 33,000	ug/kg
		Acenaphthene	20	18,000	ug/kg
		Acenaphthylene	20	< 6,600	ug/kg
		Anthracene	20	15,000	ug/kg
		Benzo(a)anthracene	20	< 6,600	ug/kg
		Benzo(a)pyrene	20	< 6,600	ug/kg
		Chrysene	20	< 6,600	ug/kg
		Di-n-butyl phthalate	20	< 6,600	ug/kg
		Dibenzofuran	20	18,000	ug/kg
		Fluoranthene	20	20,000	ug/kg
		Fluorene	20	21,000	ug/kg
		N-Nitrosodiphenylamine	20	< 6,600	ug/kg
		Naphthalene	20	61,000	ug/kg
		Nitrobenzene	20	< 6,600	ug/kg
		Pentachlorophenol	20	< 33,000	ug/kg
		Phenanthrene	20	44,000	ug/kg
		Phenol	20	< 6,600	ug/kg
		Pyrene	20	9,200	ug/kg
		bis(2-Chloroethoxy)methane	20	< 6,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB06-S19
SAMPLE NO: H446420

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	20	< 6,600	ug/kg
8	S401	SW1312 - SPLP Leaching Procedure - Metals and SVOA		Done	
9	S402	SW1312 - SPLP Leaching Procedure - ZHE		Done	
14	I685S	Petroleum Hydrocarbons	1	370	mg/kg
17	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	16	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
19	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	100	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	100	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	26	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	96	ug/L
		Fluoranthene	1	35	ug/L
		Fluorene	1	90	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	5	360	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	140	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	18	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 5

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB06-S19
SAMPLE NO: H446420

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Results for the SPLP leachate are reported in ug/L.
The reporting limits for soil semi-volatiles are elevated due to the dilution required because of high analyte concentration.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 6

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB06-S24
SAMPLE NO: H446421
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 04-MAR-97 1501
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	360	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 7

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB06-S24
SAMPLE NO: H446421

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
14	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB06-S49
SAMPLE NO: H446422
SAMPLE MATRIX: SOIL

DATE SAMPLED: 04-MAR-97 1450
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB06-S49
SAMPLE NO: H446422

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB03-S5
SAMPLE NO: H446423
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 05-MAR-97 0815
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	< 25	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	5	31	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	5	< 25	ug/kg
		Xylenes (total)	5	89	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	50	78,000	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	10	50,000	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	24,000	ug/kg
		Benzo(a)anthracene	10	7,900	ug/kg
		Benzo(a)pyrene	10	< 3,300	ug/kg
		Chrysene	10	8,600	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	10	40,000	ug/kg
		Fluoranthene	50	84,000	ug/kg
		Fluorene	10	46,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	50	180,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	50	160,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	40,000	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S5
SAMPLE NO: H446423

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg
8	S401	SW1312 - SPLP Leaching Procedure - Metals and SVOA		Done	
9	S402	SW1312 - SPLP Leaching Procedure - ZHE		Done	
14	I685S	Petroleum Hydrocarbons	1	670	mg/kg
15	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
17	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10 *	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	< 10	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	< 10	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	< 10	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	< 10	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	< 10	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S5
SAMPLE NO: H446423

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Results for the SPLP leachate are reported in ug/L.
The reporting limits on the volatile and semi-volatile analyses of the soil are elevated due to matrix interferences and high analyte concentration.
* The surrogates were not recovered in the SPLP leachate for semi-volatile analysis. The sample will be re-leached, re-analyzed, and reported on a separate report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB03-S19
SAMPLE NO: H446424
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 05-MAR-97 0830
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	38	ug/kg
		Methylene chloride	1	6	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	99	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1,600*	ug/kg
		2,4-Dimethylphenol	5	< 1,600	ug/kg
		2,4-Dinitrotoluene	5	< 1,600	ug/kg
		2,6-Dinitrotoluene	5	< 1,600	ug/kg
		2-Chloronaphthalene	5	< 1,600	ug/kg
		2-Methylnaphthalene	5	11,000	ug/kg
		4,6-Dinitro-o-cresol	5	< 8,200	ug/kg
		4-Nitrophenol	5	< 8,200	ug/kg
		Acenaphthene	5	6,100	ug/kg
		Acenaphthylene	5	< 1,600	ug/kg
		Anthracene	5	3,500	ug/kg
		Benzo(a)anthracene	5	< 1,600	ug/kg
		Benzo(a)pyrene	5	< 1,600	ug/kg
		Chrysene	5	< 1,600	ug/kg
		Di-n-butyl phthalate	5	< 1,600	ug/kg
		Dibenzofuran	5	6,400	ug/kg
		Fluoranthene	5	7,900	ug/kg
		Fluorene	5	5,600	ug/kg
		N-Nitrosodiphenylamine	5	< 1,600	ug/kg
		Naphthalene	5	30,000	ug/kg
		Nitrobenzene	5	< 1,600	ug/kg
		Pentachlorophenol	5	< 8,200	ug/kg
		Phenanthrene	5	16,000	ug/kg
		Phenol	5	< 1,600	ug/kg
		Pyrene	5	4,300	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S19
SAMPLE NO: H446424

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	5	< 1,600	ug/kg
8	S401	SW1312 - SPLP Leaching Procedure - Metals and SVOA		Done	
9	S402	SW1312 - SPLP Leaching Procedure - ZHE		Done	
14	I685S	Petroleum Hydrocarbons	1	70	mg/kg
15	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
17	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	41	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	40	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	35	ug/L
		Fluoranthene	1	10	ug/L
		Fluorene	1	28	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	75	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	54	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S19
SAMPLE NO: H446424

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Results for the SPLP leachate are reported in ug/L.
* The internal standard recoveries were outside of QC acceptance limits due to matrix interference which was confirmed by re-analysis.
The reporting limits for soil semi-volatiles are elevated due to the dilution required because of high analyte concentration.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB03-S24
SAMPLE NO: H446425
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 05-MAR-97 0835
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	16	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	29	ug/kg
		Xylenes (total)	1	51	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	1,100	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	1,100	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	860	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	1,200	ug/kg
		Fluoranthene	1	1,800	ug/kg
		Fluorene	1	1,300	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	4,600	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	3,600	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	1,200	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S24
SAMPLE NO: H446425

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
8	S401	SW1312 - SPLP Leaching Procedure - Metals and SVOA		Done	
9	S402	SW1312 - SPLP Leaching Procedure - ZHE		Done	
14	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg
15	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	24	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	30 *	ug/L
		Toluene	10	260	ug/L
		Xylenes (total)	1	11	ug/L
17	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	44	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	85	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	31	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	60	ug/L
		Fluoranthene	1	32	ug/L
		Fluorene	1	88	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	< 10	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	170	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	15	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 18

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S24
SAMPLE NO: H446425

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Results for the SPLP leachate are reported in ug/L.
* Methylene chloride is a common laboratory solvent. Methylene chloride was not detected in the analysis of the soil. The SPLP leachate may have been contaminated during the leaching process. This should be considered in evaluating the data.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB03-S34
SAMPLE NO: H446426
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 0910
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	625	< 3,100	ug/kg
		Benzene	625	< 3,100	ug/kg
		Chlorobenzene	625	< 3,100	ug/kg
		Ethylbenzene	625	46,000	ug/kg
		Methylene chloride	625	< 3,100	ug/kg
		Toluene	625	32,000	ug/kg
		Xylenes (total)	625	170,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	75	< 25,000	ug/kg
		2,4-Dimethylphenol	75	< 25,000	ug/kg
		2,4-Dinitrotoluene	75	< 25,000	ug/kg
		2,6-Dinitrotoluene	75	< 25,000	ug/kg
		2-Chloronaphthalene	75	< 25,000	ug/kg
		2-Methylnaphthalene	1500	2,200,000	ug/kg
		4,6-Dinitro-o-cresol	75	< 120,000	ug/kg
		4-Nitrophenol	75	< 120,000	ug/kg
		Acenaphthene	75	270,000	ug/kg
		Acenaphthylene	75	< 25,000	ug/kg
		Anthracene	75	160,000	ug/kg
		Benzo(a)anthracene	75	42,000	ug/kg
		Benzo(a)pyrene	75	< 25,000	ug/kg
		Chrysene	75	42,000	ug/kg
		Di-n-butyl phthalate	75	< 25,000	ug/kg
		Dibenzofuran	75	240,000	ug/kg
		Fluoranthene	75	210,000	ug/kg
		Fluorene	75	250,000	ug/kg
		N-Nitrosodiphenylamine	75	< 25,000	ug/kg
		Naphthalene	1500	4,000,000	ug/kg
		Nitrobenzene	75	< 25,000	ug/kg
		Pentachlorophenol	75	< 120,000	ug/kg
		Phenanthrene	1500	2,500,000	ug/kg
		Phenol	75	< 25,000	ug/kg
		Pyrene	75	190,000	ug/kg
		bis(2-Chloroethoxy)methane	75	< 25,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S34
SAMPLE NO: H446426

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	75	< 25,000	ug/kg
14	I685S	Petroleum Hydrocarbons	50	7,400	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 21

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB03-S52
SAMPLE NO: H446427
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 0935
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	25	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	20	ug/kg
		Xylenes (total)	1	75	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	4	11,000	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	2,900	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	1,800	ug/kg
		Benzo(a)anthracene	1	560	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	560	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	2,600	ug/kg
		Fluoranthene	1	2,900	ug/kg
		Fluorene	1	3,100	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	4	13,000	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	4	10,000	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	2,700	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 22

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S52
SAMPLE NO: H446427

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg
14	I685S	Petroleum Hydrocarbons	1	< 20	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 23

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB03-S54
SAMPLE NO: H446428
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 0940
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	820	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB03-S54
SAMPLE NO: H446428

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 25

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB04-S2.5
SAMPLE NO: H446429
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 1235
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	< 25	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	5	< 25	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	5	< 25	ug/kg
		Xylenes (total)	5	70	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	75	< 25,000	ug/kg
		2,4-Dimethylphenol	75	< 25,000	ug/kg
		2,4-Dinitrotoluene	75	< 25,000	ug/kg
		2,6-Dinitrotoluene	75	< 25,000	ug/kg
		2-Chloronaphthalene	75	< 25,000	ug/kg
		2-Methylnaphthalene	750	320,000	ug/kg
		4,6-Dinitro-o-cresol	75	< 120,000	ug/kg
		4-Nitrophenol	75	< 120,000	ug/kg
		Acenaphthene	75	370,000	ug/kg
		Acenaphthylene	75	< 25,000	ug/kg
		Anthracene	75	250,000	ug/kg
		Benzo(a)anthracene	75	130,000	ug/kg
		Benzo(a)pyrene	75	44,000	ug/kg
		Chrysene	75	130,000	ug/kg
		Di-n-butyl phthalate	75	< 25,000	ug/kg
		Dibenzofuran	75	300,000	ug/kg
		Fluoranthene	75	< 25,000	ug/kg
		Fluorene	75	370,000	ug/kg
		N-Nitrosodiphenylamine	75	< 25,000	ug/kg
		Naphthalene	750	540,000	ug/kg
		Nitrobenzene	75	< 25,000	ug/kg
		Pentachlorophenol	75	< 120,000	ug/kg
		Phenanthrene	750	1,600,000	ug/kg
		Phenol	75	< 25,000	ug/kg
		Pyrene	75	< 25,000	ug/kg
		bis(2-Chloroethoxy)methane	75	< 25,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S2.5
SAMPLE NO: H446429

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	75	< 25,000	ug/kg
14	I685S	Petroleum Hydrocarbons	50	19,000	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of matrix interferences and high target analyte concentration.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 27

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB04-S29
SAMPLE NO: H446430
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 1320
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	13	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	31	ug/kg
		Methylene chloride	1	11	ug/kg
		Toluene	1	21	ug/kg
		Xylenes (total)	1	88	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1,600	ug/kg
		2,4-Dimethylphenol	5	5,300	ug/kg
		2,4-Dinitrotoluene	5	< 1,600	ug/kg
		2,6-Dinitrotoluene	5	< 1,600	ug/kg
		2-Chloronaphthalene	5	< 1,600	ug/kg
		2-Methylnaphthalene	25	17,000	ug/kg
		4,6-Dinitro-o-cresol	5	< 8,200	ug/kg
		4-Nitrophenol	5	< 8,200	ug/kg
		Acenaphthene	5	13,000	ug/kg
		Acenaphthylene	5	< 1,600	ug/kg
		Anthracene	5	14,000	ug/kg
		Benzo(a)anthracene	5	1,800	ug/kg
		Benzo(a)pyrene	5	< 1,600	ug/kg
		Chrysene	5	1,700	ug/kg
		Di-n-butyl phthalate	5	< 1,600	ug/kg
		Dibenzofuran	5	12,000	ug/kg
		Fluoranthene	5	11,000	ug/kg
		Fluorene	5	14,000	ug/kg
		N-Nitrosodiphenylamine	5	< 1,600	ug/kg
		Naphthalene	25	59,000	ug/kg
		Nitrobenzene	5	< 1,600	ug/kg
		Pentachlorophenol	5	< 8,200	ug/kg
		Phenanthrene	25	46,000	ug/kg
		Phenol	5	< 1,600	ug/kg
		Pyrene	5	9,800	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S29
SAMPLE NO: H446430

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	5	< 1,600	ug/kg
14	I685S	Petroleum Hydrocarbons	1	70	mg/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 29

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB04-S27
SAMPLE NO: H446431
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 1330
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	13	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	64	ug/kg
		Methylene chloride	1	7	ug/kg
		Toluene	1	28	ug/kg
		Xylenes (total)	1	180	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1,600	ug/kg
		2,4-Dimethylphenol	5	2,300	ug/kg
		2,4-Dinitrotoluene	5	< 1,600	ug/kg
		2,6-Dinitrotoluene	5	< 1,600	ug/kg
		2-Chloronaphthalene	5	< 1,600	ug/kg
		2-Methylnaphthalene	25	53,000	ug/kg
		4,6-Dinitro-o-cresol	5	< 8,200	ug/kg
		4-Nitrophenol	5	< 8,200	ug/kg
		Acenaphthene	5	16,000	ug/kg
		Acenaphthylene	5	< 1,600	ug/kg
		Anthracene	5	9,700	ug/kg
		Benzo(a)anthracene	5	2,100	ug/kg
		Benzo(a)pyrene	5	< 1,600	ug/kg
		Chrysene	5	2,100	ug/kg
		Di-n-butyl phthalate	5	< 1,600	ug/kg
		Dibenzofuran	5	14,000	ug/kg
		Fluoranthene	5	13,000	ug/kg
		Fluorene	5	16,000	ug/kg
		N-Nitrosodiphenylamine	5	< 1,600	ug/kg
		Naphthalene	25	56,000	ug/kg
		Nitrobenzene	5	< 1,600	ug/kg
		Pentachlorophenol	5	< 8,200	ug/kg
		Phenanthrene	25	47,000	ug/kg
		Phenol	5	< 1,600	ug/kg
		Pyrene	5	10,000	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S27
SAMPLE NO: H446431

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	5	< 1,600	ug/kg
14	I685S	Petroleum Hydrocarbons	1	130	mg/kg

COMMENTS: The reporting limits are elevated for semi-volatiles due to the dilution required because of high analyte concentration.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 31

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB04-S31
SAMPLE NO: H446432
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 05-MAR-97 1335
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	125	< 620	ug/kg
		Benzene	125	< 620	ug/kg
		Chlorobenzene	125	< 620	ug/kg
		Ethylbenzene	125	1,700	ug/kg
		Methylene chloride	125	< 620	ug/kg
		Toluene	125	1,400	ug/kg
		Xylenes (total)	125	6,100	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1,600	ug/kg
		2,4-Dimethylphenol	5	< 1,600	ug/kg
		2,4-Dinitrotoluene	5	< 1,600	ug/kg
		2,6-Dinitrotoluene	5	< 1,600	ug/kg
		2-Chloronaphthalene	5	< 1,600	ug/kg
		2-Methylnaphthalene	10	29,000	ug/kg
		4,6-Dinitro-o-cresol	5	< 8,200	ug/kg
		4-Nitrophenol	5	< 8,200	ug/kg
		Acenaphthene	10	23,000	ug/kg
		Acenaphthylene	5	< 1,600	ug/kg
		Anthracene	5	18,000	ug/kg
		Benzo(a)anthracene	5	4,400	ug/kg
		Benzo(a)pyrene	5	< 1,600	ug/kg
		Chrysene	5	4,400	ug/kg
		Di-n-butyl phthalate	5	< 1,600	ug/kg
		Dibenzofuran	10	25,000	ug/kg
		Fluoranthene	5	20,000	ug/kg
		Fluorene	10	20,000	ug/kg
		N-Nitrosodiphenylamine	5	< 1,600	ug/kg
		Naphthalene	50	200,000	ug/kg
		Nitrobenzene	5	< 1,600	ug/kg
		Pentachlorophenol	5	< 8,200	ug/kg
		Phenanthrene	10	56,000	ug/kg
		Phenol	5	< 1,600	ug/kg
		Pyrene	5	23,000	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S31
SAMPLE NO: H446432

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	5	< 1,600	ug/kg
14	I685S	Petroleum Hydrocarbons	1	120	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB04-S39
SAMPLE NO: H446433
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 1350
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
5	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	2000	1,100,000	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	2000	750,000	ug/kg
		Acenaphthylene	10	6,800	ug/kg
		Anthracene	100	470,000	ug/kg
		Benzo(a)anthracene	10	38,000	ug/kg
		Benzo(a)pyrene	10	11,000	ug/kg
		Chrysene	10	38,000	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	2000	750,000	ug/kg
		Fluoranthene	2000	590,000J	ug/kg
		Fluorene	100	620,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	2000	4,900,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	10	1,800,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	100	430,000	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg

COMMENTS: J- The reported value is below the reporting limit.
The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 34

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB04-S51
SAMPLE NO: H446434
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 05-MAR-97 1415
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	< 25	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	5	620	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	5	200	ug/kg
		Xylenes (total)	5	1,900	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	25	< 8,200	ug/kg
		2,4-Dimethylphenol	25	< 8,200	ug/kg
		2,4-Dinitrotoluene	25	< 8,200	ug/kg
		2,6-Dinitrotoluene	25	< 8,200	ug/kg
		2-Chloronaphthalene	25	< 8,200	ug/kg
		2-Methylnaphthalene	25	51,000	ug/kg
		4,6-Dinitro-o-cresol	25	< 41,000	ug/kg
		4-Nitrophenol	25	< 41,000	ug/kg
		Acenaphthene	25	12,000	ug/kg
		Acenaphthylene	25	< 8,200	ug/kg
		Anthracene	25	< 8,200	ug/kg
		Benzo(a)anthracene	25	< 8,200	ug/kg
		Benzo(a)pyrene	25	< 8,200	ug/kg
		Chrysene	25	< 8,200	ug/kg
		Di-n-butyl phthalate	25	< 8,200	ug/kg
		Dibenzofuran	25	12,000	ug/kg
		Fluoranthene	25	< 8,200	ug/kg
		Fluorene	25	9,000	ug/kg
		N-Nitrosodiphenylamine	25	< 8,200	ug/kg
		Naphthalene	25	73,000	ug/kg
		Nitrobenzene	25	< 8,200	ug/kg
		Pentachlorophenol	25	< 41,000	ug/kg
		Phenanthrene	25	27,000	ug/kg
		Phenol	25	< 8,200	ug/kg
		Pyrene	25	8,200	ug/kg
		bis(2-Chloroethoxy)methane	25	< 8,200	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S51
SAMPLE NO: H446434

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	25	< 8,200	ug/kg
8	S401	SW1312 - SPLP Leaching Procedure - Metals and SVOA		Done	
9	S402	SW1312 - SPLP Leaching Procedure - ZHE		Done	
14	I685S	Petroleum Hydrocarbons	1	40	mg/kg
15	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	36	ug/L
		Methylene chloride	1	86 *	ug/L
		Toluene	10	120	ug/L
		Xylenes (total)	1	100	ug/L
17	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	25	< 250	ug/L
		2,4-Dimethylphenol	25	< 250	ug/L
		2,4-Dinitrotoluene	25	< 250	ug/L
		2,6-Dinitrotoluene	25	< 250	ug/L
		2-Chloronaphthalene	25	< 250	ug/L
		2-Methylnaphthalene	25	1,600	ug/L
		4,6-Dinitro-o-cresol	25	< 1,200	ug/L
		4-Nitrophenol	25	< 1,200	ug/L
		Acenaphthene	25	380	ug/L
		Acenaphthylene	25	< 250	ug/L
		Anthracene	25	< 250	ug/L
		Benzo(a)anthracene	25	< 250	ug/L
		Benzo(a)pyrene	25	< 250	ug/L
		Chrysene	25	< 250	ug/L
		Di-n-butylphthalate	25	< 250	ug/L
		Dibenzofuran	25	350	ug/L
		Fluoranthene	25	< 250	ug/L
		Fluorene	25	280	ug/L
		N-Nitrosodiphenylamine	25	< 250	ug/L
		Naphthalene	25	2,200	ug/L
		Nitrobenzene	25	< 250	ug/L
		Pentachlorophenol	25	< 1,200	ug/L
		Phenanthrene	25	820	ug/L
		Phenol	25	< 250	ug/L
		Pyrene	25	250	ug/L
		bis(2-Chloroethoxy)methane	25	< 250	ug/L
		bis(2-Ethylhexyl)phthalate	25	< 250	ug/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S51
SAMPLE NO: H446434

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Results for the SPLP leachate are reported in ug/L.
The soil reporting limits are elevated due to the dilution required because of the high concentration of target analytes.
* Methylene chloride is a common laboratory solvent. Methylene chloride was not detected in the analysis of the soil. The SPLP leachate may have been contaminated during the leaching process. This should be considered in evaluating the data.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB04-S59
SAMPLE NO: H446435
SAMPLE MATRIX: SOIL

DATE SAMPLED: 05-MAR-97 1425
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 330	ug/kg
		2,4-Dimethylphenol	1	< 330	ug/kg
		2,4-Dinitrotoluene	1	< 330	ug/kg
		2,6-Dinitrotoluene	1	< 330	ug/kg
		2-Chloronaphthalene	1	< 330	ug/kg
		2-Methylnaphthalene	1	< 330	ug/kg
		4,6-Dinitro-o-cresol	1	< 1,600	ug/kg
		4-Nitrophenol	1	< 1,600	ug/kg
		Acenaphthene	1	< 330	ug/kg
		Acenaphthylene	1	< 330	ug/kg
		Anthracene	1	< 330	ug/kg
		Benzo(a)anthracene	1	< 330	ug/kg
		Benzo(a)pyrene	1	< 330	ug/kg
		Chrysene	1	< 330	ug/kg
		Di-n-butyl phthalate	1	< 330	ug/kg
		Dibenzofuran	1	< 330	ug/kg
		Fluoranthene	1	< 330	ug/kg
		Fluorene	1	< 330	ug/kg
		N-Nitrosodiphenylamine	1	< 330	ug/kg
		Naphthalene	1	< 330	ug/kg
		Nitrobenzene	1	< 330	ug/kg
		Pentachlorophenol	1	< 1,600	ug/kg
		Phenanthrene	1	< 330	ug/kg
		Phenol	1	< 330	ug/kg
		Pyrene	1	< 330	ug/kg
		bis(2-Chloroethoxy)methane	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB04-S59
SAMPLE NO: H446435

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 39

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB07-S2.5
SAMPLE NO: H446436
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0820
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	33	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	125	6,300	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	5	360	ug/kg
		Xylenes (total)	125	22,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	75	< 25,000	ug/kg
		2,4-Dimethylphenol	75	< 25,000	ug/kg
		2,4-Dinitrotoluene	75	< 25,000	ug/kg
		2,6-Dinitrotoluene	75	< 25,000	ug/kg
		2-Chloronaphthalene	75	< 25,000	ug/kg
		2-Methylnaphthalene	1500	1,300,000	ug/kg
		4,6-Dinitro-o-cresol	75	< 124,000	ug/kg
		4-Nitrophenol	75	< 124,000	ug/kg
		Acenaphthene	1500	1,700,000	ug/kg
		Acenaphthylene	75	< 25,000	ug/kg
		Anthracene	75	400,000	ug/kg
		Benzo(a)anthracene	75	130,000	ug/kg
		Benzo(a)pyrene	75	27,000	ug/kg
		Chrysene	75	130,000	ug/kg
		Di-n-butyl phthalate	75	< 25,000	ug/kg
		Dibenzofuran	1500	1,100,000	ug/kg
		Fluoranthene	1500	2,500,000	ug/kg
		Fluorene	1500	1,600,000	ug/kg
		N-Nitrosodiphenylamine	75	< 25,000	ug/kg
		Naphthalene	1500	3,900,000	ug/kg
		Nitrobenzene	75	< 25,000	ug/kg
		Pentachlorophenol	75	< 124,000	ug/kg
		Phenanthrene	1500	4,100,000	ug/kg
		Phenol	75	< 25,000	ug/kg
		Pyrene	1500	1,500,000	ug/kg
		bis(2-Chloroethoxy)methane	75	< 25,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB07-S2.5
SAMPLE NO: H446436

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	75	< 25,000	ug/kg
14	I685S	Petroleum Hydrocarbons	25	6,300	mg/kg

