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COMPLIANCE PLAN
SEMI-ANNUAL REPORT
JANUARY 1 THROUGH JUNE 30, 1997

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

Terranext Project No. 44102069.09

Prepared For:

Union Pacific Railroad Company
Formerly Southern Pacific Lines
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July 18, 1997

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COMPLIANCE PLAN
SEMI-ANNUAL REPORT
JANUARY 1 THROUGH JUNE 30, 1997

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

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1.0 INTRODUCTION

1.1 Purpose

On June 20, 1994, the Texas Natural Resource Conservation Commission (TNRCC) issued Permit Number HW-50343-000 (hereinafter, Permit) and TNRCC Compliance Plan Number CP-50343, which is incorporated within the Permit. The Permit applies to post-closure care for one former surface impoundment (TNRCC Permit Unit No. II.B.1) located at the Southern Pacific Transportation Company (SPTCo) former Houston Wood Preserving Works (HWPW), 4910 Liberty Road, Houston, Texas (Figure 1). In September 1996, the site became the property of the Union Pacific Railroad Company (UP). The Permit requires a RCRA Facility Investigation (RFI), and the Compliance Plan (CP) requires an Extent of Contamination (EOC) Investigation; the EOC Work Plan dated September 16, 1994, and the RFI Work Plan dated October 14, 1994, were approved respectively by letters from the TNRCC dated September 29 and October 16, 1995. Phase 1 Investigation activities outlined in the approved EOC and RFI Work Plans were initiated in October 1995. SPTCO submitted the Phase 1 RFI/EOC Investigation Report to the TNRCC on May 23, 1996. This Semi-Annual Report (SAR) was prepared to comply with the requirements of CP Provision VII.B.2. All referenced figures and tables are presented at the end of each major report section.

The activity period covered by this report is designated in CP Provision VII.B.2.a and encompasses January 1 through June 30, 1997, as the preceding six-month period.

1.2 Applicability and Scope

Provisions VII.B.2.a through VII.B.2.m of the Compliance Plan require that this SAR include the following:

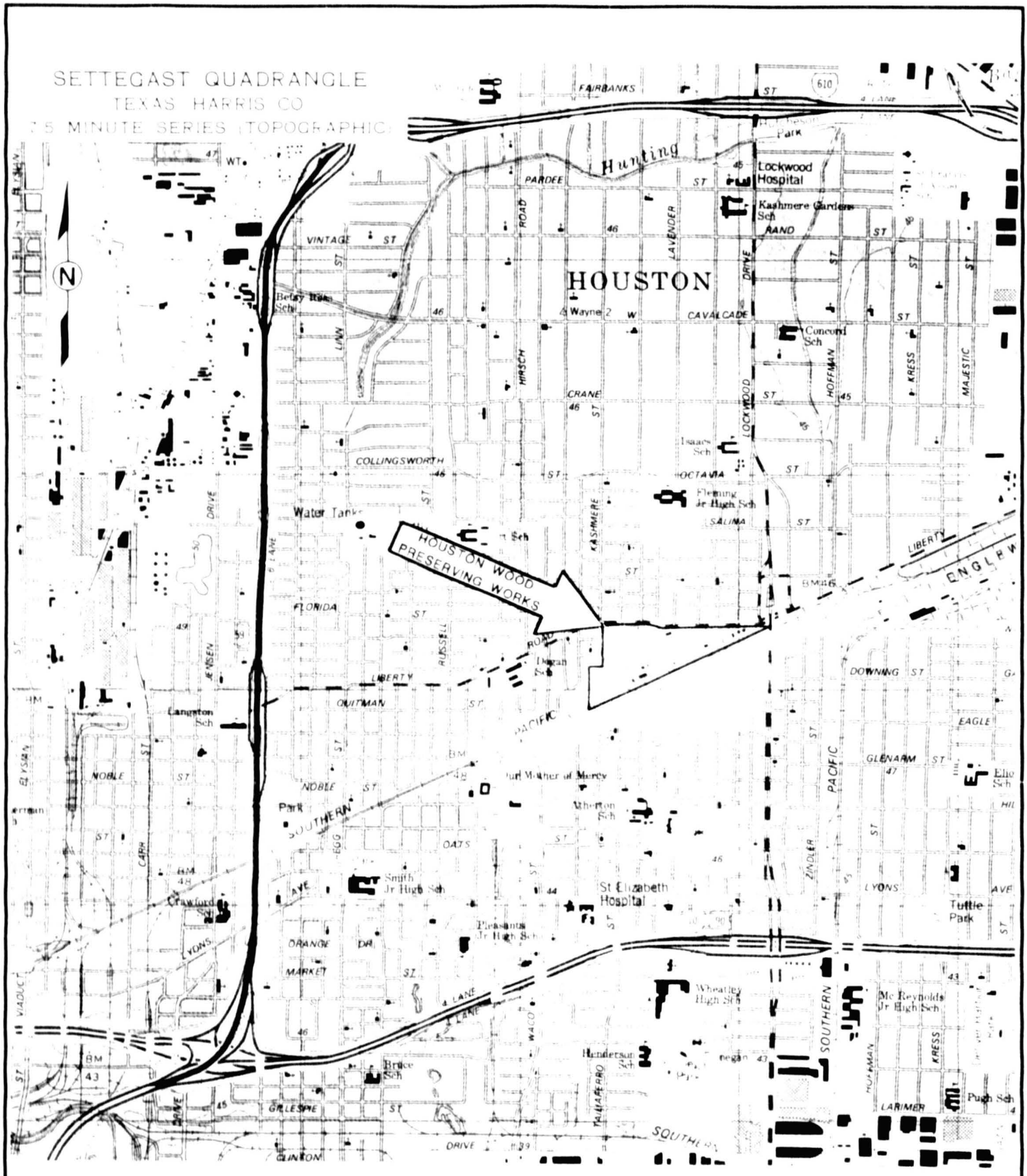

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FIGURE 1
SITE VICINITY MAP
SPTCo WOOD PRESERVING WORKS
4910 LIBERTY ROAD
HOUSTON, TEXAS

a. Narrative summary of the evaluations made in accordance with Sections V, VI, and VII with regard to corrective action and ground water monitoring.

b. Tabulated chemical analyses indicating each parameter that exceeds the Ground Water Protection Standard (CP Table I, Appendix A).

c. Tabulated water level elevations (relative to mean sea level), depth to water measurements, and total depth of well measurements.

d. Potentiometric surface maps of water table elevation during sampling events.

e. If a recovery system is installed, potentiometric surface maps indicating radius of influence, hydraulic gradients, and regional ground water flow.

f. Tabulation of the depth and thickness of non-aqueous phase liquids (NAPLs), if present, in each well for each sampling event performed during the period.

g. If a recovery system is installed, tabulation of monthly quantities of recovered ground water and NAPLs, if encountered, and graphs of weekly recorded flow rates versus time for Recovery Wells during each quarter.

h. Tabulation of data evaluation results and status of compliance of each well of CP Table III (Appendix B) with respect to the Ground Water Protection Standards.

i. Isopleth contour maps of naphthalene; acenaphthene; and the sum of benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations.

j. Updated schedule summary per CP Provision XI.A.

k. Summary of any changes made to the monitoring/corrective action program and summary of Recovery Well inspections, repairs, and any operational difficulties.

l. Recommendation for any changes.

m. Any other items requested by the Executive Director.

A recovery system has not been installed for this facility. Therefore, Items e, g, and k (as each relates to Recovery Wells) will not be addressed further in this SAR. All other items as listed above are addressed in the text summary in Section 2.0 of the SAR, with supporting figures and tables presented at the end of Section 2.0. Reference information is presented in the appendices.

2.0 REPORT ITEMS

2.1 Corrective Action and Ground Water Monitoring Summary

2.1.1 Corrective Action System

Existing wells were sampled and monitored to evaluate the extent of ground water contamination in the Uppermost Transmissive Zone (UTZ) and the Second Transmissive Zone (STZ). The definition of the UTZ and STZ is consistent with CP Provision I.A:

* UTZ refers to the first sand unit encountered at approximately 35 feet above mean sea level (MSL), averaging 6 to 8 feet in thickness.

* STZ refers to the second sand unit encountered at approximately 15 feet MSL, averaging 8 to 10 feet in thickness.

Existing monitoring wells in the UTZ, designated by function consistent with CP Table III, include Corrective Action Observation (CAO) wells (MW-4, -5, -7, -8, and -9) and Point of Compliance (POC) wells (MW-1a, -2, -7, -10a, and -11a). Existing wells in the STZ include POC wells (MW-10b and MW-11b) and piezometers (P-10, -11, and -12) (Appendix A).

2.1.2 Ground Water Monitoring

Monitor wells and piezometers, shown in Figure 2 (page 13), were sampled on March 25, 1997, as the first semi-annual monitoring event in 1997. The schedule for ground water

monitoring was changed from quarterly to semi-annual beginning with the July 1995 event, as provided by Provision VI.C.3 of the Compliance Pian.

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 (El +35-foot zone) and two monitor wells (MW-10b and MW-11b) and three piezometers (P-10, P-11, and P-12) completed in the STZ (El +15-foot zone) were sampled during the first semi-annual period 1997. Field tracking reports and ground water sampling forms from the first semi-annual sampling event in 1997 are provided in Appendix B.

2.2 Analytical Data

The ground water analytical data for the first semi-annual sampling event of 1997 are listed in Tables 1 and 2 (page 22 and 23); results are tabulated for the UTZ and STZ. Detected concentrations of analytes in excess of the Ground Water Protection Standard (Appendix C) are indicated by shading on these tables.

2.3 Water Level Elevations

Table 3 lists the total depth, casing reference elevation, measured depth to water, and calculated water level elevation relative to mean sea level for each monitor well and piezometer.

2.4 Potentiometric Surface Data

Terranext used the measured ground water elevations to prepare a potentiometric map of each ground water zone. The equipotential lines were determined by applying a linear kriging algorithm to the data. Flow vectors were calculated based on the calculate head distribution and an estimated porosity of 0.30.

Figure 3 (page 14), depicts the potentiometric surface map of water table elevations for the UTZ during the first semi-annual 1997 monitoring event. Figure 4 (page 15), depicts the piezometric surface for the STZ during the first semi-annual monitoring event for the year, showing the elevations to which ground water in the STZ rises when hydrostatic pressure is released.

The gradient for UTZ is calculated to be 0.003 ft/ft to the SSW. The gradient for the STZ is calculated to be 0.005 ft/ft to the southwest.

2.5 Non-Aqueous Phase Liquids

Disposable bailers were used to collect ground water samples during the semi-annual sampling event. Visual observation of the ground water quality within the bailers revealed no indication of dense or light non-aqueous phase liquids (DNAPLs or LNAPLs) at the time of sampling.

On June 25, 1997, in response to the May 27, 1997 results of the Comprehensive Monitoring Evaluation conducted by TNRCC Region 12, Terranext personnel collected monthly water level measurements from all wells comprising the monitoring well network for the closed surface impoundment (permitted unit) using an oil/water interface probe as required by the Compliance Plan. The interface probe was also used as a means to determine if immiscible layers were present at either the surface of the water table or at the bottom of the water column.

The probe was lowered into each well to measure the depth to the top of the fluid column and slowly passed through the air/fluid interface to determine if LNAPL was present. This procedure was repeated to confirm the results of the first pass. Once the upper fluid interface measurements were determined, the probe was lowered to the bottom of the well

until the total depth of the well was reached. The probe was then elevated approximately one foot from the bottom of the well and slowly lowered to the base of the well in the attempt to detect the presence of any DNAPL layers at the base of the well.

The results of the water level and product thickness measurements indicated that immiscible layers were not present in any of the wells associated with the permitted unit. The table on page 9 summarizes the measurements collected on June 25, 1997.

2.6 Analytical Data Evaluation

Compliance Plan Provision VI.D provides two options for data evaluation: direct comparison with the concentration limits for the Ground Water Protection Standard or statistical analysis of the data. Table 4 lists the results of direct comparison of the analytical data for the first semi-annual sampling event in 1997 with the Ground Water Protection Standard and specifications of CP Provision VI.D.1. Wells and piezometers are considered compliant with the Ground Water Protection Standard if each of the constituents of concern is detected at concentrations less than or equal to the respective practical quantitation concentration limit. Wells and piezometers are considered noncompliant if one or more constituents of concern is detected at a concentration greater than the respective concentration limit.

WATER LEVEL ELEVATIONS AND PRODUCT THICKNESS

JUNE 25, 1997

UTZ Well	Total Depth	*Reference Elevation	Depth to Water	LNAPL Thickness	DNAPL Thickness	Water Level Elevation
MW-1a	19.69	47.97	2.59	ND	ND	43.19
MW-2	18.55	48.05	2.59	ND	ND	42.71
MW-3	20.10	48.63	3.11	ND	ND	40.73
MW-4	21.85	49.91	4.68	ND	ND	43.44
MW-5	27.45	49.60	3.97	ND	ND	44.25
MW-7	24.83	47.71	3.86	ND	ND	41.97
MW-8	25.09	49.37	4.56	ND	ND	43.42
MW-9	25.37	48.81	3.80	ND	ND	43.73
MW-10a	25.65	49.90	4.58	ND	ND	42.90
MW-11a	24.08	50.03	4.88	ND	ND	43.36
STZ Well/ Piezometer	**Total Depth**	***Reference Elevation**	**Depth to Water**	**LNAPL Thickness**	**DNAPL Thickness**	**Water Level Elevation**
MW-10b	46.61	49.96	4.71	ND	ND	42.83
MW-11b	46.78	50.19	5.06	ND	ND	42.96
P-10	42.94	48.87	2.74	ND	ND	44.18
P-11	42.85	49.02	3.83	ND	ND	43.33
P-12	42.97	49.29	3.35	ND	ND	44.67

Table 1 Notes:

All depths and elevations measured in feet.
Product thicknesses measured to an accuracy of 0.01 inches.
* Elevation relative to Mean Sea Level
ND Phase-separated product not detected
UTZ Upper Transmissive Zone
STZ Second Transmissive Zone

2.7 Naphthalene, Acenaphthene, and BTEX Concentrations

The concentrations of the selected analytes as determined by the analytical laboratory have been plotted and then contoured. The contour lines were plotted using a log normal kriging technique. Locations with reported non-detects were assigned a value equal to one half of the reported laboratory detection limit.

The naphthalene, acenaphthene, and combined total BTEX concentrations determined during the first semi-annual sampling event of 1997 are illustrated in Figures 5 through 7, for the UTZ, and Figures 8 through 10 for the STZ, respectively. For monitoring well MW-8, the constituent concentrations depicted in the figures represent the average value of the concentrations from the ground water analyses from a sample collected from well MW-8 and a dupilcate sample, MW-8B.

