UNION PACIFIC RAILROAD COMPANY
ENVIRONMENTAL MANAGEMENT

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July 19, 2001

Dr. Ata-ur Rahman
Permits Sections
Industrial and Hazardous Waste Division
Texas Natural Resource Conservation Commission
12100 Park 35 Circle
MC 130
Austin, Texas 78753

Subject: Transmittal, Semiannual Monitoring Report; First Semiannual Event 2001; Compliance Plan No. CP-50343; Former Houston Wood Preserving Works Site, Houston, Texas

Dear Dr. Rahman:

In accordance with Section VII.B.2 of Compliance P
conjunction with Post Closure Care Permit No. HW-
copies of the referenced report. If you have any que
please call me at (402) 271-5979.

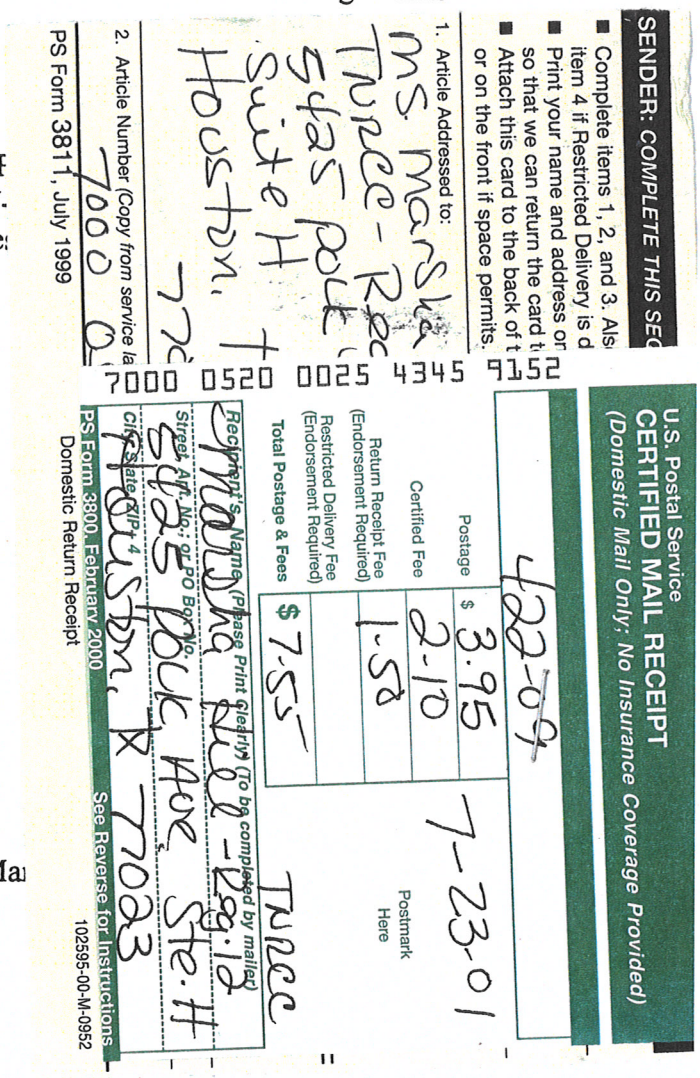
Sincerely,

Union Pacific Railroad Company

E.H. (Ed) Honig, P.E.
Manager, Environmental Site Remediation

EH/
Enclosure

cc: Ray Risner, TNRCC, Austin
Marsha Hill, TNRCC Region 12, Houston
Thomas Pacioni, Environmental Resources Ma



A MEMBER OF THE ENVIRONMENTAL RESOURCES MANAGEMENT GROUP

Union Pacific Railroad Company

Semiannual Monitoring Report: First Semiannual Event 2001

Former Houston Wood Preserving Works Houston, Texas

July 19, 2001

W.O. #422-009

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

ERM®

Union Pacific Railroad Company

Semiannual Monitoring Report: First Semiannual Event 2001

Former Houston Wood Preserving Works

Houston, Texas

July 19, 2001

W.O. #422-009

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1.0 INTRODUCTION

1.1 BACKGROUND

On April 23 - May 2, 2001, Environmental Resources Management (ERM) conducted ground water sampling activities at Union Pacific Railroad 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 first semiannual monitoring period for 2001 (i.e., January 1 through June 30) 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 June 30, 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 FIRST 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 FIRST 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 April 23 through May 2, 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 (±1° Celsius, ±0.5 pH units, 10% specific conductance, dissolved oxygen and turbidity between three consecutive readings) 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, three 40-mL glass vials (for volatile organic compound analysis), and two 1000-mL amber glass bottle (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 first semiannual sampling event of 2001 are summarized in Tables 2-1 and 2-2, respectively. Those compounds reported by the laboratory to be above the GWPS are outlined 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 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 July 19, 2001, 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 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 oil/water interface probe was used to measure for light and dense NAPLs.

2.7 *NAPL RECOVERIES*

As of July 19, 2001, 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 first 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 first semi-annual sampling event of 2001 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 has been modified from the most recent schedule that was submitted as part of a response to TNRCC's comments regarding the On-Site Affected Property Assessment Report (ERM, July 10, 2000).

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

TABLE 2-1

Summary of Analytical Results for the A-Transmissive Zone (A-TZ)

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

Analyte	GWPS[1]	Monitor Well ID:	MW-01A	MW-02	MW-03	MW-04	MW-05	MW-07	MW-08	MW-08D	MW-09	MW-10A	MW-11A	MW-11AD
		Sample Date:	04/27/01	04/26/01	04/26/01	04/25/01	04/24/01	04/25/01	04/25/01	04/25/01	04/24/01	04/27/01	04/26/01	04/26/01
Benzene	0.005		0.001 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003 J	0.003 J
Chlorobenzene	0.005		ND	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	0.003 J	ND
Methylene chloride	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005		0.004 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003 J	0.003 J
Toluene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002 J	0.002 J
Xylene (total)	0.005		0.007 J	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]	0.007 J	0.007 J
Acenaphthene	0.010		0.17	0.0096	0.25	0.00043 J	0.0029	ND	0.0025	0.011	ND	0.0027	0.28	0.37
Acenaphthylene	0.010		0.0037	0.0003 J	0.003	0.000098 J	ND	ND	0.000077 J	0.00017 J	ND	0.00011 J	0.0038	0.0043
Anthracene	0.010		0.0053	0.002	0.0044	0.0011 J	0.0006 J	0.001 J	0.00062 J	0.00065 J	0.00054 J	0.00056 J	0.014	0.016
Benzo(a)anthracene	0.010		ND	0.0004 J	ND	ND	ND	ND	ND	ND	ND	ND	0.00018 J	0.00024 J
Benzo(a)pyrene	0.010		ND	0.00016 J	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	ND
2-Chloronaphthalene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.010		ND	0.00034 J	ND	ND	ND	ND	ND	ND	ND	ND	0.00011 J	0.00012 J
Dibenzofuran	0.010		0.091	0.008	0.110	0.00029 J	ND	ND	0.0011 J	0.0055	ND	0.00026 J	0.14	0.18
Di-n-butylphthalate	0.010		0.00015 J	0.00011 J	0.00013 J	0.19 JB	0.00021 JB	0.00016 JB	0.00019 JB	0.00021 JB	0.00024 JB	0.0006 J	ND	0.00014 J
2,4-Dimethylphenol	0.010		0.00094 J	ND	ND	ND	ND	ND	ND	0.00056 J	ND	ND	0.0013 J	0.0016
4,6-Dinitro-o-cresol	0.050		ND	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	ND
2,6-Dinitrotoluene	0.010		ND	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	ND
bis(2-Ethylhexyl)phthalate	0.010		0.0000098 J	0.00024 J	ND	0.00023 JB	0.00019 JB	0.00020 JB	0.0002 JB	0.00015 JB	0.00017 JB	0.00073 J	ND	ND
Fluoranthene	0.010		0.0066	0.0029	0.015	0.000088 J	0.00023 J	ND	ND	0.00012 J	ND	0.000088 J	0.015	0.017
Fluorene	0.010		0.092	0.0089	0.140	0.00037 J	ND	ND	0.0012 J	0.0053	ND	0.00024 J	0.16	0.2
2-Methylnaphthalene	0.010		0.012 B	0.00094 J	0.000069 J	0.00015 J	ND	ND	0.0002 JB	0.002	ND	0.00014 JB	0.014	0.024
Naphthalene	0.010		0.24 B	0.028	0.00094 J	0.0014 J	0.000077 J	ND	0.013	0.089	ND	0.00028 JB	0.47	0.79
Nitrobenzene	0.010		ND	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	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.050		0.00042 JB	0.00019 JB	0.0002 JB	0.00034 JB	0.00035 JB	0.00026 JB	0.00029 JB	0.00024 JB	0.00037 JB	0.00014 JB	0.00035 JB	0.00041 JB
Phenanthrene	0.010		0.042	0.0019	0.00092 J	0.00031 J	ND	ND	ND	0.00087 J	ND	0.00017 J	0.074	0.11
Phenol	0.010		ND	ND	ND	ND	0.000085 J	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.010		0.0029	0.0015 J	0.0062	0.000055 J	0.00029 J	ND	ND	0.00012 J	0.000040 J	0.000083 J	0.0063	0.0071

NOTES:

All values reported in mg/L. ND - Not detected at the Sample Quantitation Limit (SQL).
[1]GWPS - Ground Water Protection Standard as defined on Table I of the Compliance Plan.
[2] [ ] indicate values reported above the GWPS.
[3]The compound was not detected but the reported detection limit was greater than the SQL.
J=Value was detected, but below limit of quantitation.
B=Analyte was found in the associated blank as well as in the sample.
Concentrations are reported on the Form 1s up to 3 significant figures in µg/L; then they are converted to mg/L.

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TABLE 2-2

Summary of Analytical Results for the B-Transmissive Zone (B-TZ)

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

Analyte	GWPS[1]	Monitor Well ID:	MW-10B	MW-11B	P-10	P-11	P-12
		Sample Date:	4/26/01	4/25/01	4/25/01	4/25/01	4/24/01
Benzene	0.005		0.002 J	ND	ND	ND	ND
Chlorobenzene	0.005		ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005		ND	ND	ND	ND	ND
Methylene chloride	0.010		ND	ND	ND	0.002 J	ND
Ethylbenzene	0.005		0.004 J	0.003 J	0.018	ND	ND
Toluene	0.005		ND	ND	ND	ND	ND
Xylene (total)	0.005		0.003 J	0.003 J	0.011 J	ND[3]	ND[3]
Acenaphthene	0.010		0.087	0.200	0.32	0.011	ND
Acenaphthylene	0.010		0.0018	0.0029	ND	ND	ND
Anthracene	0.010		0.0041	0.011	0.021	0.00038 J	ND
Benzo(a)anthracene	0.010		ND	0.00016 J	ND	ND	ND
Benzo(a)pyrene	0.010		ND	ND	0.0000095 J	ND	ND
bis(2-Chloroethoxy)methane	0.010		ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010		ND	ND	ND	ND	ND
Chrysene	0.010		ND	0.00011 J	ND	ND	ND
Dibenzofuran	0.010		0.036	0.100	0.110	0.00027 J	ND
Di-n-butylphthalate	0.010		0.00022 J	0.00022 JB	0.00022 JB	0.00016 JB	0.00022 JB
2,4-Dimethylphenol	0.010		0.002	0.0006 J	ND	ND	ND
4,6-Dinitro-o-cresol	0.050		ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010		ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.010		ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010		ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010		ND	ND	0.00014 JB	0.00015 JB	0.00020 JB
Fluoranthene	0.010		0.0035	0.01	0.015	0.0009 J	ND
Fluorene	0.010		0.047	0.110	0.190	0.0022	ND
2-Methylnaphthalene	0.010		0.00045 JB	0.056	0.140	ND	ND
Naphthalene	0.010		0.18 B	0.470	3.80	0.000085 J	ND
Nitrobenzene	0.010		ND	ND	ND	ND	ND
p-Nitrophenol	0.050		ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND
Pentachlorophenol	0.050		0.00062 JB	0.00036 JB	0.00041 JB	0.00026 JB	0.00022 J
Phenanthrene	0.010		0.014	0.086	0.11	ND	0.00013 J
Phenol	0.010		0.0019	ND	ND	ND	ND
Pyrene	0.010		0.0013 J	0.0047	0.0056	0.0005 J	0.0092

NOTES:

All values reported in mg/L. ND - Not detected at the Sample Quantitation Limit (SQL).
[1]GWPS - Ground Water Protection Standard as defined on Table 1 of the Compliance Plan.
[2] [ ] indicate values reported above the GWPS.
[3]The compound was not detected but the reported detection limit was greater than the SQL.
J=Value was detected, but below limit of quantitation.
B=Analyte was found in the associated blank as well as in the sample.
Concentrations are reported on the Form 1s up to 3 significant figures in µg/L; then they are converted to mg/L.