COMMENTS: The reporting limits are elevated due to dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44142
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	03219
SAMPLE ID:	HWPW-SB07-S19	DATE SAMPLED:	06-MAR-97 0840
SAMPLE NO:	H446437	DATE RECEIVED:	06-MAR-97
SAMPLE MATRIX:	SOIL	PROJECT MANAGER:	Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	230	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	125	12,000	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	125	12,000	ug/kg
		Xylenes (total)	125	40,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	100	< 33,000	ug/kg
		2,4-Dimethylphenol	100	< 33,000	ug/kg
		2,4-Dinitrotoluene	100	< 33,000	ug/kg
		2,6-Dinitrotoluene	100	< 33,000	ug/kg
		2-Chloronaphthalene	100	< 33,000	ug/kg
		2-Methylnaphthalene	1000	1,700,000	ug/kg
		4,6-Dinitro-o-cresol	100	< 160,000	ug/kg
		4-Nitrophenol	100	< 160,000	ug/kg
		Acenaphthene	100	460,000	ug/kg
		Acenaphthylene	100	< 33,000	ug/kg
		Anthracene	100	280,000	ug/kg
		Benzo(a)anthracene	100	59,000	ug/kg
		Benzo(a)pyrene	100	< 33,000	ug/kg
		Chrysene	100	56,000	ug/kg
		Di-n-butyl phthalate	100	< 33,000	ug/kg
		Dibenzofuran	100	360,000	ug/kg
		Fluoranthene	100	330,000	ug/kg
		Fluorene	100	430,000	ug/kg
		N-Nitrosodiphenylamine	100	< 33,000	ug/kg
		Naphthalene	5000	7,600,000	ug/kg
		Nitrobenzene	100	< 33,000	ug/kg
		Pentachlorophenol	100	< 160,000	ug/kg
		Phenanthrene	1000	2,600,000	ug/kg
		Phenol	100	< 33,000	ug/kg
		Pyrene	100	280,000	ug/kg
		bis(2-Chloroethoxy)methane	100	< 33,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB07-S19
SAMPLE NO: H446437

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	100	< 33,000	ug/kg
14	I685S	Petroleum Hydrocarbons	5	1,900	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB07-S21
SAMPLE NO: H446438
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0845
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	5	< 25	ug/kg
		Benzene	5	670	ug/kg
		Chlorobenzene	5	< 25	ug/kg
		Ethylbenzene	125	12,000	ug/kg
		Methylene chloride	5	< 25	ug/kg
		Toluene	125	13,000	ug/kg
		Xylenes (total)	125	38,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	10	< 3,300	ug/kg
		2,4-Dimethylphenol	10	< 3,300	ug/kg
		2,4-Dinitrotoluene	10	< 3,300	ug/kg
		2,6-Dinitrotoluene	10	< 3,300	ug/kg
		2-Chloronaphthalene	10	< 3,300	ug/kg
		2-Methylnaphthalene	500	260,000	ug/kg
		4,6-Dinitro-o-cresol	10	< 16,000	ug/kg
		4-Nitrophenol	10	< 16,000	ug/kg
		Acenaphthene	200	400,000	ug/kg
		Acenaphthylene	10	< 3,300	ug/kg
		Anthracene	10	220,000	ug/kg
		Benzo(a)anthracene	10	17,000	ug/kg
		Benzo(a)pyrene	10	5,000	ug/kg
		Chrysene	10	17,000	ug/kg
		Di-n-butyl phthalate	10	< 3,300	ug/kg
		Dibenzofuran	200	300,000	ug/kg
		Fluoranthene	10	240,000	ug/kg
		Fluorene	200	360,000	ug/kg
		N-Nitrosodiphenylamine	10	< 3,300	ug/kg
		Naphthalene	500	1,000,000	ug/kg
		Nitrobenzene	10	< 3,300	ug/kg
		Pentachlorophenol	10	< 16,000	ug/kg
		Phenanthrene	200	730,000	ug/kg
		Phenol	10	< 3,300	ug/kg
		Pyrene	10	200,000	ug/kg
		bis(2-Chloroethoxy)methane	10	< 3,300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB07-S21
SAMPLE NO: H446438

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 3,300	ug/kg
14	I685S	Petroleum Hydrocarbons	1	1,200	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB07-S22
SAMPLE NO: H446439
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0850
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	125	< 620	ug/kg
		Benzene	125	< 620	ug/kg
		Chlorobenzene	125	< 620	ug/kg
		Ethylbenzene	125	9,100	ug/kg
		Methylene chloride	125	< 620	ug/kg
		Toluene	125	9,800	ug/kg
		Xylenes (total)	125	28,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1000	< 330,000	ug/kg
		2,4-Dimethylphenol	1000	< 330,000	ug/kg
		2,4-Dinitrotoluene	1000	< 330,000	ug/kg
		2,6-Dinitrotoluene	1000	< 330,000	ug/kg
		2-Chloronaphthalene	1000	< 330,000	ug/kg
		2-Methylnaphthalene	1000	790,000	ug/kg
		4,6-Dinitro-o-cresol	1000	< 1,600,000	ug/kg
		4-Nitrophenol	1000	< 1,600,000	ug/kg
		Acenaphthene	1000	630,000	ug/kg
		Acenaphthylene	1000	< 330,000	ug/kg
		Anthracene	1000	< 330,000	ug/kg
		Benzo(a)anthracene	1000	< 330,000	ug/kg
		Benzo(a)pyrene	1000	< 330,000	ug/kg
		Chrysene	1000	< 330,000	ug/kg
		Di-n-butyl phthalate	1000	< 330,000	ug/kg
		Dibenzofuran	1000	470,000	ug/kg
		Fluoranthene	1000	380,000	ug/kg
		Fluorene	1000	560,000	ug/kg
		N-Nitrosodiphenylamine	1000	< 330,000	ug/kg
		Naphthalene	1000	5,300,000	ug/kg
		Nitrobenzene	1000	< 330,000	ug/kg
		Pentachlorophenol	1000	< 1,600,000	ug/kg
		Phenanthrene	1000	1,200,000	ug/kg
		Phenol	1000	< 330,000	ug/kg
		Pyrene	1000	< 330,000	ug/kg
		bis(2-Chloroethoxy)methane	1000	< 330,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB07-S22
SAMPLE NO: H446439

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1000	< 330,000	ug/kg
14	I685S	Petroleum Hydrocarbons	1	1,100	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB07-S24
SAMPLE NO: H446440
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0900
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1250	< 6,200	ug/kg
		Benzene	1250	< 6,200	ug/kg
		Chlorobenzene	1250	< 6,200	ug/kg
		Ethylbenzene	1250	31,000	ug/kg
		Methylene chloride	1250	< 6,200	ug/kg
		Toluene	1250	31,000	ug/kg
		Xylenes (total)	1250	90,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	7500	< 2,500	mg/kg
		2,4-Dimethylphenol	7500	< 2,500	mg/kg
		2,4-Dinitrotoluene	7500	< 2,500	mg/kg
		2,6-Dinitrotoluene	7500	< 2,500	mg/kg
		2-Chloronaphthalene	7500	< 2,500	mg/kg
		2-Methylnaphthalene	7500	3,700	mg/kg
		4,6-Dinitro-o-cresol	7500	< 12,000	mg/kg
		4-Nitrophenol	7500	< 12,000	mg/kg
		Acenaphthene	7500	3,200	mg/kg
		Acenaphthylene	7500	< 2,500	mg/kg
		Anthracene	7500	< 2,500	mg/kg
		Benzo(a)anthracene	7500	< 2,500	mg/kg
		Benzo(a)pyrene	7500	< 2,500	mg/kg
		Chrysene	7500	< 2,500	mg/kg
		Di-n-butyl phthalate	7500	< 2,500	mg/kg
		Dibenzofuran	7500	2,500	mg/kg
		Fluoranthene	7500	2,500	mg/kg
		Fluorene	7500	2,700	mg/kg
		N-Nitrosodiphenylamine	7500	< 2,500	mg/kg
		Naphthalene	7500	42,000	mg/kg
		Nitrobenzene	7500	< 2,500	mg/kg
		Pentachlorophenol	7500	< 12,000	mg/kg
		Phenanthrene	7500	6,900	mg/kg
		Phenol	7500	< 2,500	mg/kg
		Pyrene	7500	< 2,500	mg/kg
		bis(2-Chloroethoxy)methane	7500	< 2,500	mg/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 48

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB07-S24
SAMPLE NO: H446440

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	7500	< 2,500	mg/kg
14	I685S	Petroleum Hydrocarbons	50	9,200	mg/kg

COMMENTS: The reporting limits are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB08-S4
SAMPLE NO: H446441
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 06-MAR-97 0925
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	24	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	46	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	100	< 33,000	ug/kg
		2,4-Dimethylphenol	100	< 33,000	ug/kg
		2,4-Dinitrotoluene	100	< 33,000	ug/kg
		2,6-Dinitrotoluene	100	< 33,000	ug/kg
		2-Chloronaphthalene	100	< 33,000	ug/kg
		2-Methylnaphthalene	100	420,000	ug/kg
		4,6-Dinitro-o-cresol	100	< 160,000	ug/kg
		4-Nitrophenol	100	< 160,000	ug/kg
		Acenaphthene	1000	450,000	ug/kg
		Acenaphthylene	100	< 33,000	ug/kg
		Anthracene	100	480,000	ug/kg
		Benzo(a)anthracene	100	160,000	ug/kg
		Benzo(a)pyrene	100	62,000	ug/kg
		Chrysene	100	180,000	ug/kg
		Di-n-butyl phthalate	100	< 33,000	ug/kg
		Dibenzofuran	100	600,000	ug/kg
		Fluoranthene	1000	430,000	ug/kg
		Fluorene	1000	460,000	ug/kg
		N-Nitrosodiphenylamine	100	< 33,000	ug/kg
		Naphthalene	100	970,000	ug/kg
		Nitrobenzene	100	< 33,000	ug/kg
		Pentachlorophenol	100	< 160,000	ug/kg
		Phenanthrene	1000	930,000	ug/kg
		Phenol	100	< 33,000	ug/kg
		Pyrene	100	< 33,000	ug/kg
		bis(2-Chloroethoxy)methane	100	< 33,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB08-S4
SAMPLE NO: H446441

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	100	< 33,000	ug/kg
14	I685S	Petroleum Hydrocarbons	25	2,600	mg/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB08-S14
SAMPLE NO: H446442
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0940
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	71	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	125	3,400	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	125	2,600	ug/kg
		Xylenes (total)	125	11,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1000	< 330,000	ug/kg
		2,4-Dimethylphenol	1000	< 330,000	ug/kg
		2,4-Dinitrotoluene	1000	< 330,000	ug/kg
		2,6-Dinitrotoluene	1000	< 330,000	ug/kg
		2-Chloronaphthalene	1000	< 330,000	ug/kg
		2-Methylnaphthalene	1000	360,000	ug/kg
		4,6-Dinitro-o-cresol	1000	< 1,600,000	ug/kg
		4-Nitrophenol	1000	< 1,600,000	ug/kg
		Acenaphthene	1000	< 330,000	ug/kg
		Acenaphthylene	1000	< 330,000	ug/kg
		Anthracene	1000	< 330,000	ug/kg
		Benzo(a)anthracene	1000	< 330,000	ug/kg
		Benzo(a)pyrene	1000	< 330,000	ug/kg
		Chrysene	1000	< 330,000	ug/kg
		Di-n-butyl phthalate	1000	< 330,000	ug/kg
		Dibenzofuran	1000	< 330,000	ug/kg
		Fluoranthene	1000	< 330,000	ug/kg
		Fluorene	1000	330,000	ug/kg
		N-Nitrosodiphenylamine	1000	< 330,000	ug/kg
		Naphthalene	1000	4,600,000	ug/kg
		Nitrobenzene	1000	< 330,000	ug/kg
		Pentachlorophenol	1000	< 1,600,000	ug/kg
		Phenanthrene	1000	590,000	ug/kg
		Phenol	1000	< 330,000	ug/kg
		Pyrene	1000	< 330,000	ug/kg
		bis(2-Chloroethoxy)methane	1000	< 330,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB08-S14
SAMPLE NO: H446442

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1000	< 330,000	ug/kg
14	I685S	Petroleum Hydrocarbons	1	850	mg/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB08-S18
SAMPLE NO: H446443
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0945
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	125	< 620	ug/kg
		Benzene	125	1,100	ug/kg
		Chlorobenzene	125	< 620	ug/kg
		Ethylbenzene	125	19,000	ug/kg
		Methylene chloride	125	< 620	ug/kg
		Toluene	125	13,000	ug/kg
		Xylenes (total)	125	55,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	75	< 25,000	ug/kg
		2,4-Dimethylphenol	75	25,000	ug/kg
		2,4-Dinitrotoluene	75	< 25,000	ug/kg
		2,6-Dinitrotoluene	75	< 25,000	ug/kg
		2-Chloronaphthalene	75	< 25,000	ug/kg
		2-Methylnaphthalene	75	400,000	ug/kg
		4,6-Dinitro-o-cresol	75	< 124,000	ug/kg
		4-Nitrophenol	75	< 124,000	ug/kg
		Acenaphthene	75	320,000	ug/kg
		Acenaphthylene	75	< 25,000	ug/kg
		Anthracene	75	200,000	ug/kg
		Benzo(a)anthracene	75	37,000	ug/kg
		Benzo(a)pyrene	75	< 25,000	ug/kg
		Chrysene	75	37,000	ug/kg
		Di-n-butyl phthalate	75	< 25,000	ug/kg
		Dibenzofuran	75	270,000	ug/kg
		Fluoranthene	75	250,000	ug/kg
		Fluorene	75	300,000	ug/kg
		N-Nitrosodiphenylamine	75	< 25,000	ug/kg
		Naphthalene	3000	17,000,000	ug/kg
		Nitrobenzene	75	< 25,000	ug/kg
		Pentachlorophenol	75	< 124,000	ug/kg
		Phenanthrene	300	1,400,000	ug/kg
		Phenol	75	< 25,000	ug/kg
		Pyrene	75	160,000	ug/kg
		bis(2-Chloroethoxy)methane	75	< 25,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-SB08-S22
SAMPLE NO: H446444
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 06-MAR-97 0950
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	57	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	125	12,000	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	125	7,500	ug/kg
		Xylenes (total)	125	43,000	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	750	< 250,000	ug/kg
		2,4-Dimethylphenol	750	< 250,000	ug/kg
		2,4-Dinitrotoluene	750	< 250,000	ug/kg
		2,6-Dinitrotoluene	750	< 250,000	ug/kg
		2-Chloronaphthalene	750	< 250,000	ug/kg
		2-Methylnaphthalene	750	420,000	ug/kg
		4,6-Dinitro-o-cresol	750	< 1,200,000	ug/kg
		4-Nitrophenol	750	< 1,200,000	ug/kg
		Acenaphthene	750	400,000	ug/kg
		Acenaphthylene	750	< 250,000	ug/kg
		Anthracene	750	< 250,000	ug/kg
		Benzo(a)anthracene	750	< 250,000	ug/kg
		Benzo(a)pyrene	750	< 250,000	ug/kg
		Chrysene	750	< 250,000	ug/kg
		Di-n-butyl phthalate	750	< 250,000	ug/kg
		Dibenzofuran	750	300,000	ug/kg
		Fluoranthene	750	300,000	ug/kg
		Fluorene	750	350,000	ug/kg
		N-Nitrosodiphenylamine	750	< 250,000	ug/kg
		Naphthalene	4000	22,000,000	ug/kg
		Nitrobenzene	750	< 250,000	ug/kg
		Pentachlorophenol	750	< 1,200,000	ug/kg
		Phenanthrene	750	840,000	ug/kg
		Phenol	750	< 250,000	ug/kg
		Pyrene	750	< 250,000	ug/kg
		bis(2-Chloroethoxy)methane	750	< 250,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB08-S22
SAMPLE NO: H446444

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	750	< 250,000	ug/kg
14	I685S	Petroleum Hydrocarbons	25	12,000	mg/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44142
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-SB08-S21
SAMPLE NO: H446445
SAMPLE MATRIX: SOIL

DATE SAMPLED: 06-MAR-97 0955
DATE RECEIVED: 06-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	74	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	36	ug/kg
		Xylenes (total)	1	230	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	500	< 160,000	ug/kg
		2,4-Dimethylphenol	500	< 160,000	ug/kg
		2,4-Dinitrotoluene	500	< 160,000	ug/kg
		2,6-Dinitrotoluene	500	< 160,000	ug/kg
		2-Chloronaphthalene	500	< 160,000	ug/kg
		2-Methylnaphthalene	500	350,000	ug/kg
		4,6-Dinitro-o-cresol	500	< 820,000	ug/kg
		4-Nitrophenol	500	< 820,000	ug/kg
		Acenaphthene	500	200,000	ug/kg
		Acenaphthylene	500	< 160,000	ug/kg
		Anthracene	500	580,000	ug/kg
		Benzo(a)anthracene	500	< 160,000	ug/kg
		Benzo(a)pyrene	500	< 160,000	ug/kg
		Chrysene	500	< 160,000	ug/kg
		Di-n-butyl phthalate	500	< 160,000	ug/kg
		Dibenzofuran	500	230,000	ug/kg
		Fluoranthene	500	< 160,000	ug/kg
		Fluorene	500	180,000	ug/kg
		N-Nitrosodiphenylamine	500	< 160,000	ug/kg
		Naphthalene	5000	20,000,000	ug/kg
		Nitrobenzene	500	< 160,000	ug/kg
		Pentachlorophenol	500	< 820,000	ug/kg
		Phenanthrene	500	610,000	ug/kg
		Phenol	500	< 160,000	ug/kg
		Pyrene	500	< 160,000	ug/kg
		bis(2-Chloroethoxy)methane	500	< 160,000	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section A Page 58

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-SB08-S21
SAMPLE NO: H446445

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	500	< 160,000	ug/kg
14	I685S	Petroleum Hydrocarbons	5	4,500	mg/kg

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required by the high concentration of target analytes.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB05-S54								SAMPLE NO: H446419		
1	OVTCS2	72194	72257	NA						
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8260A	11-MAR-97 1424	JC	GCMSY
							19-8270B	06-APR-97 1354	EAY	GCMSA
SAMPLE ID: HWPW-SB06-S19								SAMPLE NO: H446420		
1	OVTCS2	72194	72257	NA						
8	S401	72327	72327	NA			19-8260A	11-MAR-97 1457	JC	GCMSY
9	S402	72214	72214	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
17	OVTCW2	72735	71777	NA			19-1312	12-MAR-97 1630	JLJ	005EPE
19	OSVTCW	72496	72727	19-3510B	19-MAR-97 1500	A M	19-8260A	13-MAR-97 1955	MH	GCMSB
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	06-APR-97 2257	EAY	GCMSA
14	I685S	72382	72382	19-3550A			19-8270B	24-MAR-97 1437	EAY	GCMSA
							02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB06-S24								SAMPLE NO: H446421		
1	OVTCS2	72256	72257	NA						
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8260A	11-MAR-97 2247	JC	GCMSY
14	I685S	72382	72382	19-3550A			19-8270B	04-APR-97 1842	EAY	GCMSA
							02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB06-S49								SAMPLE NO: H446422		
1	OVTCS2	72256	72257	NA						
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8260A	11-MAR-97 2321	JC	GCMSY
							19-8270B	04-APR-97 1932	EAY	GCMSA
SAMPLE ID: HWPW-SB03-S5								SAMPLE NO: H446423		
1	OVTCS2	72308	72257	NA						
8	S401	72327	72327	NA			19-8260A	13-MAR-97 0255	MH	GCMSY
9	S402	72214	72214	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
15	OVTCW2	72735	71777	NA			19-1312	12-MAR-97 1630	JLJ	005EPE
17	OSVTCW	72496	72727	19-3510B	19-MAR-97 1500	A M	19-8260A	13-MAR-97 2026	MH	GCMSB
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	05-APR-97 2044	EAY	GCMSA
14	I685S	72382	72382	19-3550A			19-8270B	24-MAR-97 0452	EAY	GCMSA
							02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB03-S19								SAMPLE NO: H446424		
1	OVTCS2	72256	72257	NA						
8	S401	72327	72327	NA			19-8260A	12-MAR-97 0028	JC	GCMSY
9	S402	72214	72214	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
15	OVTCW2	72735	71777	NA			19-1312	12-MAR-97 1630	JLJ	005EPE
17	OSVTCW	72496	72727	19-3510B	19-MAR-97 1500	A M	19-8260A	13-MAR-97 2058	MH	GCMSB
							19-8270B	05-APR-97 2134	EAY	GCMSA

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section B Page 2

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB03-S19									SAMPLE NO: H446424	
3	OSVTCS	72450	72450	19-3550A	18-MAR-97 1300	RDQ	19-8270B	24-MAR-97 1942	EAY	GCMSA
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB03-S24									SAMPLE NO: H446425	
1	OVTCS2	72256	72257	NA			19-8260A	12-MAR-97 0104	JC	GCMSY
8	S401	72327	72327	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
9	S402	72326	72326	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
15	OVTCW2	72602	72482	NA			19-8260A	19-MAR-97 1912	JC	GCMSY
17	OSVTCW	72496	72727	19-3510B	19-MAR-97 1500	A M	19-8270B	05-APR-97 2223	EAY	GCMSA
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	04-APR-97 2021	EAY	GCMSA
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB03-S34									SAMPLE NO: H446426	
1	OVTCS2	72470	72470	NA			19-8260A	17-MAR-97 2023	JC	GCMSB
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	01-APR-97 0206	EAY	GCMSA
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB03-S52									SAMPLE NO: H446427	
1	OVTCS2	72308	72257	NA			19-8260A	13-MAR-97 0330	MH	GCMSY
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	31-MAR-97 1049	EAY	GCMSZ
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB03-S54									SAMPLE NO: H446428	
1	OVTCS2	72308	72257	NA			19-8260A	13-MAR-97 0406	MH	GCMSY
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	06-APR-97 0130	EAY	GCMSA
SAMPLE ID: HWPW-SB04-S2.5									SAMPLE NO: H446429	
1	OVTCS2	72256	72257	NA			19-8260A	12-MAR-97 0326	JC	GCMSY
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	01-APR-97 0344	EAY	GCMSZ
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB04-S29									SAMPLE NO: H446430	
1	OVTCS2	72256	72257	NA			19-8260A	11-MAR-97 0401	JC	GCMSY
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	31-MAR-97 1245	EAY	GCMSZ
14	I685S	72382	72382	19-3550A			02-418.1	17-MAR-97 1300	JLJ	302WAT

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB04-S27									**SAMPLE NO: H446431**	
1	OVTCS2	72256	72257	NA						
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8260A	11-MAR-97 0437	JC	GCMSY
14	I685S	72382	72382	19-3550A			19-8270B	31-MAR-97 1334	EAY	GCMSZ
							02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB04-S31									**SAMPLE NO: H446432**	
1	OVTCS2	72471	72470	NA						
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8260A	18-MAR-97 2215	JC	GCMSB
14	I685S	72382	72382	19-3550A			19-8270B	31-MAR-97 1422	EAY	GCMSZ
							02-418.1	17-MAR-97 1300	JLJ	302WAT
SAMPLE ID: HWPW-SB04-S39									**SAMPLE NO: H446433**	
5	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	31-MAR-97 1830	EAY	GCMSZ
SAMPLE ID: HWPW-SB04-S51									**SAMPLE NO: H446434**	
1	OVTCS2	72471	72470	NA						
8	S401	72327	72327	NA			19-8260A	18-MAR-97 1915	JC	GCMSB
9	S402	72326	72326	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
15	OVTCW2	72602	72482	NA			19-1312	13-MAR-97 1400	JLJ	001EPE
17	OSVTCW	72496	72727	19-3510B	19-MAR-97 1500	A M	19-8260A	19-MAR-97 1948	JC	GCMSY
3	OSVTCS	72492	72449	19-3550A	19-MAR-97 1200	RDQ	19-8270B	02-APR-97 0311	EAY	GCMSZ
14	I685S	72468	72468	19-3550A			19-8270B	02-APR-97 0311	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB04-S59									**SAMPLE NO: H446435**	
1	OVTCS2	72470	72470	NA						
3	OSVTCS	72492	72450	19-3550A	19-MAR-97 1200	RDQ	19-8260A	17-MAR-97 1421	JC	GCMSB
							19-8270B	06-APR-97 1801	EAY	GCMSA
SAMPLE ID: HWPW-SB07-S2.5									**SAMPLE NO: H446436**	
1	OVTCS2	72523	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	19-MAR-97 1232	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	01-APR-97 0521	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB07-S19									**SAMPLE NO: H446437**	
1	OVTCS2	72523	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	19-MAR-97 2328	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	31-MAR-97 2338	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYST	INSTRUMENT
SAMPLE ID: HWPW-SB07-S21									SAMPLE NO: H446438	
1	OVTCS2	72523	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	19-MAR-97 1344	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	31-MAR-97 1511	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB07-S22									SAMPLE NO: H446439	
1	OVTCS2	72523	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	19-MAR-97 1119	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	02-APR-97 0218	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB07-S24									SAMPLE NO: H446440	
1	OVTCS2	72471	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	18-MAR-97 2104	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	02-APR-97 0357	EAY	GCMSZ
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB08-S4									SAMPLE NO: H446441	
1	OVTCS2	72471	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	18-MAR-97 1726	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	06-APR-97 1850	EAY	GCMSA
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB08-S14									SAMPLE NO: H446442	
1	OVTCS2	72471	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	18-MAR-97 1646	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	09-APR-97 0848	EAY	GCMSA
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB08-S18									SAMPLE NO: H446443	
1	OVTCS2	72471	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	18-MAR-97 1951	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	07-APR-97 0036	EAY	GCMSA
							02-418.1	18-MAR-97 0800	JLJ	302WAT
SAMPLE ID: HWPW-SB08-S22									SAMPLE NO: H446444	
1	OVTCS2	72523	72470	NA						
3	OSVTCS	72591	72450	19-3550A	20-MAR-97 0900	RDQ	19-8260A	19-MAR-97 1534	JC	GCMSB
14	I685S	72468	72468	19-3550A			19-8270B	06-APR-97 2138	EAY	GCMSA
							02-418.1	18-MAR-97 0800	JLJ	302WAT