2.8 Updated Compliance Plan Schedule

The Schedule for Compliance Plan Activities as required by CP Provision XI.A., submitted by SPTCo on August 19, 1994, was approved the TNRCC by letter dated, November 3, 1994. TNRCC recognized the dates and time-lines for the required activities to be correct and in accordance with the Compliance Plan. The revised (Semi-annual) schedule submitted with this report in Appendix D includes an estimated schedule for completion of RCRA Facility Investigation tasks required by the Permit.

Time frames, dates, and/or deadlines that were not specified in the Compliance Plan for required activities have been assumed based upon the estimated level of effort to complete the tasks. In some instances, the period for regulatory review was estimated to be 30 days from submittal date of the deliverable. Where unspecified in the Compliance Plan, the period of time for revisions to deliverables was assumed to be 60 days.

The EOC Work Plan dated September 16, 1994, was prepared as required under CP Provisions VIII and XI.D. In response to the TNRCC letter of April 11, 1995, the EOC

Work Plan and implementation schedule were amended and submitted to the TNRCC on May 19, 1995. In the TNRCC EOC Work Plan approval letter, dated September 29, 1995, the TNRCC requested a revised schedule corresponding to the date of initiation of the investigation; the revised schedule was submitted on November 22, 1995. The latest updated schedule is presented in Appendix D, and incorporates ongoing investigation activities and revisions to reflect actual dates of task completion and anticipated start dates for upcoming events.

The EOC Investigation Report required by CP Provisions VIII.E and IX was submitted to TNRCC as a component of the Phase 1 RFI/EOC Investigation Report, dated May 23, 1996. The schedule included herein provides for semi-annual ground water monitoring to continue at the closed impoundment. Phase 2 of the EOC Investigation was initiated in late February 1997, and is focused on the area south and southwest of the permitted unit to determine what impact the South Drainage Ditch, Solid Waste Management Unit (SWMU) 2, the Inactive Wastewater Lagoon Area of Concern (AOC) 6, and possible on-site sources may have on ground water quality in the vicinity of the permitted unit.

The Corrective Action Study Work Plan is required by CP Provision IX within 60 days of TNRCC approval of the EOC Investigation Report. The (Phase 2) EOC Investigation Report will be submitted as a component of the Phase 2 RFI/EOC Investigation Report. The Corrective Action Study may involve treatability or pilot studies for which time frames are currently uncertain. Similarly, the schedule for the corrective action phase of the project is uncertain due to existing data gaps and the need for subsequent technical and regulatory evaluation of the findings of the proposed investigation, including evaluation of risk-based cleanup standards. The Corrective Action Report is now anticipated to be approved in June 2001.

2.9 Monitoring/Corrective Action Program Changes and Inspections

By letter of January 10, 1995, the TNRCC acknowledged fulfillment of the requirement of CP Provision XI.B by the Operation & Maintenance (O&M) Plan dated August 19, 1994, together with the addendum to the O&M Plan dated December 8, 1994. By letter of October 13, 1995, the TNRCC approved O&M Plan Amendment 3, which included quarterly monitor well inspections.

Integrity of the well casings and siltation of the wells were evaluated during the March 1997 sampling event in accordance with CP Provision VI.C.4.e. Monitor wells and piezometers were also inspected throughout the period from September 1996 to March 1997.

POC and CAO wells and the piezometers were monitored on a quarterly basis to provide four quarters of baseline data through July 1995. Consistent with CP Provisions VI.C.3.a and VI.C.3.e, the POC wells and the CAO wells will be sampled and analyzed for the constituents of CP Table II (Appendix E) on a semi-annual basis which began in July 1995.

2.10 Recommendation for Any Changes

No changes in the monitoring/corrective action program are recommended at this time, pending completion of the data analyses and preparation of the Phase 2 RFI/EOC Investigation Report anticipated in October 1997. A scope of work for further investigation under Phase 3 will be presented in the Phase 2 RFI/EOC Report.

2.11 Other Items Requested by the Executive Director

No other items have been requested by the Executive Director of the TNRCC.

Monitoring Wells and Piezometers

Houston Wood Preserving Works Site

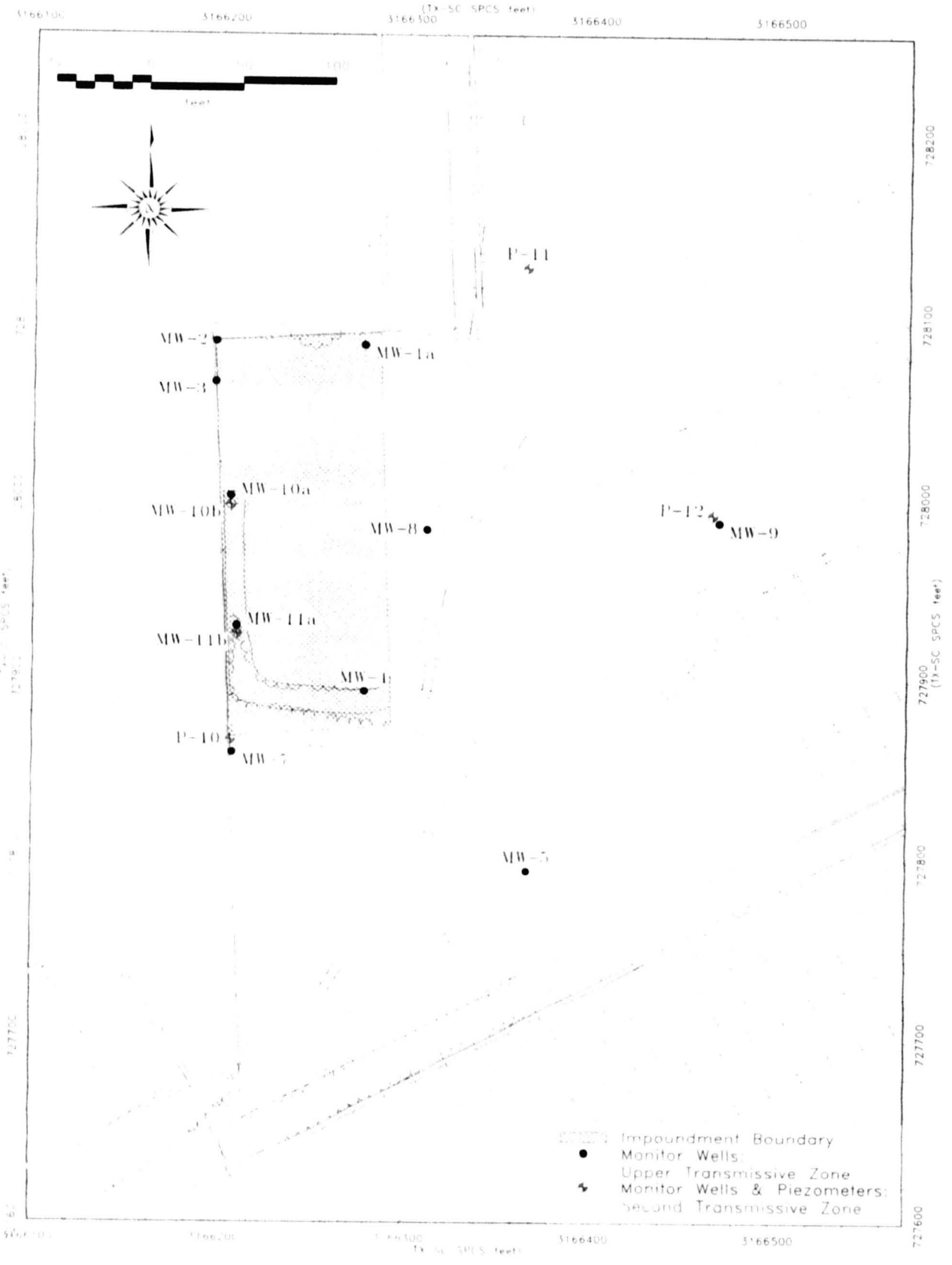

Figure 2 Monitoring Wells and Piezometers

Potentiometric Surface: Upper Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

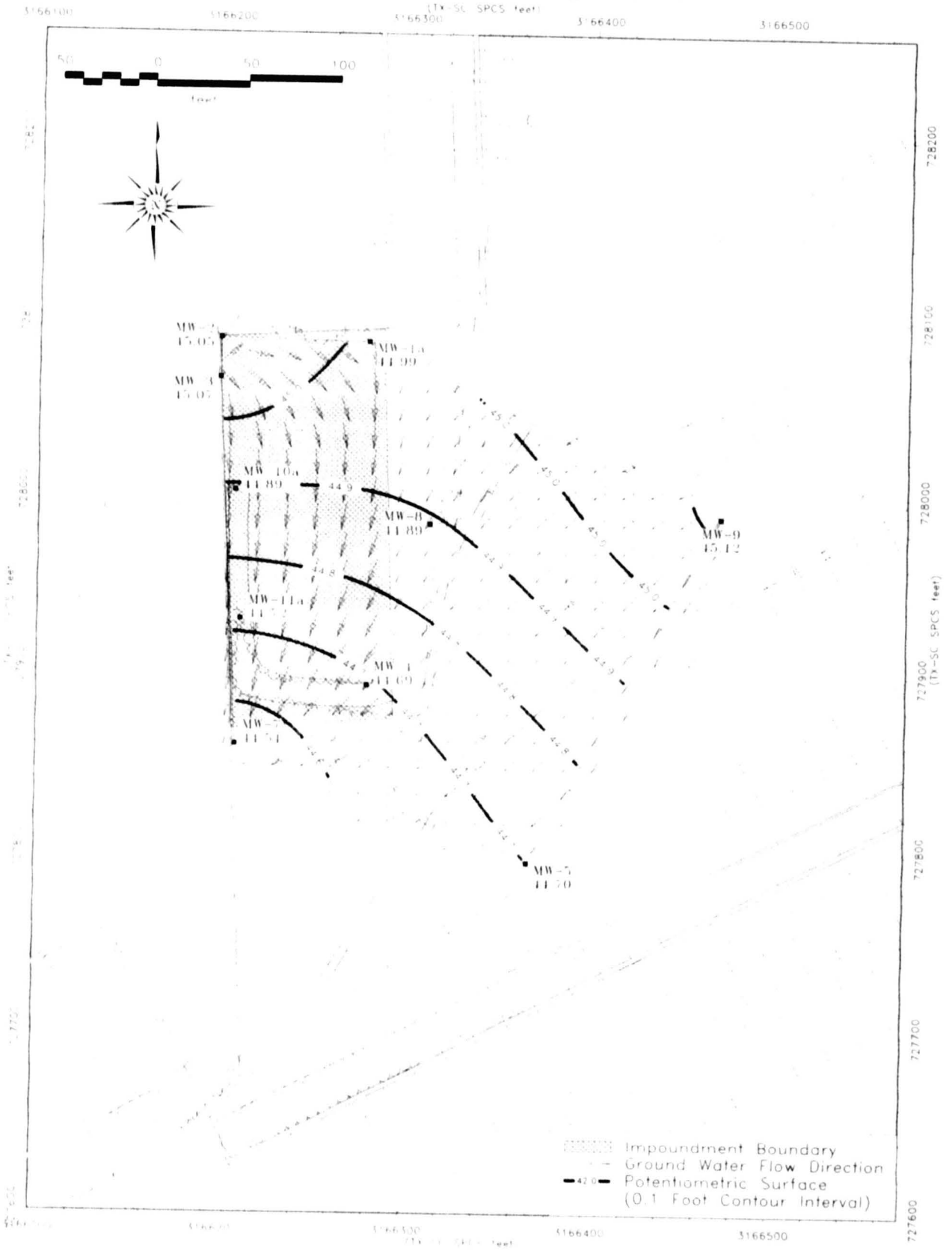

Figure 5 Potentiometric Surface: Upper Transmissive Zone, 03/25/97

Piezometric Surface: Second Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

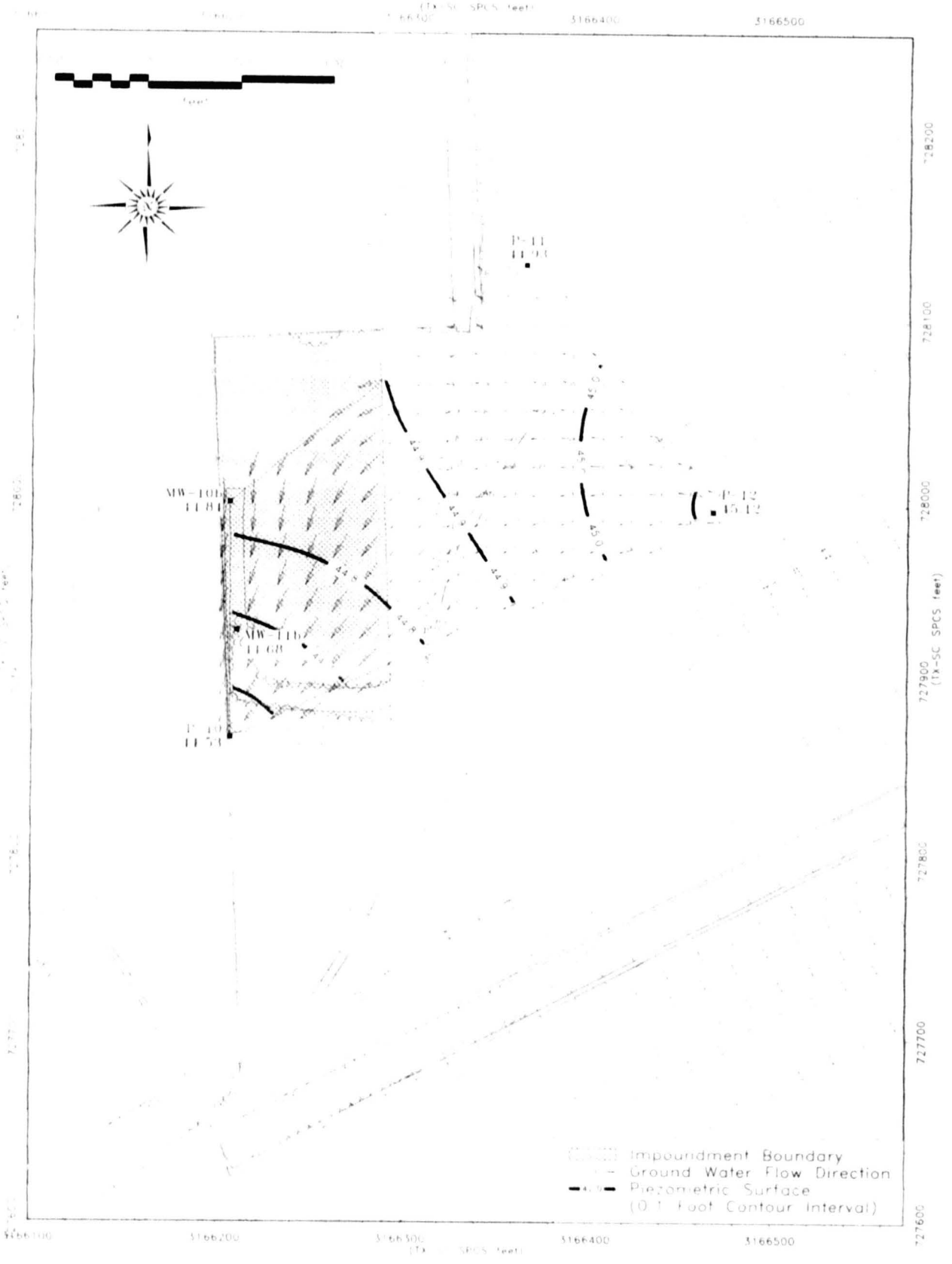

Figure 4 Piezometric Surface: Second Transmissive Zone; 03/25/97

Interpretation of Naphthalene: Upper Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