TABLE 2-3

Water Level and Total Depth of Well Measurements

First 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′	6.60'	41.35'	19.69'	20.20'
MW-02	48.03′	6.91'	41.12'	18.55'	20.30'
MW-03	48.55′	7.26'	41.29'	19.70'	20.90'
MW-04	49.85′	8.41'	41.44'	21.75'	23.40'
MW-05	49.35′	7.47'	41.88'	27.42'	28.30'
MW-07	48.86′	7.64'	41.22'	24.84'	N/A
MW-08	49.37′	7.83'	41.54'	25.11'	26.80'
MW-09	49.29′	7.16'	42.13'	25.45'	26.80'
MW-10A	49.90′	8.64'	41.26'	25.64'	25.90'
MW-11A	50.04′	8.78'	41.26'	24.04'	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′	8.75'	41.22'	46.57'	48.80'
MW-11B	50.19′	5.97'	44.22'	49.37'	46.80'
P-10	47.72'	6.52'	41.20'	62.96'	N/A
P-11	49.02′	7.48'	41.54'	62.92'	51.80'
P-12	48.82′	6.70'	42.12'	62.95'	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

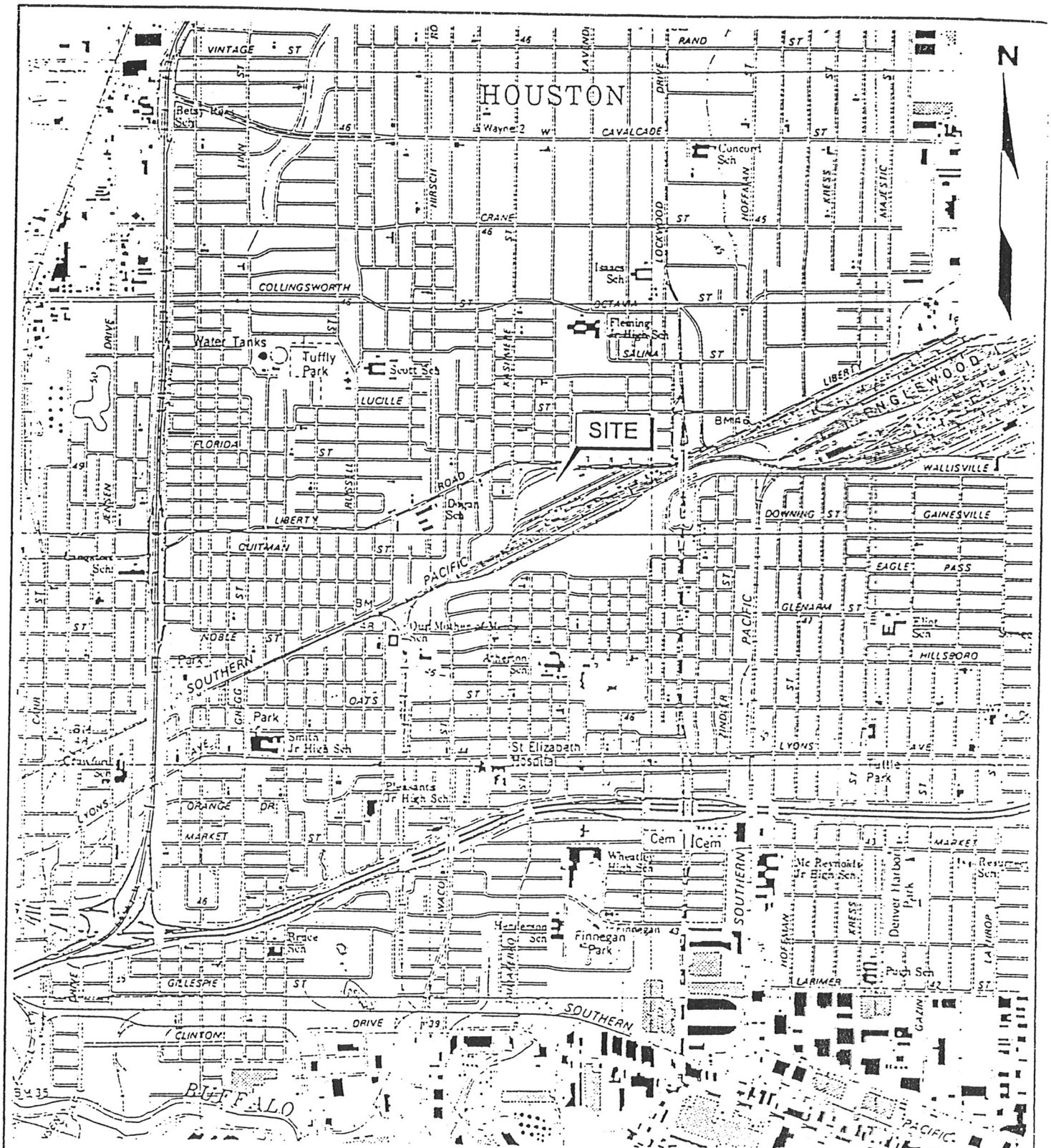
Compliance Status of Wells and Piezometers

First 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	Non-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	Non-Compliant
P-12	Corrective action observation	Compliant

Figures



ERM-Southwest, Inc.

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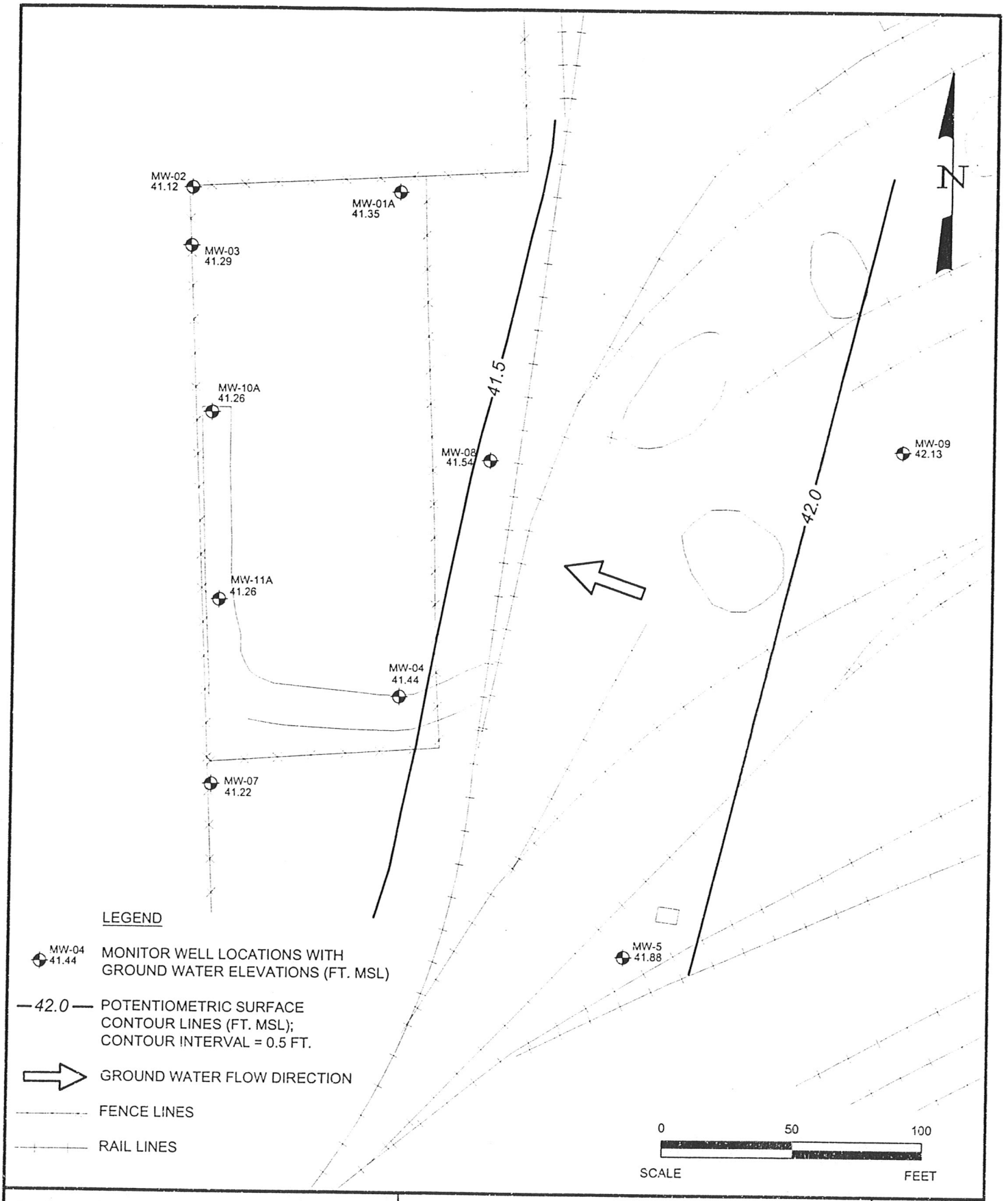
ERM

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

DATE: 11/17/97

W.O.NO.: 42209A17



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

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE: AS SHOWN	W.O.NO.: 422009A108 G01	

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

ERM

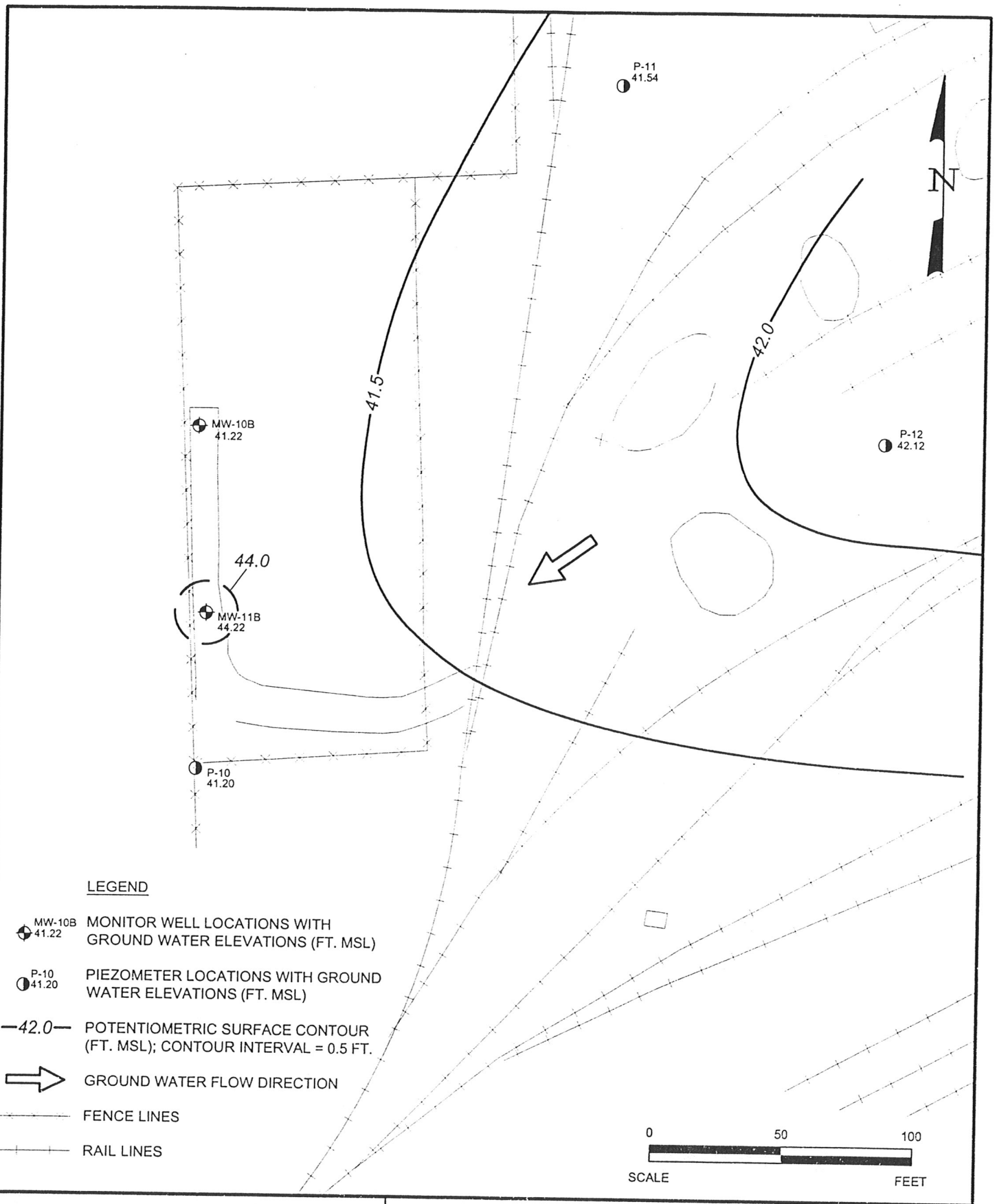

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FIGURE 2-2
B-TZ POTENTIOMETRIC SURFACE
MAY 1, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE: AS SHOWN	W.O.NO.: 422009A109 G01	

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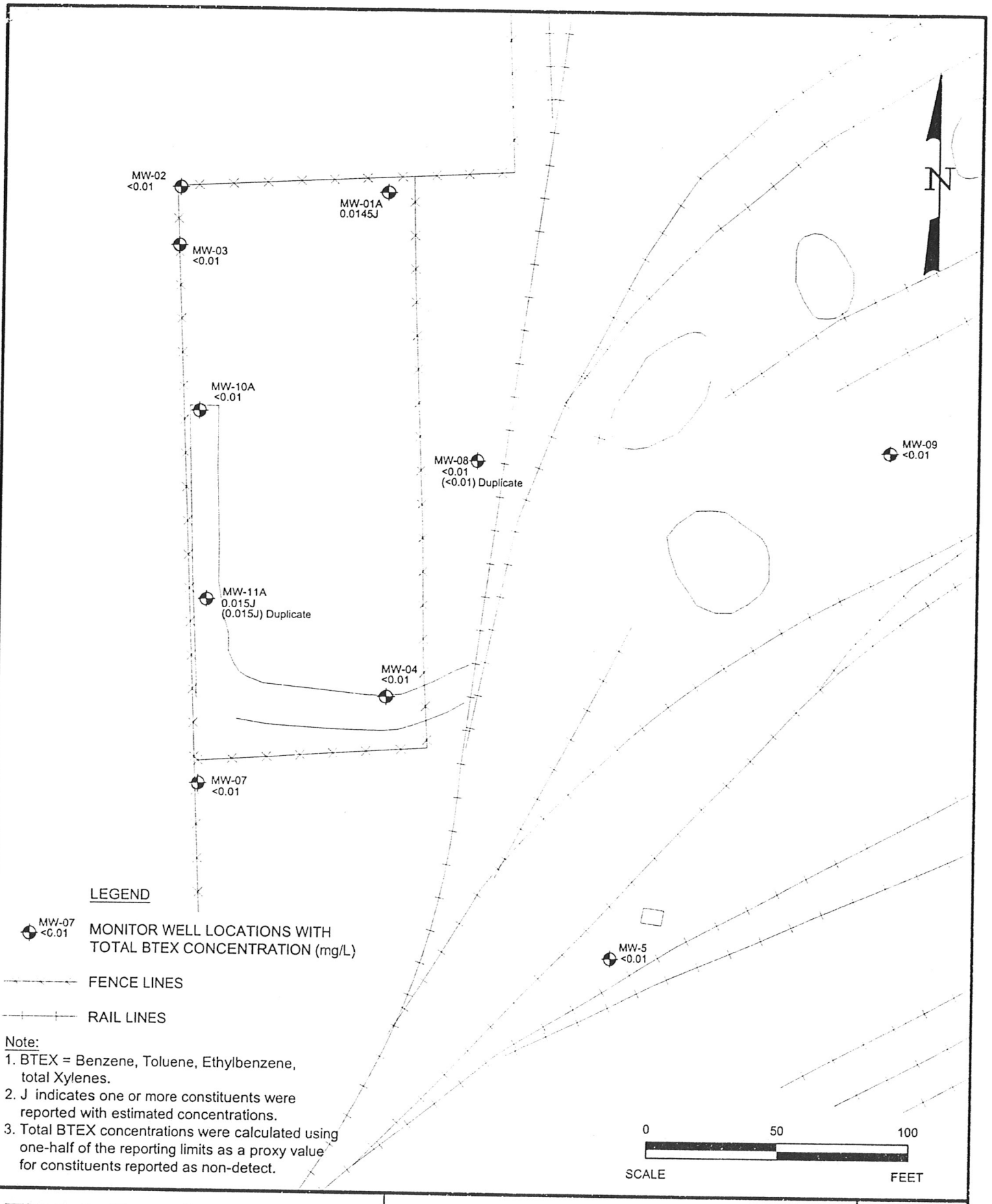

