Union Pacific Railroad Company

Semiannual Monitoring Report: Second Semiannual Event 2001

Former Houston Wood Preserving Works Houston, Texas

January 21, 2002

W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000

ERM®

Union Pacific Railroad Company

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Houston, Texas

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W.O. #422-102

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1.0 INTRODUCTION

1.1 BACKGROUND

On September 24 to October 1, 2001, Environmental Resources Management (ERM) conducted ground water sampling activities at Southern Pacific Transportation Company's Former Houston Wood Preserving Works (HWPW) site, located at 4910 Liberty Road, Houston, Texas (Figure 1-1). This semiannual sampling event included the on-site wells and piezometers associated with a closed surface impoundment (TNRCC Permit Unit No. II.B.1) as described in RCRA Permit No. HW-50343-000 and associated Compliance Plan (CP-50343), both issued by the Texas Natural Resource Conservation Commission (TNRCC). The sampling event, analytical data, and this data evaluation report represent the second semiannual monitoring period for 2001 (i.e., July 1 through December 31) and fulfill the semiannual reporting requirements described in Compliance Plan (CP) Section VII.B.2.

1.2 REPORT CONTENT AND ORGANIZATION

Section VII.B.2 of the CP requires that a specific list of items be included in each Semiannual Report. As such, each item listed below is addressed by number in Section 2 of this report. As of December 31, 2001, a recovery system had not been installed at this facility. Therefore, in the few instances where a provision refers to a recovery system (i.e., items 5, 7, and 11), a notation was made in the text, and the items, as they relate to recovery wells, were not addressed in this report. The following items are required for the Semiannual Report, pursuant to CP Section VII.B.2:

1. A narrative summary of the evaluations made in accordance with CP Sections V, VI, and VII for the preceding six-month period. These periods shall be January 1 through June 30 and July 1 through December 31;

2. The results of the chemical analyses, submitted in a tabulated format in a form acceptable to the Executive Director, which clearly indicates each parameter that exceeds the Ground Water Protection Standard (GWPS). Copies of the original laboratory report for chemical analyses showing detection limits and quality control and quality assurance data shall be provided if requested by the Executive Director;

3. Tabulation of all water level elevations (relative to mean sea level), depth to water measurements, and total depth of well measurements collected since the data that was submitted in the previous semiannual report;

4. Potentiometric surface maps showing the elevation of the water table at the time of sampling;

5. If a recovery system is installed, potentiometric surface maps showing delineation of the radius of influence, minimum and maximum gradient within the hydrologically influenced area, and the direction of ground-water flow gradients outside the radius of influence;

6. A notation of the presence or absence of NAPLs, both light and dense phases, in each well during each sampling event since the last event covered in the previous semiannual report and tabulation of depth and thickness of NAPLs, if detected;

7. If a recovery system is installed, monthly tabulations of quantities of recovered ground-water and NAPLs (if encountered), and graphs of weekly recorded flow rates versus time for the recovery wells during each quarter;

8. Tabulation of all data evaluation results pursuant to Section VI.D and status of each well listed on CP Table III with regard to compliance with the corrective action objectives and compliance with the Ground Water Protection Standards;

9. Maps of the contaminated area depicting concentrations of naphthalene, acenaphthene, and total benzene, toluene, ethylbenzene, and xylenes (BTEX) as isopleth contours;

10. An updated schedule summary as required by Section XI.A;

11. Summary of any changes made to the monitoring/corrective action program and a summary of recovery well inspections, repairs, and any operational difficulties;

12. Recommendation for any changes; and,

13. Any other items requested by the Executive Director.

2.0 *SECOND SEMIANNUAL GROUND WATER SAMPLING EVENT*

This section contains a discussion of each of the Semiannual Report items required by CP Section VII.B.2.

2.1 *NARRATIVE SUMMARY OF SECOND SEMIANNUAL ACTIVITIES*

CP Section VII.B.2.a requires a narrative summary of evaluations completed in accordance with CP Sections V, VI, and VII. Section V relates to the Corrective Action Program in place for the permitted unit. Section VI relates to the Ground Water Monitoring Program designed to evaluate the effectiveness of the Corrective Action Program. Section VII includes provisions for amending the Corrective Action Program and/or Compliance Plan.

2.1.1 *Corrective Action Program*

Existing wells were sampled to assess the extent of affected ground water in the A-Transmissive Zone (A-TZ) and the B-Transmissive Zone (B-TZ). The definitions of the A-TZ and B-TZ are consistent with the UTZ and STZ, respectively, as defined in CP Provision I.A.

- A-TZ refers to the first sand unit encountered at approximately 35 feet above mean sea level (msl), averaging 6 to 8 feet in thickness.
- B-TZ refers to the second sand unit encountered at approximately 15 feet above msl, averaging 8 to 10 feet in thickness.

Existing monitoring wells in the A-TZ, designated by function in CP Table III (Appendix A), include the Corrective Action Observation (CAO) wells MW-04, MW-05, MW-07, MW-08, and MW-09, and the Point of Compliance (POC) wells MW-01A, MW-02, MW-03, MW-10A, and MW-11A. Existing monitoring wells in the B-TZ include the POC wells MW-10B and MW-11B, and the POC piezometers P-10, P-11, and P-12.

2.1.2 *Ground Water Monitoring*

ERM personnel performed monitoring activities at the site on September 24 through October 1, 2001. The 15 A-TZ and B-TZ wells and piezometers listed in Section 2.1.1 (above) were located and inspected in preparation for the sampling event. Ground water sampling was performed using procedures outlined in a U.S. EPA document titled *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA/540/S-95/504)

published in April 1996. Purging and sampling were performed using a low-flow pump, with its sample intake set at the approximate center of the screened interval of each well.

Polytetrafluoroethylene (PTFE) tubing was placed in the wells and used for sampling. A Master-Flex® peristaltic pump was placed next to each well during sampling. Using a one-foot section of disposable silicon tubing placed around the pump head and attached to the PTFE tubing, ground water was pumped from the screened interval of the well at a flow rate of approximately 0.5 L/min. A YSI 600 Flo-Thru cell with constant read-outs was used to evaluate field parameters, including temperature, pH, specific conductivity, dissolved oxygen, and turbidity. When the field parameters had stabilized, the well was sampled. The samples were collected at a flow rate of approximately 0.5 L/min. A compilation of recorded field parameters is included in Appendix B.

For each well, two 40-mL glass vials (for volatile organic compound analysis), and one 1000-mL amber glass bottles (for semivolatile organic compounds analysis) were filled directly from the pumping apparatus described above. The bottles, which had been preserved previously by the laboratory, were sealed and packed in coolers with sufficient ice to maintain a sample temperature of approximately 4° C. The coolers were delivered to Severn Trent Laboratory, in Houston, Texas for analysis. Chain-of-Custody (COC) forms were completed and kept with their respective samples. Copies of the analytical data and COCs are included in Appendix C.

2.2 *ANALYTICAL RESULTS*

The results of the chemical analyses performed on the A-TZ and B-TZ ground water samples collected during the second semiannual sampling event of 2000 are summarized in Tables 2-1 and 2-2, respectively. Those compounds reported by the laboratory at concentrations greater than the GWPS are indicated in boxes on the tables. The CP sets the GWPS at the practical quantitation limit (PQL) for each of the compounds analyzed.

2.3 *WATER LEVEL AND TOTAL DEPTH MEASUREMENT*

Because low-flow sampling procedures were utilized for this sampling event, it was important to reduce disruption of the water column to the extent practical prior to sampling. To accomplish this, light non-aqueous

phase liquid (LNAPL) measurements were made first with an MMC® Model D-240 oil/water interface probe. Measurable LNAPL was not noted with the probe at any of the wells measured. Next, water levels were measured using the oil/water interface probe. Since the meter came into contact with only the upper surface of the water column, disruption of the water column was reduced.

Dense non-aqueous phase liquid (DNAPL) and total depth measurements were collected with the oil/water interface probe following ground water sampling. These measurements were collected in accordance with the methodology described in EPA's low-flow guidance (U.S. EPA, April 1996) which suggests that a probe be lowered gently through the water column to the bottom of the well following sample collection. Measurable DNAPL was not noted at any of the wells measured. Table 2-3 summarizes the results of the depth-to-water and total well depth measurements.

2.4 *POTENTIOMETRIC SURFACE MAPS*

The ground water elevation data described in Section 2.3 were used to create potentiometric surface maps of the A-TZ and B-TZ (Figures 2-1 and 2-2, respectively).

2.5 *POTENTIOMETRIC SURFACE MAPS FOR RECOVERY SYSTEM*

As of December 31, 2000, a recovery system had not been installed at the closed surface impoundment. Therefore, this item is not addressed herein.

2.6 *NON-AQUEOUS PHASE LIQUIDS*

The wells and piezometers were gauged for the presence of light NAPLs before low-flow sampling and dense NAPLs after low-flow sampling was completed, in order to reduce disruption of the water column prior to sampling. The low-flow sampling method resulted in little or no drawdown. Accordingly, dense NAPL layers, if present, would not have been significantly affected by prior ground water sample collection. An MMC® Model D-240 oil/water interface probe was used to measure for light and dense NAPLs. NAPLs were not detected in any of the wells sampled as part of this semiannual event.

2.7 *NAPL RECOVERIES*

As of December 31, 2000, a recovery system had not been installed at the closed surface impoundment. Therefore, this item is not addressed herein.

2.8 *ANALYTICAL DATA EVALUATION*

CP Section VI.D describes two methods which may be used to determine the compliance status of a given well. The analytical results may be either directly compared to the GWPS (CP Table I; included in Appendix A herein), or statistically compared to the GWPS using the 99% significance level of the t-distribution. Table 2-4 shows the results of a direct comparison of data from the second semiannual sampling event to the GWPS. Wells and piezometers were considered to be compliant if each of the constituents listed in CP Table I was reported at a concentration less than or equal to the Concentration Limit (i.e., the GWPS). Conversely, wells and piezometers were considered non-compliant if one or more constituents were reported at concentrations greater than the Concentration Limit.

2.9 *BTEX, ACENAPHTHENE, AND NAPHTHALENE ISOPLETHS*

As specified by the Compliance Plan, isopleth maps depicting concentrations of BTEX, acenaphthene, and naphthalene were constructed. The concentration contours of these constituents were prepared using the data presented in Table 2-3. The contours were generated manually. To facilitate generation of the contours, locations with reported non-detects were assigned a value equal to one-half of the reported detection limit.

The A-TZ and B-TZ BTEX concentrations measured during the second semiannual sampling event of 2000 are presented in Figures 2-3 and 2-4, respectively. Similarly, acenaphthene and naphthalene isopleths are presented in Figures 2-5 through 2-8.

2.10 *UPDATED COMPLIANCE SCHEDULE*

An updated compliance schedule is included as Appendix D of this report. This schedule is consistent with the schedule submitted as part of the First Semiannual Monitoring Report, 2001 (ERM, July 19, 2001).

2.11 *SUMMARY OF CHANGES MADE TO THE MONITORING/CORRECTIVE ACTION PROGRAM AND SUMMARY OF RECOVERY WELL INSPECTIONS AND MAINTENANCE*

Neither recovery wells nor a ground water recovery system are present on site. Accordingly, recovery well inspections, repairs, or operations were not conducted. However, the POC and CAO wells were inspected twice during the semiannual monitoring period. A summary of the well inspections will be included in the 2001 Annual Report.

2.12 *RECOMMENDATIONS FOR CHANGES*

At this time, no changes are recommended.

2.13 *OTHER REQUESTED ITEMS*

To date, no other items have been requested by the Executive Director.

Tables

January 21, 2002
W.O. #422-102

Environmental Resources Management
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TABLE 2-1

Summary of Analytical Results for the A-Transmissive Zone (A-TZ)
Second Semiannual Sampling Event, 2001

Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)[1]	Monitor Well ID: / Sample Date:	MW-01A 09/28/01	MW-02 09/28/01	MW-03 09/28/01	MW-04 09/27/01	MW-05 09/27/01	MW-07 09/27/01	MW-08 09/27/01	MW-08D 09/27/01	MW-09 09/27/01	MW-10AD 09/28/01	MW-11A 09/27/01
Benzene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003J
Chlorobenzene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005		0.004J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.007
Toluene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003J
Xylene (total)	0.005		0 005J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014J
Acenaphthene	0.010		0.360	0.012	0.120	ND	0.003	0.006	ND	ND	ND	0.0006J	0.310
Acenaphthylene	0.010		0.005	0.0005J	0.001J	0.0003J	ND	ND	ND	ND	ND	ND	0.004
Anthracene	0.010		0.007	0.002J	0.004	0.001 J	0.0009J	0.002J	0.0008J	0.0006J	0.0009J	0.0005J	0.008
Benzo(a)anthracene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.010		0.180	0.010	0.072	0.0003J	ND	ND	ND	ND	ND	0.0004J	0.130
Di-n-butylphthalate	0.010		0.0006J	ND	ND	ND	0.0005J	0.0006J	0.0006J	ND	0.0004J	ND	0.0006J
2,4-Dimethylphenol	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	0.050		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010		ND	ND	ND	0.0007J	0.0006J	0.0006J	0.0007J	0.0005J	0.001J	ND	0.0008J
Fluoranthene	0.010		0.010	0.002J	0.009	ND	0.0005J	0.001J	0.0005J	ND	ND	ND	0.012
Fluorene	0.010		0.170	0.010	0.078	ND	ND	ND	ND	ND	ND	0.0004J	0.180
2-Methylnaphthalene	0.010		ND	0.001J	ND	ND	ND	ND	ND	ND	ND	ND	0.140
Naphthalene	0.010		0.065	0.034	0.0007J	0.001J	ND	ND	ND	ND	0.0005J	ND	2.400
Nitrobenzene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Nitrophenol	0.050		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.050		0.0007J	0.0003J	0.0007J	ND	0.0003J	0.0003J	ND	ND	ND	0.0002J	ND
Phenanthrene	0.010		0.100	0.003	0.002	ND	ND	0.0004J	ND	ND	0.0003J	0.0003J	0.075
Phenol	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.010		0.006	0.001J a	0.006 a	ND	0.0006J	0.0009J	0.0004J	0.0005J	ND	ND a	0.008

NOTES:

All values reported in mg/L. ND - Not detected at the Method Detection Limit (MD), which is less than or equal to the Practical Quantitation Limit (PQL) in all instances.
[1]PQL - *Practical Quantitation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA.

SW-846. The PQL is the Ground Water Protection Standard.

[2] [ ] indicate values reported above the Ground Water Protection Standard (GWPS).

J=Value was detected, but below limit of quantitation.

a = Laboratory reported Matrix interface present in sample.

TABLE 2-2

Summary of Analytical Results for the B-Transmissive Zone (B-TZ)
Second Semiannual Sampling Event, 2001

Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)[1]	Monitor Well ID: / Sample Date:	MW-10B 9/28/2001	MW-11B 9/2272001	P-10 9/27/2001	P-11 9/27/2001	P-12 9/27/2001	P-12 9/27/2001
Benzene	0.005		0.002J	ND	ND	ND	ND	ND
Chlorobenzene	0.005		ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005		ND	ND	ND	ND	ND	ND
Methylene chloride	0.010		ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005		ND	ND	0.017	ND	ND	ND
Toluene	0.005		ND	ND	ND	ND	ND	ND
Xylene (total)	0.005		ND	ND	0.014J	ND	ND	ND
Acenaphthene	0.010		0.072	0.140	0.300	ND	ND	ND
Acenaphthylene	0.010		0.001J	0.003	ND	ND	ND	ND
Anthracene	0.010		0.002	0.005	0.013	0.0005J	ND	ND
Benzo(a)anthracene	0.010		ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010		ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	0.010		ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010		ND	ND	ND	ND	ND	ND
Chrysene	0.010		ND	ND	ND	ND	ND	ND
Dibenzofuran	0.010		0.029	0.068	0.130	ND	ND	ND
Di-n-butylphthalate	0.010		ND	ND	ND	0.0006J	0.0006J	ND
2,4-Dimethylphenol	0.010		ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	0.050		ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010		ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010		ND	ND	0.0005J	0.0006J	0.0007J	ND
Fluoranthene	0.010		0.002J	0.004	0.010	ND	ND	ND
Fluorene	0.010		0.036	0.072	0.170	ND	ND	ND
2-Methylnaphthalene	0.010		ND	0.056	0.140	ND	ND	ND
Naphthalene	0.010		0.001J	0.500	3.200	ND	0.0005J	0.0004J
Nitrobenzene	0.010		ND	ND	ND	ND	ND	ND
p-Nitrophenol	0.050		ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.050		0.0006J	ND	0.0004J	ND	ND	ND
Phenanthrene	0.010		0.019	0.046	0.120	ND	ND	ND
Phenol	0.010		ND	ND	ND	ND	ND	ND
Pyrene	0.010		0.001J a	0.003	0.006	ND	0.010	0.009

NOTES:

All values reported in mg/L. ND - Not detected at the Method Detection Limit (MD), which is less than or equal to the Practical Quantitation Limit (PQL) in all instances.
[1]PQL - *Practical Quantitation Limit* as defined on Table I of the Compliance Plan, and determined by the analytical methods of EPA

SW-846. The PQL is the Ground Water Protection Standard.

[2] [ ] indicate values reported above the Ground Water Protection Standard (GWPS).

J=Value was detected, but below limit of quantitation.

a = Laboratory reported Matrix interface present in sample.