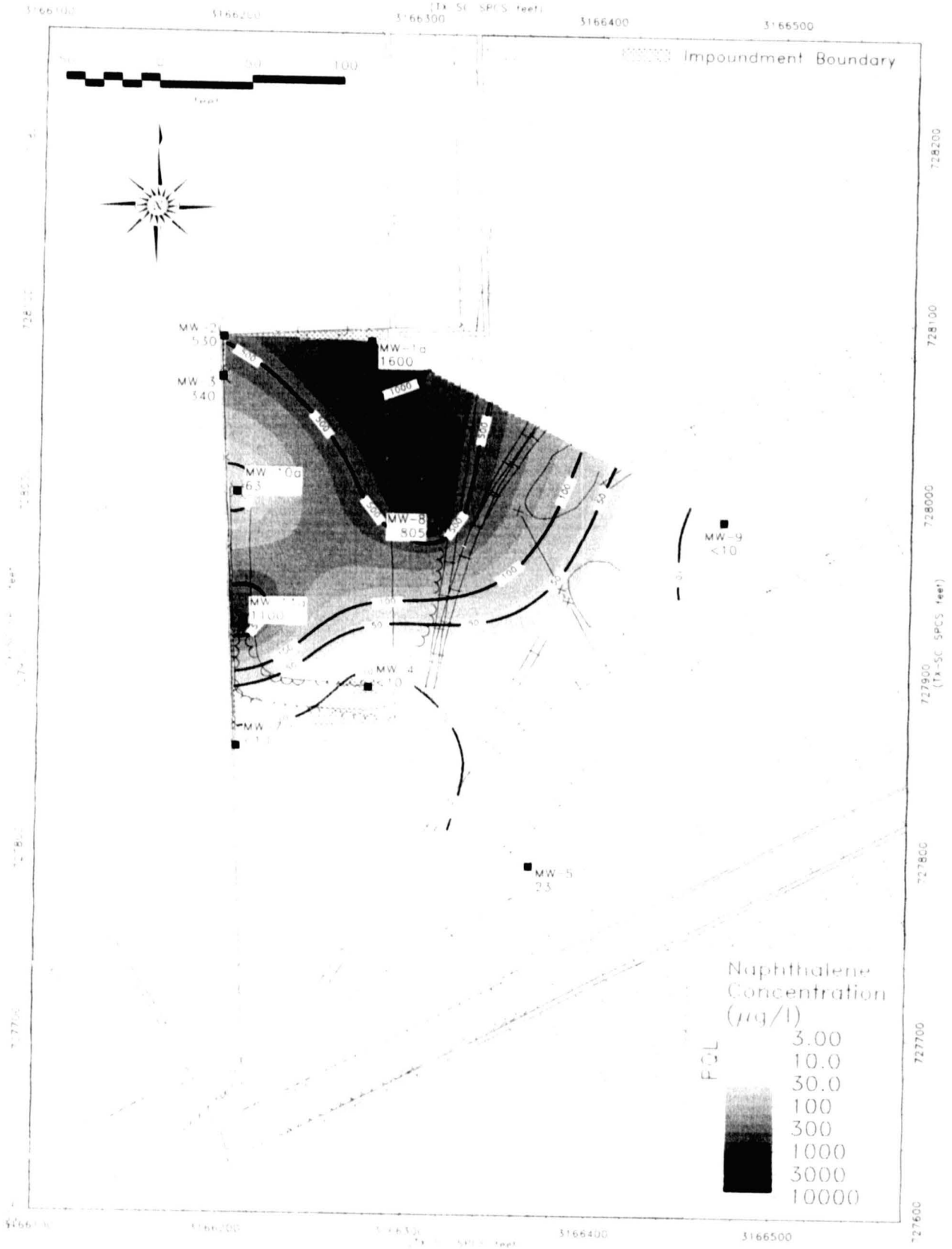

Figure 5: Interpretation of Naphthalene: Upper Transmissive Zone, 03/25/97

Interpretation of Acenaphthene: Upper Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

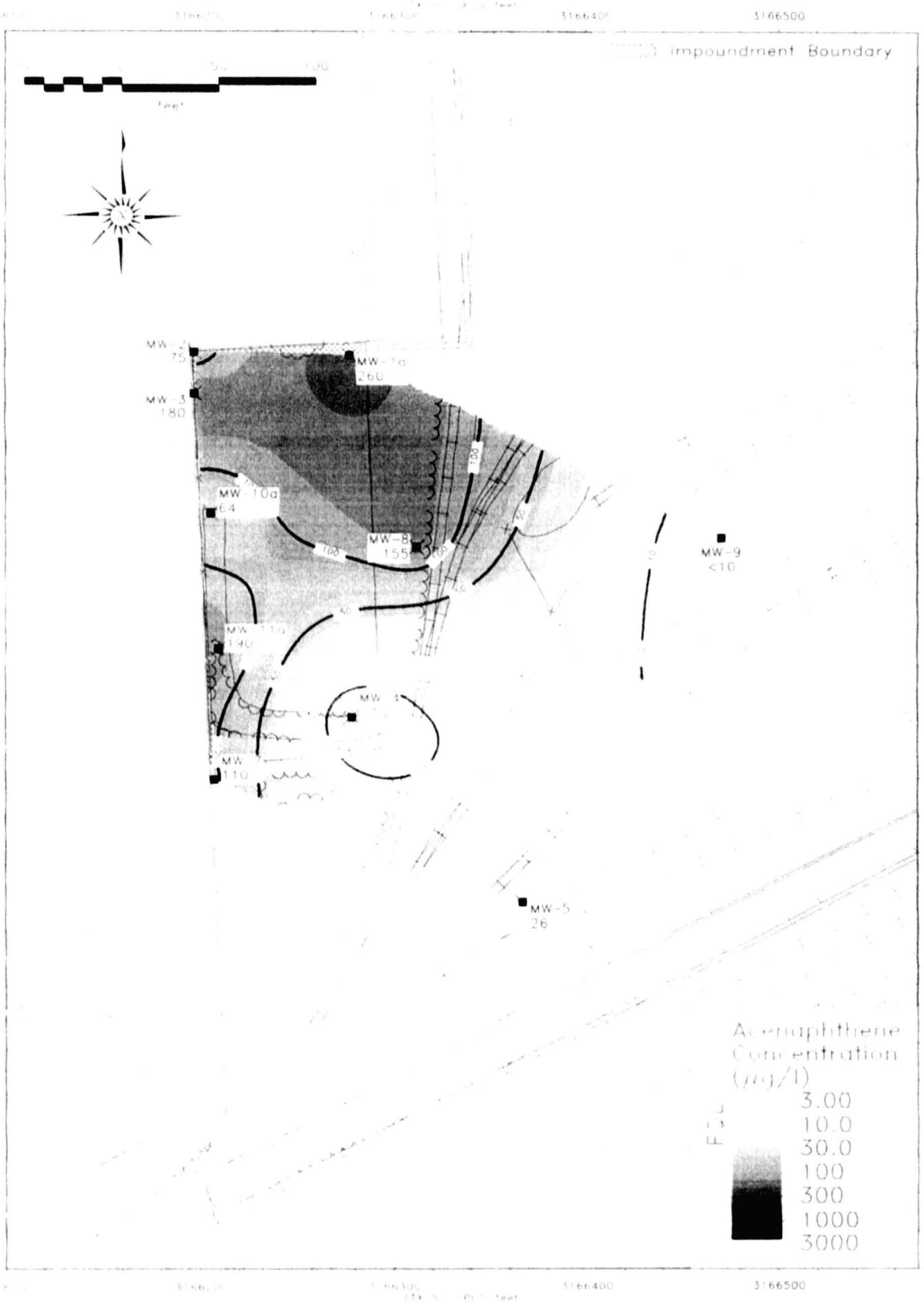

Figure 6: Interpretation of Acenaphthene: Upper Transmissive Zone; 03/25/97

Interpretation of Total BTEX: Upper Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

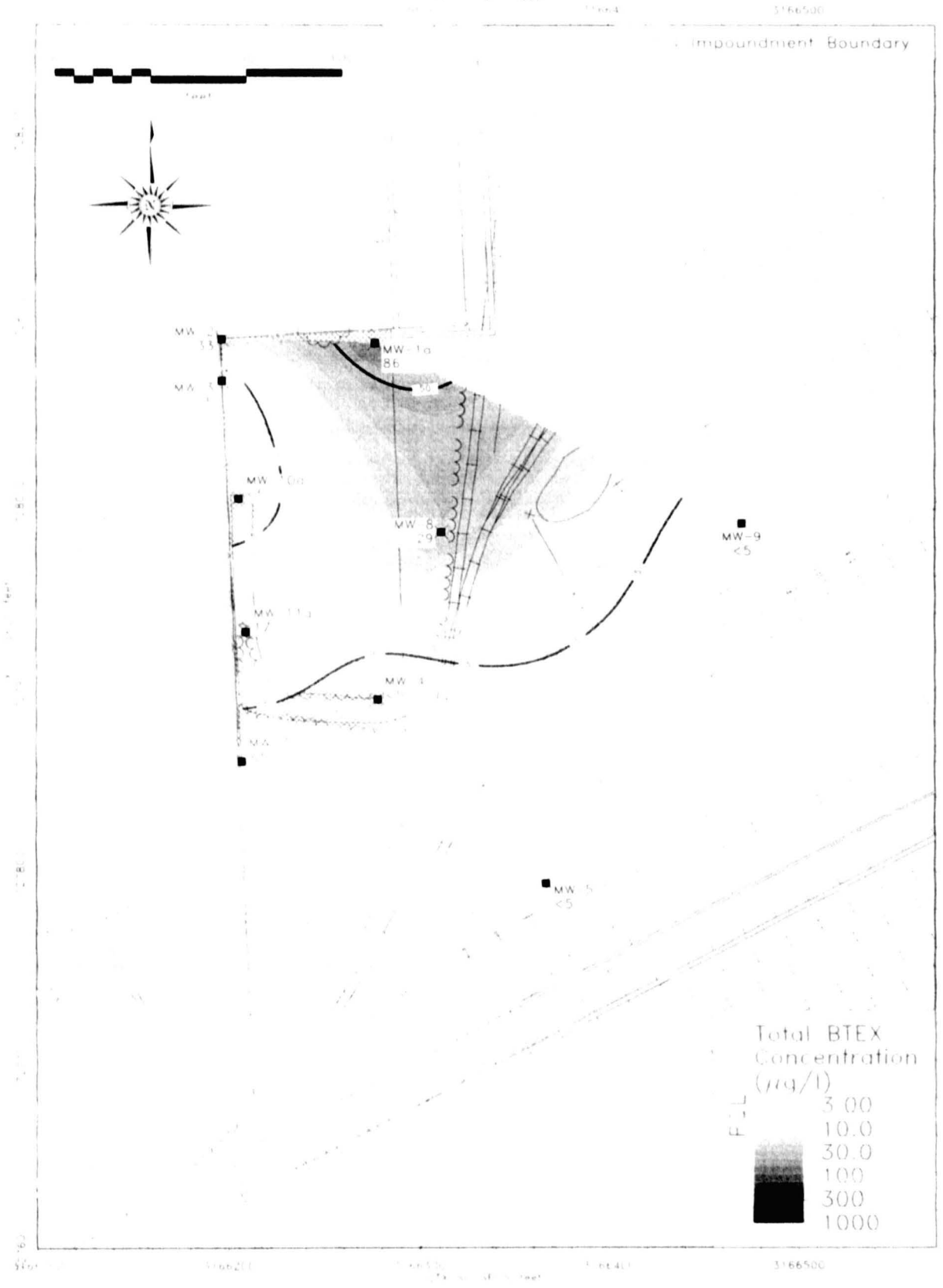

Figure 7 Interpretation of Total BTEX: Upper Transmissive Zone; 03/25/97

Interpretation of Naphthalene: Second Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

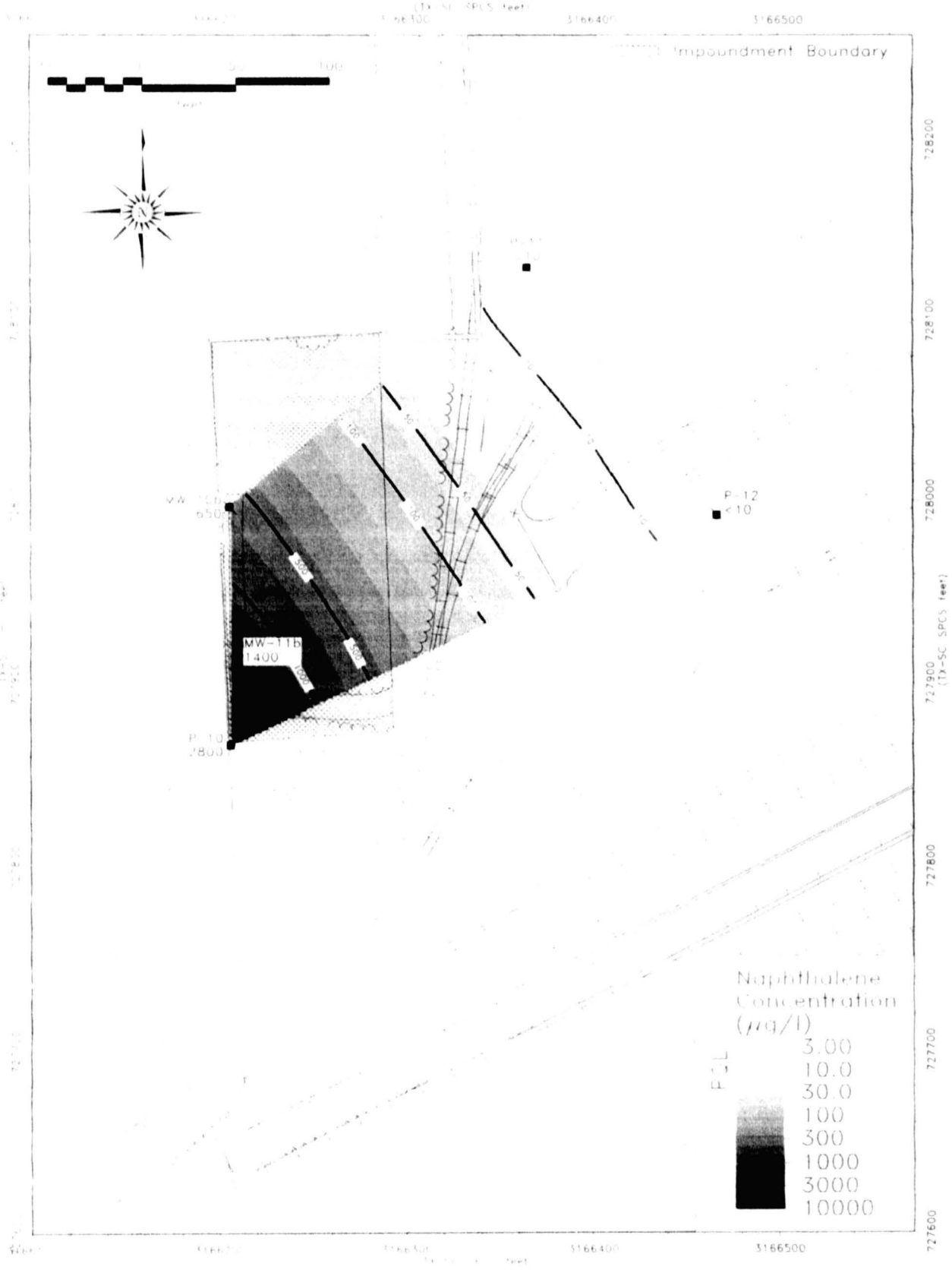

Figure 5. Interpretation of Naphthalene, Second Transmissive Zone, 03/25/97

Interpretation of Acenaphthene: Second Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