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-SB08-S21									SAMPLE NO: H446445	
1	OVTCS2	72470	72470	NA			19-8260A	17-MAR-97 1457	JC	GCMSB
3	OSVTCS	72591	72591	19-3550A	20-MAR-97 0900	RDQ	19-8270B	11-APR-97 0744	EAY	GCMSA
14	I685S	72468	72468	19-3550A			02-418.1	18-MAR-97 0800	JLJ	302WAT

LR Method Literature Reference

02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section C Page 1

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB05-S54				SAMPLE NO: H446419	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	105	-	
		Dibromofluoromethane	97	-	
		Toluene-d8	102	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	70	-	
		2-Fluorobiphenyl	86	-	
		2-Fluorophenol	62	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	67	-	
		p-Terphenyl-d14	76	-	
SAMPLE ID: HWPW-SB06-S19				SAMPLE NO: H446420	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	111	-	
		Dibromofluoromethane	110	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
18	$VOA2W	GC/MS Volatiles Surrogates (8260)			17
		1,2-Dichloroethane-d4	96	-	
		4-Bromofluorobenzene	105	-	
		Toluene-d8	105	-	
20	$BNAW	GC/MS BNA Surrogates			19
		2,4,6-Tribromophenol	37	-	
		2-Fluorobiphenyl	25*	-	
		2-Fluorophenol	7*	-	
		Nitrobenzene-d5	19*	-	
		Phenol-d5	6*	-	
		p-Terphenyl-d14	23*	-	
		*The surrogate recovery was outside of QC acceptance limits due to matrix interference.			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB06-S24				SAMPLE NO: H446421	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	104	-	
		Toluene-d8	102	-	
4	$BNAS	GC/MS BNA Surrogates	97	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	60	-	
		2-Fluorophenol	84	-	
		Nitrobenzene-d5	50	-	
		Phenol-d5	70	-	
		p-Terphenyl-d14	70	-	
			66	-	
SAMPLE ID: HWPW-SB06-S49				SAMPLE NO: H446422	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	100	-	
		Toluene-d8	104	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	70	-	
		2-Fluorophenol	100	-	
		Nitrobenzene-d5	70	-	
		Phenol-d5	73	-	
		p-Terphenyl-d14	80	-	
			84	-	
SAMPLE ID: HWPW-SB03-S5				SAMPLE NO: H446423	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	106	-	
		Toluene-d8	102	-	
4	$BNAS	GC/MS BNA Surrogates	96	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB03-S5				SAMPLE NO: H446423	
16	$VOA2W	GC/MS Volatiles Surrogates (8260)			15
		1,2-Dichloroethane-d4	89	-	
		4-Bromofluorobenzene	89	-	
		Toluene-d8	100	-	
18	$BNAW	GC/MS BNA Surrogates			17
		2,4,6-Tribromophenol	*	-	
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered during analysis. The sample will be re-leached, re-analyzed, and reported on a separate report.			
SAMPLE ID: HWPW-SB03-S19				SAMPLE NO: H446424	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	106	-	
		Dibromofluoromethane	105	-	
		Toluene-d8	98	-	
4	$BNAS	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	35	-	
		2-Fluorobiphenyl	65	-	
		2-Fluorophenol	30	-	
		Nitrobenzene-d5	50	-	
		Phenol-d5	40	-	
		p-Terphenyl-d14	70	-	
16	$VOA2W	GC/MS Volatiles Surrogates (8260)			15
		1,2-Dichloroethane-d4	88	-	
		4-Bromofluorobenzene	102	-	
		Toluene-d8	98	-	
18	$BNAW	GC/MS BNA Surrogates			17
		2,4,6-Tribromophenol	6*	-	
		2-Fluorobiphenyl	13*	-	
		2-Fluorophenol	1*	-	
		Nitrobenzene-d5	5*	-	
		Phenol-d5	1*	-	
		p-Terphenyl-d14	16*	-	
		* Surrogate recovery outside of QC acceptance limits due to matrix interference.			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-181(
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB03-S24				SAMPLE NO: H446425	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	101	-	
		Toluene-d8	98	-	
4	$BNAS	GC/MS BNA Surrogates	100	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	5*	-	
		2-Fluorophenol	90	-	
		Nitrobenzene-d5	60	-	
		Phenol-d5	71	-	
		p-Terphenyl-d14	60	-	
		* The surrogate recovery was outside of QC acceptance limits due to matrix interference.	68	-	
16	$VOA2W	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			15
		Dibromofluoromethane	113	-	
		Toluene-d8	93	-	
18	$BNAW	GC/MS BNA Surrogates	100	-	
		2,4,6-Tribromophenol			17
		2-Fluorobiphenyl	60	-	
		2-Fluorophenol	46	-	
		Nitrobenzene-d5	16*	-	
		Phenol-d5	37	-	
		p-Terphenyl-d14	11	-	
		* The surrogate recovery was outside of QC acceptance limits due to matrix interference.	65	-	
SAMPLE ID: HWPW-SB03-S34				SAMPLE NO: H446426	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	109	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates	107	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		* The surrogates were not recovered due to the dilution required as a result of	*	-	

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		the high concentration of target analytes.			
SAMPLE ID: HWPW-SB03-S52				SAMPLE NO: H446427	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	101	-	1
		Dibromofluoromethane	103	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	28	-	3
		2-Fluorobiphenyl	90	-	
		2-Fluorophenol	70	-	
		Nitrobenzene-d5	88	-	
		Phenol-d5	70	-	
		p-Terphenyl-d14	98	-	
SAMPLE ID: HWPW-SB03-S54				SAMPLE NO: H446428	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	100	-	1
		Dibromofluoromethane	102	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	48	-	3
		2-Fluorobiphenyl	83	-	
		2-Fluorophenol	50	-	
		Nitrobenzene-d5	65	-	
		Phenol-d5	50	-	
		p-Terphenyl-d14	67	-	
SAMPLE ID: HWPW-SB04-S2.5				SAMPLE NO: H446429	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	115	-	1
		Dibromofluoromethane	107	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB04-S29				SAMPLE NO: H446430	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	115	-	
		Toluene-d8	104	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	
SAMPLE ID: HWPW-SB04-S27				SAMPLE NO: H446431	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	131*	-	
		Toluene-d8	108	-	
		*The surrogate was out of range due to matrix interference, which was confirmed by re-analysis.	96	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	
SAMPLE ID: HWPW-SB04-S31				SAMPLE NO: H446432	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	107	-	
		Toluene-d8	94	-	
			100	-	

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB04-S31				SAMPLE NO: H446432	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB04-S39				SAMPLE NO: H446433	
6	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	5
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB04-S51				SAMPLE NO: H446434	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	111	-	1
		Dibromofluoromethane	97	-	
		Toluene-d8	103	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
16	$VOA2W	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	108	-	15
		Dibromofluoromethane	91	-	
		Toluene-d8	99	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB04-S51				SAMPLE NO: H446434	
18	$BNAW	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol			17
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high concentration of target analytes.			
SAMPLE ID: HWPW-SB04-S59				SAMPLE NO: H446435	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	104	-	
		Toluene-d8	97	-	
4	$BNAS	GC/MS BNA Surrogates	97	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	41	-	
		2-Fluorophenol	64	-	
		Nitrobenzene-d5	55	-	
		Phenol-d5	62	-	
		p-Terphenyl-d14	44	-	
			60	-	
SAMPLE ID: HWPW-SB07-S2.5				SAMPLE NO: H446436	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	110	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates	105	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB07-S19				SAMPLE NO: H446437	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	114	-	
		Toluene-d8	105	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	
SAMPLE ID: HWPW-SB07-S21				SAMPLE NO: H446438	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	108	-	
		Toluene-d8	92	-	
4	$BNAS	GC/MS BNA Surrogates	105	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	
SAMPLE ID: HWPW-SB07-S22				SAMPLE NO: H446439	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	111	-	
		Toluene-d8	96	-	
4	$BNAS	GC/MS BNA Surrogates	102	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB07-S22				SAMPLE NO: H446439	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB07-S24				SAMPLE NO: H446440	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	107	-	
		Toluene-d8	94	-	
4	$BNAS	GC/MS BNA Surrogates	103	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	
SAMPLE ID: HWPW-SB08-S4				SAMPLE NO: H446441	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	109	-	
		Toluene-d8	98	-	
4	$BNAS	GC/MS BNA Surrogates	99	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.		-	
SAMPLE ID: HWPW-SB08-S14				SAMPLE NO: H446442	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	114	-	
		Toluene-d8	112	-	
			98	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-SB08-S14				SAMPLE NO: H446442	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB08-S18				SAMPLE NO: H446443	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	124*	-	1
		Dibromofluoromethane	96	-	
		Toluene-d8	107	-	
		* Surrogate recovery was outside QC acceptance limits due to matrix effects which confirmed by re-analysis.			
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB08-S22				SAMPLE NO: H446444	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene	118	-	1
		Dibromofluoromethane	106	-	
		Toluene-d8	99	-	
4	$BNAS	GC/MS BNA Surrogates			
		2,4,6-Tribromophenol	*	-	3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		*The surrogates were not recovered due to the dilution required by high analyte concentration.			
SAMPLE ID: HWPW-SB08-S21				SAMPLE NO: H446445	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			
		4-Bromofluorobenzene			1
		Dibromofluoromethane	112	-	
		Toluene-d8	112	-	
4	$BNAS	GC/MS BNA Surrogates	102	-	
		2,4,6-Tribromophenol			3
		2-Fluorobiphenyl	*	-	
		2-Fluorophenol	*	-	
		Nitrobenzene-d5	*	-	
		Phenol-d5	*	-	
		p-Terphenyl-d14	*	-	
		*The surrogates were not recovered due to the dilution required by high analyte concentration.	*	-	

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410
Section D Page 1

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 72194			
			SAMPLE NO: H383390
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	94	-
	Benzene	98	-
	Chlorobenzene	96	-
	Toluene	98	-
	Trichloroethene	84	-
BATCH NO: 72256			
			SAMPLE NO: H383484
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	94	-
	Benzene	99	-
	Chlorobenzene	96	-
	Toluene	100	-
	Trichloroethene	79	-
BATCH NO: 72308			
			SAMPLE NO: H383562
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	95	-
	Benzene	107	-
	Chlorobenzene	110	-
	Toluene	114	-
	Trichloroethene	89	-
BATCH NO: 72382			
			SAMPLE NO: H383667
I685S	Petroleum Hydrocarbons	94.8	-
BATCH NO: 72450			
			SAMPLE NO: H383781
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	59	-
	1,4-Dichlorobenzene	48	-
	2,4-Dinitrotoluene	80	-
	2-Chlorophenol	55	-
	4-Nitrophenol	80	-
	Acenaphthene	67	-
	Pentachlorophenol	70	-
	Phenol	47	-
	Pyrene	66	-
	n-Nitrosodi-n-propylamine	74	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
	p-Chloro-m-cresol	55	-
BATCH NO: 72468			
			SAMPLE NO: H383812
I685S	Petroleum Hydrocarbons	88.1	-
BATCH NO: 72470			
			SAMPLE NO: H383816
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	86	-
	Benzene	90	-
	Chlorobenzene	81	-
	Toluene	92	-
	Trichloroethene	91	-
BATCH NO: 72471			
			SAMPLE NO: H383818
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	89	-
	Benzene	92	-
	Chlorobenzene	85	-
	Toluene	95	-
	Trichloroethene	95	-
BATCH NO: 72492			
			SAMPLE NO: H383850
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	78	-
	1,4-Dichlorobenzene	74	-
	2,4-Dinitrotoluene	84	-
	2-Chlorophenol	65	-
	4-Nitrophenol	100	-
	Acenaphthene	77	-
	Pentachlorophenol	85	-
	Phenol	60	-
	Pyrene	95	-
	n-Nitrosodi-n-propylamine	82	-
	p-Chloro-m-cresol	65	-
BATCH NO: 72496			
			SAMPLE NO: H383854
OSVTCW	TCL - Semi-volatile Extractables in Water		
	1,2,4-Trichlorobenzene	76	-
	1,4-Dichlorobenzene	72	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
	2,4-Dinitrotoluene	89	-
	2-Chlorophenol	70	-
	4-Nitrophenol	70	-
	Acenaphthene	79	-
	Pentachlorophenol	80	-
	Phenol	65	-
	Pyrene	85	-
	n-Nitrosodi-n-propylamine	76	-
	p-Chloro-m-cresol	75	-
BATCH NO: 72523			SAMPLE NO: H383899
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	85	-
	Benzene	90	-
	Chlorobenzene	87	-
	Toluene	96	-
	Trichloroethene	96	-
BATCH NO: 72591			SAMPLE NO: H384011
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	83	-
	1,4-Dichlorobenzene	81	-
	2,4-Dinitrotoluene	110	-
	2-Chlorophenol	75	-
	4-Nitrophenol	130	-
	Acenaphthene	86	-
	N-Nitrosodi-n-propylamine	160	-
	Pentachlorophenol	85	-
	Phenol	60	-
	Pyrene	90	-
	p-Chloro-m-cresol	80	-
BATCH NO: 72602			SAMPLE NO: H384025
OVTCW2	8260A TCL Volatiles in Water		
	1,1-Dichloroethene	85	-
	Benzene	90	-
	Chlorobenzene	87	-
	Toluene	96	-
	Trichloroethene	96	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 72735			SAMPLE NO: H384202
OVTCW2	8260A TCL Volatiles in Water		
	1,1-Dichloroethene	102	-
	Benzene	94	-
	Chlorobenzene	92	-
	Toluene	99	-
	Trichloroethene	95	-

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 72194			
		SAMPLE NO: H383391	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72256			
		SAMPLE NO: H383485	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72308			
		SAMPLE NO: H383563	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72382			
		SAMPLE NO: H383668	
I685S	Petroleum Hydrocarbons	< 20	mg/kg
BATCH NO: 72450			
		SAMPLE NO: H383782	
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2-Diphenylhydrazine	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	2-Chloronaphthalene	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg
BATCH NO: 72468		SAMPLE NO: H383813	
I685S	Petroleum Hydrocarbons	< 20	mg/kg
BATCH NO: 72470		SAMPLE NO: H383817	
OVTCS2	8260A TCL Volatiles in Soil		
	1,1,1-Trichloroethane	< 5	ug/kg
	1,1,2,2-Tetrachloroethane	< 5	ug/kg
	1,1,2-Trichloroethane	< 5	ug/kg
	1,1-Dichloroethane	< 5	ug/kg
	1,1-Dichloroethene	< 5	ug/kg
	1,2-Dichloroethane	< 5	ug/kg
	1,2-Dichloropropane	< 5	ug/kg
	2-Butanone	< 10	ug/kg
	2-Chloroethoxyethene	< 10	ug/kg
	2-Hexanone	< 10	ug/kg
	4-Methyl-2-pentanone	< 10	ug/kg
	Acetone	< 10	ug/kg
	Benzene	< 5	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	Bromodichloromethane	< 5	ug/kg
	Bromoform	< 5	ug/kg
	Bromomethane	< 10	ug/kg
	Carbon disulfide	< 5	ug/kg
	Carbon tetrachloride	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Chloroethane	< 10	ug/kg
	Chloroform	< 5	ug/kg
	Chloromethane	< 10	ug/kg
	Dibromochloromethane	< 5	ug/kg
	Dichloromethane	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Styrene	< 5	ug/kg
	Tetrachloroethene	< 5	ug/kg
	Toluene	< 5	ug/kg
	Trichloroethene	< 5	ug/kg
	Vinyl acetate	< 10	ug/kg
	Vinyl chloride	< 10	ug/kg
	Xylenes (total)	< 5	ug/kg
	cis-1,2-Dichloroethene	< 5	ug/kg
	cis-1,3-Dichloropropene	< 5	ug/kg
	trans-1,2-Dichloroethene	< 5	ug/kg
	trans-1,3-Dichloropropene	< 5	ug/kg
BATCH NO: 72471		SAMPLE NO: H383819	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72492		SAMPLE NO: H383851	
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2-Diphenylhydrazine	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	2-Methylnaphthalene	< 330	ug/kg
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Chrysene	< 330	ug/kg
*	Di-n-butyl phthalate	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg

BATCH NO: 72496

SAMPLE NO: H383855

TEST CODE	DETERMINATION	RESULT	UNIT
OSVTCW	TCL - Semi-volatile Extractables in Water		
	1,2-Diphenylhydrazine	< 10	ug/L
	2,4-Dimethylphenol	< 10	ug/L
	2,4-Dinitrotoluene	< 10	ug/L
	2,6-Dinitrotoluene	< 10	ug/L
	2-Chloronaphthalene	< 10	ug/L
	2-Methylnaphthalene	< 10	ug/L
	4,6-Dinitro-o-cresol	< 50	ug/L
	4-Nitrophenol	< 50	ug/L
	Acenaphthene	< 10	ug/L
	Acenaphthylene	< 10	ug/L
	Anthracene	< 10	ug/L
	Benzo(a)anthracene	< 10	ug/L
	Benzo(a)pyrene	< 10	ug/L
	Chrysene	< 10	ug/L
	Di-n-butylphthalate	< 10	ug/L
	Dibenzofuran	< 10	ug/L
	Fluoranthene	< 10	ug/L
	Fluorene	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	N-Nitrosodiphenylamine	< 10	ug/L
	Naphthalene	< 10	ug/L
	Nitrobenzene	< 10	ug/L
	Pentachlorophenol	< 50	ug/L
	Phenanthrene	< 10	ug/L
	Phenol	< 10	ug/L
	Pyrene	< 10	ug/L
	bis(2-Chloroethoxy)methane	< 10	ug/L
	bis(2-Ethylhexyl)phthalate	< 10	ug/L
BATCH NO: 72523		SAMPLE NO: H383900	
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg
BATCH NO: 72591		SAMPLE NO: H384012	
OSVTCS	TCL - Semi-volatile Extractables in Soil		
	1,2,4-Trichlorobenzene	< 330	ug/kg
	1,2-Dichlorobenzene	< 330	ug/kg
	1,2-Diphenylhydrazine	< 330	ug/kg
	1,3-Dichlorobenzene	< 330	ug/kg
	1,4-Dichlorobenzene	< 330	ug/kg
	2,4,5-Trichlorophenol	< 330	ug/kg
	2,4,6-Trichlorophenol	< 330	ug/kg
	2,4-Dichlorophenol	< 330	ug/kg
	2,4-Dimethylphenol	< 330	ug/kg
	2,4-Dinitrophenol	< 1,600	ug/kg
	2,4-Dinitrotoluene	< 330	ug/kg
	2,6-Dinitrotoluene	< 330	ug/kg
	2-Chloronaphthalene	< 330	ug/kg
	2-Chlorophenol	< 330	ug/kg
	2-Methylnaphthalene	< 330	ug/kg
	2-Methylphenol	< 330	ug/kg
	2-Nitroaniline	< 1,600	ug/kg
	2-Nitrophenol	< 330	ug/kg
	3,3'-Dichlorobenzidine	< 660	ug/kg
	3-Nitroaniline	< 1,600	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	4,6-Dinitro-o-cresol	< 1,600	ug/kg
	4-Bromophenylphenylether	< 330	ug/kg
	4-Chloro-3-methylphenol	< 330	ug/kg
	4-Chloroaniline	< 330	ug/kg
	4-Chlorophenylphenylether	< 330	ug/kg
	4-Methylphenol	< 330	ug/kg
	4-Nitroaniline	< 1,600	ug/kg
	4-Nitrophenol	< 1,600	ug/kg
	Acenaphthene	< 330	ug/kg
	Acenaphthylene	< 330	ug/kg
	Anthracene	< 330	ug/kg
	Benzo(a)anthracene	< 330	ug/kg
	Benzo(a)pyrene	< 330	ug/kg
	Benzo(b)fluoranthene	< 330	ug/kg
	Benzo(g,h,i)perylene	< 330	ug/kg
	Benzo(k)fluoranthene	< 330	ug/kg
	Benzoic acid	< 1,600	ug/kg
	Benzyl alcohol	< 330	ug/kg
	Butylbenzylphthalate	< 330	ug/kg
	Chrysene	< 330	ug/kg
	Di-n-butyl phthalate	< 330	ug/kg
	Di-n-butylphthalate	< 330	ug/kg
	Di-n-octylphthalate	< 330	ug/kg
	Dibenzo(a,h)anthracene	< 330	ug/kg
	Dibenzofuran	< 330	ug/kg
	Diethylphthalate	< 330	ug/kg
	Dimethylphthalate	< 330	ug/kg
	Fluoranthene	< 330	ug/kg
	Fluorene	< 330	ug/kg
	Hexachlorobenzene	< 330	ug/kg
	Hexachlorobutadiene	< 330	ug/kg
	Hexachlorocyclopentadiene	< 330	ug/kg
	Hexachloroethane	< 330	ug/kg
	Indeno(1,2,3-cd)pyrene	< 330	ug/kg
	Isophorone	< 330	ug/kg
	N-Nitrosodi-n-propylamine	< 330	ug/kg
	N-Nitrosodiphenylamine	< 330	ug/kg
	Naphthalene	< 330	ug/kg
	Nitrobenzene	< 330	ug/kg
	Pentachlorophenol	< 1,600	ug/kg
	Phenanthrene	< 330	ug/kg
	Phenol	< 330	ug/kg
	Pyrene	< 330	ug/kg
	bis(2-Chloroethoxy)methane	< 330	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
	bis(2-Chloroethyl)ether	< 330	ug/kg
	bis(2-Chloroisopropyl)ether	< 330	ug/kg
	bis(2-Ethylhexyl)phthalate	< 330	ug/kg
BATCH NO: 72602		SAMPLE NO: H384026	
OVTCW2	8260A TCL Volatiles in Water		
	1,1-Dichloroethylene	< 5	ug/L
	1,2-Dichloroethane	< 5	ug/L
	Benzene	< 5	ug/L
	Carbon Tetrachloride	< 5	ug/L
	Chlorobenzene	< 5	ug/L
	Chloroform	< 5	ug/L
	Ethylbenzene	< 5	ug/L
	Methylene chloride	< 5	ug/L
	Toluene	< 5	ug/L
	Xylenes (total)	< 5	ug/L
BATCH NO: 72735		SAMPLE NO: H384203	
OVTCW2	8260A TCL Volatiles in Water		
	1,2-Dichloroethane	< 5	ug/L
	Benzene	< 5	ug/L
	Chlorobenzene	< 5	ug/L
	Ethylbenzene	< 5	ug/L
	Methylene chloride	< 5	ug/L
	Toluene	< 5	ug/L
	Xylenes (total)	< 5	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

April 11, 1997
Report No.: 00060410

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 71777						SAMPLE NO: H444676	
OVTCWD	Volatiles by 8260 - Subtitle D						
	1,1-Dichloroethene	36.1	41.6	ug/L	14.3	90	104
	Benzene	39.7	44.1	ug/L	10.4	99	110
	Chlorobenzene	39.5	40.6	ug/L	2.95	99	102
	Toluene	38.8	40.9	ug/L	5.27	97	102
	Trichloroethene	34.5	35.1	ug/L	1.72	86	88
BATCH NO: 71777						SAMPLE NO: H444681	
OVTCWD	Volatiles by 8260 - Subtitle D						
	1,1-Dichloroethene	40.8	37.1	ug/L	9.50	102	93
	Benzene	44.8	39.8	ug/L	11.8	112	100
	Chlorobenzene	44.8	40.7	ug/L	9.60	112	1[illegible]
	Toluene	43.7	40.9	ug/L	6.60	109	1[illegible]
	Trichloroethene	39.8	35.1	ug/L	12.5	100	88
BATCH NO: 72257						SAMPLE NO: H446226	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	35.7	37.5	ug/kg	5.00	89	94
	Benzene	38.4	39.2	ug/kg	2.09	96	98
	Chlorobenzene	36.6	37.6	ug/kg	2.48	92	94
	Toluene	38.6	39.0	ug/kg	1.06	96	97
	Trichloroethene	37.0	39.4	ug/kg	6.18	92	98
BATCH NO: 72257						SAMPLE NO: H446232	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	39.5	38.2	ug/kg	3.32	99	96
	Benzene	40.0	39.6	ug/kg	1.03	100	99
	Chlorobenzene	38.3	39.1	ug/kg	2.17	96	98
	Toluene	38.5	40.8	ug/kg	5.77	96	102
	Trichloroethene	38.8	34.7	ug/kg	11.2	97	87
BATCH NO: 72382						SAMPLE NO: H446420	
I685S	Petroleum Hydrocarbons	640	570	mg/kg	11.6	*	*