TABLE 2-3

Water Level and Total Depth of Well Measurements

Second Semiannual Sampling Event, 2001
Houston Wood Preserving Works
Houston, Texas

A-TZ Monitoring Locations

Well ID	Top of Casing Elevation (msl)	Depth to Water (ft TOC)	Water Surface Elevation (msl)	Total Depth of Well as Measured (ft TOC)	Total Depth as Logged (ft TOC) *
MW-01A	47.95'	6.85'	41.10'	19.74'	20.20'
MW-02	48.03'	8.22'	39.81'	18.50'	20.30'
MW-03	48.55'	7.57'	40.98'	19.68'	20.90'
MW-04	49.85'	8.68'	41.17'	21.75'	23.40'
MW-05	49.35'	7.79'	41.56'	27.39'	28.30'
MW-07	48.86'	8.00'	40.86'	24.85'	N/A
MW-08	49.37'	8.05'	41.32'	25.15'	26.80'
MW-09	49.29'	7.39'	41.90'	25.79'	26.80'
MW-10A	49.90'	8.93'	40.97'	25.62'	25.90'
MW-11A	50.04'	9.12'	40.92'	24.05'	24.40'

B-TZ Monitoring Locations

Well ID	Top of Casing Elevation (msl)	Depth to Water (ft TOC)	Water Surface Elevation (msl)	Total Depth of Well as (ft TOC) Measured	Total Depth as Logged (ft TOC) *
MW-10B	49.97'	9.12'	40.85'	47.27'	48.80'
MW-11B	50.19'	9.33'	40.86'	47.49'	46.80'
P-10	47.72'	6.85'	40.87'	43.30'	N/A
P-11	49.02'	7.74'	41.28'	42.82'	51.80'
P-12	48.82'	6.93'	41.89'	42.89'	51.70'

NOTES:

msl - feet above mean sea level
ft TOC - feet below the Top Of (the well) Casing
* Logged during well installation
N/A - Information not available

TABLE 2-4

Compliance Status of Wells and Piezometers

Second Semiannual Sampling Event, 2001
Houston Wood Preserving Works
Houston, Texas

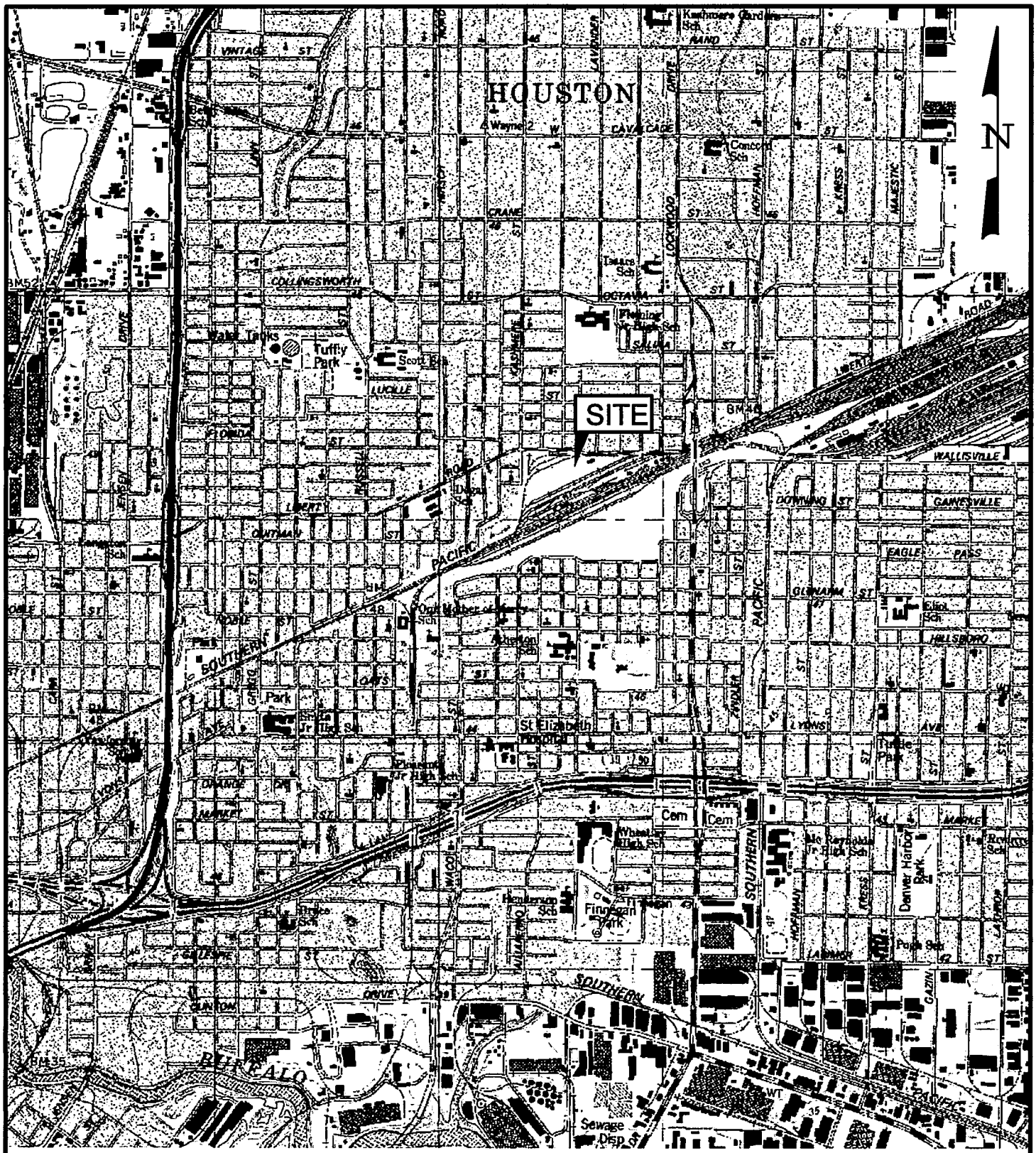
A-TZ Monitoring Location	Well Designation	Compliance Status
MW-01A	Point of compliance	Non-Compliant
MW-02	Point of compliance	Non-Compliant
MW-03	Point of compliance	Non-Compliant
MW-10A	Point of compliance	Compliant
MW-11A	Point of compliance	Non-Compliant
MW-04	Corrective action observation	Compliant
MW-05	Corrective action observation	Compliant
MW-07	Corrective action observation	Compliant
MW-08	Corrective action observation	Compliant
MW-09	Corrective action observation	Compliant

B-TZ Monitoring Location	Well Designation	Compliance Status
MW-10B	Point of compliance	Non-Compliant
MW-11B	Point of compliance	Non-Compliant
P-10	Point of compliance	Non-Compliant
P-11	Corrective action observation	Compliant
P-12	Corrective action observation	Compliant

Figures

January 21, 2002
W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000



SOURCE: U.S.G.S. QUADRANGLE, SETTEGAST, TEXAS, 1982, 7.5 MINUTE SERIES (TOPOGRAPHIC)

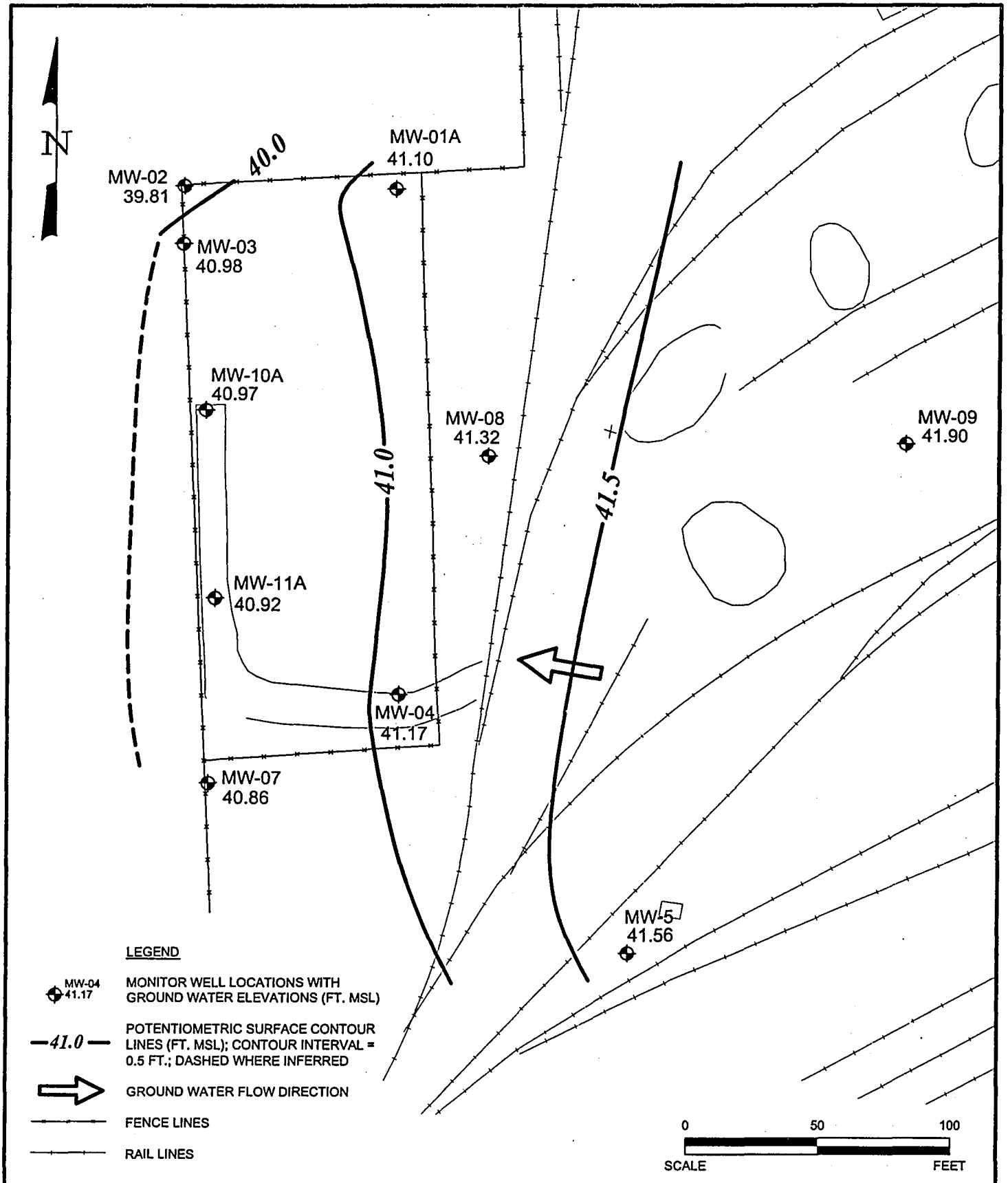
ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · DALLAS · BEAUMONT · BATON ROUGE

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

DESIGN: SG	CHKD.:	DATE: 02/20/01	REV.:
DRAWN: CAK	SCALE: AS SHOWN	W.O.NO.: 422009A104 B01	

ERM



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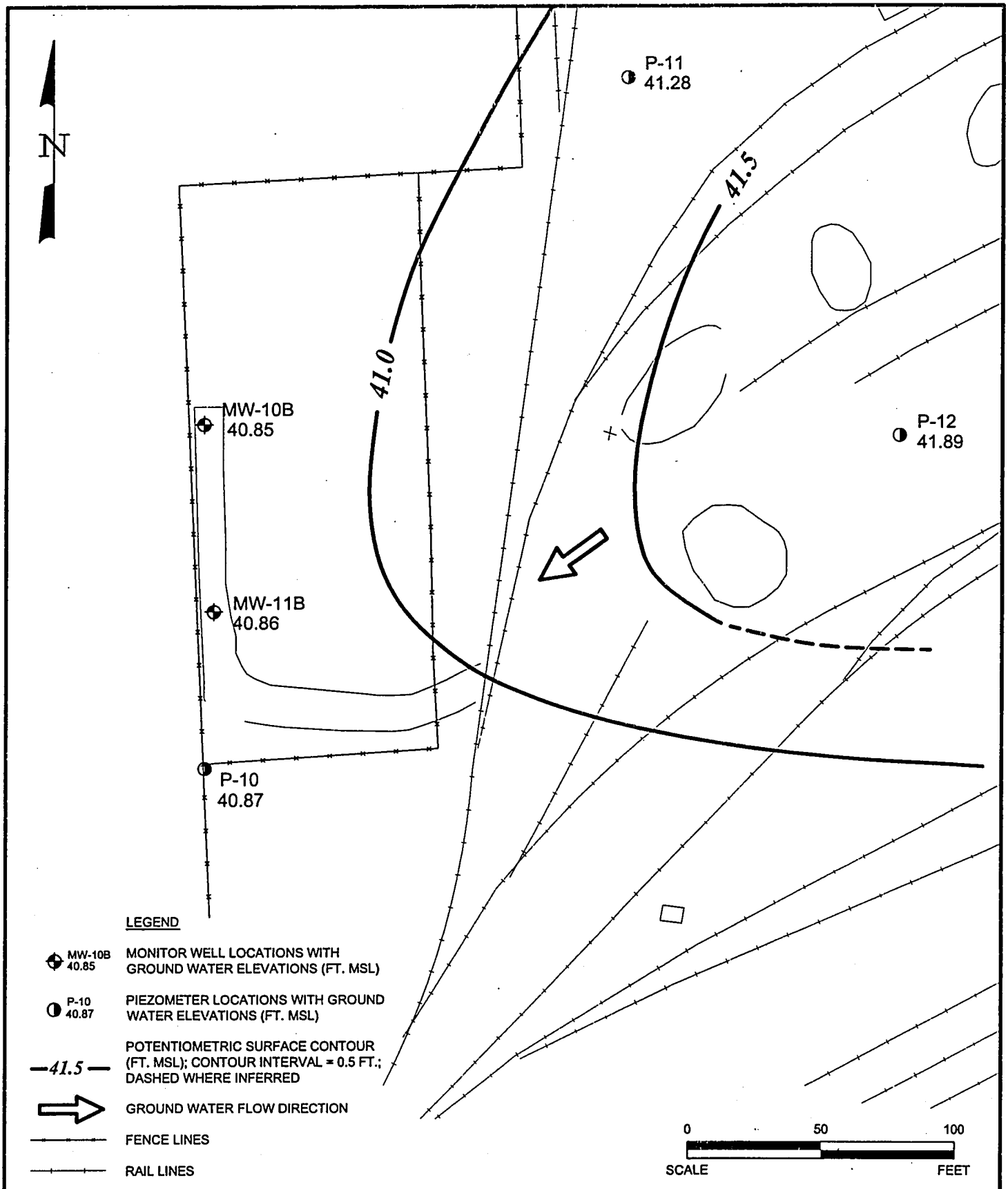
DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/18/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A108.dwg, 1/18/2002 1:16:44 PM		

FIGURE 2-1
A-TZ POTENTIOMETRIC SURFACE
OCTOBER 1, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



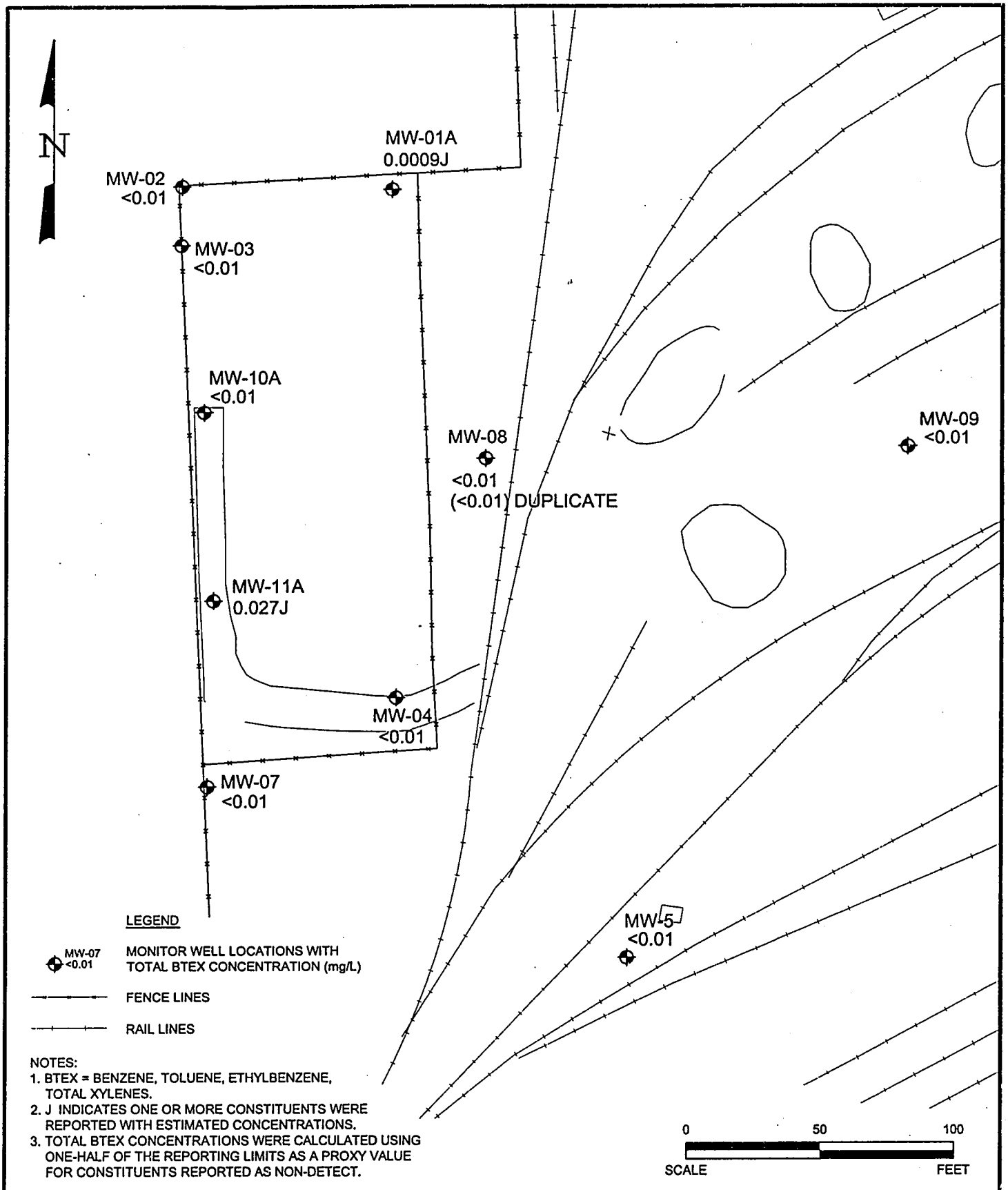
ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · DALLAS · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/18/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A109.dwg, 1/18/2002 3:06:10 PM		

FIGURE 2-2
B-TZ POTENTIOMETRIC SURFACE
OCTOBER 1, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



ERM-Southwest, Inc.
HOUSTON · NEW ORLEANS · AUSTIN · DALLAS · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