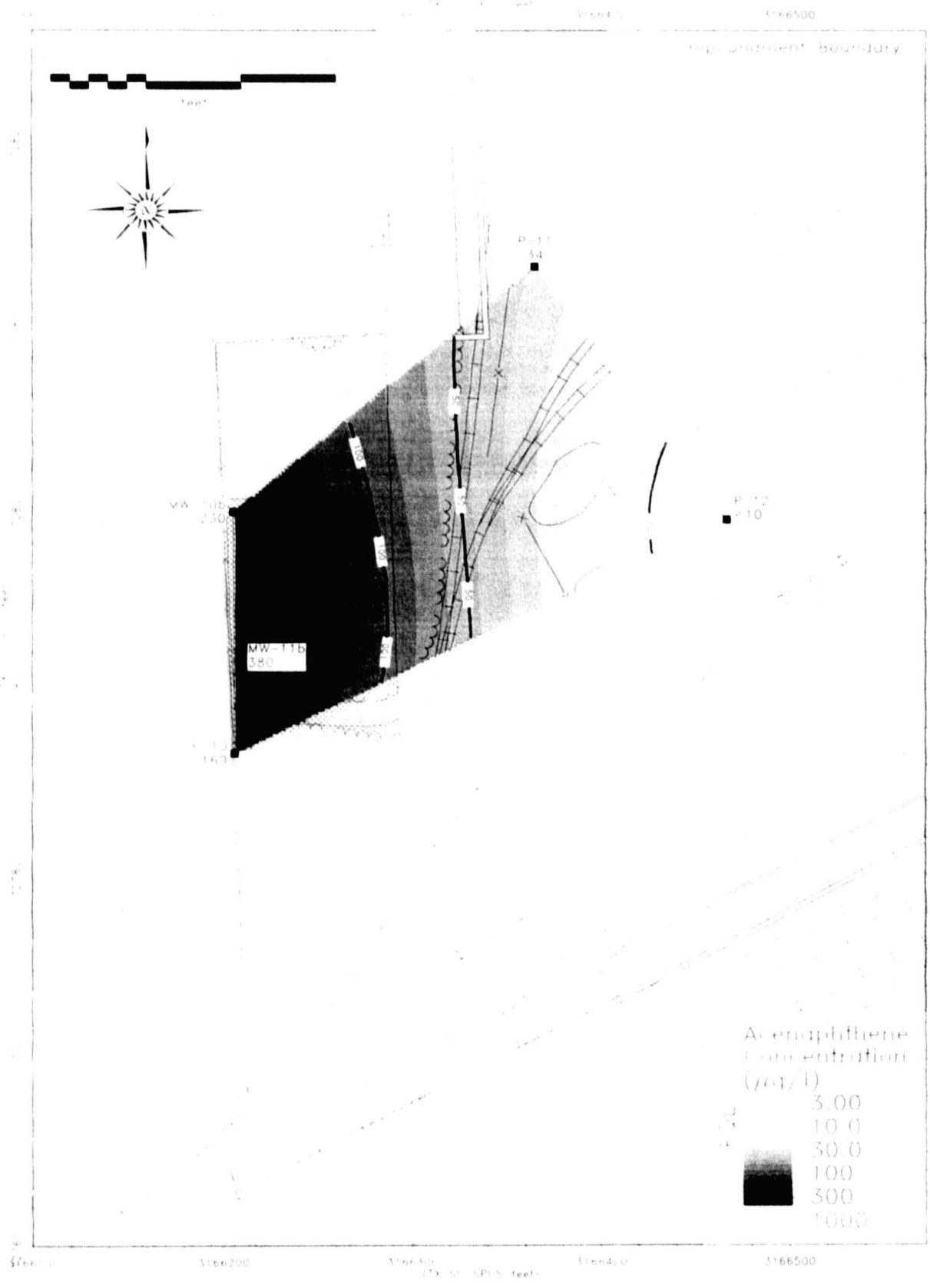

Figure 9: Interpretation of Acenaphthene: Second Transmissive Zone; 03/25/97

Interpretation of Total BTEX: Second Transmissive Zone; 03/25/97

Houston Wood Preserving Works Site

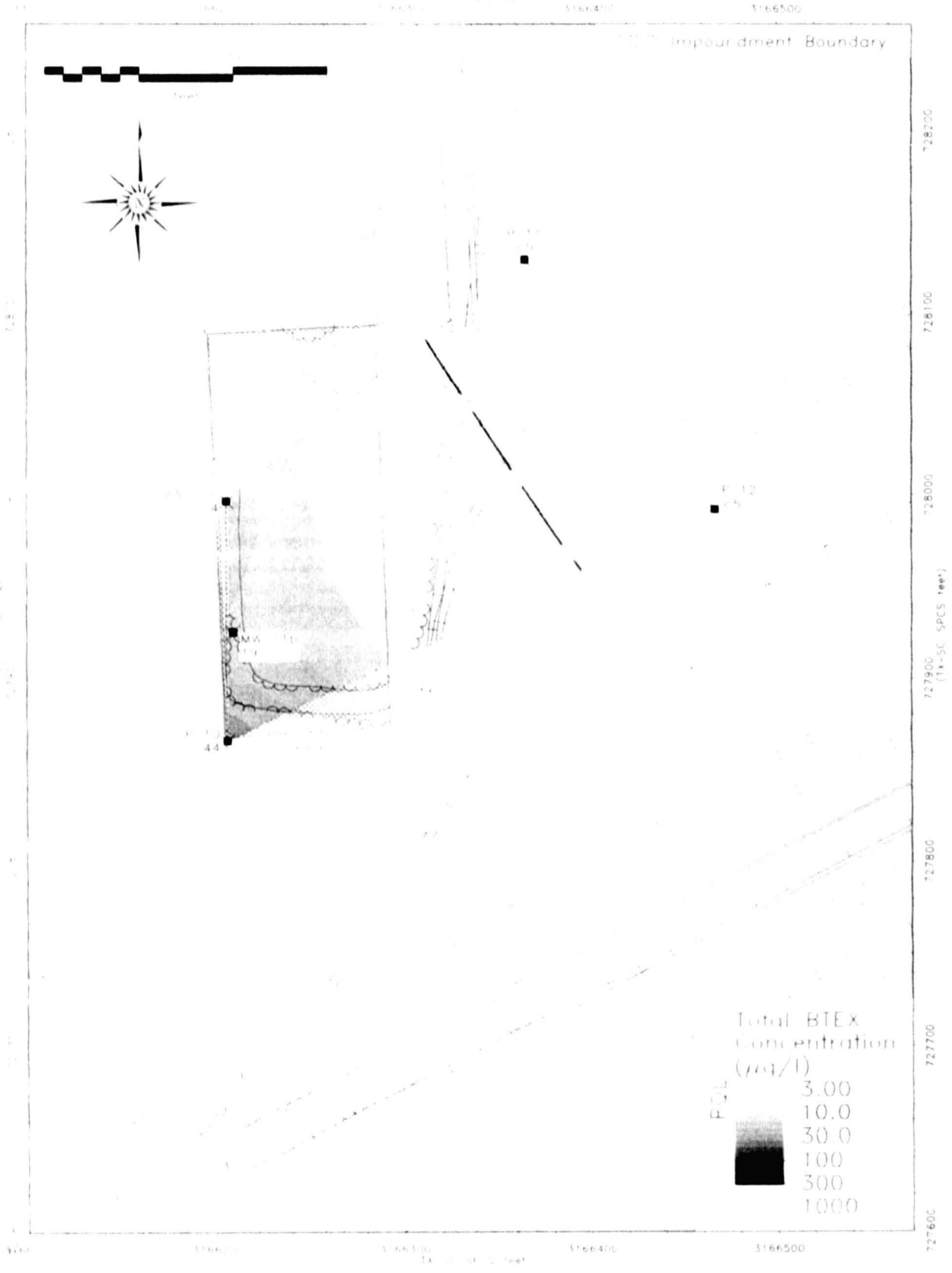

Figure 10 Interpretation of Total BTEX: Second Transmissive Zone, 03/25/97

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR UTZ
(El +35-FOOT SAND ZONE) MONITOR WELLS
First Semi-annual Event 1997

	ANALYTICAL RESULTS (µg/L)									
COMPOUND	MW-1a	MW-2	MW-3	MW-4	MW-5	MW-7	MW-8	MW-9	MW-10a	MW-11a
BENZENE	11	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
CHLOROBENZENE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
1,2-DICHLOROETHANE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
DICHLOROMETHANE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
ETHYLBENZENE	28	10	ND < 5	ND < 5	ND < 5	ND < 5	7	ND < 5	ND < 5	7
TOLUENE	5	7	ND < 5	ND < 5	ND < 5	ND < 5	5	ND < 5	ND < 5	ND < 5
XYLENES	42	16	ND < 5	ND < 5	ND < 5	ND < 5	13	ND < 5	ND < 5	10
ACENAPHTHENE	260	75	180	ND < 10	26	110	170	ND < 10	64	190
ACENAPHTHYLENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
ANTHRACENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
BENZO(A)ANTHRACENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
BENZO(A)PYRENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
BIS(2-ETHYLHEXYL)PHTHALATE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
BIS(2-CHLOROETHOXY)METHANE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
2-CHLORONAPHTHALENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
CHRYSENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
DIBENZOFURAN	160	50	120	ND < 10	ND < 10	ND < 10	140	ND < 10	15	< 100*
2,4-DIMETHYLPHENOL	< 100*	16	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
DI-N-BUTYL PHTHALATE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
4,6-DINITRO-O-CRESOL	< 500*	ND < 50	< 500*	ND < 50	ND < 50	ND < 50	< 200*	ND < 50	ND < 50	< 500*
2,4-DINITROTOLUENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
2,6-DINITROTOLUENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
1,2-DIPHENYLHYDRAZINE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
FLUORANTHENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
FLUORENE	170	44	120	ND < 10	13	81	150	ND < 10	31	< 100*
2-METHYLNAPHTHALENE	270	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	110	ND < 10	ND < 10	< 100*
NAPHTHALENE	1,600	530	340	ND < 10	23	ND < 10	640	ND < 10	63	1,100
NITROBENZENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
4-NITROPHENOL	< 500*	ND < 50	< 500*	ND < 50	ND < 50	ND < 50	< 200*	ND < 50	ND < 50	< 500*
N-NITROSODIPHENYLAMINE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
PENTACHLOROPHENOL	< 500*	ND < 50	< 500*	ND < 50	ND < 50	ND < 50	< 200*	ND < 50	ND < 50	< 500*
PHENANTHRENE	130	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	51	ND < 10	ND < 10	< 100*
PHENOL	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*
PYRENE	< 100*	ND < 10	< 100*	ND < 10	ND < 10	ND < 10	< 40*	ND < 10	ND < 10	< 100*

µg/L = micrograms per liter
ND = Not Detected at given detection limit
* = Reporting limits for semi-volatiles are elevated due to the dilution factor required as a result of high analyte concentration.

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TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR STZ
(El +15-FOOT SAND ZONE) MONITOR WELLS AND PIEZOMETERS
First Semi-annual Event 1997

ANALYTICAL RESULTS (µg/L)					
COMPOUND	**P-10**	**P-11**	**P-12**	**MW-10b**	**MW-11b**
BENZENE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
CHLOROBENZENE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
1,2-DICHLOROETHANE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
DICHLOROMETHANE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
ETHYLBENZENE	24	ND < 5	ND < 5	9	9
TOLUENE	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
XYLENES	20	ND < 5	ND < 5	15	10
ACENAPHTHENE	160	34	ND < 10	230	380
ACENAPHTHYLENE	ND < 10	ND < 10	ND < 10	ND < 10	110
ANTHRACENE	11	ND < 10	ND < 10	28	< 100*
BENZO(A)ANTHRACENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
BENZO(A)PYRENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
BIS(2-ETHYLHEXYL)PHTHALATE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
BIS(2-CHLOROETHOXY)METHANE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
2-CHLORONAPHTHALENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
CHRYSENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
DIBENZOFURAN	40	ND < 10	ND < 10	130	250
2,4-DIMETHYLPHENOL	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
DI-N-BUTYL PHTHALATE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
4,6-DINITRO-O-CRESOL	ND < 50	ND < 50	ND < 50	ND < 50	< 500*
2,4-DINITROTOLUENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
2,6-DINITROTOLUENE	19	ND < 10	ND < 10	ND < 10	< 100*
1,2-DIPHENYLHYDRAZINE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
FLUORANTHENE	10	ND < 10	ND < 10	20	< 100*
FLUORENE	100	17	ND < 10	150	270
2-METHYLNAPHTHALENE	150^	ND < 10	ND < 10	97	260
NAPHTHALENE	2800	ND < 10	ND < 10	650	1400
NITROBENZENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
4-NITROPHENOL	ND < 50	ND < 50	ND < 50	ND < 50	< 500*
N-NITROSODIPHENYLAMINE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
PENTACHLOROPHENOL	ND < 50	ND < 50	ND < 50	ND < 50	< 500*
PHENANTHRENE	40	ND < 10	ND < 10	140	270
PHENOL	ND < 10	ND < 10	ND < 10	ND < 10	< 100*
PYRENE	ND < 10	ND < 10	ND < 10	ND < 10	< 100*

µg/L = micrograms per liter
ND = Not Detected at given detection limit
* = Reporting limits for semi-volatiles are elevated due to the dilution factor required as a result of high analyte concentration.
^ = The reported result is below the reporting limit for the target