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FIGURE 2-3
TOTAL BTEX IN A-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE: AS SHOWN	W.O.NO.: 422009A110 G01	

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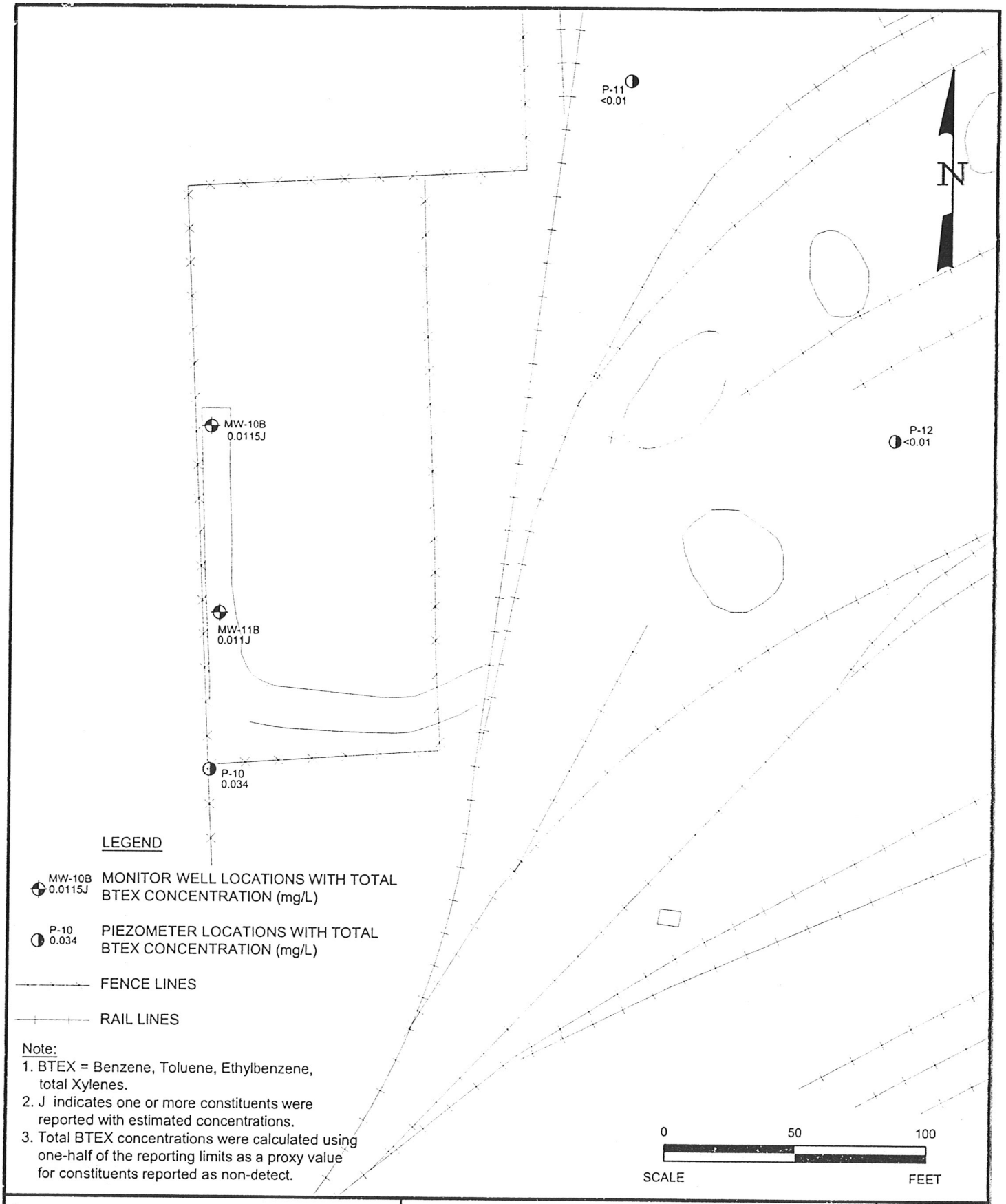

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FIGURE 2-4
TOTAL BTEX IN B-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
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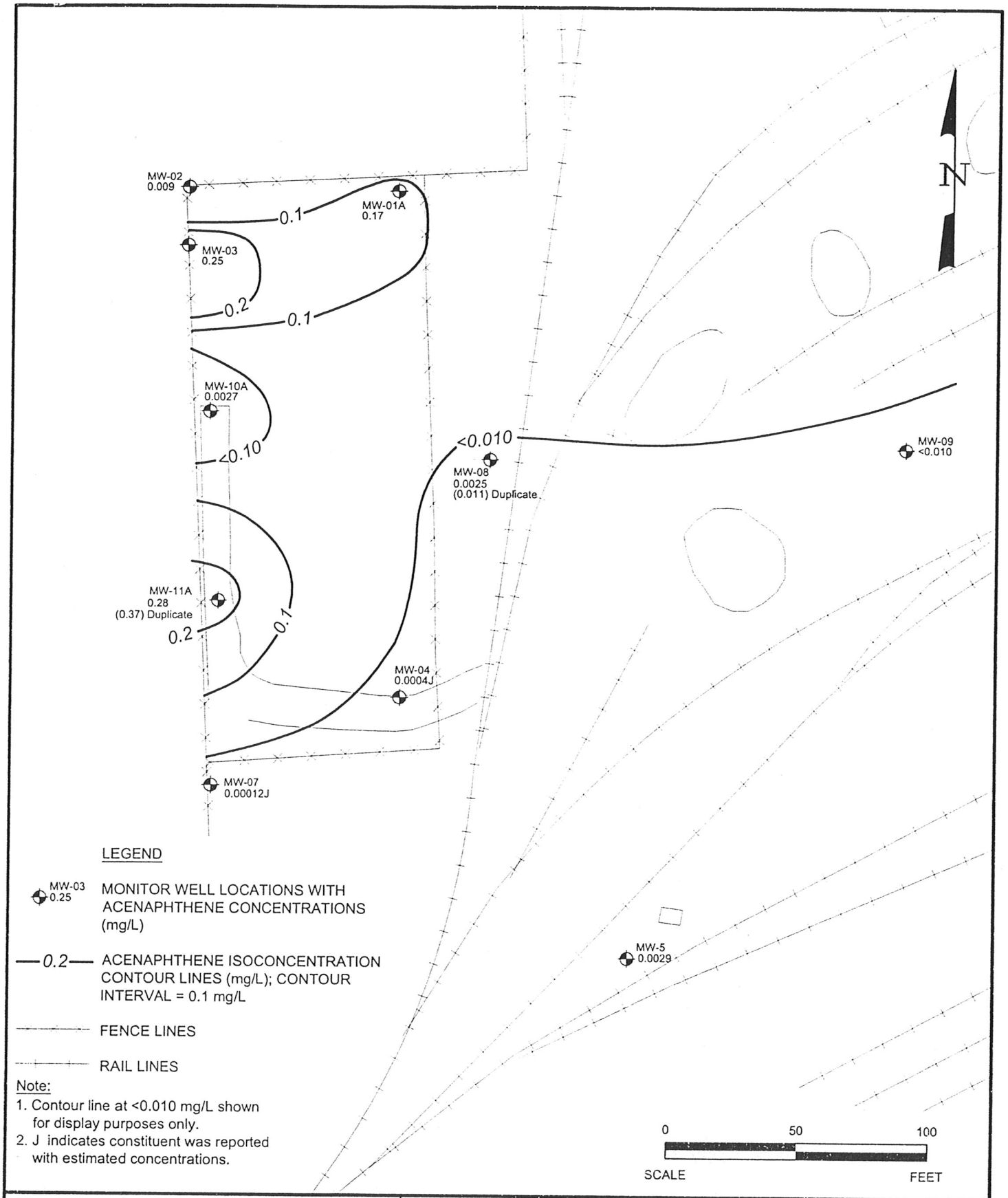

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FIGURE 2-5
ACENAPHTHENE IN A-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
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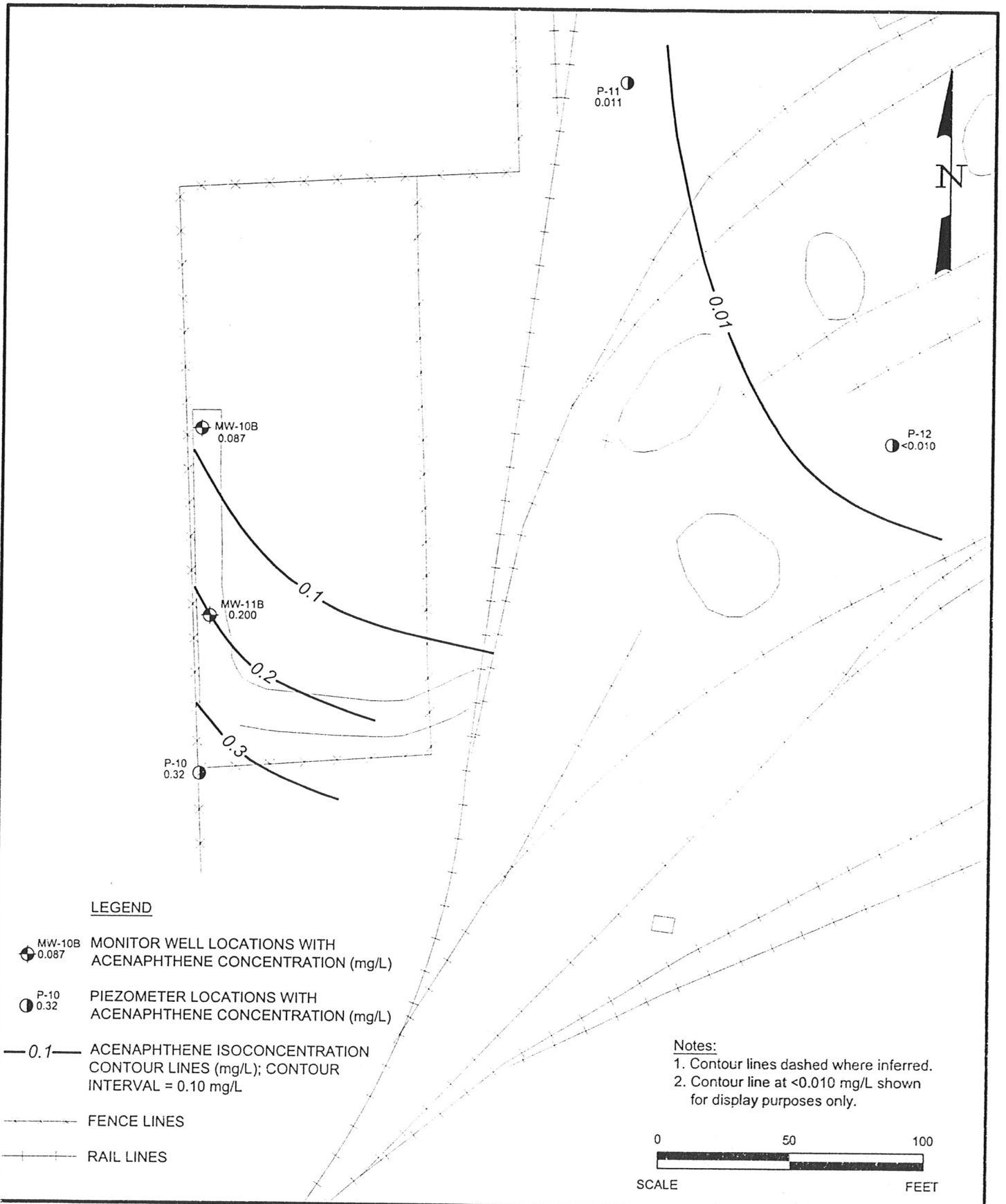

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FIGURE 2-6
ACENAPHTHENE IN B-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE. AS SHOWN	W.O.NO.: 422009A114 G01	