* The concentration of the analyte prevented accurate determination of the matrix spike.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72449						SAMPLE NO: H446230	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	56	54	ug/kg	3.6	56	54
	1,4-Dichlorobenzene	59	60	ug/kg	1.7	59	54
	2,4-Dinitrotoluene	53	56	ug/kg	5.6	53	54
	2-Chlorophenol	100	110	ug/kg	9.5	50	54
	4-Nitrophenol	82	68	ug/kg	19	41	54
	Acenaphthene	56	53	ug/kg	5.6	56	54
	N-Nitrosodi-n-propylamine	55	59	ug/kg	7.0	55	54
	Pentachlorophenol	100	130	ug/kg	26	50	54
	Phenol	110	110	ug/kg	0	55	55
	Pyrene	56	59	ug/kg	5.2	56	54
	p-Chloro-m-cresol	120	110	ug/kg	9.1	60	54
BATCH NO: 72450						SAMPLE NO: H446424	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	2,600	2,300	ug/kg	12.2	79	70
	1,4-Dichlorobenzene	2,600	2,600	ug/kg	0	79	79
	2,4-Dinitrotoluene	2,300	2,300	ug/kg	0	70	70
	2-Chlorophenol	4,000	4,300	ug/kg	7.22	61	65
	4-Nitrophenol	990	990	ug/kg	0	15	15
	Acenaphthene	4,300	3,600	ug/kg	17.7	130	109
	N-Nitrosodi-n-propylamine	1,600	1,600	ug/kg	0	48	48
	Pentachlorophenol	2,000	1,600	ug/kg	22.2*	30	24
	Phenol	4,600	4,000	ug/kg	14.0	70	61
	Pyrene	4,000	3,600	ug/kg	10.5	121	109
	p-Chloro-m-cresol	5,000	4,600	ug/kg	8.33	76	70
	* RPD outside of QC acceptance limits.						
BATCH NO: 72468						SAMPLE NO: H446436	
I685S	Petroleum Hydrocarbons	5,000	6,000	mg/kg	18	*	*
	* The concentration of the analyte prevented accurate determination of the matrix spike recovery.						
BATCH NO: 72468						SAMPLE NO: H446624	
I685S	Petroleum Hydrocarbons	410	450	mg/kg	9.3	96.2	106.8

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72470						SAMPLE NO: H446435	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	39.9	37.6	ug/kg	6.07	100	94
	Benzene	40.6	37.0	ug/kg	9.40	102	92
	Chlorobenzene	38.7	34.9	ug/kg	10.24	97	87
	Toluene	42.3	38.6	ug/kg	9.12	106	96
	Trichloroethene	42.3	38.7	ug/kg	8.81	106	97
BATCH NO: 72482						SAMPLE NO: H445321	
OVTCWD	Volatiles by 8260 - Subtitle D						
	1,1-Dichloroethene	37.6	37.8	ug/L	0.42	94	94
	Benzene	39.2	38.9	ug/L	0.69	98	97
	Chlorobenzene	39.5	39.7	ug/L	0.30	99	99
	Toluene	38.1	38.4	ug/L	0.84	95	9
	Trichloroethene	32.1	33.4	ug/L	3.91	80	8
BATCH NO: 72591						SAMPLE NO: H446363	
OSVTCS	TCL - Semi-volatile Extractables in Soil						
	1,2,4-Trichlorobenzene	690	790	ug/kg	13.5	104	120
	1,4-Dichlorobenzene	590	790	ug/kg	29.0	89	120
	2,4-Dinitrotoluene	820	1,100	ug/kg	29.2	124	83
	2-Chlorophenol	1,200	1,600	ug/kg	28.6	91	121
	4-Nitrophenol	1,100	1,600	ug/kg	37.0	83	121
	Acenaphthene	820	1,000	ug/kg	19.8	124	83
	N-Nitrosodi-n-propylamine	890	1,200	ug/kg	21.6	135	83
	Pentachlorophenol	160	165	ug/kg	3.09	12*	13*
	Phenol	1,100	1,400	ug/kg	25	83	106
	Pyrene	380	580	ug/kg	41.6	58	89
	p-Chloro-m-cresol	1,300	1,600	ug/kg	21.4	98	121
BATCH NO: 72727						SAMPLE NO: H447241	
OSVSKW	Skinner List Semi-volatiles in Water						
	1,2,4-Trichlorobenzene	68	93	ug/L	31*	68	93
	1,4-Dichlorobenzene	62	82	ug/L	27*	62	82
	2,4-Dinitrotoluene	98	130	ug/L	28*	98	130
	2-Chlorophenol	140	170	ug/L	19	70	85
	4-Nitrophenol	84	80	ug/L	5	80	40
	Acenaphthene	86	110	ug/L	24*	86	110
	Pentachlorophenol	180	280	ug/L	43*	90	140

* The recovery of the target was outside of QC acceptance limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 713-488-1810
Fax: 713-488-4661

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
	Phenol	110	120	ug/L	9	55	60
	Pyrene	92	130	ug/L	34*	92	130
	n-Nitrosodi-n-propylamine	79	110	ug/L	33*	79	110
	p-Chloro-m-cresol	160	210	ug/L	27*	80	105

*RPD is outside of QC acceptance limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

36 '02

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Terranext

Address: 8101 College Blvd Suite 230
Overland Park Ks 66210

Phone: (913) 696-1300

Report To: Curt Jones

Bill To: Curt Jones

P.O. # / Billing Reference

Project Name / No.

Pace Client No.

Pace Project Manager: E. Sommers

Pace Project No.

*Requested Due Date: normal

Sampled By (PRINT): Roger Lamb

Sampler Signature: R L

Date Sampled: 3/4/97

HH46

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	UNPRESERVED	H_2SO_4	HNO_3	VOA	8270	8260	418.1	SPLP 8270, 8260	REMARKS
1	HWPW-SB05-S54	1128	soil	419	1	X				X	X			STRONG Odor
2	HWPW-SB06-S19	14:52	soil	486	5	X				X	X	X	X	
3	HWPW SB06-S24	15:01	soil	487	5	X				X	X	X		
4	HWPW SB06-S49	1450	soil	422	4	X				X	X			
5														
6														
7														
8														

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
			3-6-97	1055
		Roy Lamb	3/6/97	11:45

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical

36700

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: TerraNext

Address: 8101 College Blvd Suite 230
Overland Park, KS 66210

Phone: (913) 693-1300

Report To:

Bill To:

P.O. # / Billing Reference

Project Name / No.

Pace Client No.

Pace Project Manager: E. Sommer

Pace Project No.

*Requested Due Date: Normal TAT

Sampled By (PRINT): Roger Lamb

Sampler Signature:

Date Sampled: 3/5/97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8260	8270	418.1	SPLP 8260/8270	REMARKS
1	HWPW-SB03-S5	0815	soil	423	5	X						X	X	X	X	Strong Odor
2	HWPW-SB03-S19	0830	soil	424	5	X						X	X	X	X	
3	HWPW-SB03-S24	0835	soil	425	5	X						X	X	X	X	
4	HWPW-SB03-S34	0910	soil	426	2	X						X	X	X		
5	HWPW-SB03-S52	0935	soil	427	2	X						X	X	X		
6	HWPW-SB03-S54	0940	soil	428	4	X						X	X			
7	[redacted]															
8																

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
			3-6-97	1055
		R. Quentin	3/6/97	11:40

Additional Comments

217

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical

3[illegible]703

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Terranext
Address: 8101 College Blvd. Suite 230, Overland Park KS 6621D
Phone: (913) 696-1300

Report To: Curt Jones
Bill To: Curt Jones
P.O. # / Billing Reference:
Project Name / No.: HWPW 44102069

Pace Client No.:
Pace Project Manager: E. Sommers
Pace Project No.:
*Requested Due Date: normal

Sampled By (PRINT): Roger Lamb
Sampler Signature: RL
Date Sampled: 3/5/97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8270	8260	TPH 418.1	SPLP 8270 8260			REMARKS
1	HWPW - SB04 - S2.5	1235	soil	429	4							X	X	X				STRONG ODOR
2	HWPW - SB04 - S29	1320		430	5							X	X	X				
3	HWPW - SB04 - S27	1330		431	5							X	X	X				
4	HWPW - SB04 - S31	1335		432	3							X	X	X				
5	HWPW - SB04 - S39	1350		433	1							X						
6	HWPW - SB04 - S51	1415 1420		434	5							X	X	X	X			
7	HWPW - SB04 - S59	1425		435	4							X	X					
8																		

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

812

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature]	[signature]	3697	1055
	Roger Lamb	[signature]	3/6/97	11:45

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

TerraNext

303/914-1700

PROJECT NAME: Houston Wood Preserving Works

SITE LOCATION: 4910 Liberty Road Houston, TX

PROJECT #: 44102069

CHAIN OF CUSTODY RECORD

C.O.C. #

SHIP TO: PACE

SAMPLERS NAME & SIGNATURE

CONTACT & PHONE

LAB. CONTACT & PHONE: E. Sommers

SAMPLE #	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	# OF CONTAINERS	ANALYSIS METHOD 8260	8270	418.1	PRESERVATIVES YES	PRESERVATIVES NO	CUSTODY SEALS YES	CUSTODY SEALS NO	*REMARKS:
HWPW-SB07-S2.5	3/6/97	08:20	X		SB07	5	X	X	X		X		X	STRONG ODOR
HWPW-SB07-S19		08:40												
HWPW-SB07-S21		08:45												
HWPW-SB07-S22		08:50												
HWPW-SB07-S24		09:00												
HWPW-SB08-S4		09:25			SB08	3								
HWPW-SB08-S14		09:40				5								
HWPW-SB08-S18		09:45				5								Labels on bottle SB07 - Lid SB08
HWPW-SB08-[redacted]S22		09:50				4								
HWPW-SB08-[redacted]S21		09:55	V			4								

RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
[signature]	3-6-97 11:45	[signature]	[signature]	3-6-97 11:45	
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED BY	RELEASED BY	DATE & TIME	RECEIVED BY
			[signature]	3-6-97 11:45	[signature]
RELINQUISHED BY (Signature)	DATE & TIME	RECEIVED AT LAB. BY	METHOD OF SHIPMENT		

*REMARKS:

401-07

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-A1-SSO
SAMPLE NO: H449055
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1615
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	8	< 2660	ug/kg
		2,4-Dimethylphenol	8	< 2660	ug/kg
		2,4-Dinitrotoluene	8	< 2660	ug/kg
		2,6-Dinitrotoluene	8	< 2660	ug/kg
		2-Chloronaphthalene	8	< 2660	ug/kg
		2-Methylnaphthalene	8	< 2660	ug/kg
		4,6-Dinitro-o-cresol	8	< 2660	ug/kg
		4-Nitrophenol	8	< 12800	ug/kg
		Acenaphthene	8	< 12800	ug/kg
		Acenaphthylene	8	< 2660	ug/kg
		Anthracene	8	< 2660	ug/kg
		Benzo(a)anthracene	8	< 2660	ug/kg
		Benzo(a)pyrene	8	< 2660	ug/kg
		Chrysene	8	< 2660	ug/kg
		Di-n-butyl phthalate	8	< 2660	ug/kg
		Dibenzofuran	8	< 2660	ug/kg
		Fluoranthene	8	< 2660	ug/kg
		Fluorene	8	< 2660	ug/kg
		N-Nitrosodiphenylamine	8	< 2660	ug/kg
		Naphthalene	8	< 2660	ug/kg
		Nitrobenzene	8	< 2660	ug/kg
		Pentachlorophenol	8	< 2660	ug/kg
		Phenanthrene	8	< 12800	ug/kg
		Phenol	8	< 2660	ug/kg
		Pyrene	8	< 2660	ug/kg
		bis(2-Chloroethoxy)methane	8	< 2660	ug/kg
		bis(2-Ethylhexyl)phthalate	8	< 2660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 2

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-A2-SSO
SAMPLE NO: H449056
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1600
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	8	< 2660	ug/kg
		2,4-Dimethylphenol	8	< 2660	ug/kg
		2,4-Dinitrotoluene	8	< 2660	ug/kg
		2,6-Dinitrotoluene	8	< 2660	ug/kg
		2-Chloronaphthalene	8	< 2660	ug/kg
		2-Methylnaphthalene	8	< 2660	ug/kg
		4,6-Dinitro-o-cresol	8	< 12800	ug/kg
		4-Nitrophenol	8	< 12800	ug/kg
		Acenaphthene	8	< 2660	ug/kg
		Acenaphthylene	8	< 2660	ug/kg
		Anthracene	8	< 2660	ug/kg
		Benzo(a)anthracene	8	< 2660	ug/kg
		Benzo(a)pyrene	8	< 2660	ug/kg
		Chrysene	8	< 2660	ug/kg
		Di-n-butyl phthalate	8	< 2660	ug/kg
		Dibenzofuran	8	< 2660	ug/kg
		Fluoranthene	8	9280	ug/kg
		Fluorene	8	< 2660	ug/kg
		N-Nitrosodiphenylamine	8	< 2660	ug/kg
		Naphthalene	8	< 2660	ug/kg
		Nitrobenzene	8	< 2660	ug/kg
		Pentachlorophenol	8	< 12800	ug/kg
		Phenanthrene	8	6120	ug/kg
		Phenol	8	< 2660	ug/kg
		Pyrene	8	8160	ug/kg
		bis(2-Chloroethoxy)methane	8	< 2660	ug/kg
		bis(2-Ethylhexyl)phthalate	8	< 2660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-A3-SSO
SAMPLE NO: H449057
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1600
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-A4-SSO
SAMPLE NO: H449058
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1545
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	20	< 6660	ug/kg
		2,4-Dimethylphenol	20	< 6660	ug/kg
		2,4-Dinitrotoluene	20	< 6660	ug/kg
		2,6-Dinitrotoluene	20	< 6660	ug/kg
		2-Chloronaphthalene	20	< 6660	ug/kg
		2-Methylnaphthalene	20	< 6660	ug/kg
		4,6-Dinitro-o-cresol	20	< 6660	ug/kg
		4-Nitrophenol	20	< 32000	ug/kg
		Acenaphthene	20	< 32000	ug/kg
		Acenaphthylene	20	< 6660	ug/kg
		Anthracene	20	< 6660	ug/kg
		Benzo(a)anthracene	20	< 6660	ug/kg
		Benzo(a)pyrene	20	< 6660	ug/kg
		Chrysene	20	< 6660	ug/kg
		Di-n-butyl phthalate	20	< 6660	ug/kg
		Dibenzofuran	20	< 6660	ug/kg
		Fluoranthene	20	< 6660	ug/kg
		Fluorene	20	< 6660	ug/kg
		N-Nitrosodiphenylamine	20	< 6660	ug/kg
		Naphthalene	20	< 6660	ug/kg
		Nitrobenzene	20	< 6660	ug/kg
		Pentachlorophenol	20	< 32000	ug/kg
		Phenanthrene	20	< 6660	ug/kg
		Phenol	20	< 6660	ug/kg
		Pyrene	20	< 6660	ug/kg
		bis(2-Chloroethoxy)methane	20	< 6660	ug/kg
		bis(2-Ethylhexyl)phthalate	20	< 6660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-A5-SSO
SAMPLE NO: H449059
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1430
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 6

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-A6-SSO
SAMPLE NO: H449060
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1515
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

April 24, 1997
Report No.: 00060793
Section A Page 7

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-B1-SSO
SAMPLE NO: H449061
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1810
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	1800	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	2540	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	2090	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-B2-SSO
SAMPLE NO: H449062
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1745
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 333	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 1600	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	382	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	501	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 333	ug/kg
		Phenanthrene	1	< 1600	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	463	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-B3-SSO
SAMPLE NO: H449063
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1800
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 10

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-B4-SSO
SAMPLE NO: H449064
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1730
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	671	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	622	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-B5-SSO
SAMPLE NO: H449065
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1415
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 12

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-B6-SSO
SAMPLE NO: H449066
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1445
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	1370	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	1340	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 13

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-C1-SSO
SAMPLE NO: H449067
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1145
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	8	< 2660	ug/kg
		2,4-Dimethylphenol	8	< 2660	ug/kg
		2,4-Dinitrotoluene	8	< 2660	ug/kg
		2,6-Dinitrotoluene	8	< 2660	ug/kg
		2-Chloronaphthalene	8	< 2660	ug/kg
		2-Methylnaphthalene	8	< 2660	ug/kg
		4,6-Dinitro-o-cresol	8	< 12800	ug/kg
		4-Nitrophenol	8	< 12800	ug/kg
		Acenaphthene	8	< 2660	ug/kg
		Acenaphthylene	8	< 2660	ug/kg
		Anthracene	8	< 2660	ug/kg
		Benzo(a)anthracene	8	< 2660	ug/kg
		Benzo(a)pyrene	8	< 2660	ug/kg
		Chrysene	8	< 2660	ug/kg
		Di-n-butyl phthalate	8	< 2660	ug/kg
		Dibenzofuran	8	< 2660	ug/kg
		Fluoranthene	8	< 2660	ug/kg
		Fluorene	8	< 2660	ug/kg
		N-Nitrosodiphenylamine	8	< 2660	ug/kg
		Naphthalene	8	< 2660	ug/kg
		Nitrobenzene	8	< 2660	ug/kg
		Pentachlorophenol	8	< 12800	ug/kg
		Phenanthrene	8	< 2660	ug/kg
		Phenol	8	< 2660	ug/kg
		Pyrene	8	< 2660	ug/kg
		bis(2-Chloroethoxy)methane	8	< 2660	ug/kg
		bis(2-Ethylhexyl)phthalate	8	< 2660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-C2-SSO
SAMPLE NO: H449068
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1645
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	383	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	537	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	470	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 15

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-C3-SSO
SAMPLE NO: H449069
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1655
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	20	< 6660	ug/kg
		2,4-Dimethylphenol	20	< 6660	ug/kg
		2,4-Dinitrotoluene	20	< 6660	ug/kg
		2,6-Dinitrotoluene	20	< 6660	ug/kg
		2-Chloronaphthalene	20	< 6660	ug/kg
		2-Methylnaphthalene	20	< 6660	ug/kg
		4,6-Dinitro-o-cresol	20	< 32000	ug/kg
		4-Nitrophenol	20	< 32000	ug/kg
		Acenaphthene	20	< 6660	ug/kg
		Acenaphthylene	20	< 6660	ug/kg
		Anthracene	20	< 6660	ug/kg
		Benzo(a)anthracene	20	< 6660	ug/kg
		Benzo(a)pyrene	20	< 6660	ug/kg
		Chrysene	20	10100	ug/kg
		Di-n-butyl phthalate	20	< 6660	ug/kg
		Dibenzofuran	20	< 6660	ug/kg
		Fluoranthene	20	35200	ug/kg
		Fluorene	20	< 6660	ug/kg
		N-Nitrosodiphenylamine	20	< 6660	ug/kg
		Naphthalene	20	< 6660	ug/kg
		Nitrobenzene	20	< 6660	ug/kg
		Pentachlorophenol	20	< 32000	ug/kg
		Phenanthrene	20	12800	ug/kg
		Phenol	20	< 6660	ug/kg
		Pyrene	20	20900	ug/kg
		bis(2-Chloroethoxy)methane	20	< 6660	ug/kg
		bis(2-Ethylhexyl)phthalate	20	< 6660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-C4-SSO
SAMPLE NO: H449070
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1715
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 17

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-C5-SSO
SAMPLE NO: H449071
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1500
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services. Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-C6-SSO
SAMPLE NO: H449072
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1530
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 1330	ug/kg
		Phenanthrene	4	< 6400	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-D1-SSO
SAMPLE NO: H449073
SAMPLE MATRIX: SOIL

DATE SAMPLED: 08-APR-97 1130
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	456	ug/kg
		Benzo(a)anthracene	1	385	ug/kg
		Benzo(a)pyrene	1	472	ug/kg
		Chrysene	1	586	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	1060	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	493	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	832	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-D2-SSO
SAMPLE NO: H449074
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 08-APR-97 1155
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 21

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-8G-SSO
SAMPLE NO: H449075
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 09-APR-97 0840
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	5	< 1670	ug/kg
		2,4-Dimethylphenol	5	< 1670	ug/kg
		2,4-Dinitrotoluene	5	< 1670	ug/kg
		2,6-Dinitrotoluene	5	< 1670	ug/kg
		2-Chloronaphthalene	5	< 1670	ug/kg
		2-Methylnaphthalene	5	< 1670	ug/kg
		4,6-Dinitro-o-cresol	5	< 8000	ug/kg
		4-Nitrophenol	5	< 8000	ug/kg
		Acenaphthene	5	< 1670	ug/kg
		Acenaphthylene	5	< 1670	ug/kg
		Anthracene	5	2510	ug/kg
		Benzo(a)anthracene	5	2720	ug/kg
		Benzo(a)pyrene	5	1690	ug/kg
		Chrysene	5	3600	ug/kg
		Di-n-butyl phthalate	5	< 1670	ug/kg
		Dibenzofuran	5	< 1670	ug/kg
		Fluoranthene	5	11100	ug/kg
		Fluorene	5	< 1670	ug/kg
		N-Nitrosodiphenylamine	5	< 1670	ug/kg
		Naphthalene	5	< 1670	ug/kg
		Nitrobenzene	5	< 1670	ug/kg
		Pentachlorophenol	5	< 8000	ug/kg
		Phenanthrene	5	2630	ug/kg
		Phenol	5	< 1670	ug/kg
		Pyrene	5	8930	ug/kg
		bis(2-Chloroethoxy)methane	5	< 1670	ug/kg
		bis(2-Ethylhexyl)phthalate	5	< 1670	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-7G-SSO
SAMPLE NO: H449076
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 0900
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	4130	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-9G-SSO
SAMPLE NO: H449077
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 0915
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 24

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-10G-SSO
SAMPLE NO: H449078
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 09-APR-97 0930
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	1	< 333	ug/kg
		2,4-Dimethylphenol	1	< 333	ug/kg
		2,4-Dinitrotoluene	1	< 333	ug/kg
		2,6-Dinitrotoluene	1	< 333	ug/kg
		2-Chloronaphthalene	1	< 333	ug/kg
		2-Methylnaphthalene	1	< 333	ug/kg
		4,6-Dinitro-o-cresol	1	< 1600	ug/kg
		4-Nitrophenol	1	< 1600	ug/kg
		Acenaphthene	1	< 333	ug/kg
		Acenaphthylene	1	< 333	ug/kg
		Anthracene	1	< 333	ug/kg
		Benzo(a)anthracene	1	< 333	ug/kg
		Benzo(a)pyrene	1	< 333	ug/kg
		Chrysene	1	< 333	ug/kg
		Di-n-butyl phthalate	1	< 333	ug/kg
		Dibenzofuran	1	< 333	ug/kg
		Fluoranthene	1	< 333	ug/kg
		Fluorene	1	< 333	ug/kg
		N-Nitrosodiphenylamine	1	< 333	ug/kg
		Naphthalene	1	< 333	ug/kg
		Nitrobenzene	1	< 333	ug/kg
		Pentachlorophenol	1	< 1600	ug/kg
		Phenanthrene	1	< 333	ug/kg
		Phenol	1	< 333	ug/kg
		Pyrene	1	< 333	ug/kg
		bis(2-Chloroethoxy)methane	1	< 333	ug/kg
		bis(2-Ethylhexyl)phthalate	1	< 333	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 25

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-11G-SSO
SAMPLE NO: H449079
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 0945
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	1510	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 26

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

SAMPLE ID: HWPW-7F-SSO
SAMPLE NO: H449080
SAMPLE MATRIX: SOIL

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

DATE SAMPLED: 09-APR-97 1000
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	20	< 6660	ug/kg
		2,4-Dimethylphenol	20	< 6660	ug/kg
		2,4-Dinitrotoluene	20	< 6660	ug/kg
		2,6-Dinitrotoluene	20	< 6660	ug/kg
		2-Chloronaphthalene	20	< 6660	ug/kg
		2-Methylnaphthalene	20	< 6660	ug/kg
		4,6-Dinitro-o-cresol	20	< 32000	ug/kg
		4-Nitrophenol	20	< 32000	ug/kg
		Acenaphthene	20	< 6660	ug/kg
		Acenaphthylene	20	< 6660	ug/kg
		Anthracene	20	< 6660	ug/kg
		Benzo(a)anthracene	20	< 6660	ug/kg
		Benzo(a)pyrene	20	< 6660	ug/kg
		Chrysene	20	< 6660	ug/kg
		Di-n-butyl phthalate	20	< 6660	ug/kg
		Dibenzofuran	20	< 6660	ug/kg
		Fluoranthene	20	< 6660	ug/kg
		Fluorene	20	< 6660	ug/kg
		N-Nitrosodiphenylamine	20	< 6660	ug/kg
		Naphthalene	20	< 6660	ug/kg
		Nitrobenzene	20	< 6660	ug/kg
		Pentachlorophenol	20	< 32000	ug/kg
		Phenanthrene	20	< 6660	ug/kg
		Phenol	20	< 6660	ug/kg
		Pyrene	20	< 6660	ug/kg
		bis(2-Chloroethoxy)methane	20	< 6660	ug/kg
		bis(2-Ethylhexyl)phthalate	20	< 6660	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44758
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	03219
SAMPLE ID:	HWPW-8F-SSO	DATE SAMPLED:	09-APR-97 1015
SAMPLE NO:	H449081	DATE RECEIVED:	11-APR-97
SAMPLE MATRIX:	SOIL	PROJECT MANAGER:	Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	1460	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 28

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-9F-SSO
SAMPLE NO: H449082
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 1030
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	4	< 1330	ug/kg
		2,4-Dimethylphenol	4	< 1330	ug/kg
		2,4-Dinitrotoluene	4	< 1330	ug/kg
		2,6-Dinitrotoluene	4	< 1330	ug/kg
		2-Chloronaphthalene	4	< 1330	ug/kg
		2-Methylnaphthalene	4	< 1330	ug/kg
		4,6-Dinitro-o-cresol	4	< 6400	ug/kg
		4-Nitrophenol	4	< 6400	ug/kg
		Acenaphthene	4	< 1330	ug/kg
		Acenaphthylene	4	< 1330	ug/kg
		Anthracene	4	< 1330	ug/kg
		Benzo(a)anthracene	4	< 1330	ug/kg
		Benzo(a)pyrene	4	< 1330	ug/kg
		Chrysene	4	< 1330	ug/kg
		Di-n-butyl phthalate	4	< 1330	ug/kg
		Dibenzofuran	4	< 1330	ug/kg
		Fluoranthene	4	< 1330	ug/kg
		Fluorene	4	< 1330	ug/kg
		N-Nitrosodiphenylamine	4	< 1330	ug/kg
		Naphthalene	4	< 1330	ug/kg
		Nitrobenzene	4	< 1330	ug/kg
		Pentachlorophenol	4	< 6400	ug/kg
		Phenanthrene	4	< 1330	ug/kg
		Phenol	4	< 1330	ug/kg
		Pyrene	4	< 1330	ug/kg
		bis(2-Chloroethoxy)methane	4	< 1330	ug/kg
		bis(2-Ethylhexyl)phthalate	4	< 1330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 29