TerraNext

TABLE 3
WATER LEVEL ELEVATIONS
FIRST SEMI-ANNUAL 1997

UTZ Well	Total Depth	*Reference Elevation	Depth to Water	Water Level Elevation
MW-1a	19.69	47.95	2.96	44.99
MW-2	18.55	48.03	2.98	45.05
MW-3	20.10	48.55	3.48	45.07
MW-4	21.85	49.85	5.16	44.69
MW-5	27.45	49.35	4.65	44.70
MW-7	24.83	48.86	4.32	44.54
MW-8	25.09	49.37	4.48	44.89
MW-9	25.37	49.29	4.17	45.12
MW-10a	25.65	49.90	5.01	44.89
MW-11a	24.08	50.04	5.32	44.72
STZ Well/ Piezometer	**Total Depth**	***Reference Elevation**	**Depth to Water**	**Water Level Elevation**
MW-10b	46.61	49.97	5.13	44.84
MW-11b	46.78	50.19	5.51	44.68
P-10	42.94	47.72	3.19	44.53
P-11	42.85	49.02	4.09	44.93
P-12	42.97	48.82	3.70	45.12

* - All depths and elevations measured in feet; depth relative to Reference Elevation and elevation relative to Mean Sea Level
UTZ Upper Transmissive Zone
STZ Second Transmissive Zone

TABLE 4
COMPLIANCE OF WELLS AND PIEZOMETERS
WITH GROUND WATER PROTECTION STANDARD

Monitoring Point	First Semi-annual Period 1997	
UTZ Well	**Compliant**	**Noncompliant**
MW-1a		X
MW-2		X
MW-3		X
MW-4	X	
MW-5		X
MW-7		X
MW-8		X
MW-9	X	
MW-10a		X
MW-11a		X
STZ Well/Piezometer	**Compliant**	**Noncompliant**
MW-10b		X
MW-11b		X
P-10		X
P-11		X
P-12	X	

APPENDIX A

DESIGNATION OF WELLS BY FUNCTION

DESIGNATION OF WELLS BY FUNCTION

Designated Function*	Zone Monitored	Well Number	Sampling Frequency
Point of Compliance	UTZ	MW-1 MW-2 MW-7 MW-10a MW-11a	Semi-annual
	STZ	MW-10b MW-11b	Semi-annual
Corrective Action Observation	UTZ	MW-4 MW-5 MW-7 MW-8 MW-9	Semi-annual
	STZ	P-10 P-11 P-12	Semi-annual

* Background Wells are negated by the use of the Practical Quantitation Limit (PQL), unless the Compliance Plan is modified under CP Provision VI.A.

APPENDIX B

FIELD TRACKING REPORT AND GROUND WATER SAMPLING FORMS

PROJECT NUMBER: 44102069

PROJECT NAME: Closed Surface Impoundment, 4910 Liberty Road in Houston, Texas

FIELD TRACKING REPORT: First Semi-annual Event 1997

FIELD SAMPLE CODE	BRIEF DESCRIPTION	DATE	TIME(S)	SAMPLER
MW-1a	Water	3-25-97	1420	Goldsby
MW-2	Water	3-25-97	1125	Goldsby
MW-3	Water	3-25-97	1400	Goldsby
MW-4	Water	3-25-97	1540	Goldsby
MW-5	Water	3-26-97	1000	Goldsby
MW-7	Water	3-26-97	1125	Goldsby
MW-8	Water	3-26-97	1050	Goldsby
MW-9	Water	3-25-97	1310	Goldsby
MW-10a	Water	3-25-97	1535	Goldsby
MW-10b	Water	3-25-97	1800	Goldsby
MW-11a	Water	3-25-97	1555	Goldsby
MW-11b	Water	3-25-97	1500	Goldsby
P-10	Water	3-26-97	1135	Goldsby
P-11	Water	3-26-97	1215	Goldsby
P-12	Water	3-26-97	1010	Goldsby

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-1a

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1420

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	47.95'
Depth to Water (From MP):	2.96'
Depth of Well (From MP):	19.44'
Volume of Water in Well:	10.76 gallons
Volume of Water Evacuated:	33 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.4
pH:	6.72
Specific Conductivity (μmhos/cm):	1306
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-1a
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1215	-	20.9	6.77	1477
3-25-97 1222	11	20.9	6.79	1527
3-25-97 1228	22	21.2	6.73	1373
3-25-97 1235	33	21.4	6.72	1306
3-25-97	33	22.2	6.82	1318

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-2

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1125

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	48.03'
Depth to Water (From MP):	2.98'
Depth of Well (From MP):	18.40'
Volume of Water in Well:	2.51 gallons
Volume of Water Evacuated:	9 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	20.4
pH:	6.56
Specific Conductivity (μmhos/cm):	1004
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-2
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1032	-	19.8	6.55	725
3-25-97 1039	3	19.4	6.61	730
3-25-97 1045	6	19.3	6.59	833
3-25-97 1052	9	20.4	6.56	1004
3-25-97 1056	9	19.7	6.65	1084

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-3

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1400

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	48.55'
Depth to Water (From MP):	3.48'
Depth of Well (From MP):	19.93'
Volume of Water in Well:	2.68 gallons
Volume of Water Evacuated:	9 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.1
pH:	6.90
Specific Conductivity (μmhos/cm):	1364
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #0060618

Terranext

FIELD TESTING:
WELL ID: MW-3
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1224	-	20.3	6.82	1366
3-25-97 1232	3	20.5	6.81	1358
3-25-97 1240	6	20.7	6.79	1358
3-25-97 1249	9	21.1	6.90	1364
3-25-97 1400	9	20.6	6.77	1384

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-4

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1540

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):		49.85'
Depth to Water (From MP):	5.16'	
Depth of Well (From MP):		22.03'
Volume of Water in Well:		2.75 gallons
Volume of Water Evacuated:		9 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.9
pH:	6.67
Specific Conductivity (μmhos/cm):	892
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-4
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1440	-	20.4	6.65	934
3-25-97 1447	3	20.8	6.63	937
3-25-97 1453	6	21.1	6.67	914
3-25-97 1458	9	21.9	6.67	892
3-25-97 1540	9	20.8	6.62	917

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-5

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1540

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.35'
Depth to Water (From MP):	4.65'
Depth of Well (From MP):	27.23'
Volume of Water in Well:	3.68 gallons
Volume of Water Evacuated:	12 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.7
pH:	6.89
Specific Conductivity (μmhos/cm):	855
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

Terranext

FIELD TESTING:
WELL ID: MW-5
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 1135	-	20.6	7.05	717
3-26-97 1143	4	21.4	6.95	821
3-26-97 1152	8	21.5	6.89	793
3-26-97 1200	12	21.7	6.89	855
3-26-97 1235	12	21.2	6.89	749

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-7

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1125

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	48.86'
Depth to Water (From MP):	4.32'
Depth of Well (From MP):	24.61'
Volume of Water in Well:	13.25 gallons
Volume of Water Evacuated:	40 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	20.8
pH:	6.72
Specific Conductivity (μmhos/cm):	1003
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

Terranext

FIELD TESTING:
WELL ID: MW-7
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 0945	-	19.2	7.07	961
3-26-97 0953	13	19.5	6.91	1047
3-26-97 0959	26	20.4	6.79	1054
3-26-97 1005	40	20.8	6.72	1003
3-26-97 1025	40	20.6	6.67	1001

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-8

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1050

Weather: Partly Cloudy, 75 F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.37'
Depth to Water (From MP):	4.48'
Depth of Well (From MP):	24.91'
Volume of Water in Well:	13.34 gallons
Volume of Water Evacuated:	40 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.8
pH:	6.76
Specific Conductivity (μmhos/cm):	990
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-8
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 0900	-	19.7	7.49	759
3-26-97 0905	13	19.5	7.18	839
3-26-97 0910	26	19.6	6.94	1008
3-26-97 0917	40	21.8	6.76	990
3-26-97 1100	40	20.8	6.83	1023

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-9

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1310

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.29'
Depth to Water (From MP):	4.17'
Depth of Well (From MP):	25.25'
Volume of Water in Well:	13.77 gallons
Volume of Water Evacuated:	42 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	22.7
pH:	6.77
Specific Conductivity (μmhos/cm):	843
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-9
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1105	-	21.3	7.02	1183
3-25-97 1125	14	22.8	6.93	1197
3-25-97 1245	28	23.0	6.82	1252
3-25-97 1345	42	23.0	7.00	1255
3-25-97 1500	42	22.9	6.69	1270

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-10a

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1535

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.90'	
Depth to Water (From MP):		5.01'
Depth of Well (From MP):		25.42'
Volume of Water in Well:	13.33 gallons	
Volume of Water Evacuated:		40 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.4
pH:	6.63
Specific Conductivity (μmhos/cm):	1728
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

Terranext

FIELD TESTING:
WELL ID: MW-10a
March 25, 1997

TIME	WATER PURGED	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1248	-	20.4	6.76	1639
3-25-97 1258	13	19.9	6.61	1797
3-25-97 1310	26	20.5	6.75	1661
3-25-97 1355	40	21.4	6.63	1728
3-25-97 1535	40	21.2	6.69	1718

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-10b

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1800

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.97'
Depth to Water (From MP):	5.13'
Depth of Well (From MP):	46.35'
Volume of Water in Well:	26.9 gallons
Volume of Water Evacuated:	81 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.3
pH:	6.46
Specific Conductivity (μmhos/cm):	1531
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

Terranext

FIELD TESTING:
WELL ID: MW-10b
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1217		20.0	6.64	1536
3-25-97 1238	27	21.2	6.56	1526
3-25-97 1414	54	21.8	6.51	1546
3-25-97 1613	81	21.3	6.46	1531
3-25-97 1800	81	20.9	6.42	1511

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-11a

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1555

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	50.04'
Depth to Water (From MP):	5.32'
Depth of Well (From MP):	23.86'
Volume of Water in Well:	12.11 gallons
Volume of Water Evacuated:	36 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.6
pH:	6.68
Specific Conductivity (μmhos/cm):	1342
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
WELL ID: MW-11a
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1347	-	21.4	6.94	1398
3-25-97 1353	12	21.5	7.00	1442
3-25-97 1400	24	21.6	6.71	1368
3-25-97 1403	36	21.6	6.68	1342
3-25-97 1555	36	21.1	6.58	1365

TERRANEXT
GROUND WATER SAMPLING FORM
WELL NUMBER: MW-11b

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-25-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1500

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	50.19'
Depth to Water (From MP):	5.51'
Depth of Well (From MP):	46.56'
Volume of Water in Well:	26.81 gallons
Volume of Water Evacuated:	81 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	23.0
pH:	7.00
Specific Conductivity (μmhos/cm):	1255
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

Terranext

FIELD TESTING:
WELL ID: MW-11b
March 25, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-25-97 1105	-	21.3	7.02	1183
3-25-97 1125	27	22.8	6.93	1197
3-25-97 1245	54	23.0	6.82	1252
3-25-97 1345	81	23.0	7.00	1255
3-25-97 1500	81	22.9	6.69	1270

TERRANEXT
GROUND WATER SAMPLING FORM
PIEZOMETER NUMBER: P-10

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1135

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	47.72'
Depth to Water (From MP):	3.19'
Depth of Piezometer (From MP):	42.74'
Volume of Water in Piezometer:	6.45 gallons
Volume of Water Evacuated:	21 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	21.8
pH:	6.81
Specific Conductivity (μmhos/cm):	1121
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
PIEZOMETER ID: P-10
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 1010	-	21.5	6.82	1133
3-26-97 1020	7	21.1	6.96	1174
3-26-97 1035	14	21.8	6.80	1151
3-26-97 1050	21	21.8	6.81	1121
3-26-97 1135	21	21.2	6.82	877

TERRANEXT
GROUND WATER SAMPLING FORM
PIEZOMETER NUMBER: P-11

Job Name: First Semi-annual Sampling Event **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1215

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	49.02'
Depth to Water (From MP):	4.09'
Depth of Piezometer (From MP):	42.64'
Volume of Water in Piezometer:	6.28 gallons
Volume of Water Evacuated:	19 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	23.1
pH:	6.69
Specific Conductivity (μmhos/cm):	1401
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
PIEZOMETER ID: P-11
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 1003	-	18.2	6.83	1368
3-26-97 1027	7	21.7	6.89	1400
3-26-97 1111	13	22.9	6.72	1379
3-26-97 1119	19	23.1	6.69	1401
3-26-97 1215	19	22.1	6.73	1320

TERRANEXT
GROUND WATER SAMPLING FORM
PIEZOMETER NUMBER: P-12

Job Name: First Semi-annual Sampling 1997 **Job Number:** 44102069

Client: Union Pacific Rail Road **Date Sampled:** 3-26-97

Site Location: 4910 Liberty Rd., Houston, Texas **Time Sampled:** 1200

Weather: Partly Cloudy, 75°F **Sampled By:** Goldsby/Jones (T)

EVACUATION DATA

Elevation of Measuring Point (MP):	48.82'
Depth to Water (From MP):	3.70'
Depth of Piezometer (From MP):	42.77'
Volume of Water in Piezometer:	6.37 gallons
Volume of Water Evacuated:	19 gallons

FIELD PARAMETERS FOLLOWING PURGING ACTIVITIES

Temp (°C):	20.6
pH:	6.39
Specific Conductivity (μmhos/cm):	1559
Purge Method:	Disposable Bailer
Sampling Method:	Disposable Bailer
Remarks:	Lab Rep #00060618

TerraNext

FIELD TESTING:
PIEZOMETER ID: P-12
March 26, 1997

TIME	WATER PURGED (gallons)	TEMP °C	pH	SPEC COND. (μmhos/cm)
3-26-97 0902	1	16.7	6.77	1451
3-26-97 0914	7	19.4	6.49	1512
3-26-97 0929	13	20.2	6.38	1557
3-26-97 0941	19	20.6	6.39	1559
3-26-97 1010	19	20.1	6.74	1492

APPENDIX C

POTENTIAL CONTAMINANTS OF CONCERN AND CONCENTRATION LIMITS FOR GROUND WATER PROTECTION STANDARD

POTENTIAL CONTAMINANTS OF CONCERN AND CONCENTRATION LIMITS FOR GROUND WATER PROTECTION STANDARD

Constituent of Concern	Detection Limits (mg/L)
Acenaphthene	ND (0.010)
Acenaphthylene	ND (0.010)
Anthracene	ND (0.010)
Benzene	ND (0.005)
Benzo(A)anthracene	ND (0.010)
Benzo(A)pyrene	ND (0.010)
Bis(2-ethylhexyl)phthalate	ND (0.010)
Bis(2-chloroethoxy)methane	ND (0.010)
Chlorobenzene	ND (0.005)
2-Chloronaphthalene	ND (0.010)
Chrysene	ND (0.010)
Dibenzofuran	ND (0.010)
1,2-Dichloroethane	ND (0.005)
Dichloromethane (Methylene chloride)	ND (0.005)
2,4-Dimethylphenol	ND (0.010)
Di-n-butyl phthalate	ND (0.010)
4,6-Dinitro-o-cresol	ND (0.050)
2,4-Dinitrotoluene	ND (0.010)
2,6-Dinitrotoluene	ND (0.010)
1,2-Diphenylhydrazine	ND (0.010)
Ethylbenzene	ND (0.005)
Fluoranthene	ND (0.010)
Fluorene	ND (0.010)
2-Methylnaphthalene	ND (0.010)
Naphthalene	ND (0.010)
Nitrobenzene	ND (0.010)
4-Nitrophenol	ND (0.050)
N-Nitrosodiphenylamine	ND (0.010)
Pentachlorophenol	ND (0.050)

POTENTIAL CONTAMINANTS OF CONCERN AND CONCENTRATION LIMITS FOR GROUND WATER PROTECTION STANDARD

Constituent of Concern	Detection Limits (mg/L)
Phenanthrene	ND (0.010)
Phenol	ND (0.010)
Pyrene	ND (0.010)
Toluene	ND (0.005)
Xylenes	ND (0.005)

ND Nondetect at Practical Quantitation Limit (PQL) as determined by the analytical methods of the EPA publication SW-846, *Test Methods for Evaluating Solid Waste*, Third Edition, November 1986, and as listed in the July 8, 1987, edition of the *Federal Register* and later editions.