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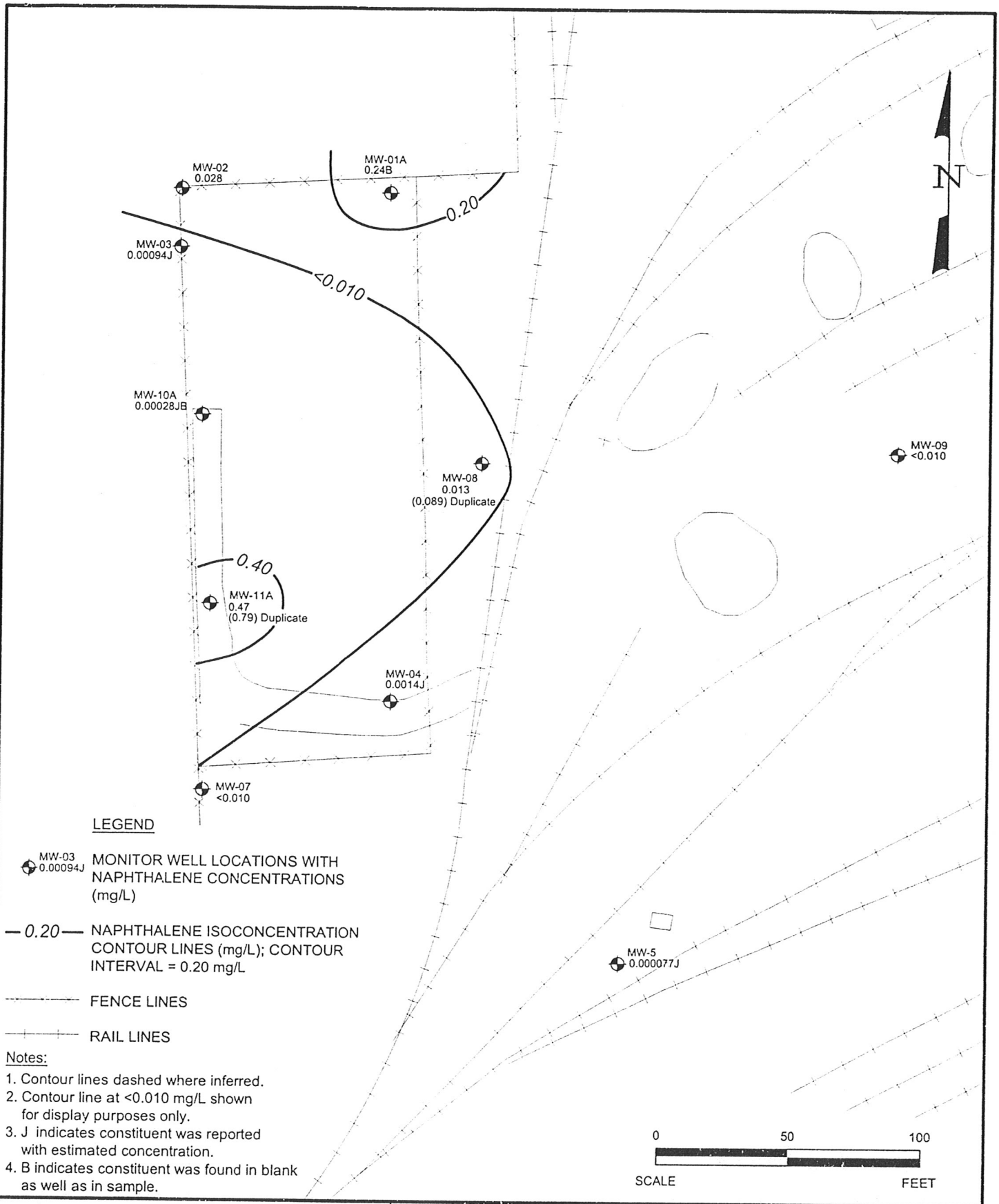

LEGEND

MW-03 0.00094J — MONITOR WELL LOCATIONS WITH NAPHTHALENE CONCENTRATIONS (mg/L)

— 0.20 — NAPHTHALENE ISOCONCENTRATION CONTOUR LINES (mg/L); CONTOUR INTERVAL = 0.20 mg/L

FENCE LINES

RAIL LINES

Notes:

1. Contour lines dashed where inferred.
2. Contour line at <0.010 mg/L shown for display purposes only.
3. J indicates constituent was reported with estimated concentration.
4. B indicates constituent was found in blank as well as in sample.

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FIGURE 2-7
NAPHTHALENE IN A-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE: AS SHOWN	W.O.NO.: 422009A115 G01	

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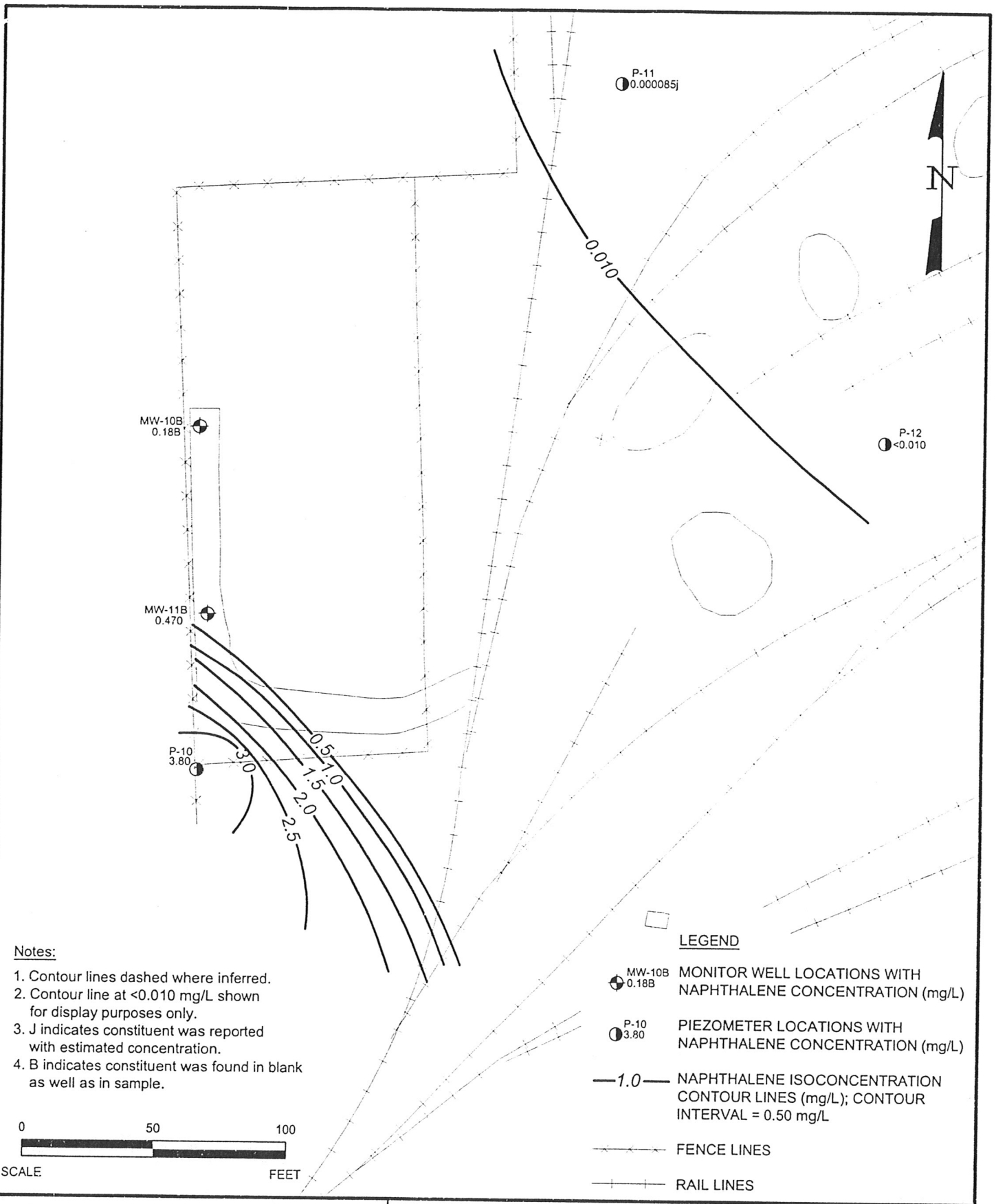

Notes:

1. Contour lines dashed where inferred.
2. Contour line at <0.010 mg/L shown for display purposes only.
3. J indicates constituent was reported with estimated concentration.
4. B indicates constituent was found in blank as well as in sample.

0 50 100

SCALE FEET

LEGEND

- MW-10B 0.18B — MONITOR WELL LOCATIONS WITH NAPHTHALENE CONCENTRATION (mg/L)
- P-10 3.80 — PIEZOMETER LOCATIONS WITH NAPHTHALENE CONCENTRATION (mg/L)
- —1.0— NAPHTHALENE ISOCONCENTRATION CONTOUR LINES (mg/L); CONTOUR INTERVAL = 0.50 mg/L
- FENCE LINES
- RAIL LINES

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FIGURE 2-8
NAPHTHALENE IN B-TZ GROUND WATER (mg/L)
APRIL 24-27, 2001
TNRCC PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

DESIGN: LBG	CHKD.:	DATE: 07/12/01	REV.:
DRAWN: CAK	SCALE. AS SHOWN	W.O.NO.: 422009A116 G01	

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Compliance Plan Tables

Appendix A

July 19, 2001
W.O. #422-009

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

G:\WO\422\br-bz\bz554rpt.doc

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

July 19, 2001
W.O. #422-009

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

TABLE B-1

Ground Water Sampling Field Parameters

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

Well ID / Date Sampled	MW-01A 04/27/01	MW-02 04/26/01	MW-03 04/26/01	MW-04 04/25/01	MW-05 04/24/01	MW-07 04/25/01	MW-08 04/25/01	MW-09 04/24/01
Time Sampled (hrs)	0940	1145	1025	1520	1600	1150	1015	1435
Temperature (°C)	20.28	19.65	19.70	22.22	21.64	21.10	21.06	22.54
pH (Standard Units)	6.85	6.61	6.85	6.58	6.84	7.02	7.11	6.80
Specific Conductivity (uS)	1229	534	1001	698	772	728	609	707
Dissolved Oxygen (mg/L)	1.09	0.76	1.25	1.13	1.12	4.95	4.35	2.30
Turbidity	0.00	0.00	0.00	0.00	4.56	0.00	0.00	0.00

Well ID / Date Sampled	MW-10A 04/27/01	MW-10B 04/26/01	MW-11A 04/26/01	MW-11B 04/25/01	P-10 04/25/01	P-11 04/25/01	P-12 04/24/01
Time Sampled (hrs)	0825	1455	0855	1620	1420	0835	1423
Temperature (°C)	19.65	24.25	20.25	22.41	22.92	21.11	23.69
pH (Standard Units)	6.95	6.81	6.84	7.05	6.77	7.33	6.61
Specific Conductivity (uS)	1102	1166	1076	1074	1026	935	1448
Dissolved Oxygen (mg/L)	1.77	1.10	1.85	1.08	1.10	5.65	1.68
Turbidity	0.00	0.00	2.79	0.00	0.00	0.00	0.44

Laboratory Analytical Reports

Appendix C

July 19, 2001
W.O. #422-009

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: 217857

Prepared For:

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

Attention: Peter Gagnon

Date: 05/23/2001

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

05/23/01
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

SEVERN TRENT SERVICES

STL Houston

05/23/2001

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

Reference:
Project : UPRR-HWPW
Project No. : 217857
Date Received : 04/25/2001
STL Job : 217857

Dear Peter Gagnon:

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

1. P-12-ISA01	2. MW-5-ISA01	3. MW-9-ISA01
4. P11-ISA01	5. P11MS-ISA01	6. P11MSD-ISA01
7. MW8-ISA01	8. MW8D-ISA01	9. MW7-ISA01
10. P10-ISA01	11. MW4-ISA01	12. TB042401-ISA01
13. TB042501-ISA01	14. MW11B-ISA01	15. TB042501B-ISA01

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.

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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TRENT SERVICES

STL Houston

SAMPLE INFORMATION
Date: 05/23/2001

Job Number.: 217857
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Peter Gagnon

Project Number.....: 99000484
Customer Project ID....: HWPW/SA-422-009
Project Description....: UPRR-HWPW

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
217857-1	P-12-ISA01	Water	04/24/2001	14:23	04/25/2001	17:38
217857-2	MW-5-ISA01	Water	04/24/2001	16:00	04/25/2001	17:38
217857-3	MW-9-ISA01	Water	04/24/2001	14:35	04/25/2001	17:38
217857-4	P11-ISA01	Water	04/25/2001	08:35	04/25/2001	17:38
217857-5	P11MS-ISA01	Water	04/25/2001	08:55	04/25/2001	17:38
217857-6	P11MSD-ISA01	Water	04/25/2001	09:10	04/25/2001	17:38
217857-7	MW8-ISA01	Water	04/25/2001	10:15	04/25/2001	17:38
217857-8	MW8D-ISA01	Water	04/25/2001	10:25	04/25/2001	17:38
217857-9	MW7-ISA01	Water	04/25/2001	11:50	04/25/2001	17:38
217857-10	P10-ISA01	Water	04/25/2001	14:20	04/25/2001	17:38
217857-11	MW4-ISA01	Water	04/25/2001	15:20	04/25/2001	17:38
217857-12	TB042401-ISA01	Trip Blank	04/24/2001	00:01	04/25/2001	17:38
217857-13	TB042501-ISA01	Trip Blank	04/25/2001	00:01	04/25/2001	17:38
217857-14	MW11B-ISA01	Water	04/25/2001	16:20	04/25/2001	17:38
217857-15	TB042501B-ISA01	Trip Blank	04/25/2001	00:01	04/25/2001	17:38

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P-12-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 14:23
Sample Matrix.....: Water

Laboratory Sample ID: 217857-1
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1624	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1624	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/l	27568		05/03/01 1624	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1624	lg1
	Pentachlorophenol, Water	0.2	J		0.2	1	1.00000	ug/L	27568		05/03/01 1624	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1624	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1050	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1
	Pyrene, Water	9			0.3	2	1.00000	ug/L	27567		05/04/01 1050	lg1

* In Description = Dry Wgt.