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DATE: 01/18/02	SCALE: AS SHOWN	REV.:
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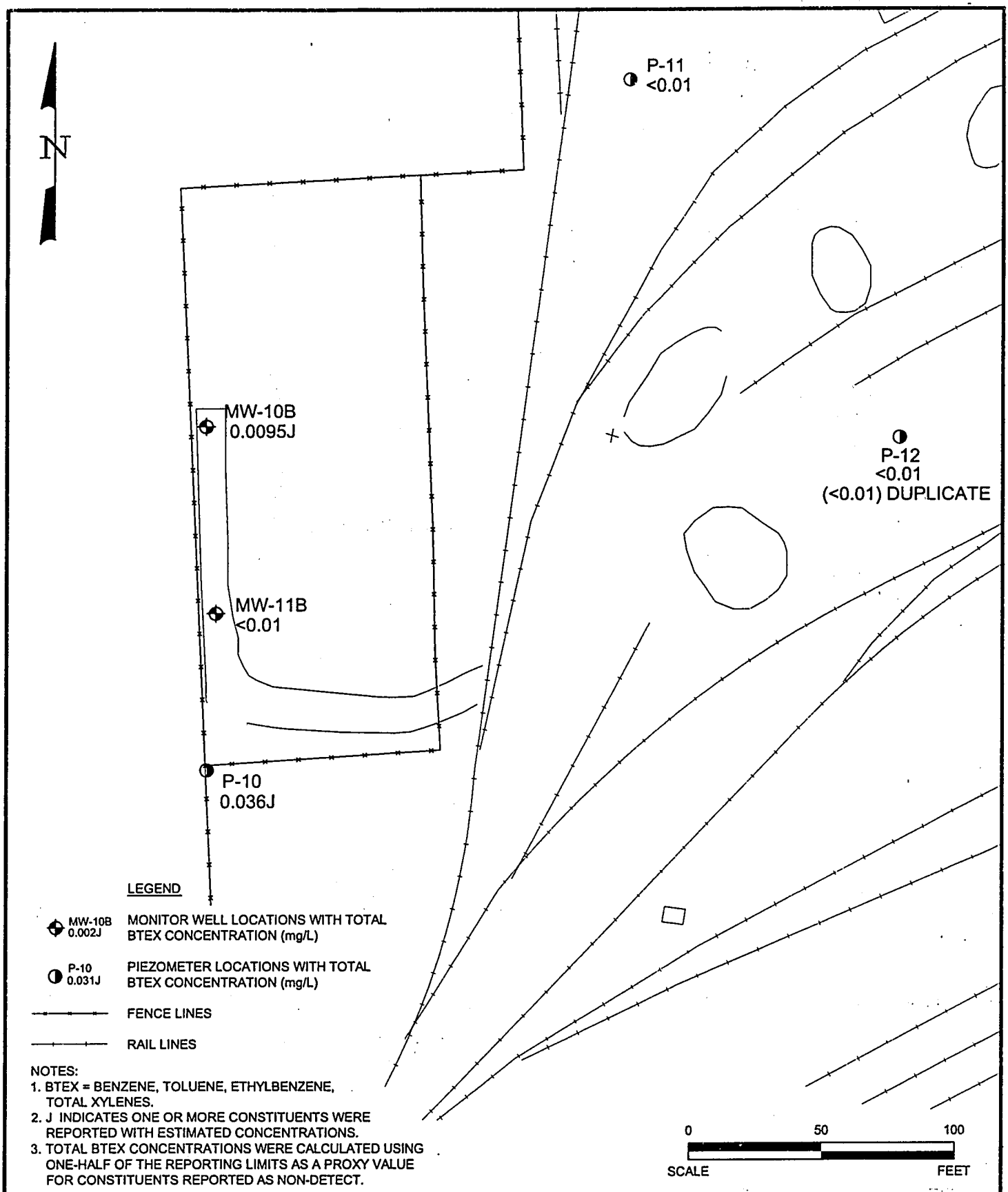
FIGURE 2-3
TOTAL BTEX IN A-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



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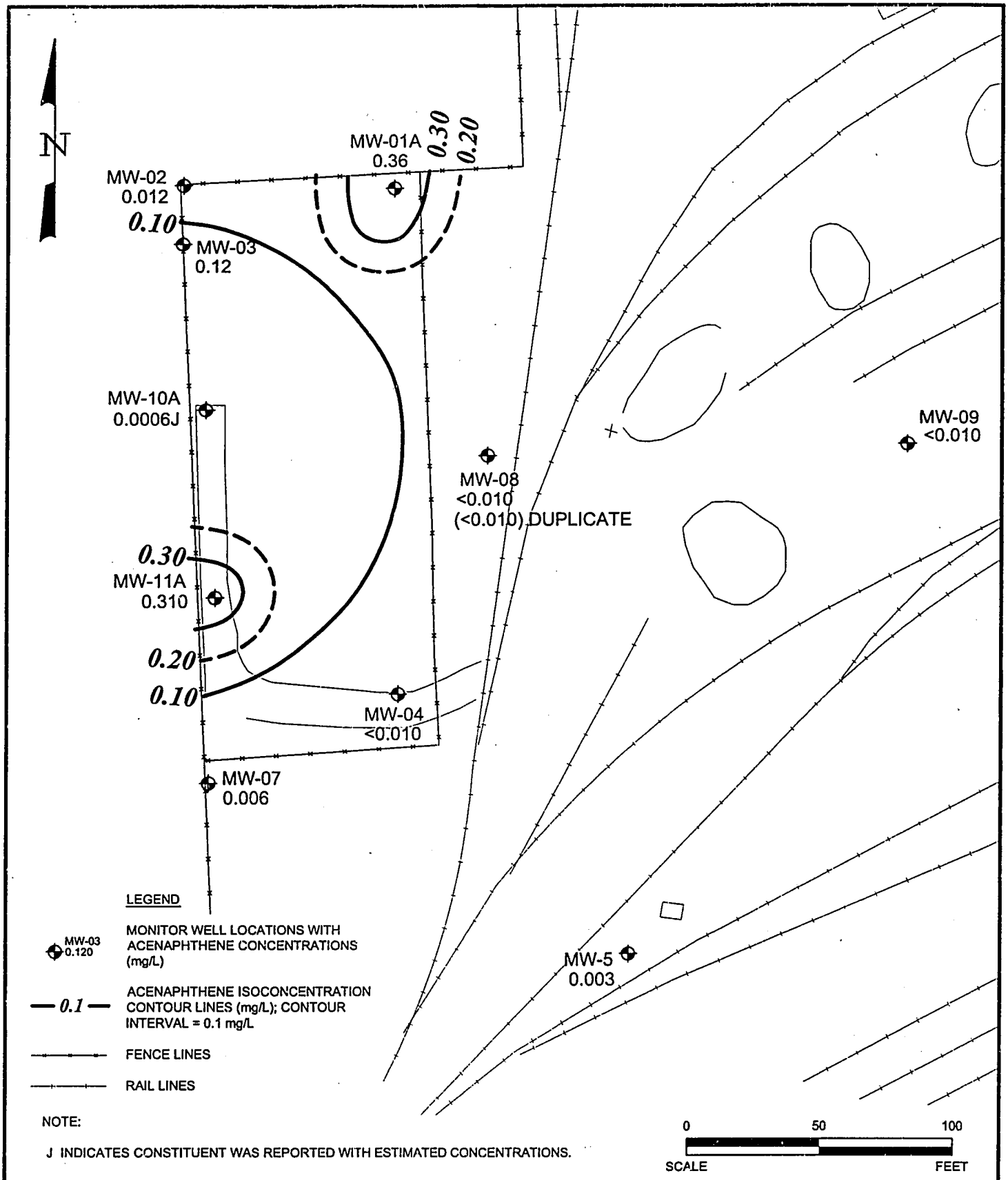
DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/18/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A112.dwg, 1/18/2002 3:07:23 PM		

FIGURE 2-4
TOTAL BTEX IN B-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



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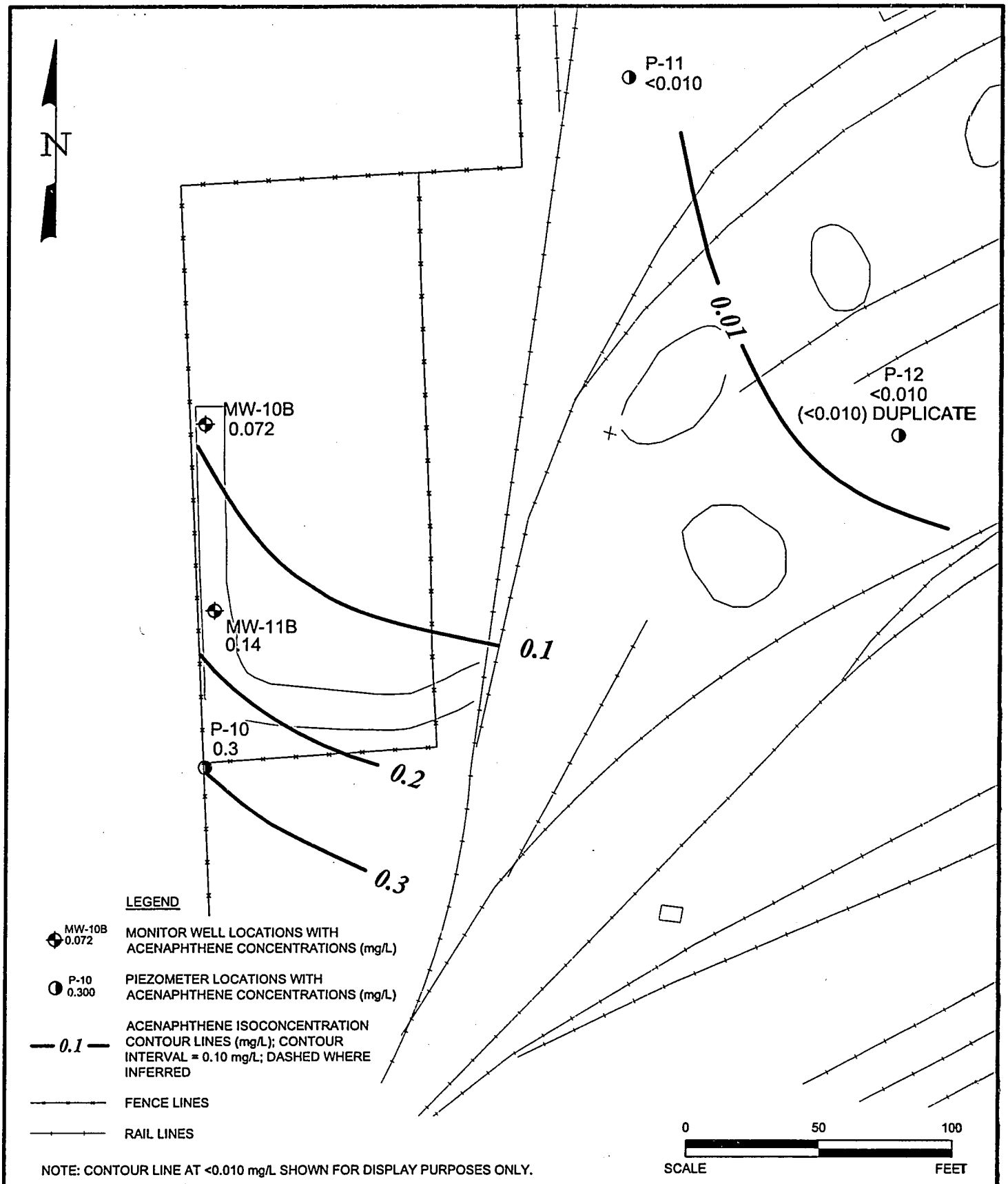
DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/22/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A113.dwg, 1/21/2002 2:13:15 PM		

FIGURE 2-5
ACENAPHTHENE IN A-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



NOTE: CONTOUR LINE AT <0.010 mg/L SHOWN FOR DISPLAY PURPOSES ONLY.

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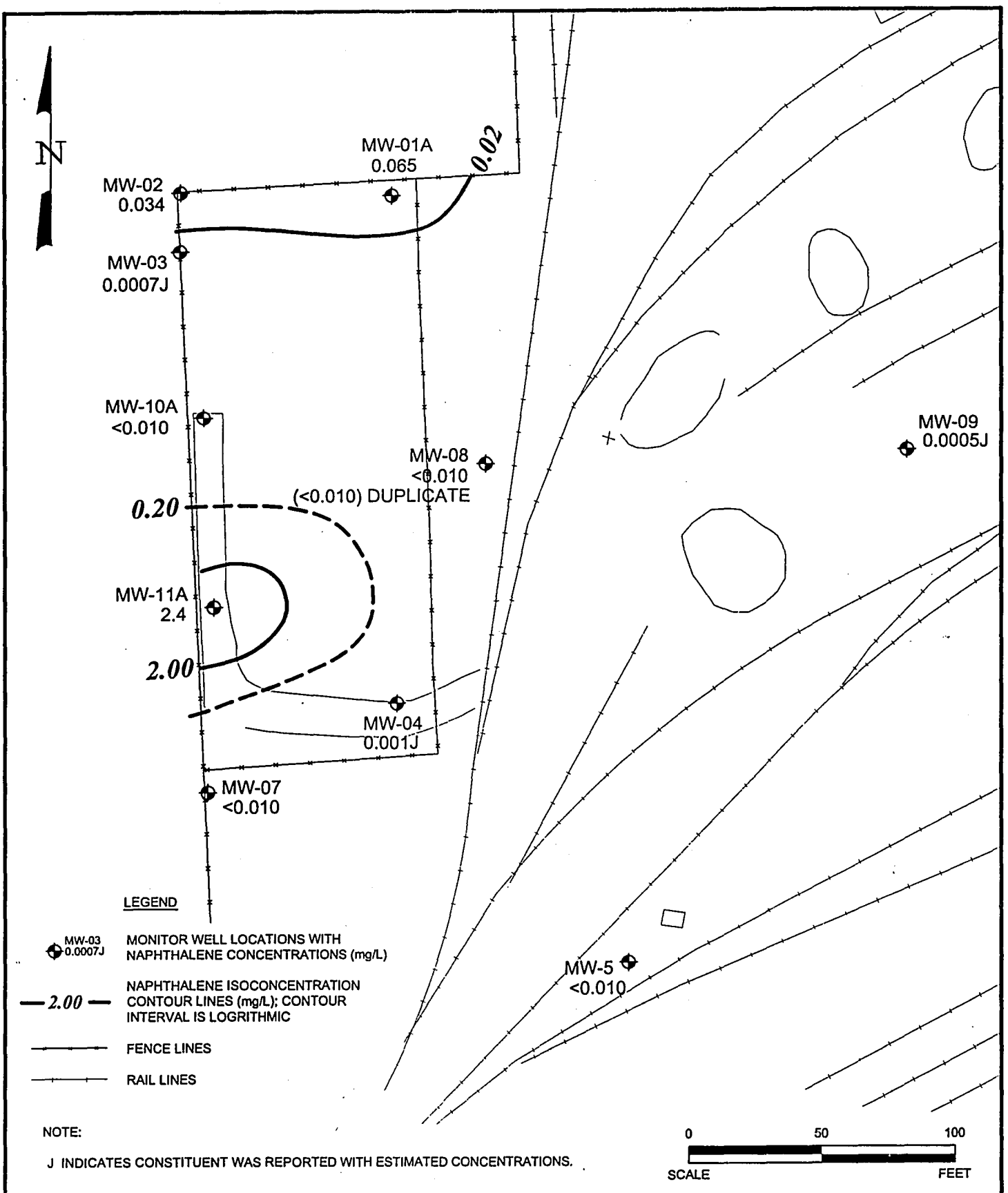
DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/18/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A114.dwg, 1/18/2002 3:08:14 PM		

FIGURE 2-6
ACENAPHTHENE IN B-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



ERM-Southwest, Inc.
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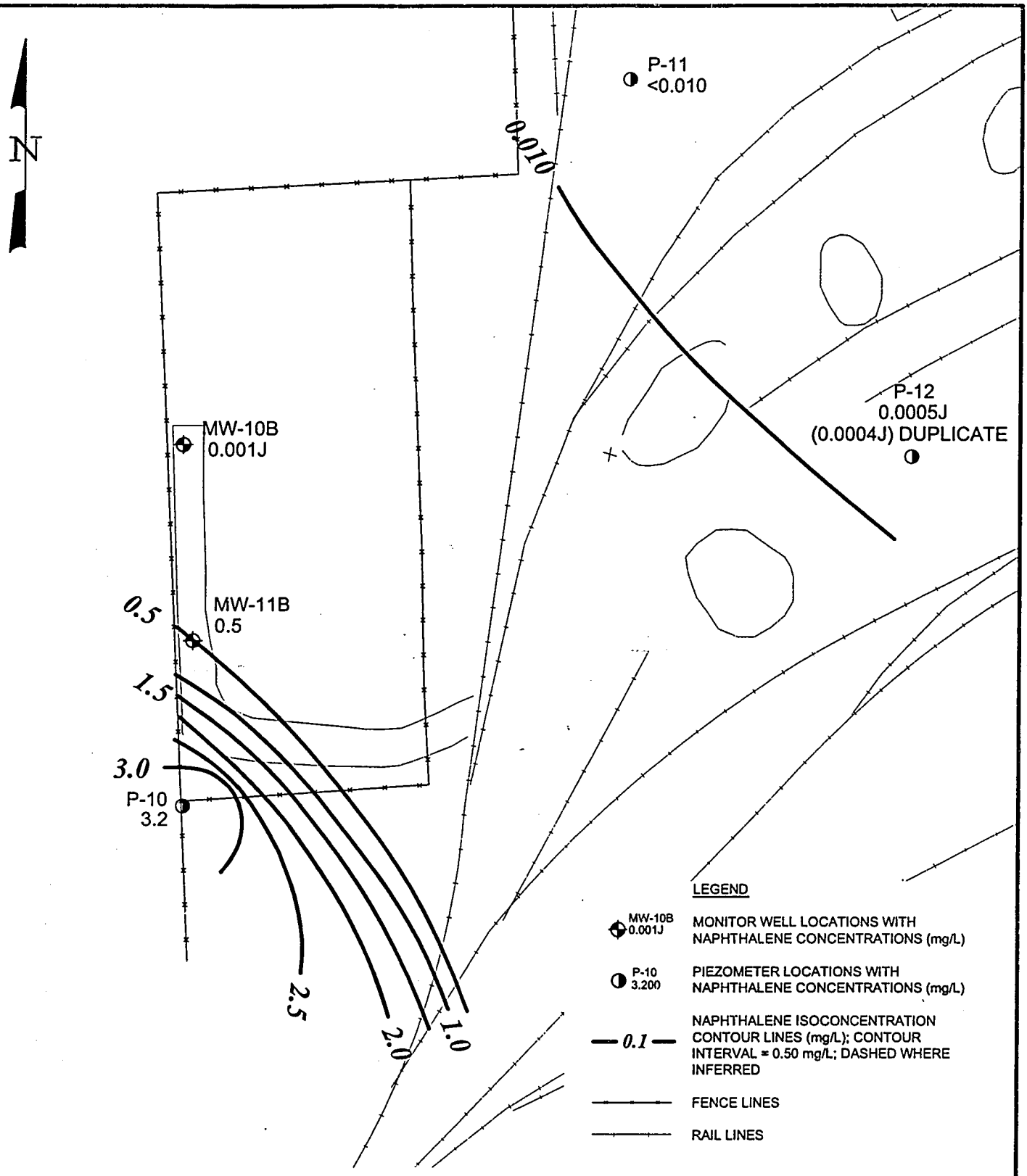
DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/22/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A115.dwg, 1/21/2002 2:38:18 PM		

FIGURE 2-7
NAPHTHALENE IN A-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



NOTES:
1. CONTOUR LINE AT <0.010 mg/L SHOWN FOR DISPLAY PURPOSES ONLY.
2. J INDICATES CONSTITUENT WAS REPORTED WITH ESTIMATED CONCENTRATIONS.