APPENDIX D

COMPLIANCE PLAN SCHEDULE REVISION

COMBINED EOC/RFI SEMI-ANNUAL SCHEDULE REVISION

ID	Task Name/Permit or CP Section No.	Duration	Start	Finish	Predec	Constraint Type
1	**SCHEDULE - COMPLIANCE PLAN/ CP XI. A.**	**97d**	**6/21/94**	**11/3/94**		**As Soon As Possible**
4						
5	**OPERATION & MAINTENANCE PLAN/ CP XI. B.**	**145d**	**6/21/94**	**1/10/95**		**As Soon As Possible**
6	Submit to TNRCC	60ed	6/21/94	8/20/94		Must Finish On
7	TNRCC Review Period	73ed	8/22/94	11/3/94	6	As Soon As Possible
8	Revise O&M Plan	43ed	11/3/94	12/16/94	7	Must Finish On
9	Submit to TNRCC	0ed	12/16/94	12/16/94	8	Must Start On
10	TNRCC Review & Approval	17d	12/19/94	1/10/95	9	Must Finish On
11						
12	**P.O.C. WELL INSTALLATION/ CP XI. C.**	**104d**	**7/22/94**	**12/14/94**		**As Soon As Possible**
13	Notify TNRCC - 30 day advance	3d	7/22/94	7/26/94		Must Finish On
14	Install P.O.C. Wells	7d	9/12/94	9/20/94	13	Must Start On
15	Develop and Sample Wells	4d	9/21/94	9/26/94	14	As Soon As Possible
16	Submit Data Report to TNRCC	57d	9/27/94	12/14/94	15	Must Finish On
17						
18						
19	**EXTENT OF CONTAMINATION WORK PLAN/ VIII & XI. D.**	**335d**	**6/20/94**	**9/29/95**		**As Soon As Possible**
20	Submit to TNRCC	67d	6/20/94	9/20/94		Must Finish On
21	TNRCC Review Period	111ed	9/21/94	1/10/95	20	As Soon As Possible
22	Revise EOC Work Plan	45ed	1/10/95	2/24/95	21	Must Finish On
23	Submit to TNRCC	0ed	2/24/95	2/24/95	22	Must Finish On
24	TNRCC Review Period	45ed	2/27/95	4/13/95	23	As Soon As Possible
25	Revise EOC Work Plan	30ed	4/13/95	5/13/95	24	As Soon As Possible
26	Submit to TNRCC	5ed	5/14/95	5/19/95	25	Must Finish On
27	TNRCC Approval	130ed	5/22/95	9/29/95	26	Must Finish On
28						
29	**RFI WORK PLAN DEVELOPMENT/ Permit VIII.**	**347d**	**6/20/94**	**10/17/95**		**As Soon As Possible**
30	Submit to TNRCC	87d	6/20/94	10/18/94		Must Finish On
31	TNRCC Review Period	362ed	10/19/94	10/16/95	30	Must Finish On
32	TNRCC Approval	1d	10/17/95	10/17/95	31	As Soon As Possible
33						
34						
35	**EOC IMPLEMENTATION - PHASE I/ CP VIII.**	**288d**	**11/9/94**	**12/15/95**		**As Soon As Possible**
36	Wetlands Assessment & Report Preparation	145d	11/9/94	5/30/95		Must Finish On
37	COE/TNRCC Approval & Access Authorization	60ed	5/31/95	7/30/95	36	As Soon As Possible
38	Initiation/Preparation for EOC Investigation	12ed	11/2/95	11/14/95	27	Must Finish On
39	CPT Soundings w/ROST real-time data	9d	11/14/95	11/24/95	38	Must Start On
40	Hydropunch Sampling & Analyses	11d	11/27/95	12/11/95	39	As Soon As Possible
41	Survey Sample Locations	4d	12/12/95	12/15/95	40	As Soon As Possible
42						
43	**RFI IMPLEMENTATION - PHASE 1/ Permit VIII.E.**	**27d**	**11/16/95**	**12/22/95**		**As Soon As Possible**
44	CPT Soundings w/ROST real-time data	7d	11/16/95	11/24/95		Must Start On
45	Hydropunch Sampling & Analyses	18d	11/29/95	12/22/95	44	Must Start On
46	Surface Soil & Sediment Sampling & Analyses	15d	12/4/95	12/22/95	44	Must Start On
47	Survey Sample Locations	4d	12/12/95	12/15/95	40	As Soon As Possible
48						
49						
50	**RFI/EOC PHASE 1 INVESTIGATION REPORT**	**284d**	**12/18/95**	**1/16/97**		**As Soon As Possible**
51	Submit Phase 1 Assessment Report to TNRCC	115d	12/18/95	5/24/96	47	As Soon As Possible
52	TNRCC Review of Phase I Report	131d	5/27/96	11/25/96	51	As Soon As Possible
53	TNRCC Approval of Phase 2 Scope of Work - EOC	1d	11/26/96	11/26/96	52	As Soon As Possible
54	TNRCC Approval of Phase 2 Scope of Work - RFI	169d	5/27/96	1/16/97	51	As Soon As Possible
55						
56						
57	**EOC & RFI IMPLEMENTATION - PHASE 2/ CP VIII/P.VIII.E.**	**117d**	**1/17/97**	**6/30/97**		**As Soon As Possible**
58	Off-site access and permitting	30ed	1/17/97	2/16/97	54	As Soon As Possible
59	Hydropunch, Soil Borings & Soil Samples	15ed	2/17/97	3/4/97	58	As Soon As Possible
60	Groundwater Monitor Well Installation	20ed	3/4/97	3/24/97	59	As Soon As Possible
61	Monitoring Well Development	4ed	3/24/97	3/28/97	60	As Soon As Possible
62	Monitoring Well Sampling - 1st Event	3d	3/28/97	4/1/97	61	As Soon As Possible
63	LSU Well Installation	15d	4/2/97	4/22/97	62	As Soon As Possible
64	Slug Tests	3d	4/23/97	4/25/97	63	As Soon As Possible
65	Survey Monitoring Wells	1d	4/28/97	4/28/97	64	As Soon As Possible
66	Lab Analyses & Data Evaluation	45d	4/29/97	6/30/97	65	As Soon As Possible
67						
68						

COMBINED EOC/RFI SEMI-ANNUAL SCHEDULE REVISION

ID	Task Name/Permit or CP Section No.	Duration	Start	Finish	Predec	Constraint Type
69	**RFI/EOC PHASE 2 REPORT DEVELOPMENT/ VIII.I./VIII. E.**	**195d**	**7/1/97**	**3/30/98**		**As Soon As Possible**
70	Submit Draft Phase 2 RFI/EOC Report to TNRCC	120ed	7/1/97	10/29/97	66	As Soon As Possible
71	TNRCC Review of Report	90ed	10/29/97	1/27/98	70	As Soon As Possible
72	Respond to TNRCC Comments	30ed	1/27/98	2/26/98	71	As Soon As Possible
73	Submit (Final) Phase 2 Report to TNRCC	1d	2/26/98	2/26/98	72	As Soon As Possible
74	TNRCC Review	30ed	2/27/98	3/29/98	73	As Soon As Possible
75	TNRCC Approval	1d	3/30/98	3/30/98	74	As Soon As Possible
76						
77						
78	**EOC & RFI IMPLEMENTATION - PHASE 3/ CP VIII/P.VIII.E.**	**133d**	**3/31/98**	**10/2/98**		**As Soon As Possible**
79	Off-site access and permitting	60ed	3/31/98	5/30/98	75	As Soon As Possible
80	Hydropunch, Soil Borings & Soil Samples	20ed	6/1/98	6/21/98	79	As Soon As Possible
81	Groundwater Monitor Well Installation	24ed	6/22/98	7/16/98	80	As Soon As Possible
82	Monitoring Well Development	4ed	7/16/98	7/20/98	81	As Soon As Possible
83	Monitoring Well Sampling - 1st Event	3d	7/20/98	7/22/98	82	As Soon As Possible
84	Slug Tests	3d	7/23/98	7/27/98	83	As Soon As Possible
85	Survey Monitoring Wells	1d	7/28/98	7/28/98	84	As Soon As Possible
86	Data Evaluation	25d	7/29/98	9/1/98	85	As Soon As Possible
87	30-day Follow-up Sampling (if necessary)	30ed	9/2/98	10/2/98	86	As Soon As Possible
88						
89						
90	**RFI/EOC PHASE 3 REPORT DEVELOPMENT/ VIII.I./VIII. E.**	**260d**	**10/2/98**	**9/30/99**		**As Soon As Possible**
91	Submit Draft Phase 3 RFI/EOC Report to TNRCC	150d	10/2/98	4/29/99	87	As Soon As Possible
92	TNRCC Review of Report	90ed	4/30/99	7/29/99	91	As Soon As Possible
93	Respond to TNRCC Comments	30ed	7/29/99	8/28/99	92	As Soon As Possible
94	Submit (Final) Phase 3 Report to TNRCC	1d	8/30/99	8/30/99	93	As Soon As Possible
95	TNRCC Review	30ed	8/31/99	9/30/99	94	As Soon As Possible
96	TNRCC Approval	1d	9/30/99	9/30/99	95	As Soon As Possible
97						
98						
99	**(EOC) CA STUDY WORK PLAN/ CP IX.**	**132d**	**10/1/99**	**4/3/00**		**As Soon As Possible**
100	Prepare and Submit CA Study Work Plan	60ed	10/1/99	11/30/99	96	As Soon As Possible
101	TNRCC Review of Draft Work Plan	60ed	11/30/99	1/29/00	100	As Soon As Possible
102	Revise per TNRCC Review	30ed	1/31/00	3/1/00	101	As Soon As Possible
103	Submit Revised CA Work Plan to TNRCC	1ed	3/1/00	3/2/00	102	As Soon As Possible
104	TNRCC Review	30ed	3/2/00	4/1/00	103	As Soon As Possible
105	TNRCC Approval	1d	4/3/00	4/3/00	104	As Soon As Possible
106						
107						
108	**(EOC) CORRECTIVE ACTION REPORT/ CP IX.E.**	**306d**	**4/4/00**	**6/5/01**		**As Soon As Possible**
109	Pilot Studies/Field Tests	180ed	4/4/00	10/1/00	105	As Soon As Possible
110	Submit CA Report to TNRCC	120ed	10/2/00	1/30/01	109	As Soon As Possible
111	TNRCC Review of Draft Report	60ed	1/30/01	3/31/01	110	As Soon As Possible
112	Revise per TNRCC Review	30ed	4/2/01	5/2/01	111	As Soon As Possible
113	Submit Final CA Report to TNRCC	1ed	5/2/01	5/3/01	112	As Soon As Possible
114	TNRCC Review	30ed	5/3/01	6/2/01	113	As Soon As Possible
115	TNRCC Approval	2d	6/4/01	6/5/01	114	As Soon As Possible
116						
117	**(RFI) CORRECTIVE MEASURES STUDY/ Permit VIII.I.3.**	**217d**	**4/30/99**	**2/29/00**		**As Soon As Possible**
118	Submit CMS with RFI Report (Option 1 - 120 days)	120ed	4/30/99	8/28/99	91	As Soon As Possible
119	TNRCC Review	90ed	8/30/99	11/28/99	118	As Soon As Possible
120	TNRCC Approval of RFI & CMS Report combined	1ed	11/29/99	11/30/99	119	As Soon As Possible
121						
122	Submit CMS separate from RFI Report (Option 2)	60ed	10/1/99	11/30/99	96	As Soon As Possible
123	TNRCC Review	90ed	11/30/99	2/28/00	122	As Soon As Possible
124	TNRCC Approval of CMS Report	1ed	2/28/00	2/29/00	123	As Soon As Possible
125						
126						
127	**CA IMPLEMENTATION/ X.**	**268d**	**1/5/99**	**1/16/00**		**As Soon As Possible**
128	Submit Engineering Plans as Permit Modification	90ed	1/5/99	4/5/99	115	Must Finish On
129	TNRCC Review of Plans	30ed	4/6/99	5/6/99	128	As Soon As Possible
130	Final Submission of Engineering Plans & Specs.	90ed	5/6/99	8/4/99	129	As Soon As Possible
131	TNRCC Review & Approval	30ed	8/4/99	9/3/99	130	As Soon As Possible
132	Construction/Installation	90ed	9/3/99	12/2/99	131	As Soon As Possible
133	System Start-up/Initial Operation/Permit Mon.	45ed	12/2/99	1/16/00	132	As Soon As Possible
134						