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-10F-SSO
SAMPLE NO: H449083
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 1045
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	100	< 33300	ug/kg
		2,4-Dimethylphenol	100	< 33300	ug/kg
		2,4-Dinitrotoluene	100	< 33300	ug/kg
		2,6-Dinitrotoluene	100	< 33300	ug/kg
		2-Chloronaphthalene	100	< 33300	ug/kg
		2-Methylnaphthalene	100	< 33300	ug/kg
		4,6-Dinitro-o-cresol	100	< 160000	ug/kg
		4-Nitrophenol	100	< 160000	ug/kg
		Acenaphthene	100	< 33300	ug/kg
		Acenaphthylene	100	< 33300	ug/kg
		Anthracene	100	< 33300	ug/kg
		Benzo(a)anthracene	100	44600	ug/kg
		Benzo(a)pyrene	100	< 33300	ug/kg
		Chrysene	100	57100	ug/kg
		Di-n-butyl phthalate	100	< 33300	ug/kg
		Dibenzofuran	100	< 33300	ug/kg
		Fluoranthene	100	237000	ug/kg
		Fluorene	100	< 33300	ug/kg
		N-Nitrosodiphenylamine	100	< 33300	ug/kg
		Naphthalene	100	< 33300	ug/kg
		Nitrobenzene	100	< 33300	ug/kg
		Pentachlorophenol	100	< 160000	ug/kg
		Phenanthrene	100	< 33300	ug/kg
		Phenol	100	< 33300	ug/kg
		Pyrene	100	204000	ug/kg
		bis(2-Chloroethoxy)methane	100	< 33300	ug/kg
		bis(2-Ethylhexyl)phthalate	100	< 33300	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 30

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-11-SSO
SAMPLE NO: H449084
SAMPLE MATRIX: SOIL

DATE SAMPLED: 09-APR-97 1100
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	25	< 8330	ug/kg
		2,4-Dimethylphenol	25	< 8330	ug/kg
		2,4-Dinitrotoluene	25	< 8330	ug/kg
		2,6-Dinitrotoluene	25	< 8330	ug/kg
		2-Chloronaphthalene	25	< 8330	ug/kg
		2-Methylnaphthalene	25	< 8330	ug/kg
		4,6-Dinitro-o-cresol	25	< 40000	ug/kg
		4-Nitrophenol	25	< 40000	ug/kg
		Acenaphthene	25	< 8330	ug/kg
		Acenaphthylene	25	< 8330	ug/kg
		Anthracene	25	13000	ug/kg
		Benzo(a)anthracene	25	10800	ug/kg
		Benzo(a)pyrene	25	< 8330	ug/kg
		Chrysene	25	10800	ug/kg
		Di-n-butyl phthalate	25	< 8330	ug/kg
		Dibenzofuran	25	< 8330	ug/kg
		Fluoranthene	25	57800	ug/kg
		Fluorene	25	< 8330	ug/kg
		N-Nitrosodiphenylamine	25	< 8330	ug/kg
		Naphthalene	25	< 8330	ug/kg
		Nitrobenzene	25	< 8330	ug/kg
		Pentachlorophenol	25	< 40000	ug/kg
		Phenanthrene	25	60200	ug/kg
		Phenol	25	< 8330	ug/kg
		Pyrene	25	40000	ug/kg
		bis(2-Chloroethoxy)methane	25	< 8330	ug/kg
		bis(2-Ethylhexyl)phthalate	25	< 8330	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section A Page 31

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 6200 ROTHWAY, STE 190
HOUSTON, TX 77040-
ATTENTION: BILL GOLDSBY

LIMS CLIENT: 0717 0007
PACE PROJECT: H44758
PACE CLIENT: 620437
P.O. NO: 03219

SAMPLE ID: HWPW-AOC5E-S00
SAMPLE NO: H449085
SAMPLE MATRIX: SOIL

DATE SAMPLED: 10-APR-97 1150
DATE RECEIVED: 11-APR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCS2	8260A TCL Volatiles in Soil			
		1,2-Dichloroethane	1	< 5	ug/kg
		Benzene	1	< 5	ug/kg
		Chlorobenzene	1	< 5	ug/kg
		Ethylbenzene	1	< 5	ug/kg
		Methylene chloride	1	< 5	ug/kg
		Toluene	1	< 5	ug/kg
		Xylenes (total)	1	< 5	ug/kg
3	OSVTCS	TCL - Semi-volatile Extractables in Soil			
		1,2-Diphenylhydrazine	40	< 13300	ug/kg
		2,4-Dimethylphenol	40	< 13300	ug/kg
		2,4-Dinitrotoluene	40	< 13300	ug/kg
		2,6-Dinitrotoluene	40	< 13300	ug/kg
		2-Chloronaphthalene	40	< 13300	ug/kg
		2-Methylnaphthalene	40	< 13300	ug/kg
		4,6-Dinitro-o-cresol	40	< 64000	ug/kg
		4-Nitrophenol	40	< 64000	ug/kg
		Acenaphthene	40	< 13300	ug/kg
		Acenaphthylene	40	< 13300	ug/kg
		Anthracene	40	< 13300	ug/kg
		Benzo(a)anthracene	40	21500	ug/kg
		Benzo(a)pyrene	40	17800	ug/kg
		Chrysene	40	34000	ug/kg
		Di-n-butyl phthalate	40	< 13300	ug/kg
		Dibenzofuran	40	< 13300	ug/kg
		Fluoranthene	40	50900	ug/kg
		Fluorene	40	< 13300	ug/kg
		N-Nitrosodiphenylamine	40	< 13300	ug/kg
		Naphthalene	40	< 13300	ug/kg
		Nitrobenzene	40	< 13300	ug/kg
		Pentachlorophenol	40	< 64000	ug/kg
		Phenanthrene	40	< 13300	ug/kg
		Phenol	40	< 13300	ug/kg
		Pyrene	40	58300	ug/kg
		bis(2-Chloroethoxy)methane	40	< 13300	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-AOC5E-S00
SAMPLE NO: H449085

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	40	< 13300	ug/kg

COMMENTS: The semi-volatiles analysis was performed by the Pace Analytical - New Orleans laboratory. See the enclosed report.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	INSTRUMENT
SAMPLE ID: HWPW-A1-SSO									SAMPLE NO: H449055	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1225	TTT	
SAMPLE ID: HWPW-A2-SSO									SAMPLE NO: H449056	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1312	TTT	
SAMPLE ID: HWPW-A3-SSO									SAMPLE NO: H449057	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1358	TTT	
SAMPLE ID: HWPW-A4-SSO									SAMPLE NO: H449058	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1444	TTT	
SAMPLE ID: HWPW-A5-SSO									SAMPLE NO: H449059	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1928	TTT	
SAMPLE ID: HWPW-A6-SSO									SAMPLE NO: H449060	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1617	TTT	
SAMPLE ID: HWPW-B1-SSO									SAMPLE NO: H449061	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 1704	TTT	
SAMPLE ID: HWPW-B2-SSO									SAMPLE NO: H449062	
3	OSVTCS	73646	73646	NA			19-8270B	21-APR-97 1214	TTT	
SAMPLE ID: HWPW-B3-SSO									SAMPLE NO: H449063	
3	OSVTCS	73646	73646	NA			19-8270B	21-APR-97 1300	TTT	
SAMPLE ID: HWPW-B4-SSO									SAMPLE NO: H449064	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 2014	TTT	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	INSTRUMENT
SAMPLE ID: HWPW-B5-SSO									SAMPLE NO: H449065	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 2009	TTT	
SAMPLE ID: HWPW-B6-SSO									SAMPLE NO: H449066	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 2055	TTT	
SAMPLE ID: HWPW-C1-SSO									SAMPLE NO: H449067	
3	OSVTCS	73646	73646	NA			19-8270B	19-APR-97 2141	TTT	
SAMPLE ID: HWPW-C2-SSO									SAMPLE NO: H449068	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 2101	TTT	
SAMPLE ID: HWPW-C3-SSO									SAMPLE NO: H449069	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1145	TTT	
SAMPLE ID: HWPW-C4-SSO									SAMPLE NO: H449070	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1231	TTT	
SAMPLE ID: HWPW-C5-SSO									SAMPLE NO: H449071	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1317	TTT	
SAMPLE ID: HWPW-C6-SSO									SAMPLE NO: H449072	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1404	TTT	
SAMPLE ID: HWPW-D1-SSO									SAMPLE NO: H449073	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1450	TTT	
SAMPLE ID: HWPW-D2-SSO									SAMPLE NO: H449074	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1536	TTT	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-8G-SSO									SAMPLE NO: H449075	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1755	TTT	
SAMPLE ID: HWPW-7G-SSO									SAMPLE NO: H449076	
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1256	TTT	
SAMPLE ID: HWPW-9G-SSO									SAMPLE NO: H449077	
3	OSVTCS	73646	73646	NA			19-8270B	17-APR-97 1658	TTT	
SAMPLE ID: HWPW-10G-SSO									SAMPLE NO: H449078	
3	OSVTCS	73646	73646	NA			19-8270B	17-APR-97 1745	TTT	
SAMPLE ID: HWPW-11G-SSO									SAMPLE NO: H449079	
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1343	TTT	
SAMPLE ID: HWPW-7F-SSO									SAMPLE NO: H449080	
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1429	TTT	
SAMPLE ID: HWPW-8F-SSO									SAMPLE NO: H449081	
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1517	TTT	
SAMPLE ID: HWPW-9F-SSO									SAMPLE NO: H449082	
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1604	TTT	
SAMPLE ID: HWPW-10F-SSO									SAMPLE NO: H449083	
3	OSVTCS	73646	73646	NA			19-8270B	17-APR-97 2140	TTT	
SAMPLE ID: HWPW-11-SSO									SAMPLE NO: H449084	
3	OSVTCS	73646	73646	NA			19-8270B	20-APR-97 1842	TTT	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-AOC5E-SOO									SAMPLE NO: H449085	
1	OVTCS2	73695	72847	NA			19-8260A	23-APR-96 1727	MH	GCMSB
3	OSVTCS	73646	73646	NA			19-8270B	18-APR-97 1651	TTT	

LR Method Literature Reference

19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section C Page 1

SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-AOC5E-SOO				SAMPLE NO: H449085	
2	$VOA2S	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	105	-	
		Dibromofluoromethane	105	-	
		Toluene-d8	99	-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	ACCEPTANCE LIMITS
BATCH NO: 73695			SAMPLE NO: H385748
OVTCS2	8260A TCL Volatiles in Soil		
	1,1-Dichloroethene	79	-
	Benzene	100	-
	Chlorobenzene	100	-
	Toluene	100	-
	Trichloroethene	105	-

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services. Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 73695		SAMPLE NO:	H385749
OVTCS2	8260A TCL Volatiles in Soil		
	1,2-Dichloroethane	< 5	ug/kg
	Benzene	< 5	ug/kg
	Chlorobenzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Methylene chloride	< 5	ug/kg
	Toluene	< 5	ug/kg
	Xylenes (total)	< 5	ug/kg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services. Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

April 24, 1997
Report No.: 00060793
Section H Page 1

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

TEST CODE	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RCVRY	MSD PCT RCVRY
BATCH NO: 72847						SAMPLE NO: H447507	
OVTCS2	8260A TCL Volatiles in Soil						
	1,1-Dichloroethene	36.4	41.0	ug/kg	11.7	91	102
	Benzene	37.4	42.3	ug/kg	12.4	93	106
	Chlorobenzene	33.0	37.1	ug/kg	11.7	82	93
	Toluene	34.8	38.9	ug/kg	11.0	87	97
	Trichloroethene	36.0	40.1	ug/kg	10.8	90	100

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: [illegible]

Address: [illegible] Rothway #190
[illegible] Texas 77040

Phone: [illegible]

Sampled By (PRINT):

Sampler Signature: [illegible]   Date Sampled: 4-8-97

Report To: TERRANEXT

Bill To:

P.O. # / Billing Reference: 03219

Project Name / No.:

Pace Client No.:

Pace Project Manager:

Pace Project No.:

*Requested Due Date:

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	UNPRESERVED	H_2SO_4	HNO_3	VOA		ANALYSES REQUEST: 8270	REMARKS
1	[illegible] - A1 - 550	1615	SOIL	055	1	X					X	
2	[illegible] - A2 - 550	1600	↓	56	↓	↓					↓	
3	[illegible] - A3 - 550	1600	↓	57	↓	↓					↓	
4	[illegible] - A4 - 550	1545	↓	58	↓	↓					↓	
5	[illegible] - A5 - 550	430	↓	59	↓	↓					↓	
6	[illegible] - A6 - 550	1515	↓	60	↓	↓					↓	
7												
8												

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	[illegible]	[illegible]	4-8-97	[illegible]
	D. [illegible] / PASI-Hou	Chem. Hardy/ [illegible] From Fed Ex	4/11/97 4/15/97	1610 0900

260

Temp 3°C

SEE REVERSE SIDE FOR INSTRUCTIONS

Pac Analytical

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client Terranext

Address 9200 Bellaire Blvd #190
Houston, TX 77040

Phone (281) 560-9330

Report To: Terranext

Bill To:

P.O. # / Billing Reference 03219

Project Name / No.

Pace Client No.

Pace Project Manager

Pace Project No.

*Requested Due Date:

Sampled By (PRINT): [illegible]

Sampler Signature

Date Sampled 4/8/97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	ANALYSES REQUEST: 8270	REMARKS
1	HWPW-B1-350	1310	SOIL	061	1	X				X	
2	HWPW-B2-350	1745		62							
3	HWPW-B3-350	1500		63							
4	HWPW-B4-350	1730		64							
5	HWPW-B5-350	1415		65							
6	HWPW-B6-350	1445	↓	66	↓	↓				↓	
7											
8											

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	[illegible]	[illegible]		
	D. Lucas / ASI-Houston	Fed Ex	4/14/97	1610
	Fed Ex	Rhena Hands / Pace	4/15/97	0900

Temp 5°C

251

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client [illegible]

Address [illegible] #190
[illegible] TX 77070

Phone [illegible] 960-4227

Report To: William Goldsby

Bill To: TERRANEXT

P.O. # / Billing Reference

Project Name / No. 03219

Pace Client No.

Pace Project Manager

Pace Project No.

*Requested Due Date:

Sampled By (PRINT): [illegible] Jones

Sampler Signature

Date Sampled 4-8-97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8270	REMARKS
1	[illegible]	1145	SOIL	67	1	X							
2	[illegible]	1645		68									
3	[illegible]	1655		69									
4	[illegible]	1715		70									
5	[illegible]	1505		71									
6	[illegible]	1530		72									
7	[illegible]	1130		73									
8	[illegible]	1155		74									

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	D. Pruett/PACE Houston	[illegible]	4/8/97	1610
	Fed EX	Alan Hall / Pace	4/9/97	0900

Additional Comments

262

Temp 3°

SEE REVERSE SIDE FOR INSTRUCTIONS

Pac Analytical

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Tennant

Address: [illegible] Pathway #190
[illegible], TX 77040

Phone: 713 460-9030

Report To:

Bill To: TENNANT

P.O. # / Billing Reference

Project Name / No.: 03219

Pace Client No.

Pace Project Manager

Pace Project No.

*Requested Due Date:

Sampled By (PRINT): Mike P. Jones

Sampler Signature

Date Sampled: 4-9-96

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8270	REMARKS
1	[illegible] - 5 - 350	[illegible]	soil	05	1	X						X	
2	[illegible] - 6 - 350	0920		76									
3	[illegible] - 7 - 350	0945		77									
4	[illegible] - 8 - 350	0930		78									
5	[illegible] - 11 - 350	0945		79									
6	[illegible] - 7F - 350	1000		80									
7	[illegible] - 8F - 350	1015		81									
8	[illegible] - 9F - 350	1050		82									

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	[illegible]	[illegible]	4/8/96	1610
	Fed EX	Mac Hamilton	4/15/96	0900

263

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: TERRANEXT

Address: 10 Greenway Plaza #190
Houston, TX

Phone: [illegible]

Report To: TERRANEXT

Bill To: TERRANEXT

P.O. # / Billing Reference: 03219

Project Name / No.: Houston Wood Preserving Works

Pace Client No.:

Pace Project Manager: E. Sanders

Pace Project No.:

*Requested Due Date: 14 Days

Sampled By (PRINT): [illegible] E. Sanders

Sampler Signature: [signature]

Date Sampled: 4-9-97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	ANALYSES REQUEST	REMARKS
1	MW(D)-10F-550	1045	soil	083	1	X				X	
2	MW(D)-11-550	1100	↓	084	↓	↓				↓	
3											
4	[illegible]										
5	[illegible] MW35E-520	1150	soil	085	1	X				X	
6											
7											
8											

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

Additional Comments

264

Temp 3°C

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	W. Gentry/PBSI Houston	[illegible]	4/14/97	1610
	Fed Ex	Pace Houston	4/15/97	0900

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical

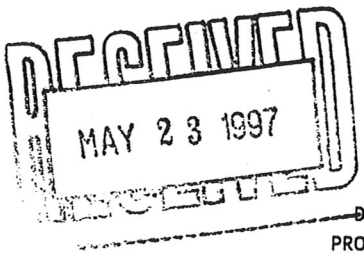
Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP17-UTZ
SAMPLE NO: H450536
SAMPLE MATRIX: WATER



LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 08-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.0	ug/L
		2,4-Dimethylphenol	1	< 10.0	ug/L
		2,4-Dinitrotoluene	1	< 10.0	ug/L
		2,6-Dinitrotoluene	1	< 10.0	ug/L
		2-Chloronaphthalene	1	< 10.0	ug/L
		2-Methylnaphthalene	1	< 10.0	ug/L
		4,6-Dinitro-o-cresol	1	< 25.0	ug/L
		4-Nitrophenol	1	< 25.0	ug/L
		Acenaphthene	1	32.9	ug/L
		Acenaphthylene	1	< 10.0	ug/L
		Anthracene	1	< 10.0	ug/L
		Benzo(a)anthracene	1	< 10.0	ug/L
		Benzo(a)pyrene	1	< 10.0	ug/L
		Chrysene	1	< 10.0	ug/L
		Di-n-butylphthalate	1	< 10.0	ug/L
		Dibenzofuran	1	< 10.0	ug/L
		Fluoranthene	1	< 10.0	ug/L
		Fluorene	1	16.3	ug/L
		N-Nitrosodiphenylamine	1	< 10.0	ug/L
		Naphthalene	1	< 10.0	ug/L
		Nitrobenzene	1	< 10.0	ug/L
		Pentachlorophenol	1	< 25.0	ug/L
		Phenanthrene	1	< 10.0	ug/L
		Phenol	1	18.4	ug/L
		Pyrene	1	< 10.0	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.0	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP17-UTZ
SAMPLE NO: H450536

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.0	ug/L

COMMENTS: The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP17-STZ
SAMPLE NO: H450537
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 08-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	< 10	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	1	< 10	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	14.2	ug/L
		Dibenzofuran	1	< 10	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	< 10	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	< 10	ug/L
		Phenol	1	21.4	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP17-STZ
SAMPLE NO: H450537

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

COMMENTS: The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

SAMPLE ID: HP18-UTZ
SAMPLE NO: H450538
SAMPLE MATRIX: WATER

DATE SAMPLED: 08-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5.00	ug/L
		Benzene	1	< 5.00	ug/L
		Chlorobenzene	1	< 5.00	ug/L
		Ethylbenzene	1	< 5.00	ug/L
		Methylene chloride	1	< 5.00	ug/L
		Toluene	1	< 5.00	ug/L
		Xylenes (total)	1	< 5.00	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	< 10	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	5	218	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	5	110	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	5	116	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	5	391	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	13.2	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP18-UTZ
SAMPLE NO: H450538

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	914	mg/L
6	I610	Solids, Suspended at 103C	2	632	mg/L

COMMENTS: The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433
Section A Page 7

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

SAMPLE ID: HP18-STZ
SAMPLE NO: H450539
SAMPLE MATRIX: WATER

DATE SAMPLED: 08-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 11.1*	ug/L
		2,4-Dimethylphenol	1	< 11.1*	ug/L
		2,4-Dinitrotoluene	1	< 11.1*	ug/L
		2,6-Dinitrotoluene	1	< 11.1*	ug/L
		2-Chloronaphthalene	1	< 11.1*	ug/L
		2-Methylnaphthalene	1	63.7*	ug/L
		4,6-Dinitro-o-cresol	1	< 27.7*	ug/L
		4-Nitrophenol	1	< 27.7*	ug/L
		Acenaphthene	5	185 *	ug/L
		Acenaphthylene	1	< 11.1*	ug/L
		Anthracene	1	< 11.1*	ug/L
		Benzo(a)anthracene	1	< 11.1*	ug/L
		Benzo(a)pyrene	1	< 11.1*	ug/L
		Chrysene	1	< 11.1*	ug/L
		Di-n-butylphthalate	1	< 11.1*	ug/L
		Dibenzofuran	1	< 11.1*	ug/L
		Fluoranthene	5	145 *	ug/L
		Fluorene	1	< 11.1*	ug/L
		N-Nitrosodiphenylamine	5	126 *	ug/L
		Naphthalene	1	< 11.1*	ug/L
		Nitrobenzene	10	476 *	ug/L
		Pentachlorophenol	1	< 11.1*	ug/L
		Phenanthrene	1	< 27.7*	ug/L
		Phenol	1	78.1*	ug/L
		Pyrene	1	13.2*	ug/L
		bis(2-Chloroethoxy)methane	1	< 11.1*	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP18-STZ
SAMPLE NO: H450539

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate			
5	I590	Solids, Dissolved at 180C	1	< 11.1*	ug/L
6	I610	Solids, Suspended at 103C	1	881	mg/L
			10	16,070	mg/L

COMMENTS: * A reduced sample aliquot was extracted. The reporting limit is elevated accordingly.
The values for Acenaphthene, Dibenzofuran, Fluorene, and Naphthalene were based upon analysis at a dilution due to the high analyte concentration.
The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

SAMPLE ID: HP19-UTZ
SAMPLE NO: H450540
SAMPLE MATRIX: WATER

DATE SAMPLED: 08-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 12.7*	ug/L
		2,4-Dimethylphenol	1	< 12.7*	ug/L
		2,4-Dinitrotoluene	1	< 12.7*	ug/L
		2,6-Dinitrotoluene	1	< 12.7*	ug/L
		2-Chloronaphthalene	1	< 12.7*	ug/L
		2-Methylnaphthalene	1	< 12.7*	ug/L
		4,6-Dinitro-o-cresol	1	< 31.7*	ug/L
		4-Nitrophenol	1	< 31.7*	ug/L
		Acenaphthene	1	< 12.7*	ug/L
		Acenaphthylene	1	< 12.7*	ug/L
		Anthracene	1	< 12.7*	ug/L
		Benzo(a)anthracene	1	< 12.7*	ug/L
		Benzo(a)pyrene	1	< 12.7*	ug/L
		Chrysene	1	< 12.7*	ug/L
		Di-n-butylphthalate	1	< 12.7*	ug/L
		Dibenzofuran	1	< 12.7*	ug/L
		Fluoranthene	1	< 12.7*	ug/L
		Fluorene	1	< 12.7*	ug/L
		N-Nitrosodiphenylamine	1	< 12.7*	ug/L
		Naphthalene	1	< 12.7*	ug/L
		Nitrobenzene	1	< 12.7*	ug/L
		Pentachlorophenol	1	< 31.7*	ug/L
		Phenanthrene	1	< 12.7*	ug/L
		Phenol	1	< 12.7*	ug/L
		Pyrene	1	< 12.7*	ug/L
		bis(2-Chloroethoxy)methane	1	< 12.7*	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP19-UTZ
SAMPLE NO: H450540

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	13.6*	ug/L
5	I590	Solids, Dissolved at 180C	1	748	mg/L
6	I610	Solids, Suspended at 103C	20	20,340	mg/L

COMMENTS: * A reduced sample aliquot was extracted. The reporting limit is elevated accordingly.
The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

SAMPLE ID: HP20-UTZ
SAMPLE NO: H450541
SAMPLE MATRIX: WATER

DATE SAMPLED: 09-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	< 10	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	1	< 10	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	< 10	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	< 10	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	< 10	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP20-UTZ
SAMPLE NO: H450541

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	912	mg/L
6	I610	Solids, Suspended at 103C	20	13,300	mg/L

COMMENTS: The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP20-STZ
SAMPLE NO: H450542
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 09-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	< 10	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	1	< 10	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	< 10	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	< 10	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 10	ug/L
		Phenanthrene	1	< 25	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433
Section A Page 14

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP20-STZ
SAMPLE NO: H450542

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	2	1,310	mg/L
6	I610	Solids, Suspended at 103C	4	2,676	mg/L

COMMENTS: The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP19-STZ
SAMPLE NO: H450543
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 09-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Naphthalene	1	< 10	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L