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Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Customer Sample ID: P-12-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 14:23
Sample Matrix.....: Water

Laboratory Sample ID: 217857-1
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1050	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1050	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1050	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1050	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1720	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1720	yd
CT	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1720	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1720	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1720	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1720	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1720	yd

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW-5-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 16:00
Sample Matrix.....: Water

Laboratory Sample ID: 217857-2
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1651	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1651	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 1651	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1651	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	27568		05/03/01 1651	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1651	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	3			0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Anthracene, Water	0.6	J		0.4	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1120	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1120	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW-5-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 16:00
Sample Matrix.....: Water

Laboratory Sample ID: 217857-2
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1120	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1120	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1120	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1120	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1748	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1748	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1748	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1748	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1748	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1748	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1748	yd

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW-9-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 14:35
Sample Matrix.....: Water

Laboratory Sample ID: 217857-3
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1718	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1718	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 1718	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1718	lg1
∞	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27568		05/03/01 1718	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1718	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Anthracene, Water	0.5	J		0.4	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1151	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1151	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW-9-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 14:35
Sample Matrix.....: Water

Laboratory Sample ID: 217857-3
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1151	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1151	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1151	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1151	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1815	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1815	yd
6	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1815	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1815	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1815	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1815	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1815	yd

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: NWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 08:35
Sample Matrix.....: Water

Laboratory Sample ID: 217857-4
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1746	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1746	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 1746	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1746	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	27568		05/03/01 1746	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1746	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	11			0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1221	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Fluoranthene, Water	0.9	J		0.4	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Fluorene, Water	2			0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1
	Pyrene, Water	0.5	J		0.3	2	1.00000	ug/L	27567		05/04/01 1221	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 08:35
Sample Matrix.....: Water

Laboratory Sample ID: 217857-4
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1221	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1221	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1221	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1221	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/27/01 1315	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1315	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/27/01 1315	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/27/01 1315	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/27/01 1315	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1315	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/27/01 1315	yd

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 217857

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11MS-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 08:55
Sample Matrix.....: Water

Laboratory Sample ID: 217857-5
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1812	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1812	lg1
	2,4-Dinitrotoluene, Water	10			0.3	1	1.00000	ug/L	27567		05/04/01 1252	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1812	lg1
	Pentachlorophenol, Water	23			0.4	1	1.00000	ug/L	27567		05/04/01 1252	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1812	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	52			0.5	3	2.00000	ug/L	27567		05/07/01 1020	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Anthracene, Water	1	J		0.4	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1252	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Di-n-butyl Phthalate, Water	0.7	J		0.4	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Fluoranthene, Water	4			0.4	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Fluorene, Water	18			0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1
	Pyrene, Water	12			0.3	2	1.00000	ug/L	27567		05/04/01 1252	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11MS-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 08:55
Sample Matrix.....: Water

Laboratory Sample ID: 217857-5
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1252	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1252	lg
	4-Nitrophenol, Water	6	J		1	7	1.00000	ug/L	27567		05/04/01 1252	lg
	Phenol, Water	6			0.2	2	1.00000	ug/L	27567		05/04/01 1252	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	50			0.8	5	1.00000	ug/L	27026		04/27/01 1343	yc
	Chlorobenzene, Water	52			0.7	5	1.00000	ug/L	27026		04/27/01 1343	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/27/01 1343	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/27/01 1343	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/27/01 1343	yc
	Toluene, Water	54			0.7	5	1.00000	ug/L	27026		04/27/01 1343	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/27/01 1343	yc

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11MSD-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 09:10
Sample Matrix.....: Water

Laboratory Sample ID: 217857-6
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1840	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1840	lg1
	2,4-Dinitrotoluene, Water	12			0.3	1	1.00000	ug/L	27567		05/04/01 1323	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1840	lg1
	Pentachlorophenol, Water	26			0.4	1	1.00000	ug/L	27567		05/04/01 1323	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1840	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	62			0.5	3	2.00000	ug/L	27567		05/07/01 0951	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Anthracene, Water	1	J		0.4	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1323	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Di-n-butyl Phthalate, Water	0.7	J		0.4	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Fluoranthene, Water	4			0.4	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Fluorene, Water	19			0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1
	Pyrene, Water	14			0.3	2	1.00000	ug/L	27567		05/04/01 1323	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P11MSD-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 09:10
Sample Matrix.....: Water

Laboratory Sample ID: 217857-6
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1323	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1323	lg
	4-Nitrophenol, Water	7			1	7	1.00000	ug/L	27567		05/04/01 1323	lg
	Phenol, Water	7			0.2	2	1.00000	ug/L	27567		05/04/01 1323	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	49			0.8	5	1.00000	ug/L	27026		04/27/01 1411	yc
	Chlorobenzene, Water	53			0.7	5	1.00000	ug/L	27026		04/27/01 1411	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/27/01 1411	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/27/01 1411	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/27/01 1411	yc
	Toluene, Water	53			0.7	5	1.00000	ug/L	27026		04/27/01 1411	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/27/01 1411	yc

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW8-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 10:15
Sample Matrix.....: Water

Laboratory Sample ID: 217857-7
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bn1
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1906	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1906	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 1906	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1906	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	27568		05/03/01 1906	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1906	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	2			0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Anthracene, Water	0.6	J		0.4	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1353	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Dibenzofuran, Water	1	J		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Fluorene, Water	1	J		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Naphthalene, Water	13			0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1353	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW8-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 10:15
Sample Matrix.....: Water

Laboratory Sample ID: 217857-7
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1353	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1353	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1353	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1353	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1843	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1843	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1843	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1843	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1843	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1843	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1843	yd

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 217857

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Customer Sample ID: MW8D-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 217857-8
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 1933	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 1933	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 1933	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 1933	lg1
	Pentachlorophenol, Water	0.2	J		0.2	1	1.00000	ug/L	27568		05/03/01 1933	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 1933	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	11			0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Anthracene, Water	0.6	J		0.4	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1424	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Dibenzofuran, Water	6			0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Fluorene, Water	5			0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	2-Methylnaphthalene, Water	2			0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Naphthalene, Water	89			0.7	4	2.00000	ug/L	27567		05/07/01 1050	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Phenanthrene, Water	0.9	J		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1424	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: NWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW8D-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 217857-8
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.6	J		0.1	2	1.00000	ug/L	27567		05/04/01 1424	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1424	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1424	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1424	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1910	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1910	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1910	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1910	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1910	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1910	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1910	yd

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SEVERN TRENT SERVICES

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LABORATORY TEST RESULTS

Job Number: 217857

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: NWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW7-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 11:50
Sample Matrix.....: Water

Laboratory Sample ID: 217857-9
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 2000	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 2000	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 2000	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 2000	lg1
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	27568		05/03/01 2000	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 2000	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Anthracene, Water	1	J		0.4	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1454	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1454	lg1

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW7-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 11:50
Sample Matrix.....: Water

Laboratory Sample ID: 217857-9
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TS
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1454	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1454	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1454	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1454	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1938	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1938	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1938	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1938	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1938	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1938	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1938	yc

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 217857

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P10-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 14:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-10
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bn
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 2027	lg
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 2027	lg
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 2027	lg
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 2027	lg
	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27568		05/03/01 2027	lg
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 2027	lg
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	320			3	15	10.00000	ug/L	27567		05/07/01 1352	lg
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Anthracene, Water	21			0.4	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1524	lg
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1524	lg
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Dibenzofuran, Water	110			1	8	5.00000	ug/L	27567		05/07/01 1120	lg
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Fluoranthene, Water	15			0.4	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Fluorene, Water	190			1	8	5.00000	ug/L	27567		05/07/01 1120	lg
	2-Methylnaphthalene, Water	140			1	8	5.00000	ug/L	27567		05/07/01 1120	lg
	Naphthalene, Water	3800			34	200	100.0000	ug/L	27567		05/07/01 1422	lg
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1524	lg
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1524	lg
	Phenanthrene, Water	110			1	8	5.00000	ug/L	27567		05/07/01 1120	lg
	Pyrene, Water	6			0.3	2	1.00000	ug/L	27567		05/04/01 1524	lg

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: P10-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 14:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-10
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1524	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1524	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1524	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1524	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 2005	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2005	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 2005	yc
	Ethylbenzene, Water	18			3	5	1.00000	ug/L	27026		04/26/01 2005	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 2005	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2005	yc
	Xylenes (total), Water	11	J		2	15	1.00000	ug/L	27026		04/26/01 2005	yc

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW4-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 15:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-11
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/24/01 0800	bn
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 2054	lg
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 2054	lg
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 2054	lg
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 2054	lg
	Pentachlorophenol, Water	0.3	J		0.2	1	1.00000	ug/L	27568		05/03/01 2054	lg
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 2054	lg
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.4	J		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Anthracene, Water	1	J		0.4	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1555	lg
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1555	lg
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Dibenzofuran, Water	0.3	J		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Fluorene, Water	0.4	J		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Naphthalene, Water	1	J		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Phenanthrene, Water	0.3	J		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1555	lg

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW4-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 15:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-11
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27567		05/04/01 1555	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1555	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1555	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1555	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 2033	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2033	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 2033	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 2033	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 2033	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2033	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 2033	yc

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: TB042401-ISA01
Date Sampled.....: 04/24/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 217857-12
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 1652	ydy
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/26/01 1652	ydy

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: TB042501-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 217857-13
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/27/01 1219	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1219	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/27/01 1219	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/27/01 1219	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/27/01 1219	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1219	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/27/01 1219	yc

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW11B-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 16:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-14
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		26934		04/26/01 0800	bn
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27568		05/03/01 2121	lg
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27568		05/03/01 2121	lg
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27568		05/03/01 2121	lg
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27568		05/03/01 2121	lg
	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27568		05/03/01 2121	lg
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27568		05/03/01 2121	lg
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	200			1	8	5.00000	ug/L	27567		05/07/01 1150	lg
	Acenaphthylene, Water	3			0.2	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Anthracene, Water	11			0.4	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27567		05/04/01 1626	lg
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27567		05/04/01 1626	lg
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Dibenzofuran, Water	100			1	8	5.00000	ug/L	27567		05/07/01 1150	lg
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Fluoranthene, Water	11			0.4	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Fluorene, Water	110			1	8	5.00000	ug/L	27567		05/07/01 1150	lg
	2-Methylnaphthalene, Water	56			1	8	5.00000	ug/L	27567		05/07/01 1150	lg
	Naphthalene, Water	470			7	40	20.00000	ug/L	27567		05/07/01 1452	lg
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1626	lg
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27567		05/04/01 1626	lg
	Phenanthrene, Water	86			1	8	5.00000	ug/L	27567		05/07/01 1150	lg
	Pyrene, Water	5			0.3	2	1.00000	ug/L	27567		05/04/01 1626	lg

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: MW11B-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 16:20
Sample Matrix.....: Water

Laboratory Sample ID: 217857-14
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
	2,4-Dimethylphenol, Water	0.6	J		0.1	2	1.00000	ug/L	27567		05/04/01 1626	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27567		05/04/01 1626	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27567		05/04/01 1626	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27567		05/04/01 1626	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/26/01 2100	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2100	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/26/01 2100	yc
	Ethylbenzene, Water	3	J		3	5	1.00000	ug/L	27026		04/26/01 2100	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/26/01 2100	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/26/01 2100	yc
	Xylenes (total), Water	3	J		2	15	1.00000	ug/L	27026		04/26/01 2100	yc

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217857

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Customer Sample ID: TB042501B-ISA01
Date Sampled.....: 04/25/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 217857-15
Date Received.....: 04/25/2001
Time Received.....: 17:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27026		04/27/01 1247	ydy
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27026		04/27/01 1247	ydy

* In Description = Dry Wgt.

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 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)...: 27567 27568

MB	Method Blank	SVS40201C	26934		05/03/2001	0757

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzo(a)pyrene	0							
is(2-chloroethoxy)methane	0							
,4-Dinitrotoluene	0							
,6-Dinitrotoluene	0							
entachlorophenol	0							
,2-Diphenylhydrazine	0							

LCS	Laboratory Control Sample	SVS042501A	26934		05/03/2001	0827

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzo(a)pyrene	5.38050		5.000000		107.6		19-182	
is(2-chloroethoxy)methane	5.02060		5.000000		100.4		47-148	
,4-Dinitrotoluene	5.41824		5.000000		108.4		13-175	
,6-Dinitrotoluene	5.46181		5.000000		109.2		17-180	
entachlorophenol	5.68831		5.000000		113.8		10-130	

PB	Prep. Blank	SVS40201C	26934	0.50000	05/03/2001	0857

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzo(a)pyrene	0							
is(2-chloroethoxy)methane	0							
,4-Dinitrotoluene	0							
,6-Dinitrotoluene	0							
entachlorophenol	0							
,2-Diphenylhydrazine	0							

MS	Matrix Spike	SVS022801A	217857-5		05/04/2001	1252

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
,4-Dinitrotoluene	4.93665		5.000000	0	99		24-96	A
entachlorophenol	11.3105		10.000000	0	113		9-103	A

MSD	Matrix Spike Duplicate	SVS022801A	217857-6		05/04/2001	1323

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
4-Dinitrotoluene	5.75589	4.93665	5.000000	0	115		24-96	A
					15.3		38.0	
entachlorophenol	12.7951	11.3105	10.000000	0	128		9-103	A
					12.3		50.0	

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS040201C	26934		05/03/2001	1557

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene	0							
Bis(2-chloroethoxy)methane	0							
2,4-Dinitrotoluene	0							
2,6-Dinitrotoluene	0							
Pentachlorophenol	0.04547							
1,2-Diphenylhydrazine	0							

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics, Low Level

Units.....: ug/L
Batch(s)...: 27567

Analyst...: lg1

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS40201C	26934		05/03/2001	0757

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	0							
Acenaphthylene	0							
Anthracene	0							
Benzo(a)anthracene	0							
Bis(2-ethylhexyl)phthalate	0.08606							
2-Chloronaphthalene	0							
Chrysene	0							
Dibenzofuran	0							
Di-n-butyl Phthalate	0.08557							
Fluoranthene	0							
Fluorene	0							
2-Methylnaphthalene	0							
Naphthalene	0							
Nitrobenzene	0							
n-Nitrosodiphenylamine	0							
Phenanthrene	0							
Pyrene	0							
2,4-Dimethylphenol	0							
2-Methyl-4,6-dinitrophenol	0							
4-Nitrophenol	0							
Phenol	0							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS042501A	26934		05/03/2001	0827