TerraNext

COMBINED EOC/RFI SEMI-ANNUAL SCHEDULE REVISION

ID	Task Name/Permit or CP Section No.	Duration	Start	Finish	Predec	Constraint Type
135	**RFI/CMS CORRECTIVE ACTION**	300ed	9/3/99	6/29/00	131	As Soon As Possible
136						
137						
138	**GROUND WATER MONITORING/ VI. & Permit VII.B.**	**912d**	**6/20/94**	**12/17/97**		**As Soon As Possible**
139						
140	Sample Existing & POC Wells	2ed	1/24/95	1/26/95		Must Start On
141	Report Submittal	58ed	1/26/95	3/25/95	140	As Soon As Possible
142						
143	Sample Existing & POC Wells	2ed	4/12/95	4/14/95		Must Start On
144	Report Submittal (2nd Qtr. 1995)	55ed	4/14/95	6/8/95	143	Must Finish On
145						
146	Sample Existing & POC Wells	2ed	7/11/95	7/13/95		Must Start On
147	Report Submittal (3rd Qtr. 1995)	25ed	7/14/95	8/8/95	146	Must Finish On
148						
149	Sample Existing & POC Wells	6ed	1/22/96	1/28/96		Start No Earlier Than
150	Report Submittal (1st semi-annual monitoring)	53ed	1/29/96	3/22/96	149	As Soon As Possible
151						
152	Sample Existing & POC Wells	6ed	9/16/96	9/22/96		Start No Earlier Than
153	Report Submittal (2nd semi-annual monitoring)	86d	9/23/96	1/20/97	152	Must Finish On
154						
155	Sample Existing, POC and RFI Wells & Analyze	6ed	3/28/97	4/3/97		Start No Earlier Than
156	Report Submittal (1st Semi-annual monitoring 1997)	82d	3/27/97	7/18/97	155	Must Finish On
157						
158	Sample EOC & RFI Wells	30ed	4/28/97	5/28/97		Start No Earlier Than
159						
160	Sample Existing, POC, and RFI Wells	6ed	9/15/97	9/21/97		Start No Earlier Than
161						
162	Sample EOC & RFI Wells	30ed	11/17/97	12/17/97		Start No Earlier Than
163						
164	**REPORTING 1997/1998**	1d	6/20/94	6/20/94		As Soon As Possible
165	**Semi-annual Report - January 21, 1997/ VII. B.2.**	**42d**	**11/21/96**	**1/20/97**		**As Soon As Possible**
166	Submit Report to TNRCC	60ed	11/21/96	1/20/97		Finish No Earlier Than
167						
168	**Annual Report - January 25, 1997 (Permit V.F. & III.B.1)**	**44d**	**11/25/96**	**1/24/97**		**As Soon As Possible**
169	Submit Report to TNRCC	60ed	11/25/96	1/24/97		Finish No Earlier Than
170						
171	**Semi-annual Report - July 21, 1997/ VII. B.2.**	**129d**	**1/23/96**	**7/20/96**		**As Soon As Possible**
172	Submit Report to TNRCC	129d	1/23/96	7/20/96		Must Finish On
173						
174	**Semi-annual Report - January 21, 1998/VII.B.2.**	**60d**	**10/29/97**	**1/20/98**		**As Soon As Possible**
175	Submit Report to TNRCC	60d	10/29/97	1/20/98		Must Finish On
176						
177	**Annual Report - January 25, 1998 (Permit V.F. & III.B.1)**	**60d**	**11/3/97**	**1/23/98**		**As Soon As Possible**
178	Submit Report to TNRCC	60d	11/3/97	1/23/98		Must Finish On
179						
180	**Semi-annual Report - July 21, 1998/VII.B.2.**	**127d**	**1/22/98**	**7/17/98**		**As Soon As Possible**
181	Submit Report to TNRCC	127d	1/22/98	7/17/98		Must Finish On
182						
183	**Semi-annual Report - January 21, 1999/VII.B.2.**	**60d**	**10/29/98**	**1/20/99**		**As Soon As Possible**
184	Submit Report to TNRCC	60d	10/29/98	1/20/99		Must Finish On
185						
186	**Annual Report - January 25, 1999 (Permit V.F. & III.B.1)**	**60d**	**11/2/98**	**1/22/99**		**As Soon As Possible**
187	Submit Report to TNRCC	60d	11/2/98	1/22/99		Must Finish On

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APPENDIX E

INDICATOR PARAMETERS AND CONCENTRATION LIMITS FOR GROUND WATER PROTECTION STANDARD

INDICATOR PARAMETERS AND CONCENTRATION LIMITS FOR GROUND WATER PROTECTION STANDARD

Indicator Parameter	Detection Limits (mg/L)
Acenaphthene	ND (0.010)
Anthracene	ND (0.010)
Benzene	ND (0.005)
Bis(2-ethylhexyl)phthalate	ND (0.010)
Dibenzofuran	ND (0.010)
Dichloromethane (Methylene chloride)	ND (0.005)
2,4-Dimethylphenol	ND (0.010)
4,6-Dinitro-o-cresol	ND (0.050)
Ethylbenzene	ND (0.005)
Fluoranthene	ND (0.010)
Fluorene	ND (0.010)
2-Methylnaphthalene	ND (0.010)
Naphthalene	ND (0.010)
Phenanthrene	ND (0.010)
Pyrene	ND (0.010)
Toluene	ND (0.005)
Xylenes	ND (0.005)

ND Nondetect at Practical Quantitation Limit (PQL) as determined by the analytical methods of the EPA publication SW-846, *Test Methods for Evaluating Solid Waste*, Third Edition, November 1986, and as listed in the July 8, 1987, edition of the *Federal Register* and later editions.

APPENDIX F

LABORATORY ANALYTICAL DATA REPORT

TerraNext

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

Pace Analytical

COPY

April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW2-WISA97-P
SAMPLE NO: H447741
SAMPLE MATRIX: WATER

DATE SAMPLED: 25-MAR-97 1125
DATE RECEIVED: 26-MAR-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	10	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	7	ug/L
		Xylenes (total)	1	16	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	1	< 10	ug/L
		2,4-Dimethylphenol	1	16	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	75	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	50	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	44	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	10	530	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

Pace Analytical

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

April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW2-WISA97-P
SAMPLE NO: H447741

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	695	mg/L

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April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44461
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	VERBAL
SAMPLE ID:	HWPW-MW9-WISA97-P	DATE SAMPLED:	25-MAR-97 1310
SAMPLE NO:	H447742	DATE RECEIVED:	26-MAR-97
SAMPLE MATRIX:	WATER	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	< 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

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW9-WISA97-P
SAMPLE NO: H447742

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	487	mg/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44461
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	VERBAL
SAMPLE ID:	HWPW-MW3-WISA97-P	DATE SAMPLED:	25-MAR-97 1400
SAMPLE NO:	H447743	DATE RECEIVED:	26-MAR-97
SAMPLE MATRIX:	WATER	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	10	< 100	ug/L
		2,4-Dimethylphenol	10	< 100	ug/L
		2,4-Dinitrotoluene	10	< 100	ug/L
		2,6-Dinitrotoluene	10	< 100	ug/L
		2-Chloronaphthalene	10	< 100	ug/L
		2-Methylnaphthalene	10	< 100	ug/L
		4,6-Dinitro-o-cresol	10	< 500	ug/L
		4-Nitrophenol	10	< 500	ug/L
		Acenaphthene	10	180	ug/L
		Acenaphthylene	10	< 100	ug/L
		Anthracene	10	< 100	ug/L
		Benzo(a)anthracene	10	< 100	ug/L
		Benzo(a)pyrene	10	< 100	ug/L
		Chrysene	10	< 100	ug/L
		Di-n-butylphthalate	10	< 100	ug/L
		Dibenzofuran	10	120	ug/L
		Fluoranthene	10	< 100	ug/L
		Fluorene	10	120	ug/L
		N-Nitrosodiphenylamine	10	< 100	ug/L
		Naphthalene	10	340	ug/L
		Nitrobenzene	10	< 100	ug/L
		Pentachlorophenol	10	< 500	ug/L
		Phenanthrene	10	< 100	ug/L
		Phenol	10	< 100	ug/L
		Pyrene	10	< 100	ug/L
		bis(2-Chloroethoxy)methane	10	< 100	ug/L

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April 18, 1997
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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW3-WISA97-P
SAMPLE NO: H447743

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 100	ug/L
5	1590	Solids, Dissolved at 180C	1	877	mg/L

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

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LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44461
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	VERBAL
SAMPLE ID:	HWPW-MW1A-WISA97-P	DATE SAMPLED:	25-MAR-97 1420
SAMPLE NO:	H447744	DATE RECEIVED:	26-MAR-97
SAMPLE MATRIX:	WATER	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	11	ug/L
		Chlorobenzene	1	< 5	ug/L
		Ethylbenzene	1	28	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	5	ug/L
		Xylenes (total)	1	42	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	10	< 100	ug/L
		2,4-Dimethylphenol	10	< 100	ug/L
		2,4-Dinitrotoluene	10	< 100	ug/L
		2,6-Dinitrotoluene	10	< 100	ug/L
		2-Chloronaphthalene	10	< 100	ug/L
		2-Methylnaphthalene	10	270	ug/L
		4,6-Dinitro-o-cresol	10	< 500	ug/L
		4-Nitrophenol	10	< 500	ug/L
		Acenaphthene	10	260	ug/L
		Acenaphthylene	10	< 100	ug/L
		Anthracene	10	< 100	ug/L
		Benzo(a)anthracene	10	< 100	ug/L
		Benzo(a)pyrene	10	< 100	ug/L
		Chrysene	10	< 100	ug/L
		Di-n-butylphthalate	10	< 100	ug/L
		Dibenzofuran	10	160	ug/L
		Fluoranthene	10	< 100	ug/L
		Fluorene	10	170	ug/L
		N-Nitrosodiphenylamine	10	< 100	ug/L
		Naphthalene	10	1,600	ug/L
		Nitrobenzene	10	< 100	ug/L
		Pentachlorophenol	10	< 500	ug/L
		Phenanthrene	10	130	ug/L
		Phenol	10	< 100	ug/L
		Pyrene	10	< 100	ug/L
		bis(2-Chloroethoxy)methane	10	< 100	ug/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW1A-WISA97-P
SAMPLE NO: H447744

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 100	ug/L
5	I590	Solids, Dissolved at 180C	1	798	mg/L

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

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LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW11B-WISA97-P
SAMPLE NO: H447745
SAMPLE MATRIX: WATER

DATE SAMPLED: 25-MAR-97 1500
DATE RECEIVED: 26-MAR-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	9	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	10	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	10	< 100	ug/L
		2,4-Dimethylphenol	10	< 100	ug/L
		2,4-Dinitrotoluene	10	< 100	ug/L
		2,6-Dinitrotoluene	10	< 100	ug/L
		2-Chloronaphthalene	10	< 100	ug/L
		2-Methylnaphthalene	10	260	ug/L
		4,6-Dinitro-o-cresol	10	< 500	ug/L
		4-Nitrophenol	10	< 500	ug/L
		Acenaphthene	10	380	ug/L
		Acenaphthylene	10	110	ug/L
		Anthracene	10	< 100	ug/L
		Benzo(a)anthracene	10	< 100	ug/L
		Benzo(a)pyrene	10	< 100	ug/L
		Chrysene	10	< 100	ug/L
		Di-n-butylphthalate	10	< 100	ug/L
		Dibenzofuran	10	250	ug/L
		Fluoranthene	10	< 100	ug/L
		Fluorene	10	270	ug/L
		N-Nitrosodiphenylamine	10	< 100	ug/L
		Naphthalene	10	1,400	ug/L
		Nitrobenzene	10	< 100	ug/L
		Pentachlorophenol	10	< 500	ug/L
		Phenanthrene	10	270	ug/L
		Phenol	10	< 100	ug/L
		Pyrene	10	< 100	ug/L
		bis(2-Chloroethoxy)methane	10	< 100	ug/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW11B-WISA97-P
SAMPLE NO: H447745

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 100	ug/L
5	I590	Solids, Dissolved at 180C	1	741	mg/L

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-MW10A-WISA97-P
SAMPLE NO: H447746
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 25-MAR-97 1535
DATE RECEIVED: 26-MAR-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	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	64	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	15	ug/L
		Fluoranthene	1	< 10	ug/L
		Fluorene	1	31	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	63	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

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW10A-WISA97-P
SAMPLE NO: H447746

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	1590	Solids, Dissolved at 180C	1	1,069	mg/L

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LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW4-WISA97-P
SAMPLE NO: H447747
SAMPLE MATRIX: WATER

DATE SAMPLED: 25-MAR-97 1540
DATE RECEIVED: 26-MAR-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	< 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

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW4-WISA97-P
SAMPLE NO: H447747

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	1590	Solids, Dissolved at 180C	1	610	mg/L

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-MW11A-WISA97-P
SAMPLE NO: H447748
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 25-MAR-97 1555
DATE RECEIVED: 26-MAR-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	7	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	10	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	10	< 100	ug/L
		2,4-Dimethylphenol	10	< 100	ug/L
		2,4-Dinitrotoluene	10	< 100	ug/L
		2,6-Dinitrotoluene	10	< 100	ug/L
		2-Chloronaphthalene	10	< 100	ug/L
		2-Methylnaphthalene	10	< 100	ug/L
		4,6-Dinitro-o-cresol	10	< 500	ug/L
		4-Nitrophenol	10	< 500	ug/L
		Acenaphthene	10	190	ug/L
		Acenaphthylene	10	< 100	ug/L
		Anthracene	10	< 100	ug/L
		Benzo(a)anthracene	10	< 100	ug/L
		Benzo(a)pyrene	10	< 100	ug/L
		Chrysene	10	< 100	ug/L
		Di-n-butylphthalate	10	< 100	ug/L
		Dibenzofuran	10	< 100	ug/L
		Fluoranthene	10	< 100	ug/L
		Fluorene	10	< 100	ug/L
		N-Nitrosodiphenylamine	10	< 100	ug/L
		Naphthalene	10	1,100	ug/L
		Nitrobenzene	10	< 100	ug/L
		Pentachlorophenol	10	< 500	ug/L
		Phenanthrene	10	< 100	ug/L
		Phenol	10	< 100	ug/L
		Pyrene	10	< 100	ug/L
		bis(2-Chloroethoxy)methane	10	< 100	ug/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW11A-WISA97-P
SAMPLE NO: H447748

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	10	< 100	ug/L
5	1590	Solids, Dissolved at 180C	1	793	mg/L

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-MW10B-WISA97-P
SAMPLE NO: H447749
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 25-MAR-97 1800
DATE RECEIVED: 26-MAR-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	9	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	15	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	97	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	5	230	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	28	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	130	ug/L
		Fluoranthene	1	20	ug/L
		Fluorene	5	150	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	5	650	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	5	140	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

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April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW108-WISA97-P
SAMPLE NO: H447749

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	887	mg/L

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April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW8-WISA97-P
SAMPLE NO: H447750
SAMPLE MATRIX: WATER

DATE SAMPLED: 26-MAR-97 1050
DATE RECEIVED: 26-MAR-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	7	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	5	ug/L
		Xylenes (total)	1	13	ug/L
3	OSVTCW	TCL - Semi-volatile Extractables in Water			
		1,2-Diphenylhydrazine	4	< 40	ug/L
		2,4-Dimethylphenol	4	< 40	ug/L
		2,4-Dinitrotoluene	4	< 40	ug/L
		2,6-Dinitrotoluene	4	< 40	ug/L
		2-Chloronaphthalene	4	< 40	ug/L
		2-Methylnaphthalene	4	110	ug/L
		4,6-Dinitro-o-cresol	4	< 200	ug/L
		4-Nitrophenol	4	< 200	ug/L
		Acenaphthene	4	170	ug/L
		Acenaphthylene	4	< 40	ug/L
		Anthracene	4	< 40	ug/L
		Benzo(a)anthracene	4	< 40	ug/L
		Benzo(a)pyrene	4	< 40	ug/L
		Chrysene	4	< 40	ug/L
		Di-n-butylphthalate	4	< 40	ug/L
		Dibenzofuran	4	140	ug/L
		Fluoranthene	4	< 40	ug/L
		Fluorene	4	190	ug/L
		N-Nitrosodiphenylamine	4	< 40	ug/L
		Naphthalene	4	640	ug/L
		Nitrobenzene	4	< 40	ug/L
		Pentachlorophenol	4	< 200	ug/L
		Phenanthrene	4	51	ug/L
		Phenol	4	< 40	ug/L
		Pyrene	4	< 40	ug/L
		bis(2-Chloroethoxy)methane	4	< 40	ug/L

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April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW8-WISA97-P
SAMPLE NO: H447750

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	4	< 40	ug/L
5	1590	Solids, Dissolved at 180C	1	636	mg/L

COMMENTS: The reporting limits for semi-volatiles are elevated due to the dilution required because of high analyte concentration.