COMMENTS: The analysis was performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP21-UTZ
SAMPLE NO: H450544
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 09-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 11.1*	ug/L
		2,4-Dimethylphenol	1	< 11.1*	ug/L
		2,4-Dinitrotoluene	1	< 11.1*	ug/L
		2,6-Dinitrotoluene	1	< 11.1*	ug/L
		2-Chloronaphthalene	1	< 11.1*	ug/L
		2-Methylnaphthalene	1	< 11.1*	ug/L
		4,6-Dinitro-o-cresol	1	< 27.7*	ug/L
		4-Nitrophenol	1	< 27.7*	ug/L
		Acenaphthene	1	< 11.1*	ug/L
		Acenaphthylene	1	< 11.1*	ug/L
		Anthracene	1	< 11.1*	ug/L
		Benzo(a)anthracene	1	< 11.1*	ug/L
		Benzo(a)pyrene	1	< 11.1*	ug/L
		Chrysene	1	< 11.1*	ug/L
		Di-n-butylphthalate	1	< 11.1*	ug/L
		Dibenzofuran	1	< 11.1*	ug/L
		Fluoranthene	1	< 11.1*	ug/L
		Fluorene	1	< 11.1*	ug/L
		N-Nitrosodiphenylamine	1	< 11.1*	ug/L
		Naphthalene	1	< 11.1*	ug/L
		Nitrobenzene	1	< 11.1*	ug/L
		Pentachlorophenol	1	< 27.7*	ug/L
		Phenanthrene	1	< 11.1*	ug/L
		Phenol	1	< 11.1*	ug/L
		Pyrene	1	< 11.1*	ug/L
		bis(2-Chloroethoxy)methane	1	< 11.1*	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP21-UTZ
SAMPLE NO: H450544

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 11.1*	ug/L
5	I590	Solids, Dissolved at 180C	1	1,119	mg/L
6	I610	Solids, Suspended at 103C	5	5,230	mg/L

COMMENTS: * A reduced sample aliquot was extracted. The reporting limit is elevated accordingly.
The organic analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433
Section A Page 18

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HP21-STZ
SAMPLE NO: H450545
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

DATE SAMPLED: 09-MAY-97
DATE RECEIVED: 10-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	6.72	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	64.3	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	15.8	ug/L

COMMENTS: The analysis was performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45136
PACE CLIENT: 620437
P.O. NO: 03410

SAMPLE ID: HP21-STZ
SAMPLE NO: H450555
SAMPLE MATRIX: WATER

DATE SAMPLED: 12-MAY-97
DATE RECEIVED: 12-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	5	118*	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	5	212*	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	10.2	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	25.9	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	5	176*	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	45.4	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	1,054	mg/L
6	I610	Solids, Suspended at 103C	5	5,735	mg/L

COMMENTS: Continued on next page.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HP21-STZ
SAMPLE NO: H450555

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: * The value for this analyte was based upon analysis at a dilution due to the high analyte concentration.
The organic analysis was performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

May 19, 1997
Report No.: 00061433
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HP17-UTZ									SAMPLE NO: H450536	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1513	P	
3	OSVTCW	0	0	19-3510B			19-8270B	14-MAY-97 1533	P	
SAMPLE ID: HP17-STZ									SAMPLE NO: H450537	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1541	P	
3	OSVTCW	0	0	19-3510B			19-8270B	14-MAY-97 1613	P	
SAMPLE ID: HP18-UTZ									SAMPLE NO: H450538	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1609	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	15-MAY-97 1153	P	
SAMPLE ID: HP18-STZ									SAMPLE NO: H450539	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1638	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	15-MAY-97 1232	P	
SAMPLE ID: HP19-UTZ									SAMPLE NO: H450540	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1706	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	14-MAY-97 1812	P	
SAMPLE ID: HP20-UTZ									SAMPLE NO: H450541	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1803	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	14-MAY-97 1852	P	
SAMPLE ID: HP20-STZ									SAMPLE NO: H450542	
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1831	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HP20-STZ								SAMPLE NO: H450542		
3	OSVTCW	0	0	19-3510B			19-8270B	14-MAY-97 0931	P	
SAMPLE ID: HP19-STZ								SAMPLE NO: H450543		
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1859	P	
SAMPLE ID: HP21-UTZ								SAMPLE NO: H450544		
1	OVTCW2	0	0	NA			19-8260A	15-MAY-97 1420	P	
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74229	74229	NA			02-160.2	12-MAY-97 1600	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	15-MAY-97 1035	P	
SAMPLE ID: HP21-STZ								SAMPLE NO: H450545		
1	OVTCW2	0	0	NA			19-8260A	14-MAY-97 1956	P	
SAMPLE ID: HP21-STZ								SAMPLE NO: H450555		
5	I590	74329	74329	NA			02-160.1	14-MAY-97 1755	C P	008WAT
6	I610	74298	74298	NA			02-160.2	14-MAY-97 1515	C P	008WAT
3	OSVTCW	0	0	19-3510B			19-8270B	15-MAY-97 1311	P	

LR Method Literature Reference

02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	LCSD % RECOVERY	ACCEPTANCE LIMITS	RPD
BATCH NO: 74329				SAMPLE NO: H386743	
I590	Solids, Dissolved at 180C	100.5		-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433
Section E Page 1

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 74229			
		SAMPLE NO:	H386581
I610	Solids, Suspended at 103C	< 4	mg/L
BATCH NO: 74298			
		SAMPLE NO:	H386694
I610	Solids, Suspended at 103C	< 4	mg/L
BATCH NO: 74329			
		SAMPLE NO:	H386744
I590	Solids, Dissolved at 180C	< 5	mg/L

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

May 19, 1997
Report No.: 00061433

DUPLICATE AND MATRIX SPIKE DATA

TEST CODE	DETERMINATION	ORIGINAL RESULT	DUPLICATE RESULT	UNITS	RANGE / RPD	MS RESULT	MS % RCVRY
BATCH NO: 74229						SAMPLE NO: H450465	
I610	Solids, Suspended at 103C	< 4	< 4	mg/L	0.0		
BATCH NO: 74298						SAMPLE NO: H444981	
I610	Solids, Suspended at 103C	9	9	mg/L	0.0		
BATCH NO: 74329						SAMPLE NO: H444981	
I590	Solids, Dissolved at 180C	2,852	2,932	mg/L	2.8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878

LABORATORY ANALYSIS REPORT

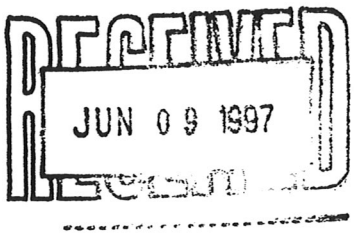
CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

SAMPLE ID: HWPW-MW-14
SAMPLE NO: H450662
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

DATE SAMPLED: 14-MAY-97 0820
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.0	ug/L
		2,4-Dimethylphenol	1	< 10.0	ug/L
		2,4-Dinitrotoluene	1	< 10.0	ug/L
		2,6-Dinitrotoluene	1	< 10.0	ug/L
		2-Chloronaphthalene	1	< 10.0	ug/L
		2-Methylnaphthalene	1	< 10.0	ug/L
		4,6-Dinitro-o-cresol	1	< 25.0	ug/L
		4-Nitrophenol	1	< 25.0	ug/L
		Acenaphthene	1	< 10.0	ug/L
		Acenaphthylene	1	< 10.0	ug/L
		Anthracene	1	< 10.0	ug/L
		Benzo(a)anthracene	1	< 10.0	ug/L
		Benzo(a)pyrene	1	< 10.0	ug/L
		Chrysene	1	< 10.0	ug/L
		Di-n-butylphthalate	1	< 10.0	ug/L
		Dibenzofuran	1	< 10.0	ug/L
		Fluoranthene	1	< 10.0	ug/L
		Fluorene	1	< 10.0	ug/L
		N-Nitrosodiphenylamine	1	< 10.0	ug/L
		Naphthalene	1	< 10.0	ug/L
		Nitrobenzene	1	< 10.0	ug/L
		Pentachlorophenol	1	< 25.0	ug/L
		Phenanthrene	1	< 10.0	ug/L
		Phenol	1	< 10.0	ug/L
		Pyrene	1	< 10.0	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.0	ug/L



290

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-14
SAMPLE NO: H450662

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.0	ug/L
6	I590	Solids, Dissolved at 180C	1	1,020	mg/L
7	I610	Solids, Suspended at 103C	1	116	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-15A
SAMPLE NO: H450663
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 0900
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	6.81	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	15.1	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	23.8	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	10	138	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	10	142	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	42.3	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	42.8	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	50	1,210	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	18.9	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-15A
SAMPLE NO: H450663

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
6	I590	Solids, Dissolved at 180C	1	945	mg/L
7	I610	Solids, Suspended at 103C	1	114	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878
Section A Page 5

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-15C
SAMPLE NO: H450664
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 0930
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	19.9	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	19.8	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	1	37.7	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	2	104	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	< 10	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	40.9	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	18.9	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-15C
SAMPLE NO: H450664

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
6	I590	Solids, Dissolved at 180C	1	705	mg/L
7	I610	Solids, Suspended at 103C	1	149	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-16
SAMPLE NO: H450665
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 1000
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	10.1	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	32.1	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	8.32	ug/L
		Xylenes (total)	1	66.6	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	29.1	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	1	39.3	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	5	139	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	16.3	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	80.2	ug/L
		Fluoranthene	1	26.3	ug/L
		Fluorene	1	82.7	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	10	472	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	5	96.8	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	14.8	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-16
SAMPLE NO: H450665

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
6	I590	Solids, Dissolved at 180C	1	538	mg/L
7	I610	Solids, Suspended at 103C	1	73	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

June 05, 1997
Report No.: 00061878
Section A Page 9

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-18C
SAMPLE NO: H450666
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 1110
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	27.9	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	11.9	ug/L
		Xylenes (total)	1	66.5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	< 10	ug/L
		2,4-Dinitrotoluene	1	< 10	ug/L
		2,6-Dinitrotoluene	1	< 10	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	10	125	ug/L
		4,6-Dinitro-o-cresol	1	< 25	ug/L
		4-Nitrophenol	1	< 25	ug/L
		Acenaphthene	1	54.1	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	< 10	ug/L
		Benzo(a)anthracene	1	< 10	ug/L
		Benzo(a)pyrene	1	< 10	ug/L
		Chrysene	1	< 10	ug/L
		Di-n-butylphthalate	1	< 10	ug/L
		Dibenzofuran	1	48.8	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	31.8	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	20	905	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 25	ug/L
		Phenanthrene	1	53.0	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-18C
SAMPLE NO: H450666

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
6	I590	Solids, Dissolved at 180C	1	1,050	mg/L
7	I610	Solids, Suspended at 103C	1	89	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-18A
SAMPLE NO: H450667
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 1145
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	10	< 50	ug/L
		Benzene	10	700	ug/L
		Chlorobenzene	10	< 50	ug/L
		Ethylbenzene	10	919	ug/L
		Methylene chloride	10	< 50	ug/L
		Toluene	10	805	ug/L
		Xylenes (total)	10	218	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	20	< 200	ug/L
		2,4-Dimethylphenol	200	9,210	ug/L
		2,4-Dinitrotoluene	20	< 200	ug/L
		2,6-Dinitrotoluene	20	< 200	ug/L
		2-Chloronaphthalene	20	< 200	ug/L
		2-Methylnaphthalene	20	617	ug/L
		4,6-Dinitro-o-cresol	20	< 500	ug/L
		4-Nitrophenol	20	< 500	ug/L
		Acenaphthene	20	350	ug/L
		Acenaphthylene	20	< 200	ug/L
		Anthracene	20	< 200	ug/L
		Benzo(a)anthracene	20	< 200	ug/L
		Benzo(a)pyrene	20	< 200	ug/L
		Chrysene	20	< 200	ug/L
		Di-n-butylphthalate	20	< 200	ug/L
		Dibenzofuran	20	< 200	ug/L
		Fluoranthene	20	< 200	ug/L
		Fluorene	20	< 200	ug/L
		N-Nitrosodiphenylamine	20	< 200	ug/L
		Naphthalene	200	7,870	ug/L
		Nitrobenzene	20	< 200	ug/L
		Pentachlorophenol	20	< 500	ug/L
		Phenanthrene	20	< 200	ug/L
		Phenol	100	1,410	ug/L
		Pyrene	20	< 200	ug/L
		bis(2-Chloroethoxy)methane	20	< 200	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-18A
SAMPLE NO: H450667

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	20	< 200	ug/L
6	I590	Solids, Dissolved at 180C	2	1,480	mg/L
7	I610	Solids, Suspended at 103C	1	101	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by the Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-17A
SAMPLE NO: H450668
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 1310
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	5	< 25	ug/L
		Benzene	5	580	ug/L
		Chlorobenzene	5	< 25	ug/L
		Ethylbenzene	5	205	ug/L
		Methylene chloride	5	< 25	ug/L
		Toluene	5	780	ug/L
		Xylenes (total)	5	105	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	50	< 500	ug/L
		2,4-Dimethylphenol	250	7,140	ug/L
		2,4-Dinitrotoluene	50	< 500	ug/L
		2,6-Dinitrotoluene	50	< 500	ug/L
		2-Chloronaphthalene	50	< 500	ug/L
		2-Methylnaphthalene	50	711	ug/L
		4,6-Dinitro-o-cresol	50	< 1,250	ug/L
		4-Nitrophenol	50	< 1,250	ug/L
		Acenaphthene	50	< 500	ug/L
		Acenaphthylene	50	< 500	ug/L
		Anthracene	50	< 500	ug/L
		Benzo(a)anthracene	50	< 500	ug/L
		Benzo(a)pyrene	50	< 500	ug/L
		Chrysene	50	< 500	ug/L
		Di-n-butylphthalate	50	< 500	ug/L
		Dibenzofuran	50	< 500	ug/L
		Fluoranthene	50	< 500	ug/L
		Fluorene	50	< 500	ug/L
		N-Nitrosodiphenylamine	50	< 500	ug/L
		Naphthalene	250	12,200	ug/L
		Nitrobenzene	50	< 500	ug/L
		Pentachlorophenol	50	< 1,250	ug/L
		Phenanthrene	50	< 500	ug/L
		Phenol	1000	29,700	ug/L
		Pyrene	50	< 500	ug/L
		bis(2-Chloroethoxy)methane	50	< 500	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-17A
SAMPLE NO: H450668

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	50	< 500	ug/L
6	I590	Solids, Dissolved at 180C	1	758	mg/L
7	I610	Solids, Suspended at 103C	1	46	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878
Section A Page 15

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-12C
SAMPLE NO: H450669
SAMPLE MATRIX: WATER

DATE SAMPLED: 14-MAY-97 1345
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.4	ug/L
		2,4-Dimethylphenol	1	< 10.4	ug/L
		2,4-Dinitrotoluene	1	< 10.4	ug/L
		2,6-Dinitrotoluene	1	< 10.4	ug/L
		2-Chloronaphthalene	1	< 10.4	ug/L
		2-Methylnaphthalene	1	< 10.4	ug/L
		4,6-Dinitro-o-cresol	1	< 26.0	ug/L
		4-Nitrophenol	1	< 26.0	ug/L
		Acenaphthene	1	< 10.4	ug/L
		Acenaphthylene	1	< 10.4	ug/L
		Anthracene	1	< 10.4	ug/L
		Benzo(a)anthracene	1	< 10.4	ug/L
		Benzo(a)pyrene	1	< 10.4	ug/L
		Chrysene	1	< 10.4	ug/L
		Di-n-butylphthalate	1	< 10.4	ug/L
		Dibenzofuran	1	< 10.4	ug/L
		Fluoranthene	1	< 10.4	ug/L
		Fluorene	1	< 10.4	ug/L
		N-Nitrosodiphenylamine	1	< 10.4	ug/L
		Naphthalene	1	< 10.4	ug/L
		Nitrobenzene	1	< 10.4	ug/L
		Pentachlorophenol	1	< 26.0	ug/L
		Phenanthrene	1	< 10.4	ug/L
		Phenol	1	< 10.4	ug/L
		Pyrene	1	< 10.4	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.4	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-12C
SAMPLE NO: H450669

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.4	ug/L
6	I590	Solids, Dissolved at 180C	2	1,566	mg/L
7	I610	Solids, Suspended at 103C	1	112	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS
This report shall not be reproduced, except in full,

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-12A
SAMPLE NO: H450670
SAMPLE MATRIX: WATER

DATE SAMPLED: 13-MAY-97 1210
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5.00	ug/L
		Benzene	1	< 5.00	ug/L
		Chlorobenzene	1	< 5.00	ug/L
		Ethylbenzene	1	17.1	ug/L
		Methylene chloride	1	< 5.00	ug/L
		Toluene	1	8.46	ug/L
		Xylenes (total)	1	28.1	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.2	ug/L
		2,4-Dimethylphenol	1	12.2	ug/L
		2,4-Dinitrotoluene	1	< 10.2	ug/L
		2,6-Dinitrotoluene	1	< 10.2	ug/L
		2-Chloronaphthalene	1	< 10.2	ug/L
		2-Methylnaphthalene	10	397	ug/L
		4,6-Dinitro-o-cresol	1	< 25.5	ug/L
		4-Nitrophenol	1	< 25.5	ug/L
		Acenaphthene	10	186	ug/L
		Acenaphthylene	1	< 10.2	ug/L
		Anthracene	1	15.9	ug/L
		Benzo(a)anthracene	1	< 10.2	ug/L
		Benzo(a)pyrene	1	< 10.2	ug/L
		Chrysene	1	< 10.2	ug/L
		Di-n-butylphthalate	1	< 10.2	ug/L
		Dibenzofuran	10	148	ug/L
		Fluoranthene	1	17.7	ug/L
		Fluorene	10	125	ug/L
		N-Nitrosodiphenylamine	1	< 10.2	ug/L
		Naphthalene	200	5,210	ug/L
		Nitrobenzene	1	< 10.2	ug/L
		Pentachlorophenol	1	< 25.5	ug/L
		Phenanthrene	10	133	ug/L
		Phenol	1	< 10.2	ug/L
		Pyrene	1	< 10.2	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.2	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-12A
SAMPLE NO: H450670

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.2	ug/L
6	I590	Solids, Dissolved at 180C	1	705	mg/L
7	I610	Solids, Suspended at 103C	1	27	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

June 05, 1997
Report No.: 00061878

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-12B
SAMPLE NO: H450671
SAMPLE MATRIX: WATER

DATE SAMPLED: 13-MAY-97 1315
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	6.54	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	27.6	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	6.48	ug/L
		Xylenes (total)	1	28.7	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.1	ug/L
		2,4-Dimethylphenol	1	< 10.1	ug/L
		2,4-Dinitrotoluene	1	< 10.1	ug/L
		2,6-Dinitrotoluene	1	< 10.1	ug/L
		2-Chloronaphthalene	1	< 10.1	ug/L
		2-Methylnaphthalene	10	233	ug/L
		4,6-Dinitro-o-cresol	1	< 25.2	ug/L
		4-Nitrophenol	1	< 25.2	ug/L
		Acenaphthene	10	216	ug/L
		Acenaphthylene	1	< 10.1	ug/L
		Anthracene	1	19.7	ug/L
		Benzo(a)anthracene	1	< 10.1	ug/L
		Benzo(a)pyrene	1	< 10.1	ug/L
		Chrysene	1	< 10.1	ug/L
		Di-n-butylphthalate	1	< 10.1	ug/L
		Dibenzofuran	10	158	ug/L
		Fluoranthene	1	22.2	ug/L
		Fluorene	10	154	ug/L
		N-Nitrosodiphenylamine	1	< 10.1	ug/L
		Naphthalene	100	2,440	ug/L
		Nitrobenzene	1	< 10.1	ug/L
		Pentachlorophenol	1	< 25.1	ug/L
		Phenanthrene	10	144	ug/L
		Phenol	1	< 10.1	ug/L
		Pyrene	1	10.2	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.1	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-12B
SAMPLE NO: H450671

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.1	ug/L
6	I590	Solids, Dissolved at 180C	1	1,088	mg/L
7	I610	Solids, Suspended at 103C	1	180	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
ADDRESS: 8101 COLLEGE BLVD., SUITE 230
OVERLAND PARK, KS 66210-
ATTENTION: CURTIS L. JONES, CHMM

LIMS CLIENT: 0717 0007
PACE PROJECT: H45189
PACE CLIENT: 620437
P.O. NO: 03422

SAMPLE ID: HWPW-MW-13
SAMPLE NO: H450672
SAMPLE MATRIX: WATER

DATE SAMPLED: 13-MAY-97 1445
DATE RECEIVED: 14-MAY-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
1	OVTCW2	8260A TCL Volatiles in Water			
		1,2-Dichloroethane	1	< 5	ug/L
		Benzene	1	< 5	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	< 5	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	< 5	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10.4	ug/L
		2,4-Dimethylphenol	1	< 10.4	ug/L
		2,4-Dinitrotoluene	1	< 10.4	ug/L
		2,6-Dinitrotoluene	1	< 10.4	ug/L
		2-Chloronaphthalene	1	< 10.4	ug/L
		2-Methylnaphthalene	1	< 10.4	ug/L
		4,6-Dinitro-o-cresol	1	< 26.0	ug/L
		4-Nitrophenol	1	< 26.0	ug/L
		Acenaphthene	1	< 10.4	ug/L
		Acenaphthylene	1	< 10.4	ug/L
		Anthracene	1	< 10.4	ug/L
		Benzo(a)anthracene	1	< 10.4	ug/L
		Benzo(a)pyrene	1	< 10.4	ug/L
		Chrysene	1	< 10.4	ug/L
		Di-n-butylphthalate	1	< 10.4	ug/L
		Dibenzofuran	1	< 10.4	ug/L
		Fluoranthene	1	< 10.4	ug/L
		Fluorene	1	< 10.4	ug/L
		N-Nitrosodiphenylamine	1	< 10.4	ug/L
		Naphthalene	1	< 10.4	ug/L
		Nitrobenzene	1	< 10.4	ug/L
		Pentachlorophenol	1	< 26.0	ug/L
		Phenanthrene	1	< 10.4	ug/L
		Phenol	1	< 10.4	ug/L
		Pyrene	1	< 10.4	ug/L
		bis(2-Chloroethoxy)methane	1	< 10.4	ug/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW-13
SAMPLE NO: H450672

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10.4	ug/L
6	I590	Solids, Dissolved at 180C	1	738	mg/L
7	I610	Solids, Suspended at 103C	1	36	mg/L

COMMENTS: The volatile and semi-volatile analyses were performed by Pace Analytical - New Orleans laboratory.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878
Section B Page 1

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW-14									SAMPLE NO: H450662	
1	OVTCW2	0	0	NA			19-8260A	19-MAY-97 1434	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 0800	P	19-8270B	23-MAY-97 1745	P	
SAMPLE ID: HWPW-MW-15A									SAMPLE NO: H450663	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 1829	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1448	P	19-8270B	23-MAY-97 1448	P	
SAMPLE ID: HWPW-MW-15C									SAMPLE NO: H450664	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 1857	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1823	P	19-8270B	23-MAY-97 1823	P	
SAMPLE ID: HWPW-MW-16									SAMPLE NO: H450665	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 1926	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	23-MAY-97 1527	P	19-8270B	23-MAY-97 1527	P	
SAMPLE ID: HWPW-MW-18C									SAMPLE NO: H450666	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 1954	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1901	P	19-8270B	23-MAY-97 1901	P	
SAMPLE ID: HWPW-MW-18A									SAMPLE NO: H450667	
1	OVTCW2	0	0	NA			19-8260A	19-MAY-97 1503	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1056	P	19-8270B	23-MAY-97 1056	P	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

Pace Analytical

June 05, 1997
Report No.: 00061878
Section B Page 2

SUPPLEMENTAL INFORMATION

LN	TEST CODE	LCSR BLNK BATCH	DUP/MS MS/MSD BATCH	SAMPLE PREPARATION LR-METHOD	SAMPLE PREPARATION DATE/TIME	SAMPLE PREPARATION ANALYST	SAMPLE ANALYSIS LR-METHOD	SAMPLE ANALYSIS DATE/TIME	SAMPLE ANALYSIS ANALYST	SAMPLE ANALYSIS INSTRUMENT
SAMPLE ID: HWPW-MW-17A									SAMPLE NO: H450668	
1	OVTCW2	0	0	NA			19-8260A	19-MAY-97 1531	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1135	P	19-8270B	23-MAY-97 1135	P	
SAMPLE ID: HWPW-MW-12C									SAMPLE NO: H450669	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 2119	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-JUN-97 1939	P	19-8270B	23-MAY-97 1939	P	
SAMPLE ID: HWPW-MW-12A									SAMPLE NO: H450670	
1	OVTCW2	0	0	NA			19-8260A	16-MAY-97 2148	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1331	P	19-8270B	23-MAY-97 1331	P	
SAMPLE ID: HWPW-MW-12B									SAMPLE NO: H450671	
1	OVTCW2	0	0	NA			19-8260A	19-MAY-97 1628	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 1409	P	19-8270B	23-MAY-97 1409	P	
SAMPLE ID: HWPW-MW-13									SAMPLE NO: H450672	
1	OVTCW2	0	0	NA			19-8260A	19-MAY-97 1657	P	
6	I590	74398	74398	NA			02-160.1	16-MAY-97 1730	C P	008WAT
7	I610	74368	74368	NA			02-160.2	16-MAY-97 1415	C P	008WAT
3	OSVTCW	0	0	19-3510B	16-MAY-97 2017	P	19-8270B	23-MAY-97 2017	P	

LR Method Literature Reference

02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878
Section D Page 1

LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	LCS % RECOVERY	LCSD % RECOVERY	ACCEPTANCE LIMITS	RPD
BATCH NO: 74398				SAMPLE NO: H386848	
I590	Solids, Dissolved at 180C	102		-	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

METHOD BLANK DATA

TEST CODE	DETERMINATION	RESULT	UNIT
BATCH NO: 74368			SAMPLE NO: H386803
I610	Solids, Suspended at 103C	< 4	mg/L
BATCH NO: 74398			SAMPLE NO: H386849
I590	Solids, Dissolved at 180C	< 5	mg/L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX 77058
Tel: 281-488-1810
Fax: 281-488-4661

June 05, 1997
Report No.: 00061878
Section F Page 1

DUPLICATE AND MATRIX SPIKE DATA

TEST CODE	DETERMINATION	ORIGINAL RESULT	DUPLICATE RESULT	UNITS	RANGE / RPD	MS RESULT	MS % RCVRY
BATCH NO: 74368						SAMPLE NO: H449447	
I610	Solids, Suspended at 103C	19	19	mg/L	0.0		
BATCH NO: 74368						SAMPLE NO: H450669	
I610	Solids, Suspended at 103C	112	112	mg/L	0.0		
BATCH NO: 74398						SAMPLE NO: H450662	
I590	Solids, Dissolved at 180C	1,020	1,034	mg/L	1.4		
BATCH NO: 74398						SAMPLE NO: H450672	
I590	Solids, Dissolved at 180C	738	712	mg/L	3.6		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

pace INCORPORATED
ENVIRONMENTAL LABORATORIES

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Terranext

Address: 6200 Rothway # 190
Houston, Tx 77040

Phone: (713) 460-4230 FAX 460-4227

Report To: Robert Coffman

Bill To:

P.O. # / Billing Reference

Project Name / No.: HWPW / 44102069

Pace Client No.