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	5.11876		5.000000		102.4		32-165	
Acenaphthylene	4.78122		5.000000		95.6		10-150	
Anthracene	5.55167		5.000000		111.0		23-178	
Benzo(a)anthracene	5.65545		5.000000		113.1		25-180	
Bis(2-ethylhexyl)phthalate	5.22001		5.000000		104.4		25-173	
2-Chloronaphthalene	4.25157		5.000000		85.0		23-143	
Chrysene	5.71325		5.000000		114.3		23-180	
Dibenzofuran	5.11868		5.000000		102.4		35-153	
Di-n-butyl Phthalate	5.35784		5.000000		107.2		28-185	
Fluoranthene	5.69669		5.000000		113.9		28-180	
Fluorene	5.30831		5.000000		106.2		30-189	

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
LCS	Laboratory Control Sample	SVS042501A	26934		05/03/2001 0827

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
-Methylnaphthalene	4.89605		5.000000		97.9		26-168	
aphthalene	5.05944		5.000000		101.2		36-139	
itrobenzene	5.74794		5.000000		115.0		17-163	
-Nitrosodiphenylamine	5.91860		5.000000		118.4		58-174	
henanthrene	5.39402		5.000000		107.9		26-166	
yrene	5.90934		5.000000		118.2		28-173	
,4-Dimethylphenol	4.12570		5.000000		82.5		23-157	
-Methyl-4,6-dinitrophenol	5.62036		5.000000		112.4		17-164	
-Nitrophenol	1.83946		5.000000		36.8		10-92	
henol	2.21668		5.000000		44.3		20-83	

PB	Prep. Blank	SVS40201C	26934	0.50000	05/03/2001 0857

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene	0							
cenaphthylene	0							
nthracene	0							
enzo(a)anthracene	0							
is(2-ethylhexyl)phthalate	0.21781							
-Chloronaphthalene	0							
rysene	0							
ibenzofuran	0							
i-n-butyl Phthalate	0.16391							
.uoranthene	0							
.uorene	0							
-Methylnaphthalene	0							
aphthalene	0							
trobenzene	0							
Nitrosodiphenylamine	0							
enanthrene	0							
rene	0							
4-Dimethylphenol	0							
Methyl-4,6-dinitrophenol	0							
Nitrophenol	0							
enol	0							

MS	Matrix Spike	SVS022801A	217857-5		05/04/2001 1252

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene	26.2760		5.000000	5.41478	417		46-118	A
rene	5.90909		5.000000	0.24764	113		52-127	
Nitrophenol	3.22366		10.000000	0	32		10-80	
enol	2.92647		10.000000	0	29		10-112	

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	SVS022801A	217857-6		05/04/2001	1323

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	28.9765	26.2760	5.000000	5.41478	471		46-118	A
					9.8		31.0	
Pyrene	6.90655	5.90909	5.000000	0.24764	133		52-127	A
					15.6		31.0	
4-Nitrophenol	3.71959	3.22366	10.000000	0	37		10-80	
					14.3		50.0	
Phenol	3.64510	2.92647	10.000000	0	36		10-112	
					21.9		23.0	

Test Method.....: SW-846 8260B
Method Description.: Volatile Organics

Units.....: ug/L
Batch(s)...: 27026

Analyst...: ydy

LCS	Laboratory Control Sample	VS042401E			04/26/2001	1022

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	50.9376		50.00	ND	101.9		68-127	
Bromodichloromethane	52.8005		50.00	ND	105.6		64-129	
Bromoform	57.1253		50.00	ND	114.3		45-147	
Bromomethane	38.1541		50.00	ND	76.3		32-143	
Carbon Tetrachloride	50.5972		50.00	ND	101.2		54-140	
Chlorobenzene	53.1110		50.00	ND	106.2		65-129	
Chloroethane	48.4170		50.00	ND	96.8		47-157	
Chloroform	51.7303		50.00	ND	103.5		71-131	
Chloromethane	40.5949		50.00	ND	81.2		22-160	
Dibromochloromethane	55.5922		50.00	ND	111.2		64-131	
1,2-Dichlorobenzene	56.4879		50.00	ND	113.0		59-133	
1,3-Dichlorobenzene	53.8796		50.00	ND	107.8		61-132	
1,4-Dichlorobenzene	54.7985		50.00	ND	109.6		46-142	
1,1-Dichloroethane	52.9435		50.00	ND	105.9		62-138	
1,2-Dichloroethane	54.1641		50.00	ND	108.3		65-133	
1,1-Dichloroethene	46.8504		50.00	ND	93.7		46-147	
cis-1,2-Dichloroethene	51.1403		50.00	ND	102.3		61-129	
trans-1,2-Dichloroethene	53.3103		50.00	ND	106.6		73-138	
1,2-Dichloropropane	49.1949		50.00	ND	98.4		60-124	
Ethylbenzene	52.2378		50.00	ND	104.5		64-132	
Methylene Chloride	51.5345		50.00	ND	103.1		54-133	
Styrene	50.9512		50.00	ND	101.9		20-156	
1,1,2,2-Tetrachloroethane	56.6115		50.00	ND	113.2		70-130	
Tetrachloroethene	49.1084		50.00	ND	98.2		59-134	
Toluene	50.5876		50.00	ND	101.2		63-127	
1,1,1-Trichloroethane	50.1316		50.00	ND	100.3		70-130	
1,1,2-Trichloroethane	54.6939		50.00	ND	109.4		70-130	
Trichloroethene	49.1919		50.00	ND	98.4		64-130	
Vinyl Chloride	47.9355		50.00	ND	95.9		35-155	
Xylenes (total)	158.219		150.00	ND	105.5		37-161	
m,p-Xylene	104.361		100.00	ND	104.4		37-160	
o-Xylene	53.8578		50.00	ND	107.7		37-161	
Acetone	42.5846		50.00	ND	85.2		38-190	
Carbon Disulfide	45.0263		50.00	ND	90.1		68-158	
Methyl Ethyl Ketone (2-Butanone)	49.8778		50.00	ND	99.8		38-186	
cis-1,3-Dichloropropene	57.2685		50.00	ND	114.5		66-130	

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

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TRENT SERVICES

STL Houston

QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/26/2001	1022

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
rans-1,3-Dichloropropene	49.0548		50.00	ND	98.1		71-139	
-Hexanone	52.6064		50.00	ND	105.2		29-173	
-Methyl-2-pentanone (MIBK)	50.8100		50.00	ND	101.6		40-144	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/26/2001	1213

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzene	ND							
romodichloromethane	ND							
romoform	ND							
romomethane	ND							
arbon Tetrachloride	ND							
hlorobenzene	ND							
hloroethane	ND							
hloroform	ND							
hloromethane	ND							
ibromochloromethane	ND							
,2-Dichlorobenzene	ND							
,3-Dichlorobenzene	ND							
,4-Dichlorobenzene	ND							
,1-Dichloroethane	ND							
,2-Dichloroethane	ND							
,1-Dichloroethene	ND							
is-1,2-Dichloroethene	ND							
rans-1,2-Dichloroethene	ND							
,2-Dichloropropane	ND							
thylbenzene	ND							
ethylene Chloride	ND							
tyrene	ND							
,1,2,2-Tetrachloroethane	ND							
etrachloroethene	ND							
oluene	ND							
,1,1-Trichloroethane	ND							
,1,2-Trichloroethane	ND							
richloroethene	ND							
inyl Chloride	ND							
ylenes (total)	ND							
,p-Xylene	ND							
-Xylene	ND							
cetone	ND							
arbon Disulfide	ND							
ethyl Ethyl Ketone (2-Butanone)	ND							
is-1,3-Dichloropropene	ND							
rans-1,3-Dichloropropene	ND							
-Hexanone	ND							
-Methyl-2-pentanone (MIBK)	ND							

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

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	VS042401E	217726-1	20.00000	04/26/2001	1336

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	43.0178		50.00	ND	86		63-123	
Carbon Tetrachloride	39.8725		50.00	ND	80		21-138	
Chlorobenzene	45.8405		50.00	ND	92		61-126	
Chloroform	45.9173		50.00	ND	92		67-136	
1,4-Dichlorobenzene	45.7719		50.00	ND	92		58-128	
1,2-Dichloroethane	45.8896		50.00	ND	92		66-135	
1,1-Dichloroethene	43.4998		50.00	ND	87		33-130	
Tetrachloroethene	42.7953		50.00	ND	86		40-134	
Trichloroethene	40.9054		50.00	ND	82		43-127	
Vinyl Chloride	38.8857		50.00	ND	78		9-158	
Methyl Ethyl Ketone (2-Butanone)	32.3051		50.00	ND	65		9-157	

MSD	Matrix Spike Duplicate	VS042401E	217726-1	20.00000	04/26/2001	1404

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	45.6464	43.0178	50.00	ND	91		63-123	
					5.9		30.0	
Carbon Tetrachloride	41.8409	39.8725	50.00	ND	84		21-138	
					4.8		30.0	
Chlorobenzene	49.1049	45.8405	50.00	ND	98		61-126	
					6.9		30.0	
Chloroform	48.5857	45.9173	50.00	ND	97		67-136	
					5.6		30.0	
1,4-Dichlorobenzene	49.2025	45.7719	50.00	ND	98		58-128	
					7.2		30.0	
1,2-Dichloroethane	49.7581	45.8896	50.00	ND	100		66-135	
					8.1		30.0	
1,1-Dichloroethene	43.3730	43.4998	50.00	ND	87		33-130	
					0.3		30.0	
Tetrachloroethene	42.7398	42.7953	50.00	ND	85		40-134	
					0.1		30.0	
Trichloroethene	42.7959	40.9054	50.00	ND	86		43-127	
					4.5		30.0	
Vinyl Chloride	39.4718	38.8857	50.00	ND	79		9-158	
					1.5		30.0	
Methyl Ethyl Ketone (2-Butanone)	36.0321	32.3051	50.00	ND	72		9-157	
					10.9		30.0	

LCS	Laboratory Control Sample	VS042401E			04/27/2001	1055

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	44.5004		50.00	ND	89.0		68-127	
Bromodichloromethane	45.3818		50.00	ND	90.8		64-129	
Bromoform	47.3110		50.00	ND	94.6		45-147	
Bromomethane	34.5769		50.00	ND	69.2		32-143	
Carbon Tetrachloride	45.3330		50.00	ND	90.7		54-140	
Chlorobenzene	47.0909		50.00	ND	94.2		65-129	
Chloroethane	43.0009		50.00	ND	86.0		47-157	
Chloroform	45.6629		50.00	ND	91.3		71-131	
Chloromethane	34.1567		50.00	ND	68.3		22-160	

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TRENT SERVICES

STL Houston

QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/27/2001	1055

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ibromochloromethane	45.6561		50.00	ND	91.3		64-131	
,2-Dichlorobenzene	47.9843		50.00	ND	96.0		59-133	
,3-Dichlorobenzene	47.3780		50.00	ND	94.8		61-132	
,4-Dichlorobenzene	47.5664		50.00	ND	95.1		46-142	
,1-Dichloroethane	45.8929		50.00	ND	91.8		62-138	
,2-Dichloroethane	44.6993		50.00	ND	89.4		65-133	
,1-Dichloroethene	46.1190		50.00	ND	92.2		48-147	
is-1,2-Dichloroethene	43.9061		50.00	ND	87.8		61-129	
rans-1,2-Dichloroethene	46.1921		50.00	ND	92.4		73-138	
,2-Dichloropropane	42.2010		50.00	ND	84.4		60-124	
thylbenzene	48.1358		50.00	ND	96.3		64-132	
ethylene Chloride	45.1786		50.00	ND	90.4		54-133	
tyrene	43.2000		50.00	ND	86.4		20-156	
,1,2,2-Tetrachloroethane	46.2029		50.00	ND	92.4		70-130	
etrachloroethene	46.0425		50.00	ND	92.1		59-134	
oluene	46.6124		50.00	ND	93.2		63-127	
,1,1-Trichloroethane	45.5743		50.00	ND	91.1		70-130	
,1,2-Trichloroethane	45.7888		50.00	ND	91.6		70-130	
richloroethene	44.1112		50.00	ND	88.2		64-130	
nyl Chloride	41.3974		50.00	ND	82.8		35-155	
ylenes (total)	143.952		150.00	ND	96.0		37-161	
p-Xylene	96.1968		100.00	ND	96.2		37-160	
Xylene	47.7550		50.00	ND	95.5		37-161	
etone	28.2782		50.00	ND	56.6		38-190	
rbon Disulfide	38.8708		50.00	ND	77.7		68-158	
thyl Ethyl Ketone (2-Butanone)	32.4295		50.00	ND	64.9		38-186	
s-1,3-Dichloropropene	45.4236		50.00	ND	90.8		66-130	
ans-1,3-Dichloropropene	41.7686		50.00	ND	83.5		71-139	
Hexanone	35.2015		50.00	ND	70.4		29-173	
Methyl-2-pentanone (MIBK)	37.7249		50.00	ND	75.4		40-144	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/27/2001	1151

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene	ND							
omodichloromethane	ND							
omoform	ND							
omomethane	ND							
rbon Tetrachloride	ND							
lorobenzene	ND							
loroethane	ND							
loroform	ND							
loromethane	ND							
bromochloromethane	ND							
2-Dichlorobenzene	ND							
3-Dichlorobenzene	ND							
4-Dichlorobenzene	ND							
1-Dichloroethane	ND							
2-Dichloroethane	ND							
1-Dichloroethene	ND							
s-1,2-Dichloroethene	ND							
ans-1,2-Dichloroethene	ND							