ERM-Southwest, Inc.
HOUSTON · NEW ORLEANS · AUSTIN · DALLAS · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

DESIGN: PJG	DRAWN: EFC	CHKD.:
DATE: 01/18/02	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\A02\422009A116.dwg, 1/18/2002 3:08:56 PM		

FIGURE 2-8
NAPHTHALENE IN B-TZ GROUND WATER (mg/L)
SEPTEMBER 27-28, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

Compliance Plan Tables

Appendix A

January 21, 2002
W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000

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TABLE I

Table of Hazardous and Solid Waste Constituents and Concentration Limits for Ground Water Protection Standard

COLUMN A Hazardous Constituents	COLUMN B Concentration 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-chlororethoxy)methane	ND (0.010)
Chlorobenzene	ND (0.005)
2-Chloronaphthalene	ND (0.010)
Chrysene	ND (0.010)
Dibenzofuran	ND (0.010)
1,2-Dichlorethane	ND (0.005)
Dichloromethane *	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)
Methylene chloride	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)
Phenanthrene	ND (0.010)
Phenol	ND (0.010)
Pyrene	ND (0.010)
Toluene	ND (0.005)
Xylenes	ND (0.005)

NOTES:

N.D. Non-detectable at Practical Quantitation Limit as determined by the analytical methods of the United States Environmental Protection Agency publication SW-846 Test Methods for Evaluating Solid Waste, Third Edition, November 1986, (USEPA SW-846) and as listed in the July 8, 1987 edition of the Federal Register and later editions. Practical Quantitation Limit (PQL) is indicated in parentheses. Practical Quantitation Limits are the lowest concentrations of analytes in ground-water that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions.

* Because Methylene Chloride is listed herein with a PQL of 0.010 mg/L, and is the same compound as Dichloromethane, comparisons for compliance will be made at 0.010 mg/L.

TABLE III

Designation of Wells by Function

1. POINT OF COMPLIANCE WELLS	SAMPLING FREQUENCY
A. A-TZ or Upper Transmissive Zone	
MW-01A	Semiannual
MW-02	Semiannual
MW-03	Semiannual
MW-10A	Semiannual
MW-11A	Semiannual
B. B-TZ or Second Transmissive Zone	
MW-10B	Semiannual
MW-11B	Semiannual
P-10	Semiannual

2. BACKGROUND WELLS

As proposed in the Compliance Plan Application, background values of the tested constituents will be assumed to be the Practical Quantitation Limit (PQL), and therefore, negate the need for background wells, unless this Compliance Plan is modified under Section VI.A.

3. CORRECTIVE ACTION OBSERVATION WELLS	SAMPLING FREQUENCY
A. On-site A-TZ or Uppermost Transmissive Zone	
MW-04	Semiannual
MW-05	Semiannual
MW-07	Semiannual
MW-08	Semiannual
MW-09	Semiannual
B. B-TZ or Second Transmissive Zone	
P-11	Semiannual
P-12	Semiannual

NOTE:

This table has been updated from CP-50343 where appropriate.

Field Parameters

Appendix B

January 21, 2002
W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000

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TABLE B-1

Ground Water Sampling Field Parameters

Second Semiannual Sampling Event, 2000
Houston Wood Preserving Works
Houston, Texas

Well ID / Date Sampled	MW-01A 09/28/01	MW-02 09/28/01	MW-03 09/28/01	MW-04 09/27/01	MW-05 09/27/01	MW-07 09/27/01	MW-08 09/27/01	MW-09 09/27/01
Time Sampled (hrs)	0845	0850	0940	1345	1105	1450	1245	1025
Temperature (°C)	23.32	22.43	23.09	25.12	25.50	24.20	25.98	27.68
pH (Standard Units)	6.53	6.63	6.90	6.44	6.87	6.72	6.99	6.63
Specific Conductivity (uS)	1467	470	867	791	801	976	684	870
Dissolved Oxygen (mg/L)	0.73	0.43	0.41	0.39	2.23	1.76	1.91	0.61
Turbidity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Well ID / Date Sampled	MW-10A 09/28/01	MW-10B 09/28/01	MW-11A 09/27/01	MW-11B 09/27/01	P-10 09/27/01	P-11 09/27/01	P-12 09/27/01
Time Sampled (hrs)	1040	0920	1440	1530	1550	0925	905
Temperature (°C)	24.61	23.15	24.19	25.12	23.44	24.72	24.51
pH (Standard Units)	6.82	7.08	6.77	7.02	6.63	6.94	6.58
Specific Conductivity (uS)	1270	1486	1214	1338	1310	1345	1404
Dissolved Oxygen (mg/L)	2.72	3.66	0.46	0.33	1.93	3.46	0.93
Turbidity	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Laboratory Analytical Reports

Appendix C

January 21, 2002
W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000

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SEVERN TRENT SERVICES

STL Houston

ANALYTICAL REPORT

JOB NUMBER: 224839

Prepared For:

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

Attention: Peter Gagnon

Date: 10/26/2001

Signature

10/26/01
Date

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: [redacted]

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

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SEVERN TRENT SERVICES

STL Houston

10/26/2001

Peter Gagnon
ERM Southwest, Inc.- Houston
16300 Katy Freeway
Suite 300
Houston, TX 77094-1611

Reference:
Project : UPRR-HWPW
Project No. : 224839
Date Received : 09/27/2001
STL Job : 224839

Dear Peter Gagnon:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

1. P-11-2SA 01	2. MW-05-2SA 01	3. MW-08-2SA 01
4. MW-08D-2SA 01	5. MW-07-2SA 01	6. P10-2SA 01
7. P12-2SAO1	8. P12D-2SAO1	9. MW9-2SAO1
10. MW9 MS-2SAO1	11. MW9 MSD-2SAO1	12. MW04-2SAO1
13. MW11A-2SAO1	14. MW11B-2SAO1	15. TB092701 1
16. TB092701 2	17. TB092701 3	

All holding times were met for the tests performed on these samples.

Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting Severn-Trent Laboratories to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Sachin G. Kudchadkar
Project Manager

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SEVERN TRENT SERVICES

STL Houston

SAMPLE INFORMATION

Date: 10/26/2001

Job Number.: 224839
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Peter Gagnon

Project Number.....: 99000484
Customer Project ID....: UPRR: 2ND SEMIANNUAL
Project Description....: UPRR-HWPW

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
224839-1	P-11-2SA 01	Water	09/27/2001	09:25	09/27/2001	17:32
224839-2	MW-05-2SA 01	Water	09/27/2001	11:05	09/27/2001	17:32
224839-3	MW-08-2SA 01	Water	09/27/2001	12:45	09/27/2001	17:32
224839-4	MW-08D-2SA 01	Water	09/27/2001	13:00	09/27/2001	17:32
224839-5	MW-07-2SA 01	Water	09/27/2001	14:50	09/27/2001	17:32
224839-6	P10-2SA 01	Water	09/27/2001	15:50	09/27/2001	17:32
224839-7	P12-2SA01	Water	09/27/2001	09:05	09/27/2001	17:32
224839-8	P12D-2SA01	Water	09/27/2001	09:15	09/27/2001	17:32
224839-9	MW9-2SA01	Water	09/27/2001	10:25	09/27/2001	17:32
224839-10	MW9 MS-2SA01	Water	09/27/2001	10:35	09/27/2001	17:32
224839-11	MW9 MSD-2SA01	Water	09/27/2001	10:45	09/27/2001	17:32
224839-12	MW04-2SA01	Water	09/27/2001	13:45	09/27/2001	17:32
224839-13	MW11A-2SA01	Water	09/27/2001	14:00	09/27/2001	17:32
224839-14	MW11B-2SA01	Water	09/27/2001	15:30	09/27/2001	17:32
224839-15	TB092701 1	Trip Blank	09/27/2001	00:01	09/27/2001	17:32
224839-16	TB092701 2	Trip Blank	09/27/2001	00:01	09/27/2001	17:32
224839-17	TB092701 3	Trip Blank	09/27/2001	00:01	09/27/2001	17:32

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: P-11-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:25
Sample Matrix.....: Water

Laboratory Sample ID: 224839-1
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/09/01 2301	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/09/01 2301	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/09/01 2301	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/09/01 2301	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/09/01 2301	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/09/01 2301	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Anthracene, Water	0.5	J		0.4	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/03/01 1909	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.6	J		0.5	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1909	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: P-11-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:25
Sample Matrix.....: Water

Laboratory Sample ID: 224839-1
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/03/01 1909	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/03/01 1909	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/03/01 1909	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 1909	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
CT	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1831	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 1831	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-05-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 11:05
Sample Matrix.....: Water

Laboratory Sample ID: 224839-2
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/09/01 2329	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/09/01 2329	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/09/01 2329	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/09/01 2329	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	37945		10/09/01 2329	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/09/01 2329	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	3			0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Anthracene, Water	0.9	J		0.4	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/03/01 1938	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.6	J		0.5	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Di-n-butyl Phthalate, Water	0.5	J		0.4	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Fluoranthene, Water	0.5	J		0.4	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	Pyrene, Water	0.6	J		0.3	2	1.00000	ug/L	37511		10/03/01 1938	lg1

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-05-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 11:05
Sample Matrix.....: Water

Laboratory Sample ID: 224839-2
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/03/01 1938	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/03/01 1938	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/03/01 1938	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 1938	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1900	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 1900	zfl

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-08-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 12:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-3
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/09/01 2356	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/09/01 2356	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/09/01 2356	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/09/01 2356	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/09/01 2356	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/09/01 2356	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Anthracene, Water	0.8	J		0.4	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/03/01 2007	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Fluoranthene, Water	0.5	J		0.4	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	Pyrene, Water	0.4	J		0.3	2	1.00000	ug/L	37511		10/03/01 2007	lg1

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW-08-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 12:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-3
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/03/01 2007	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/03/01 2007	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/03/01 2007	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/03/01 2007	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1928	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 1928	zfl

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW-08D-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 13:00
Sample Matrix.....: Water

Laboratory Sample ID: 224839-4
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0024	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0024	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0024	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0024	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 0024	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0024	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Anthracene, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1234	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	J		0.5	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	Pyrene, Water	0.5	J		0.3	2	1.00000	ug/L	37511		10/04/01 1234	lg1

1C

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-08D-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 13:00
Sample Matrix.....: Water

Laboratory Sample ID: 224839-4
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1234	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1234	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1234	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1234	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 1956	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 1956	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: MW-07-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 14:50
Sample Matrix.....: Water

Laboratory Sample ID: 224839-5
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0051	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0051	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0051	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0051	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	37945		10/10/01 0051	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0051	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	6			0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Anthracene, Water	2	J		0.4	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1303	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.6	J		0.5	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Fluoranthene, Water	1	J		0.4	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Phenanthrene, Water	0.4	J		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	Pyrene, Water	0.9	J		0.3	2	1.00000	ug/L	37511		10/04/01 1303	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: MW-07-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 14:50
Sample Matrix.....: Water

Laboratory Sample ID: 224839-5
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1303	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1303	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1303	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1303	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2025	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 2025	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: P10-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 15:50
Sample Matrix.....: Water

Laboratory Sample ID: 224839-6
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0119	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0119	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0119	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0119	lg1
	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	37945		10/10/01 0119	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0119	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	300			5	30	20.00000	ug/L	37511		10/05/01 1638	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Anthracene, Water	13			0.4	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1333	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	J		0.5	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Dibenzofuran, Water	130			6	30	20.00000	ug/L	37511		10/05/01 1638	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Fluoranthene, Water	10			0.4	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Fluorene, Water	170			5	30	20.00000	ug/L	37511		10/05/01 1638	lg1
	2-Methylnaphthalene, Water	140			5	30	20.00000	ug/L	37511		10/05/01 1638	lg1
	Naphthalene, Water	3200			68	400	200.0000	ug/L	37511		10/05/01 1707	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	Phenanthrene, Water	120			6	30	20.00000	ug/L	37511		10/05/01 1638	lg1
	Pyrene, Water	6			0.3	2	1.00000	ug/L	37511		10/04/01 1333	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: P10-2SA 01
Date Sampled.....: 09/27/2001
Time Sampled.....: 15:50
Sample Matrix.....: Water

Laboratory Sample ID: 224839-6
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1333	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1333	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1333	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1333	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	Ethylbenzene, Water	17			2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2218	zfl
	Xylenes (total), Water	14	J		5	15	1.00000	ug/L	37206		10/01/01 2218	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: P12-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:05
Sample Matrix.....: Water

Laboratory Sample ID: 224839-7
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0146	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0146	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0146	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0146	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 0146	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0146	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1402	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Naphthalene, Water	0.5	J		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	Pyrene, Water	10			0.3	2	1.00000	ug/L	37511		10/04/01 1402	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: P12-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:05
Sample Matrix.....: Water

Laboratory Sample ID: 224839-7
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1402	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1402	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1402	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1402	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2053	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 2053	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: P12D-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:15
Sample Matrix.....: Water

Laboratory Sample ID: 224839-8
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0807	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0807	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0807	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0807	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 0807	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0807	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1431	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Naphthalene, Water	0.4	J		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	Pyrene, Water	9			0.3	2	1.00000	ug/L	37511		10/04/01 1431	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: P12D-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 09:15
Sample Matrix.....: Water

Laboratory Sample ID: 224839-8
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1431	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1431	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1431	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1431	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2121	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 2121	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW9-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 224839-9
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0834	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0834	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0834	lg1
2	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0834	lg1
CJ	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 0834	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0834	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Anthracene, Water	0.9	J		0.4	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1501	lg1
	Bis(2-ethylhexyl)phthalate, Water	1	J		0.5	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Di-n-butyl Phthalate, Water	0.4	J		0.4	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Naphthalene, Water	0.5	J		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Phenanthrene, Water	0.3	J		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1501	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: MW9-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 224839-9
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1501	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1501	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1501	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1501	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1601	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1601	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW9 MS-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:35
Sample Matrix.....: Water

Laboratory Sample ID: 224839-10
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0902	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0902	lg1
	2,4-Dinitrotoluene, Water	9			0.02	1	1.00000	ug/L	37945		10/04/01 1530	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0902	lg1
	Pentachlorophenol, Water	24			0.2	1	1.00000	ug/L	37945		10/04/01 1530	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0902	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	11			0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1530	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.9	J		0.5	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Naphthalene, Water	0.4	J		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	Pyrene, Water	13			0.3	2	1.00000	ug/L	37511		10/04/01 1530	lg1

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW9 MS-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:35
Sample Matrix.....: Water

Laboratory Sample ID: 224839-10
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1530	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1530	lg1
	4-Nitrophenol, Water	5	J		1	7	1.00000	ug/L	37511		10/04/01 1530	lg1
	Phenol, Water	10			0.2	2	1.00000	ug/L	37511		10/04/01 1530	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	44			2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	Chlorobenzene, Water	51			2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	Methylene Chloride, Water	2	J		2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	Toluene, Water	50			2	5	1.00000	ug/L	37206		10/02/01 1630	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1630	zfl

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW9 MSD-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-11
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0929	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0929	lg1
	2,4-Dinitrotoluene, Water	11			0.02	1	1.00000	ug/L	37945		10/04/01 1559	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0929	lg1
	Pentachlorophenol, Water	23			0.2	1	1.00000	ug/L	37945		10/04/01 1559	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0929	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	10			0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Anthracene, Water	0.8	J		0.4	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1559	lg1
	Bis(2-ethylhexyl)phthalate, Water	1	J		0.5	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Di-n-butyl Phthalate, Water	0.8	J		0.4	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Naphthalene, Water	0.4	J		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	Pyrene, Water	14			0.3	2	1.00000	ug/L	37511		10/04/01 1559	lg1

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW9 MSD-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 10:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-11
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1559	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1559	lg1
	4-Nitrophenol, Water	6	J		1	7	1.00000	ug/L	37511		10/04/01 1559	lg1
	Phenol, Water	9			0.2	2	1.00000	ug/L	37511		10/04/01 1559	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	46			2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	Chlorobenzene, Water	48			2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	Methylene Chloride, Water	2	J		2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	Toluene, Water	50			2	5	1.00000	ug/L	37206		10/02/01 1659	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1659	zfl

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LABORATORY TEST RESULTS

Job Number: 224839

Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: MW04-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 13:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-12
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 0957	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 0957	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 0957	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 0957	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 0957	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 0957	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Acenaphthylene, Water	0.3	J		0.2	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Anthracene, Water	1	J		0.4	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1629	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Dibenzofuran, Water	0.3	J		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Naphthalene, Water	1	J		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1629	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW04-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 13:45
Sample Matrix.....: Water

Laboratory Sample ID: 224839-12
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1629	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1629	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1629	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1629	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
12	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/01/01 2150	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/01/01 2150	zfl

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW11A-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 14:00
Sample Matrix.....: Water

Laboratory Sample ID: 224839-13
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 1025	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 1025	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 1025	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 1025	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 1025	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 1025	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	310			3	15	10.00000	ug/L	37511		10/05/01 1736	lg1
	Acenaphthylene, Water	4			0.2	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Anthracene, Water	8			0.4	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1658	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.8	J		0.5	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Dibenzofuran, Water	130			3	15	10.00000	ug/L	37511		10/05/01 1736	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Fluoranthene, Water	12			0.4	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Fluorene, Water	180			3	15	10.00000	ug/L	37511		10/05/01 1736	lg1
	2-Methylnaphthalene, Water	140			3	15	10.00000	ug/L	37511		10/05/01 1736	lg1
	Naphthalene, Water	2400			68	400	200.0000	ug/L	37511		10/05/01 1805	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	Phenanthrene, Water	75			3	15	10.00000	ug/L	37511		10/05/01 1736	lg1
	Pyrene, Water	8			0.3	2	1.00000	ug/L	37511		10/04/01 1658	lg1

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW11A-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 14:00
Sample Matrix.....: Water

Laboratory Sample ID: 224839-13
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1658	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1658	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1658	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1658	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	3	J		2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	Ethylbenzene, Water	7			2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	Toluene, Water	3	J		2	5	1.00000	ug/L	37206		10/02/01 1727	zfl
	Xylenes (total), Water	14	J		5	15	1.00000	ug/L	37206		10/02/01 1727	zfl

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW11B-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 15:30
Sample Matrix.....: Water