Pace Project Manager

Pace Project No.

*Requested Due Date:

Sampled By (PRINT): Elston P. Jones

Sampler Signature: Elston P. Jones

Date Sampled: 5-13-97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8260	8270	105, 155	REMARKS
1	MW-12A	1210	H_2O	670	4							2	1	1	
2	MW-12B	1315	↓	671	↓							↓	↓	↓	
3	MW-13	1445	↓	672	↓							↓	↓	↓	
4															
5															
6															
7															
8															

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
	Elston P. Jones	[illegible]	5-14-97	1750

Additional Comments

SEE REVERSE SIDE FOR INSTRUCTIONS

pace INCORPORATED
ENVIRONMENTAL LABORATORIES

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Terramext
Address: 6200 Rothway #190
Houston, TX 77040
Phone: (713) 460-4230 Fax: 460-4227

Report To: Robert Coffman
Bill To:
P.O. # / Billing Reference
Project Name / No.: HWPW 44102069

Pace Client No.
Pace Project Manager
Pace Project No.
*Requested Due Date:

Sampled By (PRINT): Elston P. Jones
Sampler Signature:
Date Sampled: 5-14-97

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA			ANALYSES REQUEST: 8260 / 5220 / TDS + TSS	REMARKS
1	MW-14	0820	H2O	6662								2 1 1	
2	MW-15A	0900		6663									
3	MW-15C	0930		6664									
4	MW-16	1000		6665									
5	MW-18C	1110		6666									
6	MW-18A	1145		6667									
7	MW-17A	1310		6668									
8	MW-17C	1345		669									

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT/DATE	SHIPMENT METHOD RETURNED/DATE

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
			5-14-97	1750

Additional Comments

SEE REVERSE SIDE FOR INSTRUCTIONS

Aquifer Slug Test Results

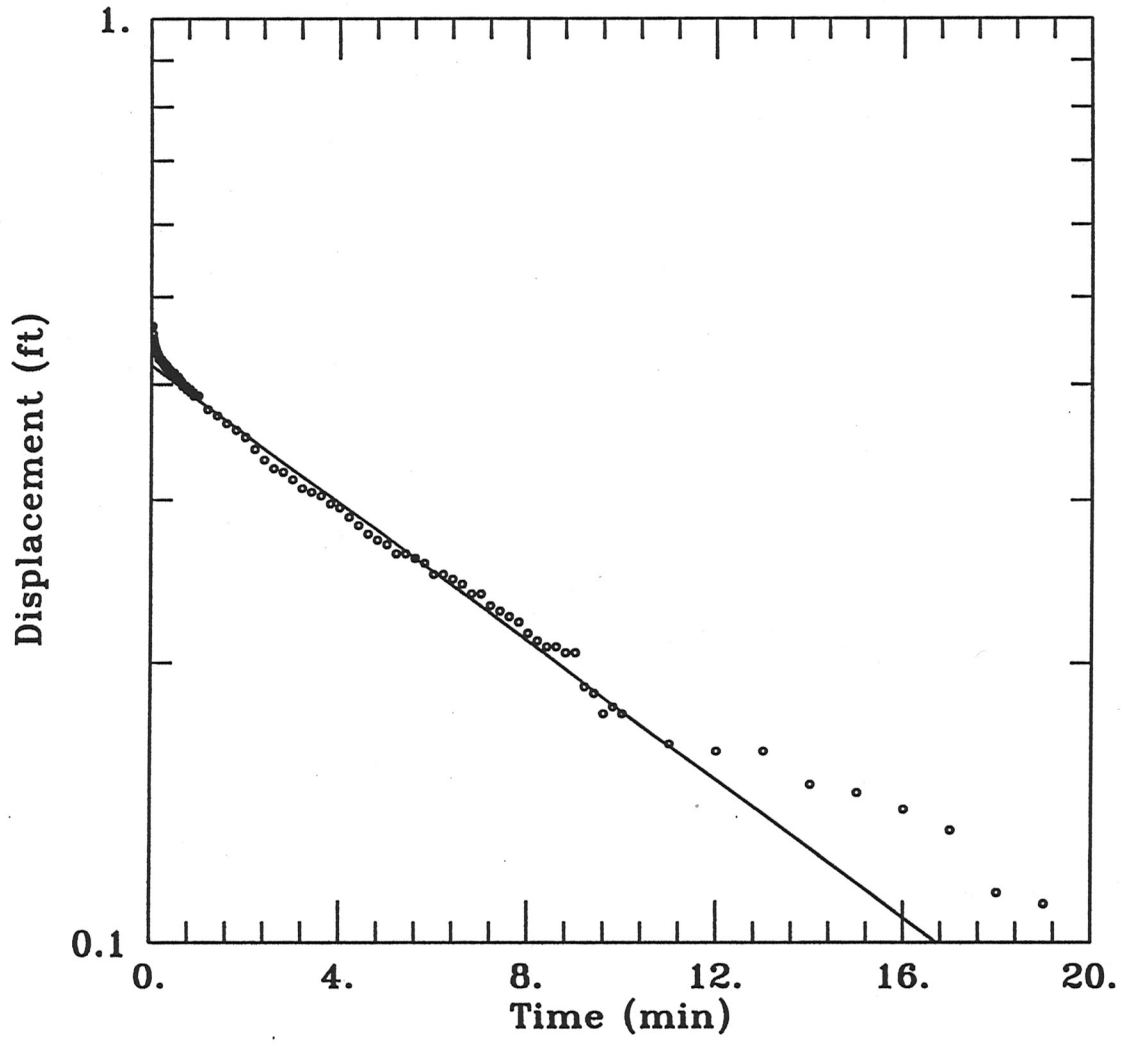
Appendix C

February 13, 1998
W.O. #422-09

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

Client: **Houston Wood Preserving Works**	Company: **ERM–Southwest, Inc**
Location: **Houston, Texas**	Project: **422–009**

MW–10A Slug Test



DATA SET:
HWPW10A.IN
02/11/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

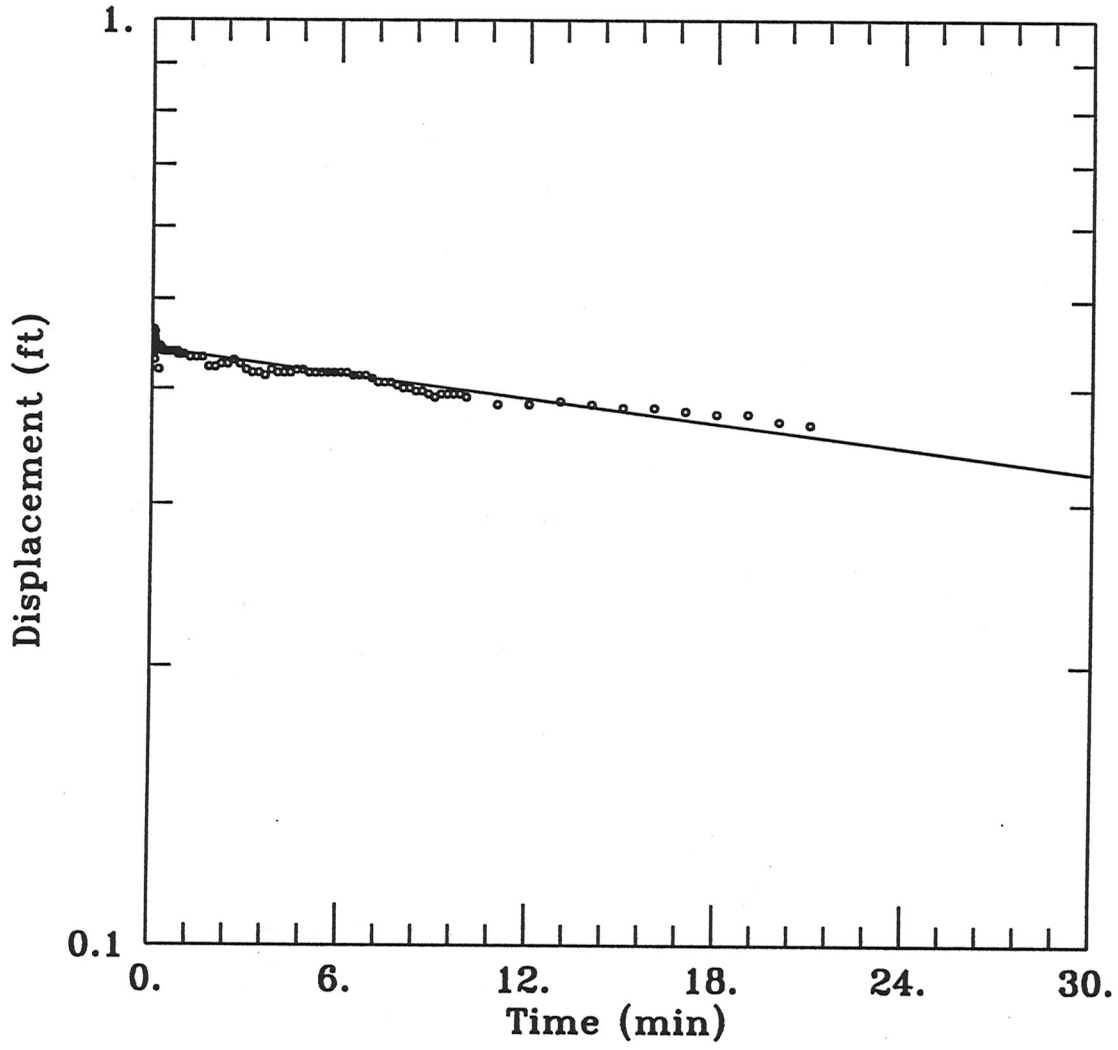
TEST DATA:
H0 = 0.464 ft
rc = 0.167 ft
rw = 0.438 ft
L = 10. ft
b = 13.4 ft
H = 13.4 ft

PARAMETER ESTIMATES:
K = 0.0004217 cm/sec
y0 = 0.4188 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc.**
Location: **Houston, Texas**	Project: **422-009**

MW-10B Slug Test



DATA SET:
HWPW10B.IN
02/11/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

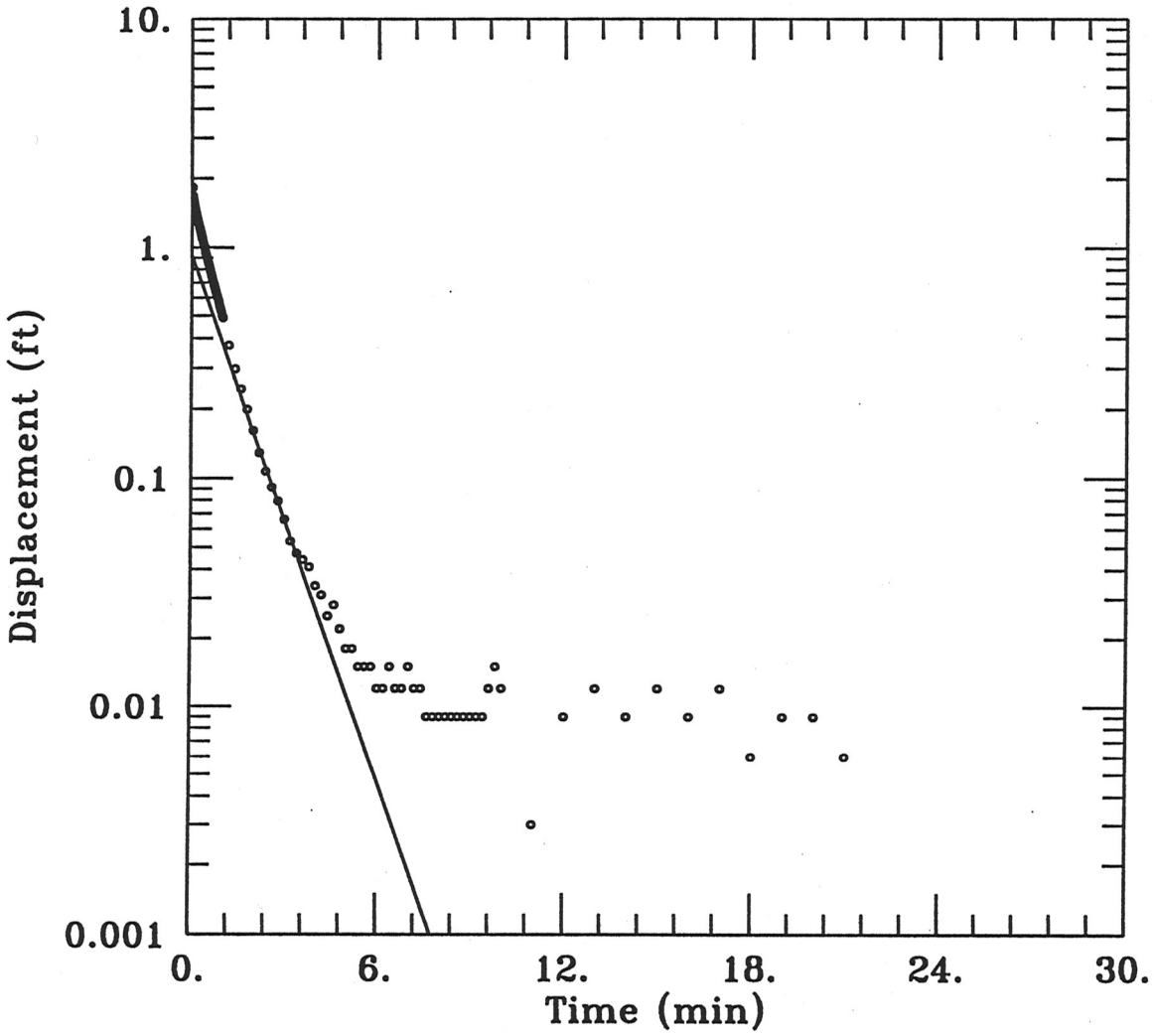
TEST DATA:
H0 = 0.464 ft
rc = 0.166 ft
rw = 0.5 ft
L = 14.5 ft
b = 34.6 ft
H = 34.6 ft

PARAMETER ESTIMATES:
K = 5.261E-05 cm/sec
y0 = 0.4424 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc.**
Location: **Houston, Texas**	Project: **422-009**

MW-12A Slug Test



DATA SET:
HWPW12A.IN
02/11/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

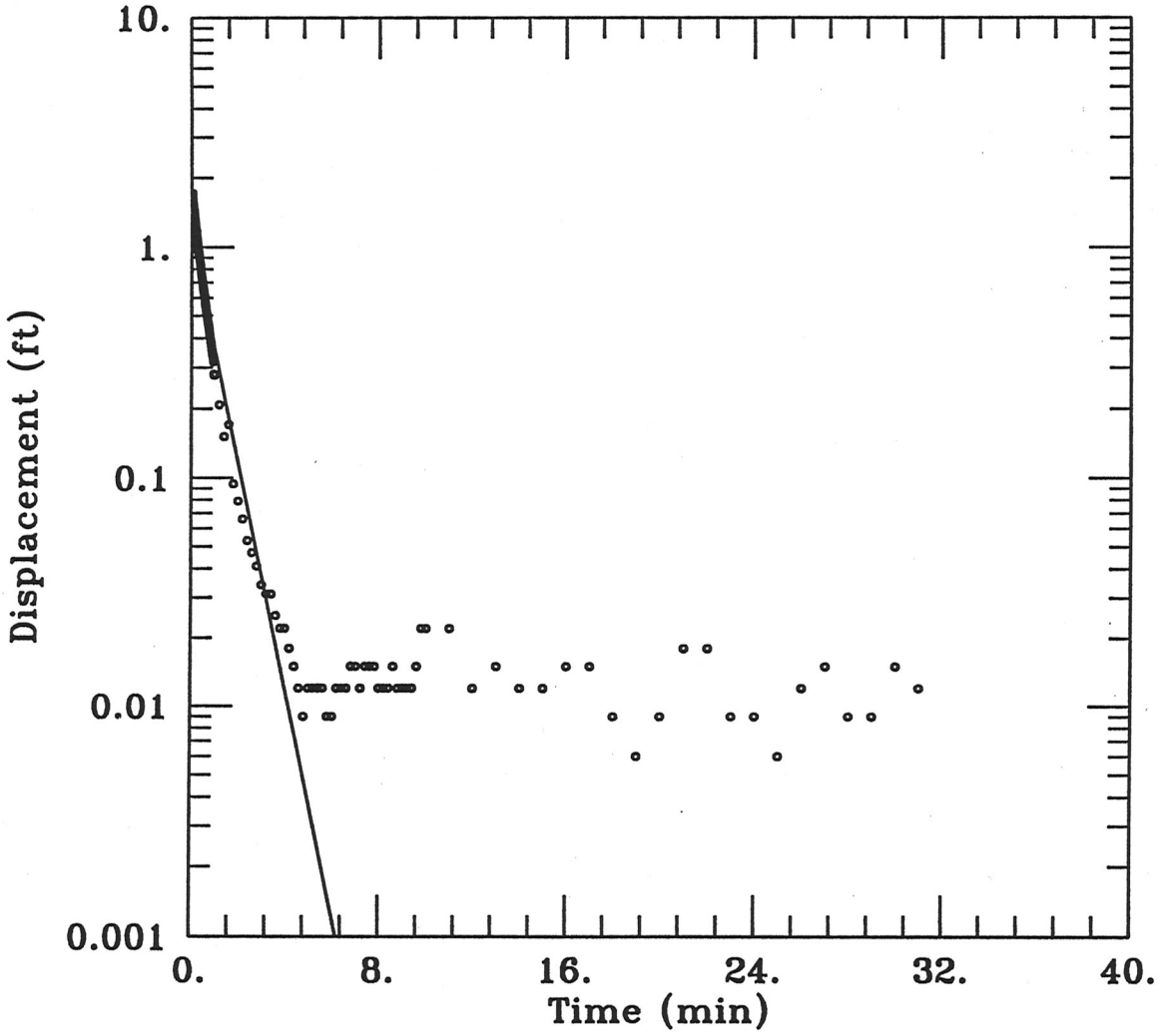
TEST DATA:
H0 = 1.83 ft
rc = 0.083 ft
rw = 0.343 ft
L = 8.5 ft
b = 22. ft
H = 22. ft

PARAMETER ESTIMATES:
K = 0.003127 cm/sec
y0 = 0.9148 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc.**
Location: **Houston, Texas**	Project: **422-009**

MW-12B Slug Test



DATA SET:
HWPW12B.IN
02/11/98

AQUIFER MODEL:
Confined
SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

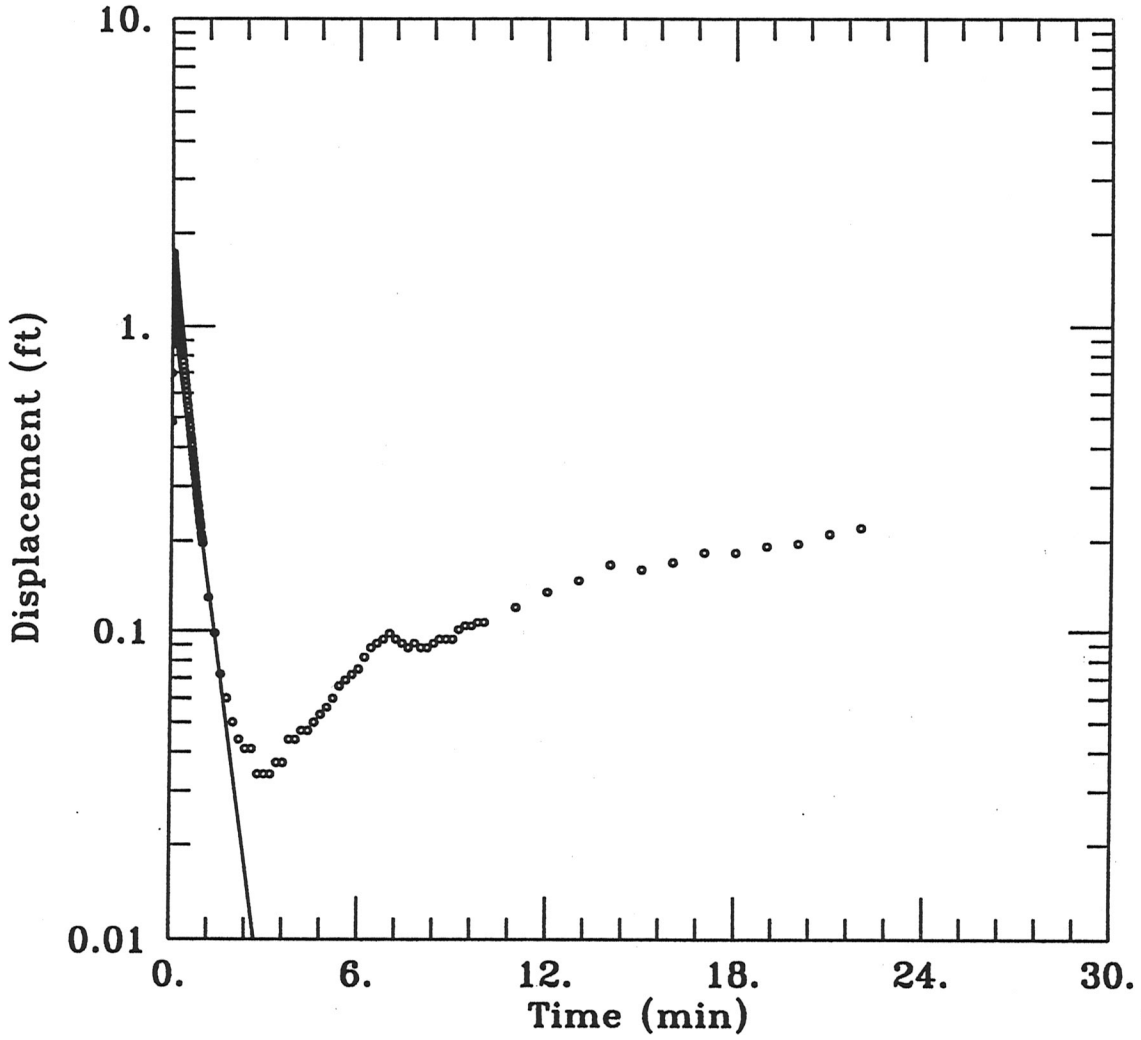
TEST DATA:
H0 = 1.713 ft
rc = 0.083 ft
rw = 0.343 ft
L = 10. ft
b = 34.4 ft
H = 34.4 ft

PARAMETER ESTIMATES:
K = 0.00377 cm/sec
y0 = 1.098 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc.**
Location: **Houston, Texas**	Project: **422-009**