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

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QUALITY CONTROL RESULTS

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/27/2001	1151

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
1,2-Dichloropropane	ND							
Ethylbenzene	ND							
Methylene Chloride	ND							
Styrene	ND							
1,1,2,2-Tetrachloroethane	ND							
Tetrachloroethene	ND							
Toluene	ND							
1,1,1-Trichloroethane	ND							
1,1,2-Trichloroethane	ND							
Trichloroethene	ND							
Vinyl Chloride	ND							
Xylenes (total)	ND							
m,p-Xylene	ND							
o-Xylene	ND							
Acetone	ND							
Carbon Disulfide	ND							
Methyl Ethyl Ketone (2-Butanone)	ND							
cis-1,3-Dichloropropene	ND							
trans-1,3-Dichloropropene	ND							
2-Hexanone	ND							
4-Methyl-2-pentanone (MIBK)	ND							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	VS042401F	217857-5		04/27/2001	1343

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	50.2070		50.00	ND	100		65-125	
Chlorobenzene	51.9136		50.00	ND	104		74-122	
1,1-Dichloroethene	57.4128		50.00	ND	115		22-123	
Toluene	53.6590		50.00	ND	107		76-125	
Trichloroethene	49.3969		50.00	ND	99		56-118	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	VS042401F	217857-6		04/27/2001	1411

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	48.9232	50.2070	50.00	ND	98		65-125	
					2.6		30.0	
Chlorobenzene	53.1651	51.9136	50.00	ND	106		74-122	
					2.4		30.0	
1,1-Dichloroethene	52.9611	57.4128	50.00	ND	106		22-123	
					8.1		30.0	
Toluene	52.7124	53.6590	50.00	ND	105		76-125	
					1.8		30.0	
Trichloroethene	49.1529	49.3969	50.00	ND	98		56-118	
					0.5		30.0	

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

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TRENT SERVICES

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SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

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

Batch..: 27026
Analyst.....: ydy

Surrogate	Units
1,2-Dichloroethane-d4	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	57.2179	50.00	114.4	70-130		04/26/2001	1022
	Water	MB	1.00000	46.7936	50.00	93.6	70-130		04/26/2001	1213
217726-1	TCLP	MS	20.00000	44.5118	50.00	89.0	70-132		04/26/2001	1336
217726-1	TCLP	MSD	20.00000	45.7189	50.00	91.4	70-132		04/26/2001	1404
217857-12	Water		1.00000	47.3005	50.00	94.6	70-130		04/26/2001	1652
217857-1	Water		1.00000	53.0244	50.00	106.0	70-130		04/26/2001	1720
217857-2	Water		1.00000	55.0202	50.00	110.0	70-130		04/26/2001	1748
217857-3	Water		1.00000	48.2496	50.00	96.5	70-130		04/26/2001	1815
217857-7	Water		1.00000	45.9594	50.00	91.9	70-130		04/26/2001	1843
217857-8	Water		1.00000	48.8127	50.00	97.6	70-130		04/26/2001	1910
217857-9	Water		1.00000	54.0705	50.00	108.1	70-130		04/26/2001	1938
217857-10	Water		1.00000	46.2127	50.00	92.4	70-130		04/26/2001	2005
217857-11	Water		1.00000	44.1336	50.00	88.3	70-130		04/26/2001	2033
217857-14	Water		1.00000	48.6278	50.00	97.3	70-130		04/26/2001	2100
	Water	LCS	1.00000	44.1225	50.00	88.2	70-130		04/27/2001	1055
	Water	MB	1.00000	45.0048	50.00	90.0	70-130		04/27/2001	1151
217857-13	Water		1.00000	47.9555	50.00	95.9	70-130		04/27/2001	1219
217857-15	Water		1.00000	46.9705	50.00	93.9	70-130		04/27/2001	1247
217857-4	Water		1.00000	43.8026	50.00	87.6	70-130		04/27/2001	1315
217857-5	Water		1.00000	45.5391	50.00	91.1	70-130		04/27/2001	1343
217857-5	Water	MS	1.00000	45.5391	50.00	91.1	70-130		04/27/2001	1343
217857-6	Water		1.00000	46.4238	50.00	92.8	70-130		04/27/2001	1411
217857-6	Water	MSD	1.00000	46.4238	50.00	92.8	70-130		04/27/2001	1411

Surrogate	Units
4-Bromofluorobenzene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	57.1939	50.00	114.4	70-130		04/26/2001	1022
	Water	MB	1.00000	50.9023	50.00	101.8	70-130		04/26/2001	1213
217726-1	TCLP	MS	20.00000	48.4451	50.00	96.9	70-130		04/26/2001	1336
217726-1	TCLP	MSD	20.00000	46.0788	50.00	92.2	70-130		04/26/2001	1404
217857-12	Water		1.00000	49.5149	50.00	99.0	70-130		04/26/2001	1652
217857-1	Water		1.00000	59.1717	50.00	118.3	70-130		04/26/2001	1720
217857-2	Water		1.00000	60.9230	50.00	121.8	70-130		04/26/2001	1748
217857-3	Water		1.00000	51.3193	50.00	102.6	70-130		04/26/2001	1815
217857-7	Water		1.00000	50.2091	50.00	100.4	70-130		04/26/2001	1843
217857-8	Water		1.00000	52.0747	50.00	104.1	70-130		04/26/2001	1910
217857-9	Water		1.00000	59.2035	50.00	118.4	70-130		04/26/2001	1938
17857-10	Water		1.00000	52.3536	50.00	104.7	70-130		04/26/2001	2005
17857-11	Water		1.00000	50.2376	50.00	100.5	70-130		04/26/2001	2033
17857-14	Water		1.00000	53.5064	50.00	107.0	70-130		04/26/2001	2100
	Water	LCS	1.00000	48.0490	50.00	96.1	70-130		04/27/2001	1055
	Water	MB	1.00000	48.0493	50.00	96.1	70-130		04/27/2001	1151

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SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Surrogate	Units
4-Bromofluorobenzene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-13	Water		1.00000	49.6614	50.00	99.3	70-130		04/27/2001	1219
217857-15	Water		1.00000	52.1735	50.00	104.3	70-130		04/27/2001	1247
217857-4	Water		1.00000	50.0128	50.00	100.0	70-130		04/27/2001	1315
217857-5	Water		1.00000	49.5446	50.00	99.1	70-130		04/27/2001	1343
217857-5	Water	MS	1.00000	49.5446	50.00	99.1	70-130		04/27/2001	1343
217857-6	Water		1.00000	49.0977	50.00	98.2	70-130		04/27/2001	1411
217857-6	Water	MSD	1.00000	49.0977	50.00	98.2	70-130		04/27/2001	1411

Surrogate	Units
Dibromofluoromethane	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	58.8856	50.00	117.8	70-130		04/26/2001	1022
	Water	MB	1.00000	47.8338	50.00	95.7	70-130		04/26/2001	1213
217726-1	TCLP	MS	20.00000	45.7901	50.00	91.6	70-130		04/26/2001	1336
217726-1	TCLP	MSD	20.00000	45.5795	50.00	91.2	70-130		04/26/2001	1404
217857-12	Water		1.00000	48.0280	50.00	96.1	70-130		04/26/2001	1652
217857-1	Water		1.00000	54.6596	50.00	109.3	70-130		04/26/2001	1720
217857-2	Water		1.00000	57.7060	50.00	115.4	70-130		04/26/2001	1745
217857-3	Water		1.00000	48.7771	50.00	97.6	70-130		04/26/2001	1815
217857-7	Water		1.00000	49.0470	50.00	98.1	70-130		04/26/2001	1843
217857-8	Water		1.00000	49.9117	50.00	99.8	70-130		04/26/2001	1910
217857-9	Water		1.00000	54.5747	50.00	109.1	70-130		04/26/2001	1938
217857-10	Water		1.00000	48.5650	50.00	97.1	70-130		04/26/2001	2005
217857-11	Water		1.00000	46.3819	50.00	92.8	70-130		04/26/2001	2033
217857-14	Water		1.00000	49.7484	50.00	99.5	70-130		04/26/2001	2100
	Water	LCS	1.00000	45.8469	50.00	91.7	70-130		04/27/2001	1055
	Water	MB	1.00000	46.5611	50.00	93.1	70-130		04/27/2001	1151
217857-13	Water		1.00000	49.0809	50.00	98.2	70-130		04/27/2001	1219
217857-15	Water		1.00000	47.5052	50.00	95.0	70-130		04/27/2001	1247
217857-4	Water		1.00000	45.9748	50.00	91.9	70-130		04/27/2001	1315
217857-5	Water	MS	1.00000	48.0440	50.00	96.1	70-130		04/27/2001	1343
217857-5	Water		1.00000	48.0440	50.00	96.1	70-130		04/27/2001	1343
217857-6	Water		1.00000	47.0927	50.00	94.2	70-130		04/27/2001	1411
217857-6	Water	MSD	1.00000	47.0927	50.00	94.2	70-130		04/27/2001	1411

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	54.4785	50.00	109.0	70-130		04/26/2001	1022
	Water	MB	1.00000	38.3907	50.00	76.8	70-130		04/26/2001	1213
217726-1	TCLP	MS	20.00000	44.1498	50.00	88.3	70-130		04/26/2001	1336
217726-1	TCLP	MSD	20.00000	43.9406	50.00	87.9	70-130		04/26/2001	1404

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SURROGATE RECOVERIES REPORT

Job Number.: 217857 Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-12	Water		1.00000	45.5234	50.00	91.0	70-130		04/26/2001	1652
217857-1	Water		1.00000	56.7345	50.00	113.5	70-130		04/26/2001	1720
217857-2	Water		1.00000	56.0743	50.00	112.1	70-130		04/26/2001	1748
217857-3	Water		1.00000	49.4790	50.00	99.0	70-130		04/26/2001	1815
217857-7	Water		1.00000	48.7389	50.00	97.5	70-130		04/26/2001	1843
217857-8	Water		1.00000	49.0223	50.00	98.0	70-130		04/26/2001	1910
217857-9	Water		1.00000	57.2206	50.00	114.4	70-130		04/26/2001	1938
217857-10	Water		1.00000	48.6733	50.00	97.3	70-130		04/26/2001	2005
217857-11	Water		1.00000	46.5853	50.00	93.2	70-130		04/26/2001	2033
217857-14	Water		1.00000	50.0904	50.00	100.2	70-130		04/26/2001	2100
	Water	LCS	1.00000	45.5877	50.00	91.2	70-130		04/27/2001	1055
	Water	MB	1.00000	46.2762	50.00	92.6	70-130		04/27/2001	1151
217857-13	Water		1.00000	48.7596	50.00	97.5	70-130		04/27/2001	1219
217857-15	Water		1.00000	48.1647	50.00	96.3	70-130		04/27/2001	1247
217857-4	Water		1.00000	48.7154	50.00	97.4	70-130		04/27/2001	1315
217857-5	Water		1.00000	48.0674	50.00	96.1	70-130		04/27/2001	1343
217857-5	Water	MS	1.00000	48.0674	50.00	96.1	70-130		04/27/2001	1343
217857-6	Water		1.00000	47.8655	50.00	95.7	70-130		04/27/2001	1411
217857-6	Water	MSD	1.00000	47.8655	50.00	95.7	70-130		04/27/2001	1411

Method.....: Semivolatile Organics, Low Level Batch..: 27567
Method Code.....: 8270LL Analyst.....: lg1

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	58.7612	100.00	59	10-123		05/03/2001	0757
26934	Water	LCS	1.00000	110.566	100.00	111	10-123		05/03/2001	0827
26934	Water	PB	0.50000	203.762	100.00	102	10-123		05/03/2001	0857
217857-1	Water		1.00000	110.028	100.00	110	10-123		05/04/2001	1050
217857-2	Water		1.00000	114.080	100.00	114	10-123		05/04/2001	1120
217857-3	Water		1.00000	106.879	100.00	107	10-123		05/04/2001	1151
217857-4	Water		1.00000	101.020	100.00	101	10-123		05/04/2001	1221
217857-5	Water	MS	1.00000	102.814	100.00	103	10-123		05/04/2001	1252
217857-5	Water		1.00000	102.814	100.00	103	10-123		05/04/2001	1252
217857-6	Water	MSD	1.00000	111.691	100.00	112	10-123		05/04/2001	1323
217857-6	Water		1.00000	111.691	100.00	112	10-123		05/04/2001	1323
217857-7	Water		1.00000	110.852	100.00	111	10-123		05/04/2001	1353
217857-8	Water		1.00000	112.870	100.00	113	10-123		05/04/2001	1424
217857-9	Water		1.00000	105.590	100.00	106	10-123		05/04/2001	1454
217857-10	Water		1.00000	112.235	100.00	112	10-123		05/04/2001	1524
217857-11	Water		1.00000	115.272	100.00	115	10-123		05/04/2001	1555
217857-14	Water		1.00000	113.903	100.00	114	10-123		05/04/2001	1626
217857-6	Water		2.00000	57.9939	100.00	116	10-123		05/07/2001	0951
217857-5	Water		2.00000	49.7680	100.00	100	10-123		05/07/2001	1020
217857-8	Water		2.00000	58.1726	100.00	116	10-123		05/07/2001	1050

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SEVERN TRENT SERVICES

STL Houston

SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-10	Water		5.00000	21.3564	100.00	107	10-123		05/07/2001	1120
217857-14	Water		5.00000	22.6495	100.00	113	10-123		05/07/2001	1150
217857-10	Water		10.00000	10.0725	100.00	101	10-123		05/07/2001	1352
217857-10	Water		100.00000	1.01473	100.00	101	10-123		05/07/2001	1422
217857-14	Water		20.00000	5.11443	100.00	102	10-123		05/07/2001	1452