Laboratory Sample ID: 224839-14
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37213		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37945		10/10/01 1052	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37945		10/10/01 1052	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37945		10/10/01 1052	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37945		10/10/01 1052	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37945		10/10/01 1052	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37945		10/10/01 1052	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	140			1	8	5.00000	ug/L	37511		10/05/01 1835	lg1
	Acenaphthylene, Water	3			0.2	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Anthracene, Water	5			0.4	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37511		10/04/01 1728	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Dibenzofuran, Water	68			1	8	5.00000	ug/L	37511		10/05/01 1835	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Fluoranthene, Water	4			0.4	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Fluorene, Water	72			1	8	5.00000	ug/L	37511		10/05/01 1835	lg1
	2-Methylnaphthalene, Water	56			1	8	5.00000	ug/L	37511		10/05/01 1835	lg1
	Naphthalene, Water	500			7	40	20.00000	ug/L	37511		10/05/01 1904	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Phenanthrene, Water	46			0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	Pyrene, Water	3			0.3	2	1.00000	ug/L	37511		10/04/01 1728	lg1

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW11B-2SA01
Date Sampled.....: 09/27/2001
Time Sampled.....: 15:30
Sample Matrix.....: Water

Laboratory Sample ID: 224839-14
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37511		10/04/01 1728	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37511		10/04/01 1728	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37511		10/04/01 1728	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37511		10/04/01 1728	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1756	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1756	zfl

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: TB092701 1
Date Sampled.....: 09/27/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 224839-15
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	Methylene Chloride, Water	3	J		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1406	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1406	zfl

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR: 2ND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: TB092701 2
Date Sampled.....: 09/27/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 224839-16
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	Methylene Chloride, Water	2	J		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1435	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1435	zfl

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LABORATORY TEST RESULTS

Job Number: 224839

Date:10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: TB092701 3
Date Sampled.....: 09/27/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 224839-17
Date Received.....: 09/27/2001
Time Received.....: 17:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37206		10/02/01 1504	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37206		10/02/01 1504	zfl

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STL Houston

QUALITY CONTROL RESULTS

Job Number.: 224839 Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: lg1
Method Description.: Semivolatile Organics - SIM Analysis Batch(s)...: 37945

MB	Method Blank	SVS091801D	37213		10/09/2001	2234

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0							
Bis(2-chloroethoxy)methane, Water	0							
2,4-Dinitrotoluene, Water	0							
2,6-Dinitrotoluene, Water	0							
Pentachlorophenol, Water	0.07761							
1,2-Diphenylhydrazine, Water	0							

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: lg1
Method Description.: Semivolatile Organics, Low Level Batch(s)...: 37511

LCS	Laboratory Control Sample	SVS081501B	37213		10/03/2001	1840

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	4.97936		5.000000		99.6		32-165	
Acenaphthylene, Water	4.33651		5.000000		86.7		10-150	
Anthracene, Water	5.12338		5.000000		102.5		23-178	
Benzo(a)anthracene, Water	5.46537		5.000000		109.3		25-180	
Bis(2-ethylhexyl)phthalate, Water	6.12155		5.000000		122.4		25-173	
2-Chloronaphthalene, Water	5.54770		5.000000		111.0		23-143	
Chrysene, Water	5.30319		5.000000		106.1		23-180	
Dibenzofuran, Water	4.87607		5.000000		97.5		35-153	
Di-n-butyl Phthalate, Water	6.22319		5.000000		124.5		28-185	
Fluoranthene, Water	5.24094		5.000000		104.8		28-180	
Fluorene, Water	5.02917		5.000000		100.6		30-189	
2-Methylnaphthalene, Water	4.79193		5.000000		95.8		26-168	
Naphthalene, Water	4.91886		5.000000		98.4		36-139	
Nitrobenzene, Water	4.89059		5.000000		97.8		17-163	
n-Nitrosodiphenylamine, Water	6.49219		5.000000		129.8		58-174	
Phenanthrene, Water	5.04801		5.000000		101.0		26-166	
Pyrene, Water	5.64211		5.000000		112.8		28-173	
2,4-Dimethylphenol, Water	4.53954		5.000000		90.8		23-157	
2-Methyl-4,6-dinitrophenol, Water	2.78270		5.000000		55.7		17-164	
4-Nitrophenol, Water	2.15592		5.000000		43.1		10-92	
Phenol, Water	2.59507		5.000000		51.9		20-83	

MB	Method Blank	SVS091801D	37213		10/03/2001	1811

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	0							
Acenaphthylene, Water	0							
Anthracene, Water	0							
Benzo(a)anthracene, Water	0							
Bis(2-ethylhexyl)phthalate, Water	0.17713							
2-Chloronaphthalene, Water	0							
Chrysene, Water	0							

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QUALITY CONTROL RESULTS

Job Number.: 224839 Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS091801D	37213		10/03/2001	1811

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Dibenzofuran, Water	0							
Di-n-butyl Phthalate, Water	0.44354							
Fluoranthene, Water	0							
Fluorene, Water	0							
2-Methylnaphthalene, Water	0							
Naphthalene, Water	0							
Nitrobenzene, Water	0							
n-Nitrosodiphenylamine, Water	0							
Phenanthrene, Water	0							
Pyrene, Water	0							
2,4-Dimethylphenol, Water	0							
2-Methyl-4,6-dinitrophenol, Water	0							
4-Nitrophenol, Water	0							
Phenol, Water	0							

MS	Matrix Spike	SVS090501A	224839-10		10/04/2001	1530

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	5.26179		5.000000	0.06954	104		46-118	
Pyrene, Water	6.25115		5.000000	0.09758	123		52-127	
4-Nitrophenol, Water	2.53769		10.000000	0	25		10-80	
Phenol, Water	4.84266		10.000000	0	48		10-112	

MSD	Matrix Spike Duplicate	SVS090501A	224839-11		10/04/2001	1559

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	5.17808	5.26179	5.000000	0.06954	102		46-118	
					1.6		31.0	
Pyrene, Water	6.93060	6.25115	5.000000	0.09758	137		52-127	A
					10.3		31.0	
4-Nitrophenol, Water	2.97642	2.53769	10.000000	0	30		10-80	
					15.9		50.0	
Phenol, Water	4.39432	4.84266	10.000000	0	44		10-112	
					9.7		23.0	

Test Method.....: SW-846 8260B Units.....: ug/L Analyst...: zfl
Method Description.: Volatile Organics Batch(s)...: 37206

LCS	Laboratory Control Sample	VS091801E			10/01/2001	1222

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	53.2558		50.00	ND	106.5		68-127	
Chlorobenzene, Water	53.4648		50.00	ND	106.9		65-129	
1,2-Dichloroethane, Water	47.1521		50.00	ND	94.3		65-133	
Ethylbenzene, Water	54.8692		50.00	ND	109.7		64-132	
Methylene Chloride, Water	53.0609		50.00	ND	106.1		54-133	
Toluene, Water	54.4841		50.00	ND	109.0		63-127	

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QUALITY CONTROL RESULTS

Job Number.: 224839 Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS091801E			10/01/2001	1222

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Xylenes (total), Water	162.982		150.00	ND	108.7		37-161	

LCS	Laboratory Control Sample	VS100201E			10/02/2001	1338

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	49.1514		50.00	ND	98.3		68-127	
Chlorobenzene, Water	49.3218		50.00	ND	98.6		65-129	
1,2-Dichloroethane, Water	47.9000		50.00	ND	95.8		65-133	
Ethylbenzene, Water	51.4104		50.00	ND	102.8		64-132	
Methylene Chloride, Water	46.4637		50.00	ND	92.9		54-133	
Toluene, Water	48.2360		50.00	ND	96.5		63-127	
Xylenes (total), Water	152.025		150.00	ND	101.3		37-161	

MB	Method Blank	VS091801C			10/01/2001	1318

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Chlorobenzene, Water	ND							
1,2-Dichloroethane, Water	ND							
Ethylbenzene, Water	ND							
Methylene Chloride, Water	ND							
Toluene, Water	ND							
Xylenes (total), Water	ND							

MB	Method Blank	VS100201C			10/02/2001	1309

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Chlorobenzene, Water	ND							
1,2-Dichloroethane, Water	ND							
Ethylbenzene, Water	ND							
Methylene Chloride, Water	ND							
Toluene, Water	ND							
Xylenes (total), Water	ND							

MS	Matrix Spike	VS091801F	224932-3		10/01/2001	1609

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	44.0926		50.00	ND	88		65-125	
Chlorobenzene, Water	49.1561		50.00	ND	98		74-122	
Toluene, Water	48.7147		50.00	ND	97		76-125	

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QUALITY CONTROL RESULTS

Job Number.: 224839 Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	VS100201F	224839-10		10/02/2001	1630

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	44.1301		50.00	ND	88		65-125	
Chlorobenzene, Water	50.7440		50.00	ND	101		74-122	
Toluene, Water	50.4667		50.00	ND	101		76-125	

MSD	Matrix Spike Duplicate	VS091801F	224932-4		10/01/2001	1638

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	50.0594	44.0926	50.00	ND	100		65-125	
					12.7		30.0	
Chlorobenzene, Water	53.5526	49.1561	50.00	ND	107		74-122	
					8.6		30.0	
Toluene, Water	53.2036	48.7147	50.00	ND	106		76-125	
					8.8		30.0	

MSD	Matrix Spike Duplicate	VS100201F	224839-11		10/02/2001	1659

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	45.5324	44.1301	50.00	ND	91		65-125	
					3.1		30.0	
Chlorobenzene, Water	48.0852	50.7440	50.00	ND	96		74-122	
					5.4		30.0	
Toluene, Water	49.5517	50.4667	50.00	ND	99		76-125	
					1.8		30.0	

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SURROGATE RECOVERIES REPORT

Job Number.: 224839

Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR: 2ND SEMIANNUAL | ATTN: Peter Gagnon

Method.....: Volatile Organics
Method Code...: 8260

Test Matrix...: Water
Batch(s).....: 37206

Prep Batch..:

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
LCS			10/01/2001	101.5	107.1	114.9	114.5
LCS			10/02/2001	104.4	98.3	104.0	107.9
MB			10/01/2001	92.6	93.0	100.8	111.6
MB			10/02/2001	96.8	99.4	93.6	102.5
224839- 1		P-11-2SA 01	10/01/2001	102.8	96.9	98.1	107.2
224839- 2		MW-05-2SA 01	10/01/2001	95.2	97.6	98.6	104.7
224839- 3		MW-08-2SA 01	10/01/2001	92.7	91.7	95.0	106.6
224839- 4		MW-08D-2SA 01	10/01/2001	95.9	92.2	95.4	103.4
224839- 5		MW-07-2SA 01	10/01/2001	95.5	94.4	97.3	107.7
224839- 6		P10-2SA 01	10/01/2001	100.7	93.5	98.5	106.6
224839- 7		P12-2SA01	10/01/2001	95.0	92.8	97.8	104.4
224839- 8		P12D-2SA01	10/01/2001	100.8	100.3	95.0	102.8
224839- 9		MW9-2SA01	10/02/2001	100.4	104.0	99.8	111.0
224839- 10		MW9 MS-2SA01	10/02/2001	102.9	91.5	104.3	110.3
224839- 10	MS	MW9 MS-2SA01	10/02/2001	102.9	91.5	104.3	110.3
224839- 11		MW9 MSD-2SA01	10/02/2001	99.3	92.4	95.2	100.8
224839- 11	MSD	MW9 MSD-2SA01	10/02/2001	99.3	92.4	95.2	100.8
224839- 12		MW04-2SA01	10/01/2001	105.1	92.8	101.5	102.7
224839- 13		MW11A-2SA01	10/02/2001	109.0	85.9	102.8	110.6
224839- 14		MW11B-2SA01	10/02/2001	99.3	93.0	97.6	99.3
224839- 15		TB092701 1	10/02/2001	92.8	98.9	97.6	113.2
224839- 16		TB092701 2	10/02/2001	98.1	99.4	94.6	104.1
224839- 17		TB092701 3	10/02/2001	96.4	98.4	96.4	104.4
224932- 3	MS	M-121-50-MS	10/01/2001	100.2	97.9	103.8	107.5
224932- 4	MSD	M-121-50-MSD	10/01/2001	99.6	97.4	103.3	112.2

Test	Test Description	Limits
12DCED	1,2-Dichloroethane-d4	70 - 130
BRFLBE	4-Bromofluorobenzene	70 - 130
DBRFLM	Dibromofluoromethane	70 - 130
TOLD8	Toluene-d8	70 - 130

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SURROGATE RECOVERIES REPORT

Job Number.: 224839 Report Date.: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Method.....: Semivolatile Organics, Low Level Test Matrix...: Water Prep Batch..: 37213
Method Code...: 8270LL Batch(s).....: 37511

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
LCS			10/03/2001	115	92	76	100	42	111
MB			10/03/2001	108	93	71	100	41	118
224839- 1		P-11-2SA 01	10/03/2001	109	94	68	101	40	94
224839- 2		MW-05-2SA 01	10/03/2001	109	88	68	93	37	93
224839- 3		MW-08-2SA 01	10/03/2001	104	85	56	91	35	94
224839- 4		MW-08D-2SA 01	10/04/2001	128A	102	69	96	27	104
224839- 5		MW-07-2SA 01	10/04/2001	137A	101	86	95	37	103
224839- 6		P10-2SA 01	10/04/2001	123	118G	86	185A	40	114
224839- 6		P10-2SA 01	10/05/2001	117	50	0 D	10D	32	7 D
224839- 6		P10-2SA 01	10/05/2001	579D	0 D	0 D	0 D	0 D	0 D
224839- 7		P12-2SA01	10/04/2001	105	102	90	98	42	153A
224839- 8		P12D-2SA01	10/04/2001	110	100	86	96	40	113
224839- 9		MW9-2SA01	10/04/2001	119	106	91	100	42	114
224839- 10		MW9 MS-2SA01	10/04/2001	138A	106	78	97	41	103
224839- 10	MS	MW9 MS-2SA01	10/04/2001	138A	106	78	97	41	103
224839- 11		MW9 MSD-2SA01	10/04/2001	126A	111	82	97	38	136
224839- 11	MSD	MW9 MSD-2SA01	10/04/2001	126A	111	82	97	38	136
224839- 12		MW04-2SA01	10/04/2001	121	102	89	97	40	102
224839- 13		MW11A-2SA01	10/04/2001	128A	119A	85	150A	41	103
224839- 13		MW11A-2SA01	10/05/2001	106	93	54	95	51	86
224839- 13		MW11A-2SA01	10/05/2001	581D	0 D	0 D	0 D	0 D	0 D
224839- 14		MW11B-2SA01	10/04/2001	116	101	85	99	39	98
224839- 14		MW11B-2SA01	10/05/2001	94	89	64	85	39	83
224839- 14		MW11B-2SA01	10/05/2001	130D	50	0 D	0 D	33	0 D

Test	Test Description	Limits
246TBP	2,4,6-Tribromophenol	10 - 123
2FLUBP	2-Fluorobiphenyl	43 - 116
2FLUPH	2-Fluorophenol	21 - 100
NITRD5	Nitrobenzene-d5	35 - 114
PHEND6	Phenol-d6	10 - 94
TERD14	Terphenyl-d14	33 - 141

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/26/2001

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reportesd as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.

Explanation of Qualifiers:

U - This qualifier indicates that the analyte was analyzed but not detected.
J - (Organics only) This qualifier indicates that the analyte is an estimated value between the PQL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the PQL and the IDL.
N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic charachterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

A - Matrix interference present in sample.
a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the PQL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Spike and/or surrogate diluted out.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
CC - Continuing Calibration Verification (CCV) standard is not associated with the samples reported. M1 - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K1 - See case narrative.

Explanation of Organic QC outliers:

E - Method blank analysis yielded methylene chloride and/or acetone concentrations above the PQL. Methylene chloride and acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
e - Method blank analysis yielded phthalate concentrations above the PQL. Phthlates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
T - Sample analysis yielded poor surrogate recovery.
R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
N1 - Gaseous compound. In-house QC limits are advisory.
P1 - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/26/2001

S1 - Surrogate not associated with reported analytes.
K - High recovery will not affect the quality of reported results.

Explanation of Inorganic QC Outliers:

b - Target analyte was found in the method blank. This analyte was not detected above the PQL in the sample.
Q - Method blank analysis yielded target analytes above the PQL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
3a - The RPD control limit for sample results less than 5 times the PQL is +/- the PQL value. Sample and duplicate results are within method acceptance criteria.
S - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficent for the MSA is greater than or equal to 0.995.
s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Method References:

(1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
(2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
(3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),

(4) HACH Water Analysis Handbook 3rd Edition (1997).
(5) Federal Register, July 1, 1990 (40 CFR Part 136).
(6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.

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LABORATORY CHRONICLE

Job Number: 224839 Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Lab ID: 224839-1 Client ID: P-11-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Data Package Validataion	1	38845		10/26/2001 0000	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
	GC/MS Semi-Volatile Package Production	1	38727			
	GC/MS Volatiles Data Package Production	1	38423		10/18/2001 1700	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/09/2001 2301	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/03/2001 1909	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 1831	1.00000

Lab ID: 224839-2 Client ID: MW-05-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/09/2001 2329	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/03/2001 1938	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 1900	1.00000

Lab ID: 224839-3 Client ID: MW-08-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/09/2001 2356	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/03/2001 2007	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 1928	1.00000

Lab ID: 224839-4 Client ID: MW-08D-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0024	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1234	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 1956	1.00000

Lab ID: 224839-5 Client ID: MW-07-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0051	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1303	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 2025	1.00000

Lab ID: 224839-6 Client ID: P10-2SA 01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0119	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1333	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1638	20.0000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1707	200.000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 2218	1.00000

Lab ID: 224839-7 Client ID: P12-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0146	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1402	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 2053	1.00000

Lab ID: 224839-8 Client ID: P12D-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	

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LABORATORY CHRONICLE

Job Number: 224839 Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Lab ID: 224839-8 Client ID: P12D-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0807	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1431	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 2121	1.00000

Lab ID: 224839-9 Client ID: MW9-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0834	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1501	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1601	1.00000

Lab ID: 224839-10 Client ID: MW9 MS-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/04/2001 1530	1.00000
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0902	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1530	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1630	1.00000

Lab ID: 224839-11 Client ID: MW9 MSD-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/04/2001 1559	1.00000
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0929	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1559	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1659	1.00000

Lab ID: 224839-12 Client ID: MW04-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 0957	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1629	1.00000
SW-846 8260B	Volatile Organics	1	37206		10/01/2001 2150	1.00000

Lab ID: 224839-13 Client ID: MW11A-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 1025	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1658	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1736	10.0000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1805	200.000
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1727	1.00000

Lab ID: 224839-14 Client ID: MW11B-2SA01 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37213		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37945	37213	10/10/2001 1052	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/04/2001 1728	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1835	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37511	37213	10/05/2001 1904	20.0000
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1756	1.00000

Lab ID: 224839-15 Client ID: TB092701 1 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1406	1.00000

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LABORATORY CHRONICLE

Job Number: 224839 Date: 10/26/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR: 2ND SEMIANNUAL ATTN: Peter Gagnon

Lab ID: 224839-16 Client ID: TB092701 2 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1435	1.00000

Lab ID: 224839-17 Client ID: TB092701 3 Date Recvd: 09/27/2001 Sample Date: 09/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	37206		10/02/2001 1504	1.00000

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ANALYTICAL REPORT

JOB NUMBER: 224894

Prepared For:

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

Attention: Peter Gagnon

Date: 11/09/2001

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: [redacted]

11/09/01
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

SEVERN TRENT SERVICES

STL Houston

11/09/2001

Peter Gagnon
ERM Southwest, Inc.- Houston
16300 Katy Freeway
Suite 300
Houston, TX 77094-1611

Reference:
Project : UPRR-HWPW
Project No. : 224894
Date Received : 09/28/2001
STL Job : 224894

Dear Peter Gagnon:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

1. MW01A-2SA01
2. FB092801-2SA01
3. TB092901-2SA01
4. TB092901-2SA01
5. MW02-2SA01
6. MW03-2SA01
7. MW-10B-2SA01
8. MW-10A-2SA01

All holding times were met for the tests performed on these samples.

Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting Severn-Trent Laboratories to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,

Sachin G. Kudchadkar
Project Manager

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SAMPLE INFORMATION

Date: 11/09/2001

Job Number.: 224894
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Peter Gagnon

Project Number.....: 99000484
Customer Project ID....: SECOND SEMIANNUAL
Project Description....: UPRR-HWPW

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
224894-1	MW01A-2SA01	Water	09/28/2001	08:45	09/28/2001	11:35
224894-2	FB092801-2SA01	Field Blank	09/28/2001	08:55	09/28/2001	11:35
224894-3	TB092901-2SA01	Trip Blank	09/28/2001	00:01	09/28/2001	11:35
224894-4	TB092901-2SA01	Trip Blank	09/28/2001	00:01	09/28/2001	11:35
224894-5	MW02-2SA01	Water	09/28/2001	08:50	09/28/2001	11:35
224894-6	MW03-2SA01	Water	09/28/2001	09:40	09/28/2001	11:35
224894-7	MW-10B-2SA01	Water	09/28/2001	09:20	09/28/2001	11:35
224894-8	MW-10A-2SA01	Water	09/28/2001	10:40	09/28/2001	11:35

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: SECOND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW01A-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 224894-1
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 1948	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 1948	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 1948	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 1948	lg1
	Pentachlorophenol, Water	0.7	J		0.2	1	1.00000	ug/L	37682		10/09/01 1948	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 1948	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	360			3	15	10.00000	ug/L	37673		10/11/01 2152	lg1
	Acenaphthylene, Water	5			0.2	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Anthracene, Water	7			0.4	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1342	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Dibenzofuran, Water	180			1	8	5.00000	ug/L	37673		10/08/01 1640	lg1
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Fluoranthene, Water	10			0.4	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Fluorene, Water	170			1	8	5.00000	ug/L	37673		10/08/01 1640	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Naphthalene, Water	65			2	10	5.00000	ug/L	37673		10/08/01 1640	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	Phenanthrene, Water	100			1	8	5.00000	ug/L	37673		10/08/01 1640	lg1
	Pyrene, Water	6		a	0.3	2	1.00000	ug/L	37673		10/05/01 1342	lg1

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW01A-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 224894-1
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1342	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1342	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1342	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1342	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	Ethylbenzene, Water	4	J		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2316	zfl
	Xylenes (total), Water	5	J		5	15	1.00000	ug/L	37419		10/03/01 2316	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: FB092801-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:55
Sample Matrix.....: Field Blank

Laboratory Sample ID: 224894-2
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 2016	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 2016	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 2016	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 2016	lg1
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	37682		10/09/01 2016	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 2016	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1411	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	J		0.5	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	Pyrene, Water	0.3	U	a	0.3	2	1.00000	ug/L	37673		10/05/01 1411	lg1

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: FB092801-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:55
Sample Matrix.....: Field Blank

Laboratory Sample ID: 224894-2
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1411	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1411	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1411	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1411	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1921	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/02/01 1921	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: TB092901-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 224894-3
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 1949	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/02/01 1949	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: SECOND SEMIANNUAL | ATTN: Peter Gagnon

Customer Sample ID: TB092901-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 224894-4
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2017	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/02/01 2017	zfl

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: SECOND SEMIANNUAL

ATTN: Peter Gagnon

Customer Sample ID: MW02-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 224894-5
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 2044	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 2044	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 2044	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 2044	lg1
CT	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	37682		10/09/01 2044	lg1
CT	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 2044	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	12			0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Acenaphthylene, Water	0.5	J		0.2	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Anthracene, Water	2	J		0.4	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1441	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Dibenzofuran, Water	10			0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Fluoranthene, Water	2	J		0.4	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Fluorene, Water	10			0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	2-Methylnaphthalene, Water	1	J		0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Naphthalene, Water	34			0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Phenanthrene, Water	3			0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	Pyrene, Water	1	J	a	0.3	2	1.00000	ug/L	37673		10/05/01 1441	lg1

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW02-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 224894-5
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1441	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1441	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1441	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1441	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2046	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/02/01 2046	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW03-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 224894-6
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 2111	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 2111	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 2111	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 2111	lg1
	Pentachlorophenol, Water	0.7	J		0.2	1	1.00000	ug/L	37682		10/09/01 2111	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 2111	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	120			1	6	4.00000	ug/L	37673		10/08/01 1709	lg1
	Acenaphthylene, Water	1	J		0.2	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Anthracene, Water	4			0.4	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1510	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Dibenzofuran, Water	72			1	6	4.00000	ug/L	37673		10/08/01 1709	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Fluoranthene, Water	9			0.4	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Fluorene, Water	78			1	6	4.00000	ug/L	37673		10/08/01 1709	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Naphthalene, Water	0.7	J		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Phenanthrene, Water	2			0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	Pyrene, Water	6		a	0.3	2	1.00000	ug/L	37673		10/05/01 1510	lg1

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW03-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 224894-6
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1510	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1510	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1510	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1510	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/02/01 2114	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/02/01 2114	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-10B-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 09:20
Sample Matrix.....: Water

Laboratory Sample ID: 224894-7
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 2139	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 2139	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 2139	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 2139	lg1
	Pentachlorophenol, Water	0.6	J		0.2	1	1.00000	ug/L	37682		10/09/01 2139	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 2139	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	72			0.5	3	2.00000	ug/L	37673		10/08/01 1738	lg1
	Acenaphthylene, Water	1	J		0.2	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Anthracene, Water	2			0.4	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1539	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Dibenzofuran, Water	29			0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Fluoranthene, Water	2	J		0.4	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Fluorene, Water	36			0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Naphthalene, Water	1	J		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Phenanthrene, Water	19			0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	Pyrene, Water	1	J	a	0.3	2	1.00000	ug/L	37673		10/05/01 1539	lg1

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-10B-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 09:20
Sample Matrix.....: Water

Laboratory Sample ID: 224894-7
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1539	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1539	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1539	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1539	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	J		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/05/01 0125	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/05/01 0125	zfl

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LABORATORY TEST RESULTS

Job Number: 224894

Date: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-10A-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 224894-8
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		37216		10/01/01 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	37682		10/09/01 2206	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	37682		10/09/01 2206	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	37682		10/09/01 2206	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	37682		10/09/01 2206	lg1
	Pentachlorophenol, Water	0.2	J		0.2	1	1.00000	ug/L	37682		10/09/01 2206	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	37682		10/09/01 2206	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.6	J		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Anthracene, Water	0.5	J		0.4	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	37673		10/05/01 1608	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Dibenzofuran, Water	0.4	J		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Fluorene, Water	0.4	J		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Phenanthrene, Water	0.3	J		0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	Pyrene, Water	0.3	U	a	0.3	2	1.00000	ug/L	37673		10/05/01 1608	lg1

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 224894

Date:11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Customer Sample ID: MW-10A-2SA01
Date Sampled.....: 09/28/2001
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 224894-8
Date Received.....: 09/28/2001
Time Received.....: 11:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	37673		10/05/01 1608	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	37673		10/05/01 1608	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	37673		10/05/01 1608	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	37673		10/05/01 1608	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	Chlorobenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	1,2-Dichloroethane, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	Ethylbenzene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	Toluene, Water	2	U		2	5	1.00000	ug/L	37419		10/03/01 2248	zfl
	Xylenes (total), Water	5	U		5	15	1.00000	ug/L	37419		10/03/01 2248	zfl

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STL Houston

QUALITY CONTROL RESULTS

Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS091801D	37216		10/09/2001	1444

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: lg1
Method Description.: Semivolatile Organics - SIM Analysis Batch(s)...: 37682

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0							
Bis(2-chloroethoxy)methane, Water	0							
2,4-Dinitrotoluene, Water	0							
2,6-Dinitrotoluene, Water	0							
Pentachlorophenol, Water	0.21473							
1,2-Diphenylhydrazine, Water	0							

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: lg1
Method Description.: Semivolatile Organics, Low Level Batch(s)...: 37673

LCS	Laboratory Control Sample	SVS081501B	37216		10/04/2001	1924

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	4.93663		5.000000		98.7		32-165	
Acenaphthylene, Water	4.32956		5.000000		86.6		10-150	
Anthracene, Water	4.90352		5.000000		98.1		23-178	
Benzo(a)anthracene, Water	5.46235		5.000000		109.2		25-180	
Benzo(b)fluoranthene, Water	6.11579		5.000000		122.3		24-175	
Benzo(k)fluoranthene, Water	5.58311		5.000000		111.7		15-185	
Benzo(ghi)perylene, Water	4.93530		5.000000		98.7		15-182	
Benzo(a)pyrene, Water	5.60056		5.000000		112.0		19-182	
Benzyl Alcohol, Water	5.34149		5.000000		106.8		70-130	
Butyl Benzyl Phthalate, Water	6.03790		5.000000		120.8		23-171	
Bis(2-chloroethoxy)methane, Water	6.61516		5.000000		132.3		47-148	
bis(2-Chloroethyl)ether, Water	4.94937		5.000000		99.0		13-154	
Bis(2-chloroisopropyl)ether, Water	5.35621		5.000000		107.1		20-154	
Bis(2-ethylhexyl)phthalate, Water	6.13590		5.000000		122.7		25-173	
4-Bromophenyl Phenyl Ether, Water	7.10245		5.000000		142.0		28-121	KK
4-Chloroaniline, Water	4.74991		5.000000		95.0		44-114	
2-Chloronaphthalene, Water	5.60042		5.000000		112.0		23-143	
4-Chlorophenyl Phenyl Ether, Water	5.90548		5.000000		118.1		46-120	
Chrysene, Water	5.64544		5.000000		112.9		23-180	
Dibenzo(a,h)anthracene, Water	5.44894		5.000000		109.0		12-178	
Dibenzofuran, Water	4.67580		5.000000		93.5		35-153	
1,2-Dichlorobenzene, Water	4.88442		5.000000		97.7		16-130	
1,3-Dichlorobenzene, Water	5.05879		5.000000		101.2		25-105	
1,4-Dichlorobenzene, Water	4.35357		5.000000		87.1		16-125	
Diethyl Phthalate, Water	5.12565		5.000000		102.5		24-166	
Dimethyl Phthalate, Water	5.95556		5.000000		119.1		70-116	G
Di-n-butyl Phthalate, Water	5.83410		5.000000		116.7		28-185	
Di-n-octyl Phthalate, Water	6.09714		5.000000		121.9		21-176	
2,4-Dinitrotoluene, Water	5.50347		5.000000		110.1		13-175	
2,6-Dinitrotoluene, Water	5.95855		5.000000		119.2		17-180	
Fluoranthene, Water	4.93390		5.000000		98.7		28-180	
Fluorene, Water	4.81607		5.000000		96.3		30-189	
Hexachlorobenzene, Water	4.46994		5.000000		89.4		18-165	
Hexachlorobutadiene, Water	4.90023		5.000000		98.0		14-145	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS081501B	37216		10/04/2001	1924

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Hexachlorocyclopentadiene, Water	1.95961		5.000000		39.2		12-85	
Hexachloroethane, Water	4.76733		5.000000		95.3		15-120	
Indeno(1,2,3-cd)pyrene, Water	6.20844		5.000000		124.2		16-180	
Isophorone, Water	4.52503		5.000000		90.5		70-114	
2-Methylnaphthalene, Water	4.59501		5.000000		91.9		26-168	
Naphthalene, Water	4.84918		5.000000		97.0		36-139	
Nitrobenzene, Water	5.00306		5.000000		100.1		17-163	
n-Nitrosodi-n-propylamine, Water	6.33241		5.000000		126.6		20-161	
n-Nitrosodiphenylamine, Water	6.93273		5.000000		138.7		58-174	
Phenanthrene, Water	4.94985		5.000000		99.0		26-166	
Pyrene, Water	5.94773		5.000000		119.0		28-173	
1,2,4-Trichlorobenzene, Water	4.61403		5.000000		92.3		16-133	
4-Chloro-3-methylphenol, Water	4.77631		5.000000		95.5		60-114	
2-Chlorophenol, Water	4.64899		5.000000		93.0		53-116	
2,4-Dichlorophenol, Water	4.93147		5.000000		98.6		54-119	
2,4-Dimethylphenol, Water	3.80907		5.000000		76.2		23-157	
2,4-Dinitrophenol, Water	3.86273		5.000000		77.3		10-144	
2-Methyl-4,6-dinitrophenol, Water	4.83776		5.000000		96.8		17-164	
2-Methylphenol (o-Cresol), Water	4.16533		5.000000		83.3		17-117	
4-Methylphenol (p-Cresol), Water	3.90308		5.000000		78.1		12-111	
2-Nitrophenol, Water	5.16415		5.000000		103.3		39-121	
4-Nitrophenol, Water	1.95389		5.000000		39.1		10-92	
Pentachlorophenol, Water	3.96078		5.000000		79.2		10-130	
Phenol, Water	2.82624		5.000000		56.5		20-83	
2,4,5-Trichlorophenol, Water	4.94618		5.000000		98.9		37-129	
2,4,6-Trichlorophenol, Water	5.45467		5.000000		109.1		42-133	
2-Nitroaniline, Water	6.50303		5.000000		130.1		61-132	
3-Nitroaniline, Water	4.72226		5.000000		94.4		33-122	
4-Nitroaniline, Water	4.98432		5.000000		99.7		11-129	
3,3'-Dichlorobenzidine, Water	5.75776		5.000000		115.2		70-130	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS091801D	37216		10/04/2001	1757

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	0							
Acenaphthylene, Water	0							
Anthracene, Water	0							
Benzidine, Water	0							
Benzo(a)anthracene, Water	0							
Benzo(b)fluoranthene, Water	0							
Benzo(k)fluoranthene, Water	0							
Benzo(ghi)perylene, Water	0							
Benzo(a)pyrene, Water	0							
Benzyl Alcohol, Water	0							
Butyl Benzyl Phthalate, Water	0							
Bis(2-chloroethoxy)methane, Water	0							
bis(2-Chloroethyl)ether, Water	0							
Bis(2-chloroisopropyl)ether, Water	0							
Bis(2-ethylhexyl)phthalate, Water	0.33255							
4-Bromophenyl Phenyl Ether, Water	0							
4-Chloroaniline, Water	0							
2-Chloronaphthalene, Water	0							

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 224894

Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS091801D	37216		10/04/2001	1757

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
4-Chlorophenyl Phenyl Ether, Water	0							
Chrysene, Water	0							
Dibenzo(a,h)anthracene, Water	0							
Dibenzofuran, Water	0							
1,2-Dichlorobenzene, Water	0							
1,3-Dichlorobenzene, Water	0							
1,4-Dichlorobenzene, Water	0							
Diethyl Phthalate, Water	0.15290							
Dimethyl Phthalate, Water	0							
Di-n-butyl Phthalate, Water	0.26835							
Di-n-octyl Phthalate, Water	0							
2,4-Dinitrotoluene, Water	0							
2,6-Dinitrotoluene, Water	0							
Fluoranthene, Water	0							
Fluorene, Water	0							
Hexachlorobenzene, Water	0							
Hexachlorobutadiene, Water	0							
Hexachlorocyclopentadiene, Water	0							
Hexachloroethane, Water	0							
Indeno(1,2,3-cd)pyrene, Water	0							
Isophorone, Water	0							
2-Methylnaphthalene, Water	0							
Naphthalene, Water	0							
Nitrobenzene, Water	0							
n-Nitrosodi-n-propylamine, Water	0							
n-Nitrosodiphenylamine, Water	0							
Phenanthrene, Water	0							
Pyrene, Water	0							
1,2,4-Trichlorobenzene, Water	0							
Benzoic Acid, Water	0							
4-Chloro-3-methylphenol, Water	0							
2-Chlorophenol, Water	0							
2,4-Dichlorophenol, Water	0							
2,4-Dimethylphenol, Water	0							
2,4-Dinitrophenol, Water	0							
2-Methyl-4,6-dinitrophenol, Water	0							
2-Methylphenol (o-Cresol), Water	0							
4-Methylphenol (p-Cresol), Water	0							
2-Nitrophenol, Water	0							
4-Nitrophenol, Water	0							
Pentachlorophenol, Water	0							
Phenol, Water	0							
2,4,5-Trichlorophenol, Water	0							
2,4,6-Trichlorophenol, Water	0							
n-Nitrosodimethylamine, Water	0							
Pyridine, Water	0							
Aniline, Water	0							
1-Methylnaphthalene, Water	0							
2-Nitroaniline, Water	0							
3-Nitroaniline, Water	0							
4-Nitroaniline, Water	0							
1,2-Diphenylhydrazine, Water	0							
Carbazole, Water	0							
3,3'-Dichlorobenzidine, Water	0							

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QUALITY CONTROL RESULTS

Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SB	Spiked Blank	SVS090501A	37216		10/04/2001	1826