MW-13 Slug Test



DATA SET:
HWPW13.IN
02/11/98

AQUIFER MODEL:
Confined
SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

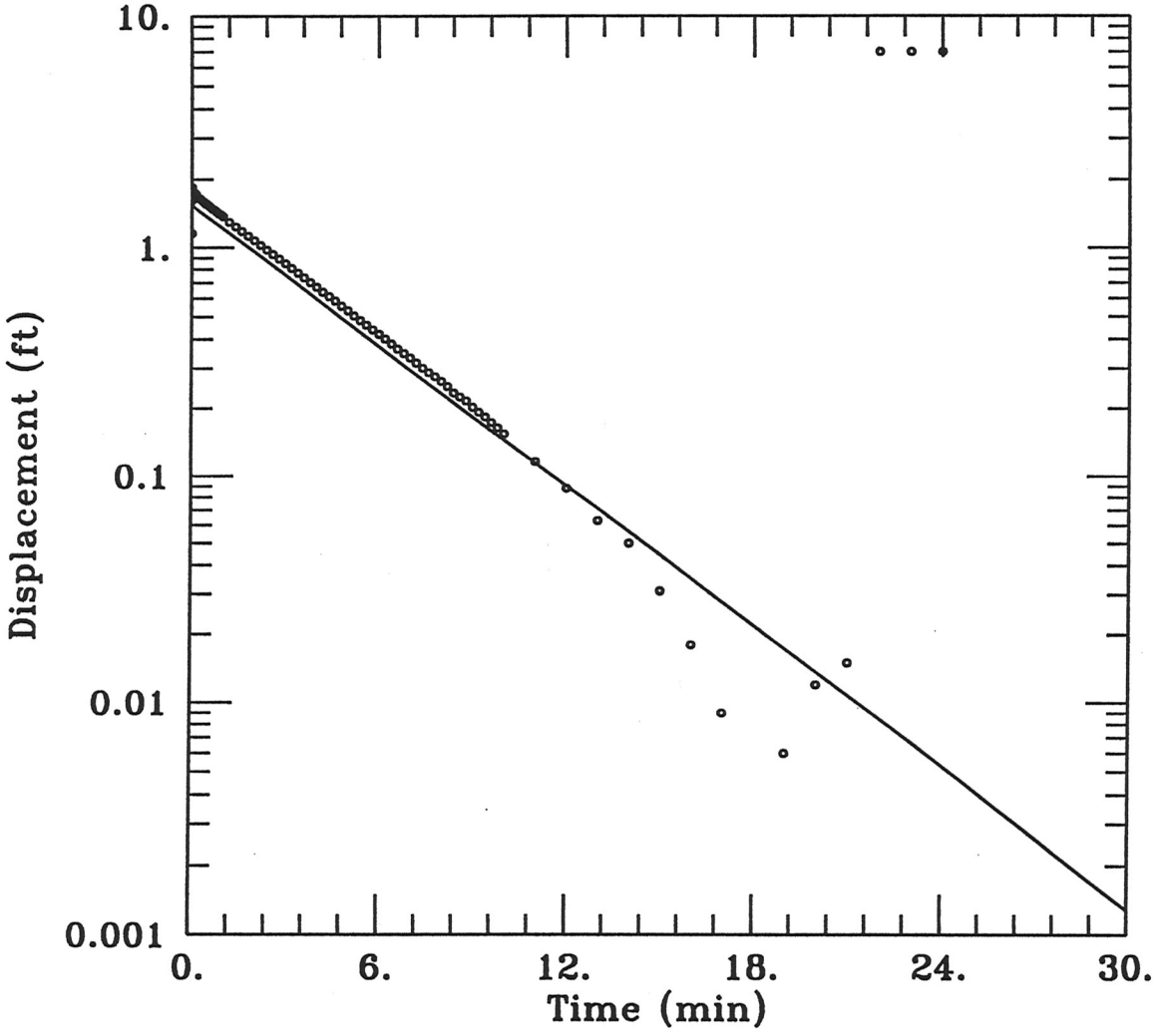
TEST DATA:
H0 = 1.73 ft
rc = 0.083 ft
rw = 0.34 ft
L = 10. ft
b = 11.57 ft
H = 11.57 ft

PARAMETER ESTIMATES:
K = 0.0007992 cm/sec
y0 = 1.082 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM–Southwest, Inc.**
Location: **Houston, Texas**	Project: **422–009**

MW–14 Slug Test



DATA SET:
HWPW14.IN
02/11/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

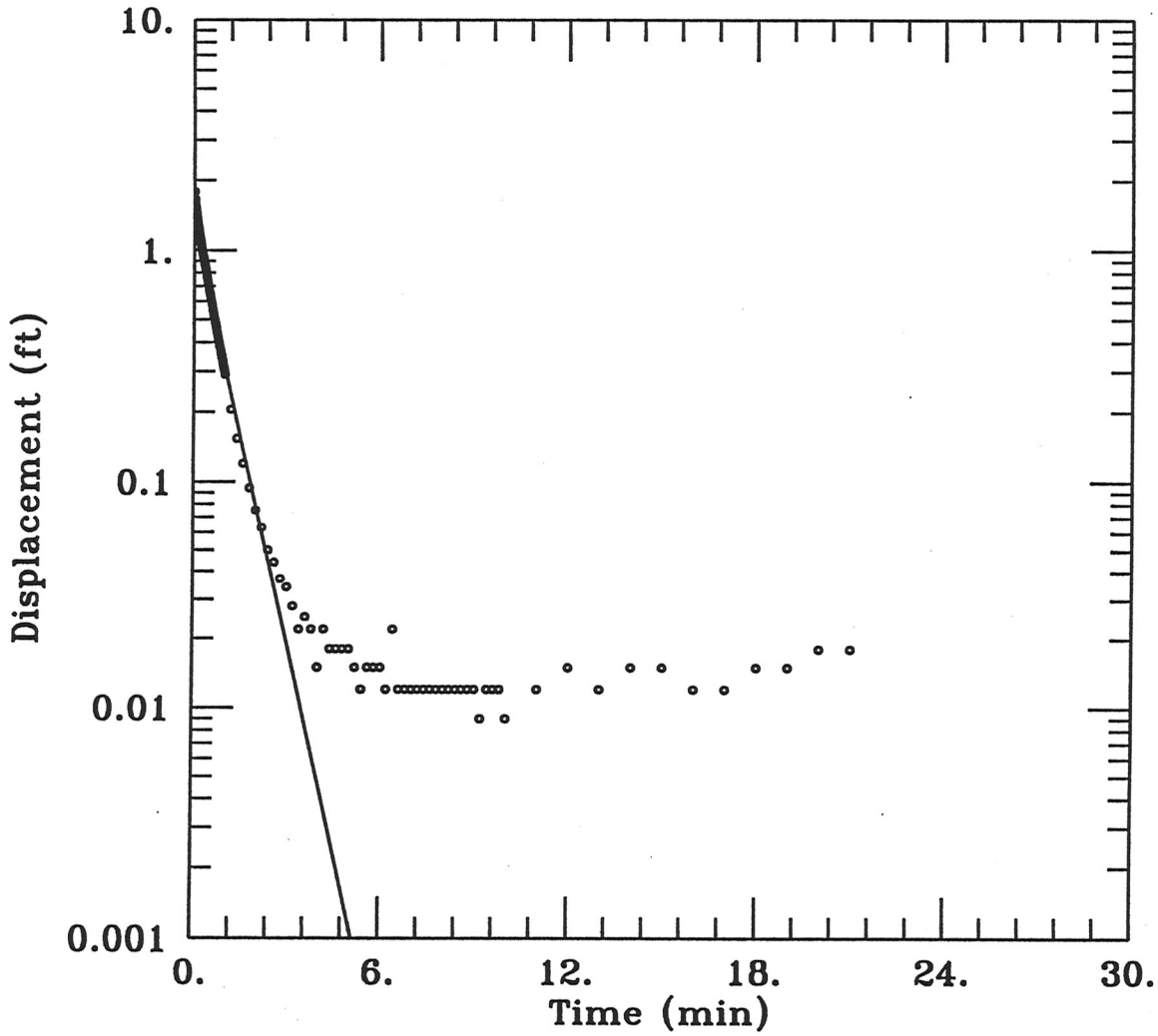
TEST DATA:
H0 = 1.839 ft
rc = 0.083 ft
rw = 0.5 ft
L = 10. ft
b = 35.29 ft
H = 35.29 ft

PARAMETER ESTIMATES:
K = 0.000121 cm/sec
y0 = 1.533 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc**
Location: **Houston, Texas**	Project: **422-009**

MW-15 Slug Test



DATA SET:
HWPW15.IN
02/11/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

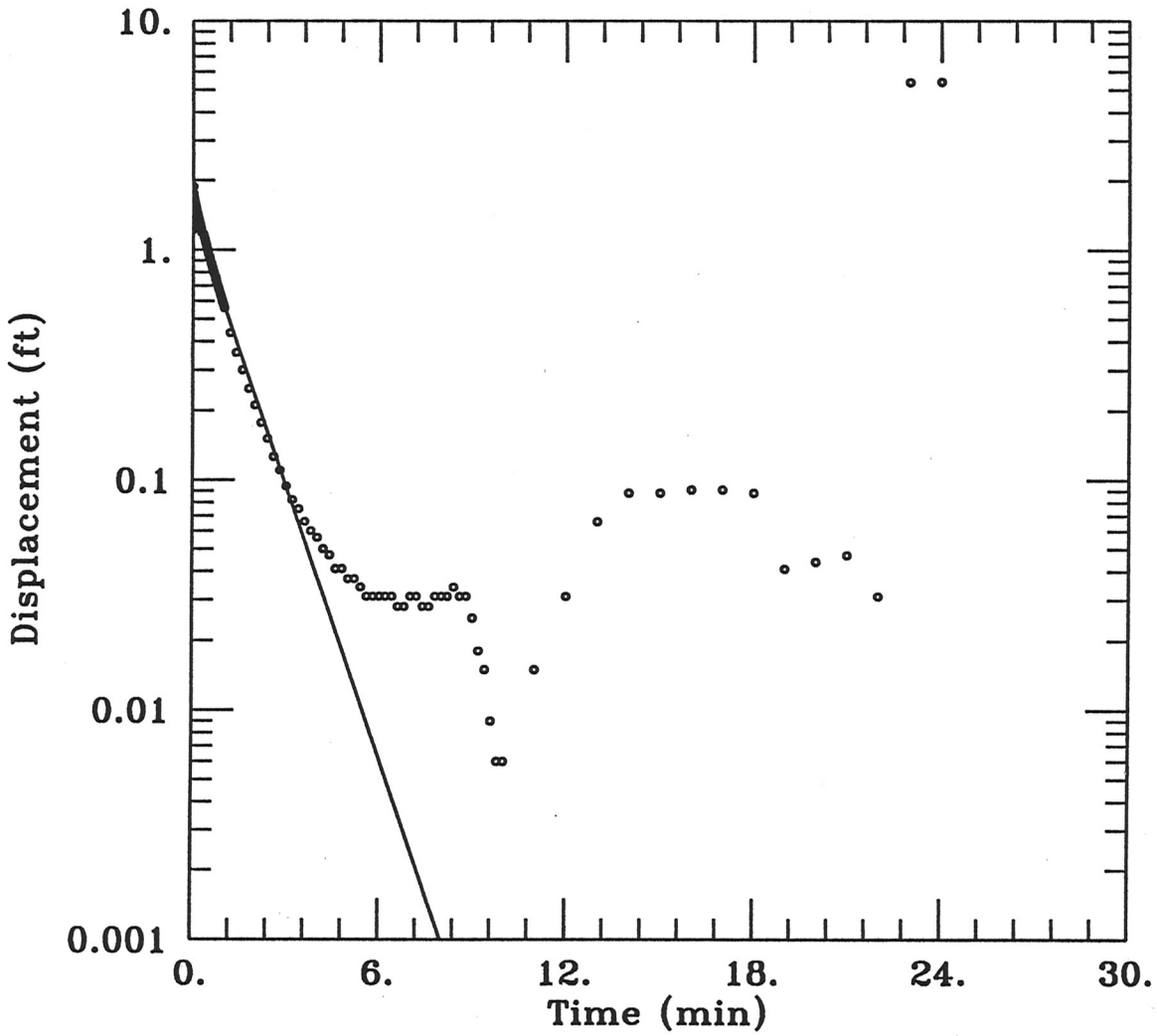
TEST DATA:
H0 = 1.78 ft
rc = 0.0833 ft
rw = 0.34 ft
L = 10. ft
b = 15.78 ft
H = 15.78 ft

PARAMETER ESTIMATES:
K = 0.0006912 cm/sec
y0 = 1.245 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest, Inc**
Location: **Houston, Texas**	Project: **422-009**

MW-16 Slug Test



DATA SET:
HWPW16.IN
02/10/98

AQUIFER MODEL:
Confined
SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

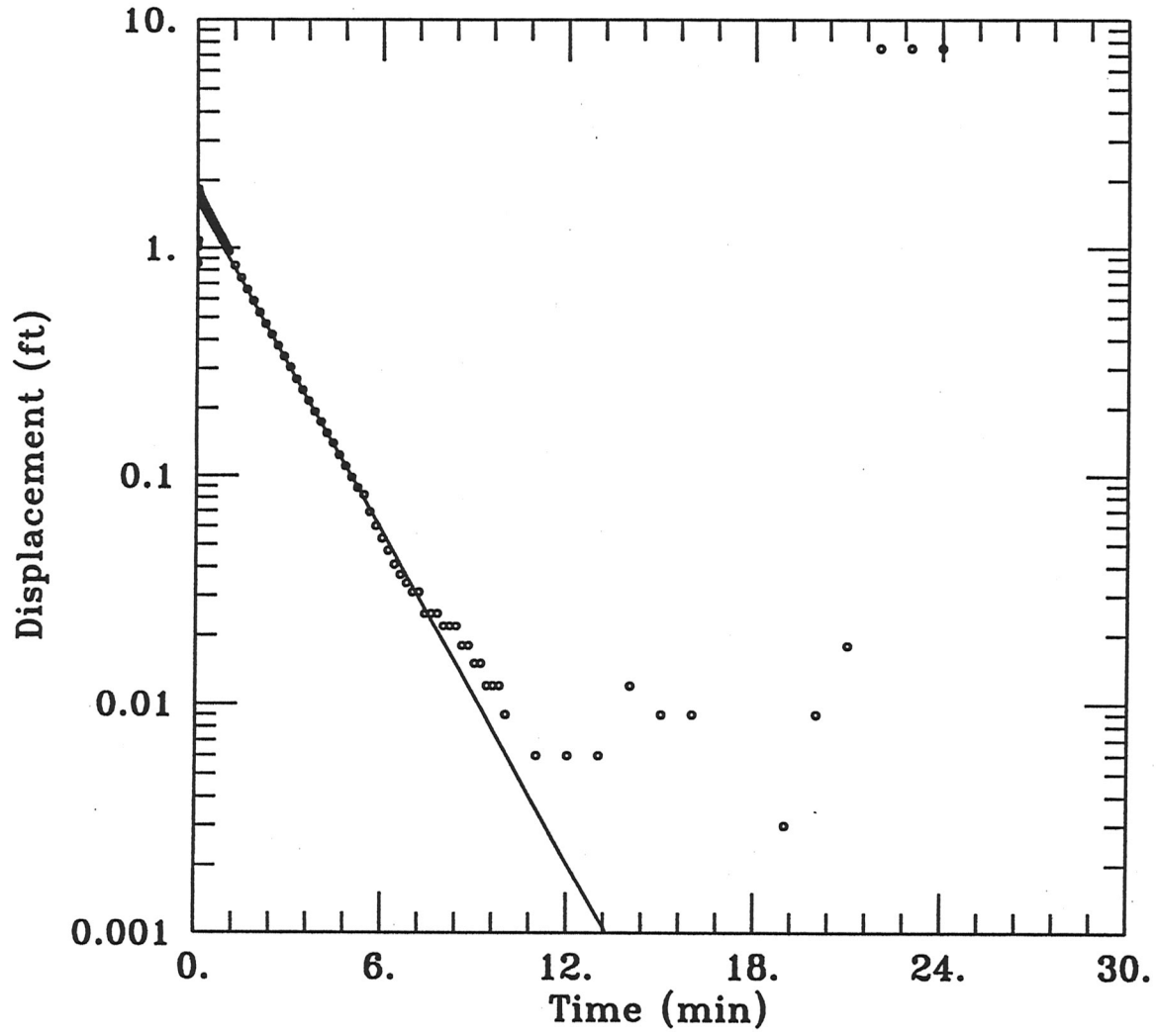
TEST DATA:
H0 = 1.865 ft
rc = 0.083 ft
rw = 0.34 ft
L = 10. ft
b = 17.09 ft
H = 17.09 ft

PARAMETER ESTIMATES:
K = 0.0004564 cm/sec
y0 = 1.413 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM-Southwest**
Location: **Houston, Texas**	Project: **422-009**

MW-17 Slug Test



DATA SET:
HWPW17.IN
02/10/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

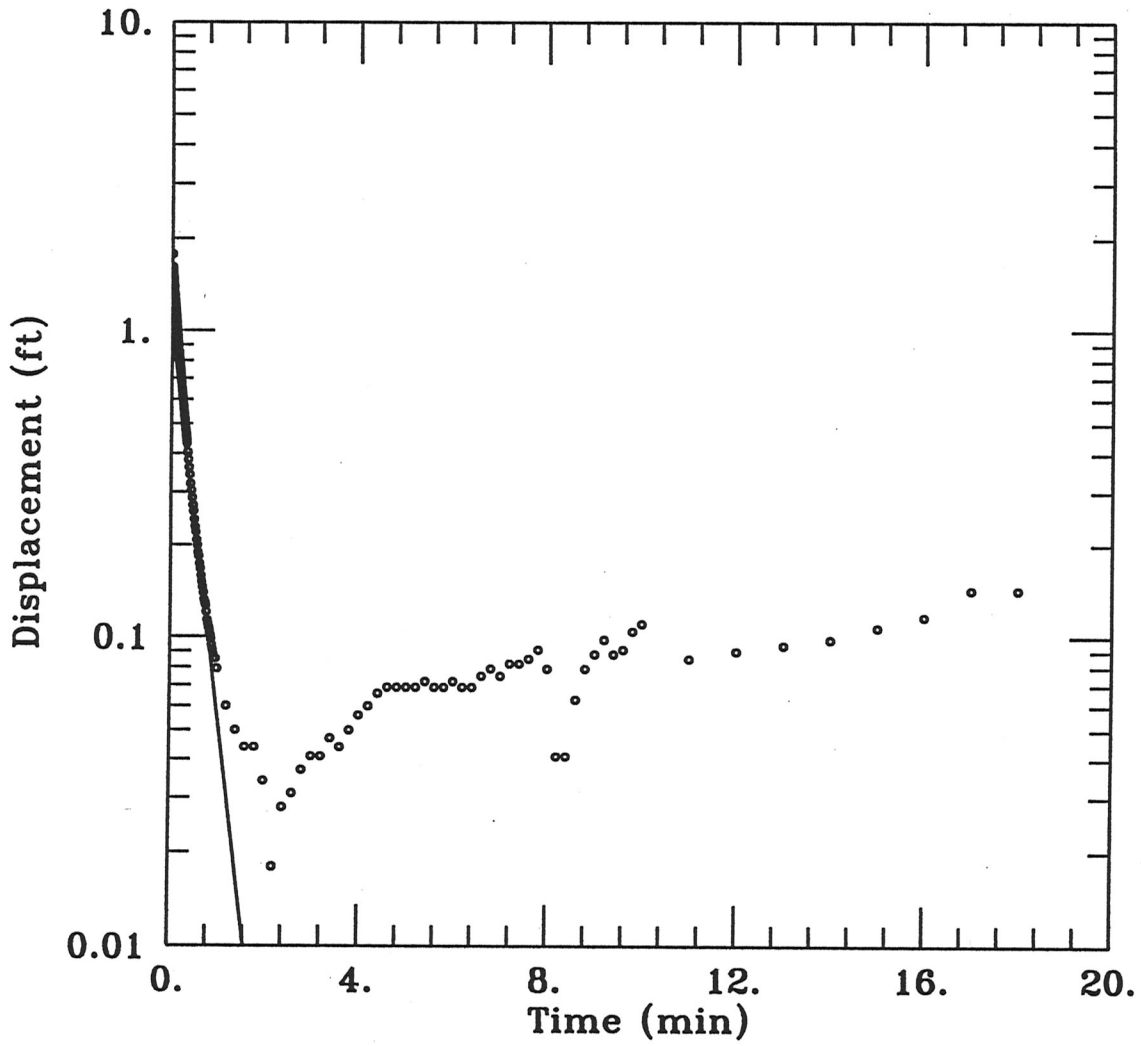
TEST DATA:
H0 = 1.824 ft
rc = 0.083 ft
rw = 0.34 ft
L = 10. ft
b = 20.03 ft
H = 20.03 ft

PARAMETER ESTIMATES:
K = 0.0002886 cm/sec
y0 = 1.577 ft

AQTESOLV

Client: **Houston Wood Preserving Works**	Company: **ERM–Southwest, Inc.**
Location: **Houston, Texas**	Project: **422–009**

MW–18 Slug Test



DATA SET:
HWPW18.IN
02/10/98

AQUIFER MODEL:
Confined

SOLUTION METHOD:
Bouwer-Rice

PROJECT DATA:
test date: 5/1/97

TEST DATA:
H0 = 1.779 ft
rc = 0.083 ft
rw = 0.34 ft
L = 10. ft
b = 14.59 ft
H = 14.59 ft

PARAMETER ESTIMATES:
K = 0.001387 cm/sec
y0 = 0.9848 ft

AQTESOLV

Preliminary Outline for Risk Reduction Implementation Plan

Appendix D

February 13, 1998
W.O. #422-09

ERM-SOUTHWEST, INC.
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 579-8999

PRELIMINARY OUTLINE
RISK REDUCTION IMPLEMENTATION WORK PLAN

HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS

EXECUTIVE SUMMARY

1.0 INTRODUCTION
- 1.1 SCOPE AND OBJECTIVES
- 1.2 SITE LOCATION AND DESCRIPTION
- 1.3 SITE HISTORY
- 1.4 REGULATORY FRAMEWORK

2.0 REMEDIAL INVESTIGATION SUMMARY
- 2.1 SITE CHARACTERIZATION
  - 2.1.1 Previous Soil Investigations
  - 2.1.2 Previous Ground Water Investigations
  - 2.1.3 Soil Geochemical Analytical Results
  - 2.1.4 Ground Water and Surface Water Analytical Results
- 2.2 SITE GEOLOGY AND HYDROGEOLOGY
  - 2.2.1 Environmental Setting
  - 2.2.2 Regional Geology and Hydrogeology
  - 2.2.3 Site-Specific Geology and Hydrogeology
  - 2.2.4 Water Well Survey
  - 2.2.5 Estimates of Horizontal Flow Rate and Flow Direction
  - 2.2.6 Interaction of the A and B Transmissive Zones
- 2.3 EXTENT OF AFFECTED MEDIA
  - 2.3.1 Extent of Affected Soil
  - 2.3.2 Extent of Affected Ground Water
  - 2.3.3 Site Conceptual Model

3.0 APPLICATION OF RISK REDUCTION STANDARDS
- 3.1 PRELIMINARY RISK GOALS
- 3.2 STANDARD NO. 2
- 3.3 STANDARD NO. 3

4.0 PRELIMINARY RISK ASSESSMENT ACTIVITIES
- 4.1 DATA EVALUATION
  - 4.1.1 Selection of Data Based Upon Useability
  - 4.1.2 Samples Included in the Risk Assessment Database
- 4.2 TWO-TIERED SCREEN FOR SELECTION OF CONSTITUENTS OF CONCERN (COCs)
  - 4.2.1 Selection of Constituents for Standard No. 3 Risk Reduction Evaluation
  - 4.2.2 Screening Comparison to Standard No. 2 MSCs and Identification of COCs for Standard No. 2 Risk Reduction Evaluation

5.0 SITE-SPECIFIC RISK ASSESSMENT ISSUES
5.1 RISK ASSESSMENT FOR DERMAL EXPOSURE TO CARCINOGENIC POLYNUCLEAR AROMATIC HYDROCARBONS
5.2 PRACTICAL QUANTITATION LIMITS (PQLs)
5.3 WETLANDS AND ECOLOGICAL ASSESSMENT

6.0 PROPOSED CONTENTS OF RISK REDUCTION REPORT

7.0 REFERENCES

LIST OF FIGURES

1-1 SITE LOCATION MAP
1-2 SITE LAYOUT

2-1 RFI SAMPLING LOCATIONS
2-2 CROSS-SECTION LOCATIONS
2-3 GEOLOGIC CROSS-SECTION A-A'
2-4 GEOLOGIC CROSS-SECTION B-B'
2-5 GEOLOGIC CROSS-SECTION C-C'
2-6 GEOLOGIC CROSS-SECTION D-D'
2-7 POTENTIOMETRIC SURFACE MAP - A-TZ
2-8 POTENTIOMETRIC SURFACE MAP - B-TZ
2-9 POTENTIOMETRIC SURFACE MAP - C-TZ
2-10 SITE CONCEPTUAL MODEL

3-1 DATA SCREENING PROCESS FOR RISK REDUCTION EVALUATION

LIST OF TABLES

3-1 COMPARISON OF SOIL/RESIDUAL NAPL CONCENTRATIONS TO TNRCC LIMITS FOR 1000 PPM IN VAPOR

3-2 SUMMARY OF EXPOSURE PATHWAY ANALYSIS FOR STANDARD NO.3

3-3 EXPOSURE PARAMETERS FOR STANDARD NO. 3

4-1 SUMMARY OF SOIL SAMPLE LOCATIONS AND DATA SEGREGATION

4-2 SUMMARY OF GROUND WATER SAMPLE LOCATIONS AND DATA SEGREGATION

4-3 COMPREHENSIVE LIST OF CONSTITUENTS ANALYZED IN SITE MEDIA

4-4 CONSTITUENTS OMITTED FROM THE QUANTITATIVE ASSESSMENT FOR SOIL

4-5 CONSTITUENTS OMITTED FROM THE QUANTITATIVE ASSESSMENT FOR WATER

4-6 SUMMARY OF DETECTED COMPOUNDS SELECTED FOR QUANTITATIVE ASSESSMENT

4-7 COMPARISON OF SOIL CONCENTRATIONS TO STANDARD NO. 2

4-8 COMPARISON OF GROUND WATER CONCENTRATIONS TO STANDARD NO. 2

4-9 COMPARISON OF DITCH SEDIMENT CONCENTRATIONS TO STANDARD NO. 2

APPENDIX

A DERIVATION OF STANDARD NO. 2 MSCs