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LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44461
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	VERBAL
SAMPLE ID:	HWPW-MW88-WISA97-P	DATE SAMPLED:	26-MAR-97 1100
SAMPLE NO:	H447751	DATE RECEIVED:	26-MAR-97
SAMPLE MATRIX:	WATER	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	8	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	7	ug/L
		Xylenes (total)	1	17	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	71	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	140	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	16	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	120	ug/L
		Fluoranthene	1	15	ug/L
		Fluorene	1	120	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	50	970	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	47	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW8B-WISA97-P
SAMPLE NO: H447751

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-P12-WISA97-P
SAMPLE NO: H447752
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 26-MAR-97 1010
DATE RECEIVED: 26-MAR-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	< 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	< 50	ug/L
		Pentachlorophenol	1	< 10	ug/L
		Phenanthrene	1	< 10	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane			

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April 18, 1997
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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-P12-WISA97-P
SAMPLE NO: H447752

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	901	mg/L

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LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW7-WISA97-P
SAMPLE NO: H447753
SAMPLE MATRIX: WATER

DATE SAMPLED: 26-MAR-97 1125
DATE RECEIVED: 26-MAR-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	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	110	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	81	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

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April 18, 1997
Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW7-WISA97-P
SAMPLE NO: H447753

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	626	mg/L

COMMENTS: The semi-volatiles were re-extracted out of hold time due to surrogate failures on the original extract. The reported results are from the re-extraction.

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LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-P10-WISA97-P
SAMPLE NO: H447754
SAMPLE MATRIX: WATER

DATE SAMPLED: 26-MAR-97 1135
DATE RECEIVED: 26-MAR-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	24	ug/L
		Methylene chloride	1	< 5	ug/L
		Toluene	1	< 5	ug/L
		Xylenes (total)	1	20	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	19	ug/L
		2-Chloronaphthalene	1	< 10	ug/L
		2-Methylnaphthalene	50	150 J	ug/L
		4,6-Dinitro-o-cresol	1	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	160	ug/L
		Acenaphthylene	1	< 10	ug/L
		Anthracene	1	11	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	40	ug/L
		Fluoranthene	1	10	ug/L
		Fluorene	1	100	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	50	2,800	ug/L
		Nitrobenzene	1	< 10	ug/L
		Pentachlorophenol	1	< 50	ug/L
		Phenanthrene	1	49	ug/L
		Phenol	1	< 10	ug/L
		Pyrene	1	< 10	ug/L
		bis(2-Chloroethoxy)methane	1	< 10	ug/L

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-P10-WISA97-P
SAMPLE NO: H447754

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	678	mg/L

COMMENTS: J - The reported result is below the reporting limit for the target.

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LABORATORY ANALYSIS REPORT

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

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

SAMPLE ID: HWPW-MW5-WISA97-P
SAMPLE NO: H447755
SAMPLE MATRIX: WATER

DATE SAMPLED: 26-MAR-97 1235
DATE RECEIVED: 26-MAR-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	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	26	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	13	ug/L
		N-Nitrosodiphenylamine	1	< 10	ug/L
		Naphthalene	1	23	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

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-MW5-WISA97-P
SAMPLE NO: H447755

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	493	mg/L

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Report No.: 00060618

LABORATORY ANALYSIS REPORT

CLIENT NAME:	TERRANEXT	LIMS CLIENT:	0717 0007
ADDRESS:	6200 ROTHWAY, STE 190	PACE PROJECT:	H44461
	HOUSTON, TX 77040-	PACE CLIENT:	620437
ATTENTION:	BILL GOLDSBY	P.O. NO:	VERBAL
SAMPLE ID:	HWPW-P11-WISA97-P	DATE SAMPLED:	26-MAR-97 1215
SAMPLE NO:	H447756	DATE RECEIVED:	26-MAR-97
SAMPLE MATRIX:	WATER	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	< 50	ug/L
		4-Nitrophenol	1	< 50	ug/L
		Acenaphthene	1	34	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	17	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

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LABORATORY ANALYSIS REPORT

CLIENT NAME: TERRANEXT
SAMPLE ID: HWPW-P11-WISA97-P
SAMPLE NO: H447756

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS
		bis(2-Ethylhexyl)phthalate	1	< 10	ug/L
5	I590	Solids, Dissolved at 180C	1	792	mg/L

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-EB-WISA97-P
SAMPLE NO: H447757
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 26-MAR-97 0955
DATE RECEIVED: 26-MAR-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

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LABORATORY ANALYSIS REPORT

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

SAMPLE ID: HWPW-FB-WISA97-P
SAMPLE NO: H447810
SAMPLE MATRIX: WATER

LIMS CLIENT: 0717 0007
PACE PROJECT: H44461
PACE CLIENT: 620437
P.O. NO: VERBAL

DATE SAMPLED: 26-MAR-97
DATE RECEIVED: 26-MAR-97
PROJECT MANAGER: Elessa Sommers

LN	TEST CODE	DETERMINATION	DILUTION FACTOR	RESULT	UNITS

COMMENTS: Sample was not analyzed due to lab error in storage placement.

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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-MW2-WISA97-P								SAMPLE NO: H447741		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1515	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	02-APR-96 1723	EAY	GCMSA
SAMPLE ID: HWPW-MW9-WISA97-P								SAMPLE NO: H447742		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1554	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	02-APR-96 1823	EAY	GCMSA
SAMPLE ID: HWPW-MW3-WISA97-P								SAMPLE NO: H447743		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1621	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	03-APR-96 1713	EAY	GCMSA
SAMPLE ID: HWPW-MW1A-WISA97-P								SAMPLE NO: H447744		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1648	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	03-APR-96 1802	EAY	GCMSA
SAMPLE ID: HWPW-MW11B-WISA97-P								SAMPLE NO: H447745		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1715	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	17-APR-97 1402	JC	GCMSZ
SAMPLE ID: HWPW-MW10A-WISA97-P								SAMPLE NO: H447746		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1742	JC	GCMSB
5	1590	72960	72960	NA			02-160.1	31-MAR-97 1855	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	02-APR-96 2130	EAY	GCMSA
SAMPLE ID: HWPW-MW4-WISA97-P								SAMPLE NO: H447747		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1810	JC	GCMSB
5	1590	72961	72961	NA			02-160.1	31-MAR-97 1945	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	02-APR-96 2219	EAY	GCMSA

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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-MW11A-WISA97-P								SAMPLE NO: H447748		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1837	JC	GCMSB
5	I590	72961	72961	NA			02-160.1	31-MAR-97 1945	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	03-APR-96 1852	EAY	GCMSA
SAMPLE ID: HWPW-MW10B-WISA97-P								SAMPLE NO: H447749		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1904	JC	GCMSB
5	I590	72961	72961	NA			02-160.1	31-MAR-97 1945	C P	008WAT
3	OSVTCW	72849	72813	19-3510B	28-MAR-97 0800	A M	19-8270B	02-APR-96 2358	EAY	GCMSA
SAMPLE ID: HWPW-MW8-WISA97-P								SAMPLE NO: H447750		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 1931	JC	GCMSB
5	I590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	17-APR-97 0157	EAY	GCMSA
SAMPLE ID: HWPW-MW8B-WISA97-P								SAMPLE NO: H447751		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 2030	JC	GCMSB
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	11-APR-97 0922	EAY	GCMSA
SAMPLE ID: HWPW-P12-WISA97-P								SAMPLE NO: H447752		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 2057	JC	GCMSB
5	I590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	11-APR-97 1012	EAY	GCMSA
SAMPLE ID: HWPW-MW7-WISA97-P								SAMPLE NO: H447753		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 2124	JC	GCMSB
5	I590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	18-APR-97 1032	EAY	GCMSA
SAMPLE ID: HWPW-P10-WISA97-P								SAMPLE NO: H447754		
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 2151	JC	GCMSB
5	I590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	15-APR-97 1106	EAY	GCMSA

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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-MW5-WISA97-P									SAMPLE NO:	H447755
1	OVTCW2	73079	73079	NA			19-8260A	03-APR-97 2218	JC	GCMSB
5	1590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	15-APR-97 1155	EAY	GCMSA
SAMPLE ID: HWPW-P11-WISA97-P									SAMPLE NO:	H447756
1	OVTCW2	73176	73079	NA			19-8260A	07-APR-97 1440	JC	GCMSY
5	1590	73004	73004	NA			02-160.1	01-APR-97 1645	C P	008WAT
3	OSVTCW	72907	72907	19-3510B	31-MAR-97 0900	A M	19-8270B	15-APR-97 1244	EAY	GCMSA
SAMPLE ID: HWPW-EB-WISA97-P									SAMPLE NO:	H447757
1	OVTCW2	73176	73079	NA			19-8260A	07-APR-97 1407	JC	GCMSY
SAMPLE ID: HWPW-FB-WISA97-P									SAMPLE NO:	H447810

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

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SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW2-WISA97-P				SAMPLE NO: H447741	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	89	-	
		4-Bromofluorobenzene	102	-	
		Toluene-d8	95	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	95	-	
		2-Fluorobiphenyl	110	-	
		2-Fluorophenol	55	-	
		Nitrobenzene-d5	92	-	
		Phenol-d5	45	-	
		p-Terphenyl-d14	95	-	
SAMPLE ID: HWPW-MW9-WISA97-P				SAMPLE NO: H447742	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	91	-	
		4-Bromofluorobenzene	106	-	
		Toluene-d8	93	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	37	-	
		2-Fluorobiphenyl	43	-	
		2-Fluorophenol	28	-	
		Nitrobenzene-d5	35	-	
		Phenol-d5	24	-	
		p-Terphenyl-d14	51	-	
SAMPLE ID: HWPW-MW3-WISA97-P				SAMPLE NO: H447743	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	91	-	
		4-Bromofluorobenzene	106	-	
		Toluene-d8	94	-	
4	$BNAW	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.

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SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW1A-WISA97-P				SAMPLE NO: H447744	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	84	-	
		4-Bromofluorobenzene	109	-	
		Toluene-d8	93	-	
4	$BNAW	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.			
SAMPLE ID: HWPW-MW11B-WISA97-P				SAMPLE NO: H447745	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane-d4	87	-	
		4-Bromofluorobenzene	110	-	
		Toluene-d8	92	-	
4	$BNAW	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.			
SAMPLE ID: HWPW-MW10A-WISA97-P				SAMPLE NO: H447746	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	87	-	
		4-Bromofluorobenzene	104	-	
		Toluene-d8	91	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	11	-	
		2-Fluorobiphenyl	100	-	
		2-Fluorophenol	3*	-	
		Nitrobenzene-d5	85	-	
		Phenol-d5	8*	-	

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SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW10A-WISA97-P				SAMPLE NO: H447746	
		p-Terphenyl-d14	61	-	
		* The surrogate recoveries were outside of QC acceptance limits due to matrix interference.			
SAMPLE ID: HWPW-MW4-WISA97-P				SAMPLE NO: H447747	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	87	-	
		4-Bromofluorobenzene	102	-	
		Toluene-d8	92	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	13	-	
		2-Fluorobiphenyl	100	-	
		2-Fluorophenol	21	-	
		Nitrobenzene-d5	100	-	
		Phenol-d5	12	-	
		p-Terphenyl-d14	81	-	
SAMPLE ID: HWPW-MW11A-WISA97-P				SAMPLE NO: H447748	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	86	-	
		4-Bromofluorobenzene	105	-	
		Toluene-d8	94	-	
4	$BNAW	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.			
SAMPLE ID: HWPW-MW10B-WISA97-P				SAMPLE NO: H447749	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	85	-	
		4-Bromofluorobenzene	108	-	
		Toluene-d8	95	-	

REPORT OF LABORATORY ANALYSIS

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SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID: HWPW-MW10B-WISA97-P				SAMPLE NO: H447749	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	70	-	
		2-Fluorobiphenyl	110	-	
		2-Fluorophenol	39	-	
		Nitrobenzene-d5	92	-	
		Phenol-d5	25	-	
		p-Terphenyl-d14	64	-	
SAMPLE ID: HWPW-MW8-WISA97-P				SAMPLE NO: H447750	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		4-Bromofluorobenzene	107	-	
		Dibromofluoromethane	90	-	
		Toluene-d8	93	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	95	-	
		2-Fluorobiphenyl	116	-	
		2-Fluorophenol	43	-	
		Nitrobenzene-d5	88	-	
		Phenol-d5	41	-	
		p-Terphenyl-d14	81	-	
		The surrogate recoveries were outside of QC acceptance limits in the original sample analysis. The sample was re-extracted outside of the recommended hold time and re-analyzed. The reported recoveries are those of the re-extract.			
SAMPLE ID: HWPW-MW8B-WISA97-P				SAMPLE NO: H447751	
2	$VOA2W	GC/MS Volatiles Surrogates (8260)			1
		1,2-Dichloroethane	90	-	
		4-Bromofluorobenzene	107	-	
		Toluene-d8	96	-	
4	$BNAW	GC/MS BNA Surrogates			3
		2,4,6-Tribromophenol	20	-	
		2-Fluorobiphenyl	95	-	
		2-Fluorophenol	1*	-	
		Nitrobenzene-d5	75	-	
		Phenol-d5	8*	-	
		p-Terphenyl-d14	84	-	
		* The surrogate recoveries were outside of QC acceptance limits. The sample was re-extracted outside of the recommended hold time and re-analyzed.			

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DUPLICATE AND MATRIX SPIKE DATA

TEST CODE	DETERMINATION	ORIGINAL RESULT	DUPLICATE RESULT	UNITS	RANGE / RPD	MS RESULT	MS % RCVRY
BATCH NO: 72960						SAMPLE NO: H447587	
I590	Solids, Dissolved at 180C	211	213	mg/L	0.9		
BATCH NO: 72960						SAMPLE NO: H447599	
I590	Solids, Dissolved at 180C	18,740	19,100	mg/L	1.9		
BATCH NO: 72961						SAMPLE NO: H447747	
I590	Solids, Dissolved at 180C	610	606	mg/L	0.7		
BATCH NO: 73004						SAMPLE NO: H447750	
I590	Solids, Dissolved at 180C	636	673	mg/L	5.6		
BATCH NO: 73004						SAMPLE NO: H447806	
I590	Solids, Dissolved at 180C	68	69	mg/L	0.0		