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	4.62787		5.000000	0	93		46-118	
1,4-Dichlorobenzene, Water	3.74975		5.000000	0	75		36-97	
2,4-Dinitrotoluene, Water	5.03208		5.000000	0	101		24-96	KK
n-Nitrosodi-n-propylamine, Water	6.48983		5.000000	0	130		41-116	KK
Pyrene, Water	6.18720		5.000000	0	124		26-127	
1,2,4-Trichlorobenzene, Water	3.72450		5.000000	0	74		39-98	
4-Chloro-3-methylphenol, Water	8.98938		10.000000	0	90		23-97	
2-Chlorophenol, Water	9.28254		10.000000	0	93		27-123	
4-Nitrophenol, Water	4.41303		10.000000	0	44		10-80	
Pentachlorophenol, Water	7.89219		10.000000	0	79		9-103	
Phenol, Water	4.55391		10.000000	0	46		10-112	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SBD	Spiked Blank Duplicate	SVS090501A	37216		10/04/2001	1855

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	5.03222	4.62787	5.000000	0	100.6		46-118	
					8.4		31	
1,4-Dichlorobenzene, Water	4.04176	3.74975	5.000000	0	80.8		36-97	
					7.5		28	
2,4-Dinitrotoluene, Water	5.46658	5.03208	5.000000	0	109.3		24-96	KK
					8.3		38	
n-Nitrosodi-n-propylamine, Water	6.69782	6.48983	5.000000	0	134.0		41-116	KK
					3.2		38	
Pyrene, Water	6.79319	6.18720	5.000000	0	135.9		26-127	a
					9.3		31	
1,2,4-Trichlorobenzene, Water	3.99022	3.72450	5.000000	0	79.8		39-98	
					6.9		28	
4-Chloro-3-methylphenol, Water	9.87239	8.98938	10.000000	0	98.7		23-97	G
					9.4		42	
2-Chlorophenol, Water	9.36826	9.28254	10.000000	0	93.7		27-123	
					0.9		40	
4-Nitrophenol, Water	4.71507	4.41303	10.000000	0	47.2		10-80	
					6.6		50	
Pentachlorophenol, Water	8.86957	7.89219	10.000000	0	88.7		9-103	
					11.7		50	
Phenol, Water	4.86198	4.55391	10.000000	0	48.6		10-112	
					6.5		23	

Test Method.....: SW-846 8260B Units.....: ug/L Analyst...: zfl
Method Description.: Volatile Organics Batch(s)...: 37419

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS100201E			10/02/2001	1338

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	49.1514		50.00	ND	98.3		68-127	
Bromodichloromethane, Water	49.6833		50.00	ND	99.4		64-129	
Bromoform, Water	38.9525		50.00	ND	77.9		45-147	
Bromomethane, Water	52.2249		50.00	ND	104.4		32-143	
Carbon Tetrachloride, Water	49.5701		50.00	ND	99.1		54-140	

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QUALITY CONTROL RESULTS

Job Number.: 224894

Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: SECOND SEMIANNUAL | ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS100201E			10/02/2001	1338

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Chlorobenzene, Water	49.3218		50.00	ND	98.6		65-129	
Chloroethane, Water	78.5697		50.00	ND	157.1		47-157	KK
Chloroform, Water	51.4920		50.00	ND	103.0		71-131	
Chloromethane, Water	57.3729		50.00	ND	114.7		22-160	
Dibromochloromethane, Water	43.9890		50.00	ND	88.0		64-131	
1,2-Dichlorobenzene, Water	47.1306		50.00	ND	94.3		59-133	
1,3-Dichlorobenzene, Water	45.5104		50.00	ND	91.0		61-132	
1,4-Dichlorobenzene, Water	45.5343		50.00	ND	91.1		46-142	
1,1-Dichloroethane, Water	49.2795		50.00	ND	98.6		62-138	
1,2-Dichloroethane, Water	47.9000		50.00	ND	95.8		65-133	
1,1-Dichloroethene, Water	50.4649		50.00	ND	100.9		48-147	
cis-1,2-Dichloroethene, Water	45.7985		50.00	ND	91.6		61-129	
trans-1,2-Dichloroethene, Water	48.6807		50.00	ND	97.4		73-138	
1,2-Dichloropropane, Water	44.0567		50.00	ND	88.1		60-124	
Ethylbenzene, Water	51.4104		50.00	ND	102.8		64-132	
Methylene Chloride, Water	46.4637		50.00	ND	92.9		54-133	
Styrene, Water	45.4881		50.00	ND	91.0		20-156	
1,1,2,2-Tetrachloroethane, Water	38.8430		50.00	ND	77.7		70-130	
Tetrachloroethene, Water	56.3770		50.00	ND	112.8		59-134	
Toluene, Water	48.2360		50.00	ND	96.5		63-127	
1,1,1-Trichloroethane, Water	45.1074		50.00	ND	90.2		70-130	
1,1,2-Trichloroethane, Water	45.8620		50.00	ND	91.7		70-130	
Trichloroethene, Water	51.0049		50.00	ND	102.0		64-130	
Vinyl Chloride, Water	59.6071		50.00	ND	119.2		35-155	
Xylenes (total), Water	152.025		150.00	ND	101.3		37-161	
m,p-Xylene, Water	100.894		100.00	ND	100.9		37-160	
o-Xylene, Water	51.1302		50.00	ND	102.3		37-161	
Acetone, Water	32.7904		50.00	ND	65.6		38-190	
Carbon Disulfide, Water	60.8455		50.00	ND	121.7		68-158	
Methyl Ethyl Ketone (2-Butanone), Water	35.1422		50.00	ND	70.3		38-186	
cis-1,3-Dichloropropene, Water	42.7471		50.00	ND	85.5		66-130	
trans-1,3-Dichloropropene, Water	42.1296		50.00	ND	84.3		71-139	
2-Hexanone, Water	32.9209		50.00	ND	65.8		29-173	
4-Methyl-2-pentanone (MIBK), Water	36.1089		50.00	ND	72.2		40-144	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS100201E			10/03/2001	1244

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	51.0583		50.00	ND	102.1		68-127	
Bromodichloromethane, Water	48.4687		50.00	ND	96.9		64-129	
Bromoform, Water	40.9388		50.00	ND	81.9		45-147	
Bromomethane, Water	49.1637		50.00	ND	98.3		32-143	
Carbon Tetrachloride, Water	47.6318		50.00	ND	95.3		54-140	
Chlorobenzene, Water	49.1240		50.00	ND	98.2		65-129	
Chloroethane, Water	77.9340		50.00	ND	155.9		47-157	
Chloroform, Water	49.4803		50.00	ND	99.0		71-131	
Chloromethane, Water	58.1606		50.00	ND	116.3		22-160	
Dibromochloromethane, Water	47.0029		50.00	ND	94.0		64-131	
1,2-Dichlorobenzene, Water	49.5460		50.00	ND	99.1		59-133	
1,3-Dichlorobenzene, Water	48.1434		50.00	ND	96.3		61-132	
1,4-Dichlorobenzene, Water	47.7023		50.00	ND	95.4		46-142	
1,1-Dichloroethane, Water	50.1871		50.00	ND	100.4		62-138	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT SERVICES

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QUALITY CONTROL RESULTS

Job Number.: 224894

Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS100201E			10/03/2001	1244

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
1,2-Dichloroethane, Water	46.5465		50.00	ND	93.1		65-133	
1,1-Dichloroethene, Water	56.4285		50.00	ND	112.9		48-147	
cis-1,2-Dichloroethene, Water	48.5784		50.00	ND	97.2		61-129	
trans-1,2-Dichloroethene, Water	52.3973		50.00	ND	104.8		73-138	
1,2-Dichloropropane, Water	45.6207		50.00	ND	91.2		60-124	
Ethylbenzene, Water	53.3287		50.00	ND	106.7		64-132	
Methylene Chloride, Water	53.7070		50.00	ND	107.4		54-133	
Styrene, Water	44.0261		50.00	ND	88.1		20-156	
1,1,2,2-Tetrachloroethane, Water	46.3711		50.00	ND	92.7		70-130	
Tetrachloroethene, Water	50.4720		50.00	ND	100.9		59-134	
Toluene, Water	48.6236		50.00	ND	97.2		63-127	
1,1,1-Trichloroethane, Water	46.3632		50.00	ND	92.7		70-130	
1,1,2-Trichloroethane, Water	51.0039		50.00	ND	102.0		70-130	
Trichloroethene, Water	49.5464		50.00	ND	99.1		64-130	
Vinyl Chloride, Water	59.8182		50.00	ND	119.6		35-155	
Xylenes (total), Water	148.278		150.00	ND	98.9		37-161	
m,p-Xylene, Water	98.9277		100.00	ND	98.9		37-160	
o-Xylene, Water	49.3507		50.00	ND	98.7		37-161	
Acetone, Water	34.6291		50.00	ND	69.3		38-190	
Carbon Disulfide, Water	65.3226		50.00	ND	130.6		68-158	
Methyl Ethyl Ketone (2-Butanone), Water	37.6187		50.00	ND	75.2		38-186	
cis-1,3-Dichloropropene, Water	45.0483		50.00	ND	90.1		66-130	
trans-1,3-Dichloropropene, Water	42.4171		50.00	ND	84.8		71-139	
2-Hexanone, Water	36.2569		50.00	ND	72.5		29-173	
4-Methyl-2-pentanone (MIBK), Water	39.8771		50.00	ND	79.8		40-144	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS100201E			10/04/2001	1439

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	49.8499		50.00	ND	99.7		68-127	
Bromodichloromethane, Water	55.9182		50.00	ND	111.8		64-129	
Bromoform, Water	42.5467		50.00	ND	85.1		45-147	
Bromomethane, Water	47.9105		50.00	ND	95.8		32-143	
Carbon Tetrachloride, Water	50.8242		50.00	ND	101.6		54-140	
Chlorobenzene, Water	51.2965		50.00	ND	102.6		65-129	
Chloroethane, Water	74.9586		50.00	ND	149.9		47-157	
Chloroform, Water	54.8697		50.00	ND	109.7		71-131	
Chloromethane, Water	52.8212		50.00	ND	105.6		22-160	
Dibromochloromethane, Water	49.6354		50.00	ND	99.3		64-131	
1,2-Dichlorobenzene, Water	45.6676		50.00	ND	91.3		59-133	
1,3-Dichlorobenzene, Water	46.7540		50.00	ND	93.5		61-132	
1,4-Dichlorobenzene, Water	45.9272		50.00	ND	91.9		46-142	
1,1-Dichloroethane, Water	52.0465		50.00	ND	104.1		62-138	
1,2-Dichloroethane, Water	53.1936		50.00	ND	106.4		65-133	
1,1-Dichloroethene, Water	56.0671		50.00	ND	112.1		48-147	
cis-1,2-Dichloroethene, Water	49.6846		50.00	ND	99.4		61-129	
trans-1,2-Dichloroethene, Water	50.3914		50.00	ND	100.8		73-138	
1,2-Dichloropropane, Water	47.7327		50.00	ND	95.5		60-124	
Ethylbenzene, Water	52.1514		50.00	ND	104.3		64-132	
Methylene Chloride, Water	50.4872		50.00	ND	101.0		54-133	
Styrene, Water	47.2409		50.00	ND	94.5		20-156	
1,1,2,2-Tetrachloroethane, Water	46.3856		50.00	ND	92.8		70-130	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 224894

Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
LCS	Laboratory Control Sample	VS100201E			10/04/2001 1439

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Tetrachloroethene, Water	58.7276		50.00	ND	117.5		59-134	
Toluene, Water	52.7667		50.00	ND	105.5		63-127	
1,1,1-Trichloroethane, Water	49.4170		50.00	ND	98.8		70-130	
1,1,2-Trichloroethane, Water	49.7142		50.00	ND	99.4		70-130	
Trichloroethene, Water	46.8569		50.00	ND	93.7		64-130	
Vinyl Chloride, Water	62.6635		50.00	ND	125.3		35-155	
Xylenes (total), Water	158.217		150.00	ND	105.5		37-161	
m,p-Xylene, Water	106.170		100.00	ND	106.2		37-160	
o-Xylene, Water	52.0473		50.00	ND	104.1		37-161	
Acetone, Water	61.3104		50.00	ND	122.6		38-190	
Carbon Disulfide, Water	64.3783		50.00	ND	128.8		68-158	
Methyl Ethyl Ketone (2-Butanone), Water	51.1759		50.00	ND	102.4		38-186	
cis-1,3-Dichloropropene, Water	50.7867		50.00	ND	101.6		66-130	
trans-1,3-Dichloropropene, Water	50.7671		50.00	ND	101.5		71-139	
2-Hexanone, Water	55.8856		50.00	ND	111.8		29-173	
4-Methyl-2-pentanone (MIBK), Water	48.5290		50.00	ND	97.1		40-144	

MB	Method Blank	VS100201C			10/02/2001 1309

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Bromodichloromethane, Water	ND							
Bromoform, Water	ND							
Bromomethane, Water	ND							
Carbon Tetrachloride, Water	ND							
Chlorobenzene, Water	ND							
Chloroethane, Water	ND							
Chloroform, Water	ND							
Chloromethane, Water	ND							
Dibromochloromethane, Water	ND							
1,2-Dichlorobenzene, Water	ND							
1,3-Dichlorobenzene, Water	ND							
1,4-Dichlorobenzene, Water	ND							
1,1-Dichloroethane, Water	ND							
1,2-Dichloroethane, Water	ND							
1,1-Dichloroethene, Water	ND							
cis-1,2-Dichloroethene, Water	ND							
trans-1,2-Dichloroethene, Water	ND							
1,2-Dichloropropane, Water	ND							
Ethylbenzene, Water	ND							
Methylene Chloride, Water	ND							
Styrene, Water	ND							
1,1,2,2-Tetrachloroethane, Water	ND							
Tetrachloroethene, Water	ND							
Toluene, Water	ND							
1,1,1-Trichloroethane, Water	ND							
1,1,2-Trichloroethane, Water	ND							
Trichloroethene, Water	ND							
Vinyl Chloride, Water	ND							
Xylenes (total), Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							

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Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS100201C			10/02/2001	1309

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acetone, Water	ND							
Carbon Disulfide, Water	ND							
Methyl Ethyl Ketone (2-Butanone), Water	ND							
cis-1,3-Dichloropropene, Water	ND							
trans-1,3-Dichloropropene, Water	ND							
2-Hexanone, Water	ND							
4-Methyl-2-pentanone (MIBK), Water	ND							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS100201C			10/03/2001	1634

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Bromodichloromethane, Water	ND							
Bromoform, Water	ND							
Bromomethane, Water	ND							
Carbon Tetrachloride, Water	ND							
Chlorobenzene, Water	ND							
Chloroethane, Water	ND							
Chloroform, Water	ND							
Chloromethane, Water	ND							
Dibromochloromethane, Water	ND							
1,2-Dichlorobenzene, Water	ND							
1,3-Dichlorobenzene, Water	ND							
1,4-Dichlorobenzene, Water	ND							
1,1-Dichloroethane, Water	ND							
1,2-Dichloroethane, Water	ND							
1,1-Dichloroethene, Water	ND							
cis-1,2-Dichloroethene, Water	ND							
trans-1,2-Dichloroethene, Water	ND							
1,2-Dichloropropane, Water	ND							
Ethylbenzene, Water	ND							
Methylene Chloride, Water	ND							
Styrene, Water	ND							
1,1,2,2-Tetrachloroethane, Water	ND							
Tetrachloroethene, Water	ND							
Toluene, Water	ND							
1,1,1-Trichloroethane, Water	ND							
1,1,2-Trichloroethane, Water	ND							
Trichloroethene, Water	ND							
Vinyl Chloride, Water	ND							
Xylenes (total), Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							
Acetone, Water	ND							
Carbon Disulfide, Water	ND							
Methyl Ethyl Ketone (2-Butanone), Water	ND							
cis-1,3-Dichloropropene, Water	ND							
trans-1,3-Dichloropropene, Water	ND							
2-Hexanone, Water	ND							
4-Methyl-2-pentanone (MIBK), Water	ND							

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 224894

Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: SECOND SEMIANNUAL | ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS100201C			10/04/2001	1618

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Bromodichloromethane, Water	ND							
Bromoform, Water	ND							
Bromomethane, Water	ND							
Carbon Tetrachloride, Water	ND							
Chlorobenzene, Water	ND							
Chloroethane, Water	ND							
Chloroform, Water	ND							
Chloromethane, Water	ND							
Dibromochloromethane, Water	ND							
1,2-Dichlorobenzene, Water	ND							
1,3-Dichlorobenzene, Water	ND							
1,4-Dichlorobenzene, Water	ND							
1,1-Dichloroethane, Water	ND							
1,2-Dichloroethane, Water	ND							
1,1-Dichloroethene, Water	ND							
cis-1,2-Dichloroethene, Water	ND							
trans-1,2-Dichloroethene, Water	ND							
1,2-Dichloropropane, Water	ND							
Ethylbenzene, Water	ND							
Methylene Chloride, Water	ND							
Styrene, Water	ND							
1,1,2,2-Tetrachloroethane, Water	ND							
Tetrachloroethene, Water	ND							
Toluene, Water	ND							
1,1,1-Trichloroethane, Water	ND							
1,1,2-Trichloroethane, Water	ND							
Trichloroethene, Water	ND							
Vinyl Chloride, Water	ND							
Xylenes (total), Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							
Acetone, Water	ND							
Carbon Disulfide, Water	ND							
Methyl Ethyl Ketone (2-Butanone), Water	ND							
cis-1,3-Dichloropropene, Water	ND							
trans-1,3-Dichloropropene, Water	ND							
2-Hexanone, Water	ND							
4-Methyl-2-pentanone (MIBK), Water	ND							

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SURROGATE RECOVERIES REPORT

Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Method.....: Volatile Organics Test Matrix...: Water Prep Batch..:
Method Code...: 8260 Batch(s).....: 37419

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
LCS			10/02/2001	104.4	98.3	104.0	107.9
LCS			10/03/2001	103.3	100.3	108.9	111.0
LCS			10/04/2001	114.5	105.1	111.5	124.4
MB			10/02/2001	96.8	99.4	93.6	102.5
MB			10/03/2001	105.9	91.1	102.4	97.5
MB			10/04/2001	107.2	100.3	101.8	100.4
224894- 1		MW01A-2SA01	10/03/2001	105.6	80.0	97.7	94.2
224894- 2		FB092801-2SA01	10/02/2001	103.6	89.9	95.7	106.1
224894- 3		TB092901-2SA01	10/02/2001	106.7	105.3	98.0	112.7
224894- 4		TB092901-2SA01	10/02/2001	104.2	95.8	99.4	94.8
224894- 5		MW02-2SA01	10/02/2001	100.7	95.7	96.4	100.9
224894- 6		MW03-2SA01	10/02/2001	100.9	103.0	100.2	111.4
224894- 7		MW-10B-2SA01	10/05/2001	120.8	99.5	95.5	101.9
224894- 8		MW-10A-2SA01	10/03/2001	108.7	96.8	100.9	99.2

Test	Test Description	Limits
12DCED	1,2-Dichloroethane-d4	70 - 130
BRFLBE	4-Bromofluorobenzene	70 - 130
DBRFLM	Dibromofluoromethane	70 - 130
TOLD8	Toluene-d8	70 - 130

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SURROGATE RECOVERIES REPORT

Job Number.: 224894 Report Date.: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Method.....: Semivolatile Organics, Low Level Test Matrix...: Water Prep Batch..: 37216
Method Code...: 8270LL Batch(s).....: 37673

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
LCS			10/04/2001	115	104	90	101	41	125
MB			10/04/2001	102	87	90	90	40	130
SB			10/04/2001	102	100	90	101	40	129
SBD			10/04/2001	106	99	91	99	40	128
224894- 1		MW01A-2SA01	10/05/2001	83	99	64	94	36	83
224894- 1		MW01A-2SA01	10/08/2001	105	98	76	93	40	95
224894- 1		MW01A-2SA01	10/11/2001	149D	146D	59	127D	36	147D
224894- 2		FB092801-2SA01	10/05/2001	91	93	64	92	36	106
224894- 5		MW02-2SA01	10/05/2001	110	99	87	95	38	97
224894- 6		MW03-2SA01	10/05/2001	94	87	75	86	39	98
224894- 6		MW03-2SA01	10/08/2001	95	97	65	91	47	124
224894- 7		MW-10B-2SA01	10/05/2001	106	95	79	94	38	83
224894- 7		MW-10B-2SA01	10/08/2001	110	100	67	95	42	94
224894- 8		MW-10A-2SA01	10/05/2001	101	90	67	91	38	95

Test	Test Description	Limits
246TBP	2,4,6-Tribromophenol	10 - 123
2FLUBP	2-Fluorobiphenyl	43 - 116
2FLUPH	2-Fluorophenol	21 - 100
NITRD5	Nitrobenzene-d5	35 - 114
PHEND6	Phenol-d6	10 - 94
TERD14	Terphenyl-d14	33 - 141

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 11/09/2001

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reportesd as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- Diphenylamine and n-Nitrosodiphenylamine co-elute. The result(s) are reported as either analyte.

Explanation of Qualifiers:

U - This qualifier indicates that the analyte was analyzed but not detected.
J - (Organics only) This qualifier indicates that the analyte is an estimated value between the PQL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the PQL and the IDL.
N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic charachterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

A - Matrix interference present in sample.
a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the PQL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted out.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
CC - Continuing Calibration Verification (CCV) standard is not
associated with the samples reported. M1 - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K1 - See case narrative.

Explanation of Organic QC Outliers:

E - Method blank analysis yielded methylene chloride and/or acetone concentrations above the PQL. Methylene chloride and acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
e - Method blank analysis yielded phthalate concentrations above the PQL. Phthlates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
T - Sample analysis yielded poor surrogate recovery.
R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 11/09/2001

Explanation of Organic QC Outliers, Continued:

I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
N1 - Gaseous compound. In-house QC limits are advisory.
P1 - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
S1 - Surrogate not associated with reported analytes.
K - High recovery will not affect the quality of reported results.

Explanation of Inorganic QC Outliers:

b - Target analyte was found in the method blank. This analyte was not detected above the PQL in the sample.
Q - Method blank analysis yielded target analytes above the PQL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
3a - The RPD control limit for sample results less than 5 times the PQL is +/- the PQL value. Sample and duplicate results are within method acceptance criteria.
S - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficent for the MSA is greater than or equal to 0.995.
s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Method References:

(1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
(2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
(3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),

(4) HACH Water Analysis Handbook 3rd Edition (1997).
(5) Federal Register, July 1, 1990 (40 CFR Part 136).
(6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.

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LABORATORY CHRONICLE

Job Number: 224894 Date: 11/09/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: SECOND SEMIANNUAL ATTN: Peter Gagnon

Lab ID: 224894-1 Client ID: MW01A-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Data Package Validataion	1	38845		10/26/2001 0000	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
	GC/MS Semi-Volatile Package Production	1	38727			
	GC/MS Volatiles Data Package Production	1	38423		10/18/2001 1700	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 1948	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1342	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/08/2001 1640	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/11/2001 2152	10.0000
SW-846 8260B	Volatile Organics	1	37419		10/03/2001 2316	1.00000

Lab ID: 224894-2 Client ID: FB092801-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 2016	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1411	1.00000
SW-846 8260B	Volatile Organics	1	37419		10/02/2001 1921	1.00000

Lab ID: 224894-3 Client ID: TB092901-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	37419		10/02/2001 1949	1.00000

Lab ID: 224894-4 Client ID: TB092901-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	37419		10/02/2001 2017	1.00000

Lab ID: 224894-5 Client ID: MW02-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 2044	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1441	1.00000
SW-846 8260B	Volatile Organics	1	37419		10/02/2001 2046	1.00000

Lab ID: 224894-6 Client ID: MW03-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 2111	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1510	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/08/2001 1709	4.00000
SW-846 8260B	Volatile Organics	1	37419		10/02/2001 2114	1.00000

Lab ID: 224894-7 Client ID: MW-10B-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 2139	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1539	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/08/2001 1738	2.00000
SW-846 8260B	Volatile Organics	1	37419		10/05/2001 0125	1.00000

Lab ID: 224894-8 Client ID: MW-10A-2SA01 Date Recvd: 09/28/2001 Sample Date: 09/28/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	37216		10/01/2001 1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	37682	37216	10/09/2001 2206	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	37673	37216	10/05/2001 1608	1.00000
SW-846 8260B	Volatile Organics	1	37419		10/03/2001 2248	1.00000

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SEVERN TRENT SERVICES

SEVERN TRENT LABORATORIES

6310 Rothway Center
Houston, TX 77040
(713) 690-4444, Fax (713) 690-5646

1 Company: ERM-SW
Address: 16300 Katy Freeway, su 300 Houston, TX 77094
Tele #: 281-600-1000
Fax #: 281-600-1001

Reports Sent To: Peter Gagnon
P O #:
Project #: 422-009 (SA)

Project Name: UPRR: Second Semiannual
Project Location: HWPW Impoundment

Sampler(s) Name: (Signature) Kristen Elston; Andy Jacobs [signature] Kristen Elston

Courier: Delivery

6 Request for Analysis

2 Field Sample ID	**3** Sampling Date	Time	**4** Matrix: Water	Soil	Sludge	Oil	Other	# of Containers	Haz Sample (Y/N)	8260B-VOC	8270C Low Level	8270C-SIM																
1. MW01A-2SAQ1	9-28-01	0845	X					5		X	X	X																
2. FB092801-2SAQ1	9-28-01	0855	X					5		X	X	X																
3. TB092801-2SAQ1	9-28-01		X					2		X																		
4. TB092801-2SAQ1	9-28-01		X					2		X																		
5. MW02-2SAØ1	9-28-01	0850	X					5		X	X	X																
6. MW03-2SAØ1	9-28-01	0940	X					5		X	X	X																
7. MW-10B-2SAØ1	9-28-01	0920	X					5		X	X	X																
8. MW-10A-2SAØ1	9-28-01	1040	X					5		X	X	X																
9.																												
10.																												
11.																												
12.																												
13.																												

7

Relinquished by Sampler: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)
Date:	Date:	Date: 9/28/01
Time:	Time: 77	Time: 1135
Received by: (Signature)	Received by: (Signature)	Received by Laboratory: (Signature) Iris Ramirez
Date:	Date:	Date: 9/28/01
Time:	Time:	Time: 11:28

6 Remarks:

Requested Turnaround: Standard

GSAI Group: 220204

Special Detection Limits: see project requirements

QC Package: (check one)
☒ CLP ☐ Site Specific
☐ Tier 1 ☐ Tier 2 ☐ QC Summary

rpjsckl | Job Sample Receipt Checklist Report 09/28/2001 | V2

Job Number.....: 224894 Location.: 57216 Customer Job ID.....: Job Check List Date.: 09/28/2001
Project Number.: 99000484 Project Description.: UPRR-HWPW Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.- Houston Contact.: Peter Gagnon

Questions ?	(Y/N)	Comments
Chain of Custody Received?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	N	
...If "yes", custody seal intact?		
Custody seals on sample containers?	N	
...If "yes", custody seal intact?		
Samples chilled?	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	1.1,1.3
Thermometer ID	Y	325
Samples received intact (good condition)?	Y	
Volatile samples acceptable? (no headspace)	Y	
Correct containers used?	Y	
Adequate sample volume provided?	Y	
Samples preserved correctly?	Y	
Samples received within holding-time?	Y	
Agreement between COC and sample labels?	Y	
Radioactivity at or below background levels?	Y	
Additional		
Comments		
Sample Custodian Signature/Date	Y	

Iris Benitez
9/28/01

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SEVERN TRENT LABORATORIES-HOUSTON
SAMPLE RECEIPT CHECKLIST

CLIENT: ERM-SW CONTACT: Peter Eagmon

PROJECT: Search semiannual CARRIER: Client

DATE SHIPPED: UNPACKED BY: JB

DATE RECEIVED: UNPACKED STAMP:

NUMBER OF KITS RECEIVED: 2 JOB# 224894 B.O.#

KIT CHECKLIST

KIT ID	COC PRESENT	CUSTODY TAPE		COOLER TEMP Thermometer # 325	# OF SAMPLE CONTAINERS
		PRESENT?	INTACT?		
R/W 503	yes	C NO	NO	1.1	22
		B NO	NO		
B/W 538	yes	C NO	NO	1.3	12
		B NO	NO		
		C			
		B			

C = COOLER B = BOTTLES

SAMPLE CHECKS

pH OF WATER SAMPLES CHECKED? Yes ✓ No ___ SAMPLE(S) SCREENED FOR RADIATION? Yes ✓ No ___

VOLATILE HEAD SPACE CHECKED? Yes ✓ No ___

SHORT HOLD / RUSH SAMPLES (include department delivered to and time delivered)

INCONSISTENCIES

ACTION TAKEN

PERSON CONTACTED: DATE:

RESOLUTION:

EMPLOYEE DATE:

☐ HNO_3 ☐ HCL ☐ H_2SO_4 ☐ NaOH ☐ $Na_2S_2O_3$ ☐ NEAT ☐ $NaHSO_4$ ☐ OT/PRE.

(Water Only)

22 VOA ___ Other ___ VOA ___ Other

# Cont.	Matrix
34	W
Total ___	

NOTES

Project Manager

Updated Compliance Schedule

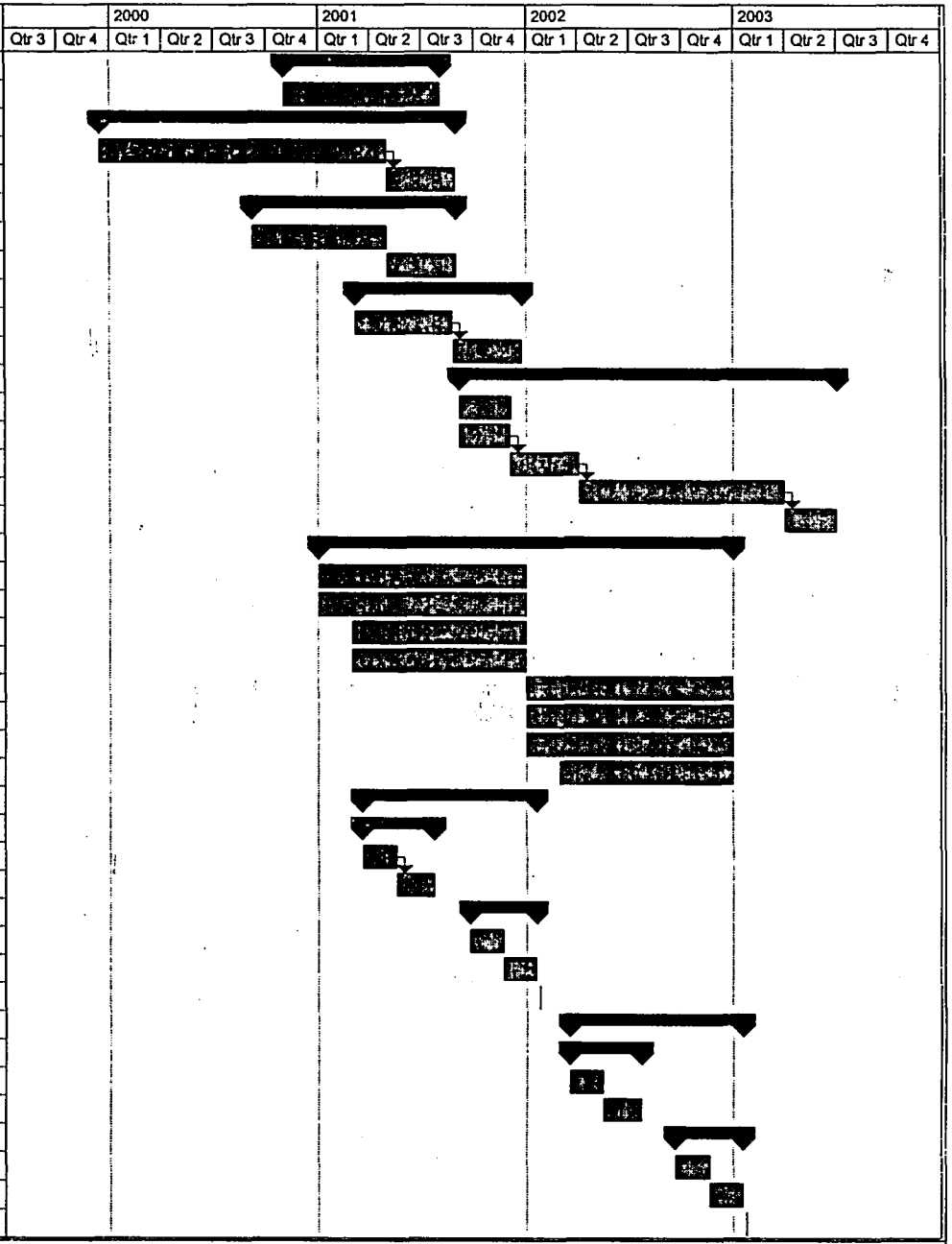
Appendix D

January 21, 2002
W.O. #422-102

Environmental Resources Management
16300 Katy Freeway, Suite 300
Houston, Texas 77094-1611
(281) 600-1000

G:\DM\422\102\1204Hrpt.doc

ID	Task Name	Start	Finish
1	On-Site Risk Assessment (Permit VIII.I)	Wed 11/01/00	Fri 08/03/01
2	Respond to TNRCC Questions	Wed 11/01/00	Fri 08/03/01
3	RFI/EOC Phase 2-C Implementation (Permit VIII.D and CP VIII)	Wed 12/15/99	Thu 08/30/01
4	Complete Phase 2-C RFI/EOC	Wed 12/15/99	Tue 05/01/01
5	Submit RFI/EOC Progress Reports to TNRCC	Wed 05/02/01	Thu 08/30/01
6	Off-Site Risk Assessment (Permit VIII.I)	Fri 09/08/00	Fri 08/31/01
7	Submit RFI Risk Assessment	Fri 09/08/00	Tue 05/01/01
8	TNRCC Review Process	Wed 05/02/01	Fri 08/31/01
9	Corrective Measures Study (Permit VIII.I and CP IX)	Wed 03/07/01	Mon 12/24/01
10	Submit Corrective Measures Study	Wed 03/07/01	Fri 08/24/01
11	TNRCC Review Process	Mon 08/27/01	Mon 12/24/01
12	Corrective Measures Implementation (Permit VIII.J and CP X)	Wed 09/05/01	Wed 07/02/03
13	Submit Proposed Permit Modification	Wed 09/05/01	Tue 12/04/01
14	Submit Corrective Measures Implementation Work Plan	Wed 09/05/01	Mon 12/03/01
15	TNRCC Review Process	Tue 12/04/01	Thu 04/04/02
16	Perform Corrective Action	Fri 04/05/02	Tue 04/01/03
17	Submit Corrective Measures Report	Wed 04/02/03	Wed 07/02/03
18	Compliance Activities (Permit IV, C and CP VI)	Mon 01/01/01	Tue 12/31/02
19	Impoundment Inspections (Weekly)	Mon 01/01/01	Mon 12/31/01
20	Water Level Measurments (Semiannually)	Mon 01/01/01	Mon 12/31/01
21	Monitor Well inspections (Quarterly)	Thu 03/01/01	Mon 12/31/01
22	Ground Water Sampling (Semiannually)	Thu 03/01/01	Mon 12/31/01
23	Impoundment Inspections (Weekly)	Tue 01/01/02	Tue 12/31/02
24	Water Level Measurments (Semiannually)	Tue 01/01/02	Tue 12/31/02
25	Monitor Well inspections (Quarterly)	Tue 01/01/02	Tue 12/31/02
26	Ground Water Sampling (Semiannually)	Fri 03/01/02	Tue 12/31/02
27	Post-Closure Care Reporting 2000-2001	Mon 03/19/01	Fri 01/18/02
28	Semiannual Report - July 21, 2001 (CP VII.B.2)	Mon 03/19/01	Mon 07/23/01
29	Perform Data Evaluation	Mon 03/19/01	Thu 05/17/01
30	Submit Report to TNRCC	Fri 05/18/01	Mon 07/23/01
31	Semiannual Report - January 21, 2002 (CP VII.B.2)	Mon 09/24/01	Fri 01/18/02
32	Perform Data Evaluation	Mon 09/24/01	Wed 11/21/01
33	Submit Report to TNRCC	Wed 11/21/01	Fri 01/18/02
34	2001 Annual Report - January 25, 2002 (Permit V.F and III.B.1)	Fri 01/25/02	Fri 01/25/02
35	Post-Closure Care Reporting 2001-2002	Mon 03/18/02	Fri 01/17/03
36	Semiannual Report - July 21, 2002 (CP VII.B.2)	Mon 03/18/02	Mon 07/22/02
37	Perform Data Evaluation	Mon 03/18/02	Thu 05/16/02
38	Submit Report to TNRCC	Fri 05/17/02	Mon 07/22/02
39	Semiannual Report - January 17, 2003 (CP VII.B.2)	Fri 09/20/02	Fri 01/17/03
40	Perform Data Evaluation	Fri 09/20/02	Wed 11/20/02
41	Submit Report to TNRCC	Wed 11/20/02	Fri 01/17/03
42	2002 Annual Report - January 24, 2003 (Permit V.F and III.B.1)	Fri 01/24/03	Fri 01/24/03



Project: UpdateCompliance3
Date: Wed 01/09/02

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

Documents Dated

Dec. 31, 2001 and Prior

Have Been

Microfilmed