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	26.2710	50.00	53	43-116		05/03/2001	0757
26934	Water	LCS	1.00000	49.2853	50.00	99	43-116		05/03/2001	0827
26934	Water	PB	0.50000	84.0756	50.00	84	43-116		05/03/2001	0857
217857-1	Water		1.00000	41.6088	50.00	83	43-116		05/04/2001	1050
217857-2	Water		1.00000	44.2043	50.00	88	43-116		05/04/2001	1120
217857-3	Water		1.00000	41.9712	50.00	84	43-116		05/04/2001	1151
217857-4	Water		1.00000	39.9016	50.00	80	43-116		05/04/2001	1221
217857-5	Water	MS	1.00000	38.6747	50.00	77	43-116		05/04/2001	1252
217857-5	Water		1.00000	38.6747	50.00	77	43-116		05/04/2001	1252
217857-6	Water	MSD	1.00000	44.2830	50.00	89	43-116		05/04/2001	1323
217857-6	Water		1.00000	44.2830	50.00	89	43-116		05/04/2001	1323
217857-7	Water		1.00000	40.3755	50.00	81	43-116		05/04/2001	1353
217857-8	Water		1.00000	44.9578	50.00	90	43-116		05/04/2001	1424
217857-9	Water		1.00000	41.4351	50.00	83	43-116		05/04/2001	1454
217857-10	Water		1.00000	45.1965	50.00	90	43-116		05/04/2001	1524
217857-11	Water		1.00000	44.8997	50.00	90	43-116		05/04/2001	1555
217857-14	Water		1.00000	43.1268	50.00	86	43-116		05/04/2001	1626
217857-6	Water		2.00000	24.5553	50.00	98	43-116		05/07/2001	0951
217857-5	Water		2.00000	19.8098	50.00	79	43-116		05/07/2001	1020
217857-8	Water		2.00000	24.3299	50.00	97	43-116		05/07/2001	1050
217857-10	Water		5.00000	9.84612	50.00	98	43-116		05/07/2001	1120
217857-14	Water		5.00000	9.47853	50.00	95	43-116		05/07/2001	1150
217857-10	Water		10.00000	4.69798	50.00	94	43-116		05/07/2001	1352
217857-10	Water		100.00000	0.54605	50.00	109	43-116		05/07/2001	1422
217857-14	Water		20.00000	2.31562	50.00	93	43-116		05/07/2001	1452

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	35.1166	100.00	35	21-100		05/03/2001	0757
26934	Water	LCS	1.00000	72.4320	100.00	72	21-100		05/03/2001	0827
26934	Water	PB	0.50000	145.227	100.00	73	21-100		05/03/2001	0857
217857-1	Water		1.00000	42.5441	100.00	43	21-100		05/04/2001	1050

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TRENT SERVICES

STL Houston

SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-2	Water		1.00000	47.9114	100.00	48	21-100		05/04/2001	1120
217857-3	Water		1.00000	29.2756	100.00	29	21-100		05/04/2001	1151
217857-4	Water		1.00000	41.6603	100.00	42	21-100		05/04/2001	1221
217857-5	Water		1.00000	42.4169	100.00	42	21-100		05/04/2001	1252
217857-5	Water	MS	1.00000	42.4169	100.00	42	21-100		05/04/2001	1252
217857-6	Water		1.00000	47.8564	100.00	48	21-100		05/04/2001	1323
217857-6	Water	MSD	1.00000	47.8564	100.00	48	21-100		05/04/2001	1323
217857-7	Water		1.00000	45.6447	100.00	46	21-100		05/04/2001	1353
217857-8	Water		1.00000	32.7991	100.00	33	21-100		05/04/2001	1424
217857-9	Water		1.00000	46.4780	100.00	46	21-100		05/04/2001	1454
217857-10	Water		1.00000	42.5099	100.00	43	21-100		05/04/2001	1524
217857-11	Water		1.00000	50.2592	100.00	50	21-100		05/04/2001	1555
217857-14	Water		1.00000	41.6000	100.00	42	21-100		05/04/2001	1626
217857-6	Water		2.00000	21.5377	100.00	43	21-100		05/07/2001	0951
217857-5	Water		2.00000	19.0030	100.00	38	21-100		05/07/2001	1020
217857-8	Water		2.00000	21.7658	100.00	44	21-100		05/07/2001	1050
217857-10	Water		5.00000	7.95871	100.00	40	21-100		05/07/2001	1120
217857-14	Water		5.00000	8.02984	100.00	40	21-100		05/07/2001	1150
217857-10	Water		10.00000	4.93955	100.00	49	21-100		05/07/2001	1352
217857-10	Water		100.00000	0.55695	100.00	56	21-100		05/07/2001	1422
217857-14	Water		20.00000	1.63354	100.00	33	21-100		05/07/2001	1452

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	25.2658	50.00	51	35-114		05/03/2001	0757
26934	Water	LCS	1.00000	57.2712	50.00	115	35-114	G	05/03/2001	0827
26934	Water	PB	0.50000	101.718	50.00	102	35-114		05/03/2001	0857
217857-1	Water		1.00000	47.4630	50.00	95	35-114		05/04/2001	1050
217857-2	Water		1.00000	50.4784	50.00	101	35-114		05/04/2001	1120
217857-3	Water		1.00000	46.8603	50.00	94	35-114		05/04/2001	1151
217857-4	Water		1.00000	46.3679	50.00	93	35-114		05/04/2001	1221
217857-5	Water		1.00000	45.5233	50.00	91	35-114		05/04/2001	1252
217857-5	Water	MS	1.00000	45.5233	50.00	91	35-114		05/04/2001	1252
217857-6	Water	MSD	1.00000	51.8443	50.00	104	35-114		05/04/2001	1323
217857-6	Water		1.00000	51.8443	50.00	104	35-114		05/04/2001	1323
217857-7	Water		1.00000	44.0714	50.00	88	35-114		05/04/2001	1353
217857-8	Water		1.00000	51.6245	50.00	103	35-114		05/04/2001	1424
217857-9	Water		1.00000	48.3246	50.00	97	35-114		05/04/2001	1454
217857-10	Water		1.00000	64.0723	50.00	128	35-114	A	05/04/2001	1524
217857-11	Water		1.00000	50.6036	50.00	101	35-114		05/04/2001	1555
217857-14	Water		1.00000	49.4934	50.00	99	35-114		05/04/2001	1626
217857-6	Water		2.00000	27.4565	50.00	110	35-114		05/07/2001	0951
217857-5	Water		2.00000	22.4367	50.00	90	35-114		05/07/2001	1020
217857-8	Water		2.00000	27.2338	50.00	109	35-114		05/07/2001	1050
217857-10	Water		5.00000	10.8143	50.00	108	35-114		05/07/2001	1120
217857-14	Water		5.00000	10.7322	50.00	107	35-114		05/07/2001	1150

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Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-10	Water		10.00000	5.36809	50.00	107	35-114		05/07/2001	1352
217857-10	Water		100.00000	0.61058	50.00	122	35-114	D	05/07/2001	1422
217857-14	Water		20.00000	2.69409	50.00	108	35-114		05/07/2001	1452

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	18.2668	100.00	18	10-94		05/03/2001	0757
26934	Water	LCS	1.00000	40.8707	100.00	41	10-94		05/03/2001	0827
26934	Water	PB	0.50000	72.9119	100.00	36	10-94		05/03/2001	0857
217857-1	Water		1.00000	31.3848	100.00	31	10-94		05/04/2001	1050
217857-2	Water		1.00000	33.4195	100.00	33	10-94		05/04/2001	1120
217857-3	Water		1.00000	31.2055	100.00	31	10-94		05/04/2001	1151
217857-4	Water		1.00000	29.6987	100.00	30	10-94		05/04/2001	1221
217857-5	Water	MS	1.00000	28.8310	100.00	29	10-94		05/04/2001	1252
217857-5	Water		1.00000	28.8310	100.00	29	10-94		05/04/2001	1252
217857-6	Water	MSD	1.00000	33.2887	100.00	33	10-94		05/04/2001	1323
217857-6	Water		1.00000	33.2887	100.00	33	10-94		05/04/2001	1323
217857-7	Water		1.00000	28.1214	100.00	28	10-94		05/04/2001	1353
217857-8	Water		1.00000	34.2063	100.00	34	10-94		05/04/2001	1424
217857-9	Water		1.00000	30.8190	100.00	31	10-94		05/04/2001	1454
217857-10	Water		1.00000	34.9203	100.00	35	10-94		05/04/2001	1524
217857-11	Water		1.00000	33.1346	100.00	33	10-94		05/04/2001	1555
217857-14	Water		1.00000	34.9511	100.00	35	10-94		05/04/2001	1626
217857-6	Water		2.00000	17.4672	100.00	35	10-94		05/07/2001	0951
217857-5	Water		2.00000	14.2126	100.00	28	10-94		05/07/2001	1020
217857-8	Water		2.00000	17.6678	100.00	35	10-94		05/07/2001	1050
217857-10	Water		5.00000	7.14664	100.00	36	10-94		05/07/2001	1120
217857-14	Water		5.00000	7.20886	100.00	36	10-94		05/07/2001	1150
217857-10	Water		10.00000	3.39638	100.00	34	10-94		05/07/2001	1352
217857-10	Water		100.00000	0.38364	100.00	38	10-94		05/07/2001	1422
217857-14	Water		20.00000	1.79271	100.00	36	10-94		05/07/2001	1452

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	30.4553	50.00	61	33-141		05/03/2001	0757
26934	Water	LCS	1.00000	58.4612	50.00	117	33-141		05/03/2001	0827
26934	Water	PB	0.50000	103.647	50.00	104	33-141		05/03/2001	0857
217857-1	Water		1.00000	42.4146	50.00	85	33-141		05/04/2001	1050
217857-2	Water		1.00000	42.3347	50.00	85	33-141		05/04/2001	1120
217857-3	Water		1.00000	40.1471	50.00	80	33-141		05/04/2001	1151

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CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-4	Water		1.00000	41.1847	50.00	82	33-141		05/04/2001	1221
217857-5	Water		1.00000	40.1292	50.00	80	33-141		05/04/2001	1252
217857-5	Water	MS	1.00000	40.1292	50.00	80	33-141		05/04/2001	1252
217857-6	Water	MSD	1.00000	42.3591	50.00	85	33-141		05/04/2001	1323
217857-6	Water		1.00000	42.3591	50.00	85	33-141		05/04/2001	1323
217857-7	Water		1.00000	43.2397	50.00	86	33-141		05/04/2001	1353
217857-8	Water		1.00000	44.4649	50.00	89	33-141		05/04/2001	1424
217857-9	Water		1.00000	42.8202	50.00	86	33-141		05/04/2001	1454
217857-10	Water		1.00000	43.2577	50.00	87	33-141		05/04/2001	1524
217857-11	Water		1.00000	46.0871	50.00	92	33-141		05/04/2001	1555
217857-14	Water		1.00000	42.4328	50.00	85	33-141		05/04/2001	1626
217857-6	Water		2.00000	24.0903	50.00	96	33-141		05/07/2001	0951
217857-5	Water		2.00000	21.4124	50.00	86	33-141		05/07/2001	1020
217857-8	Water		2.00000	25.4272	50.00	102	33-141		05/07/2001	1050
217857-10	Water		5.00000	9.53554	50.00	95	33-141		05/07/2001	1120
217857-14	Water		5.00000	9.28207	50.00	93	33-141		05/07/2001	1150
217857-10	Water		10.00000	4.55898	50.00	91	33-141		05/07/2001	1352
217857-10	Water		100.00000	0.56546	50.00	113	33-141		05/07/2001	1422
217857-14	Water		20.00000	2.34370	50.00	94	33-141		05/07/2001	1452

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
6934	Water	MB	1.00000	58.7612	100.00	59	10-123		05/03/2001	0757
6934	Water	LCS	1.00000	110.566	100.00	111	10-123		05/03/2001	0827
6934	Water	PB	0.50000	203.762	100.00	102	10-123		05/03/2001	0857
17857-1	Water		1.00000	110.028	100.00	110	10-123		05/04/2001	1050
17857-2	Water		1.00000	114.080	100.00	114	10-123		05/04/2001	1120
17857-3	Water		1.00000	106.879	100.00	107	10-123		05/04/2001	1151
17857-4	Water		1.00000	101.020	100.00	101	10-123		05/04/2001	1221
17857-5	Water		1.00000	102.814	100.00	103	10-123		05/04/2001	1252
17857-5	Water	MS	1.00000	102.814	100.00	103	10-123		05/04/2001	1252
17857-6	Water		1.00000	111.691	100.00	112	10-123		05/04/2001	1323
17857-6	Water	MSD	1.00000	111.691	100.00	112	10-123		05/04/2001	1323
17857-7	Water		1.00000	110.852	100.00	111	10-123		05/04/2001	1353
17857-8	Water		1.00000	112.870	100.00	113	10-123		05/04/2001	1424
17857-9	Water		1.00000	105.590	100.00	106	10-123		05/04/2001	1454
17857-10	Water		1.00000	112.235	100.00	112	10-123		05/04/2001	1524
17857-11	Water		1.00000	115.272	100.00	115	10-123		05/04/2001	1555
17857-14	Water		1.00000	113.903	100.00	114	10-123		05/04/2001	1626
17857-6	Water		2.00000	57.9939	100.00	116	10-123		05/07/2001	0951
17857-5	Water		2.00000	49.7680	100.00	100	10-123		05/07/2001	1020
17857-8	Water		2.00000	58.1726	100.00	116	10-123		05/07/2001	1050
17857-10	Water		5.00000	21.3564	100.00	107	10-123		05/07/2001	1120
17857-14	Water		5.00000	22.6495	100.00	113	10-123		05/07/2001	1150
17857-10	Water		10.00000	10.0725	100.00	101	10-123		05/07/2001	1352
17857-10	Water		100.00000	1.01473	100.00	101	10-123		05/07/2001	1422

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Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-14	Water		20.00000	5.11443	100.00	102	10-123		05/07/2001	1452

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	26.2710	50.00	53	43-116		05/03/2001	0757
26934	Water	LCS	1.00000	49.2853	50.00	99	43-116		05/03/2001	0827
26934	Water	PB	0.50000	84.0756	50.00	84	43-116		05/03/2001	0857
217857-1	Water		1.00000	41.6088	50.00	83	43-116		05/04/2001	1050
217857-2	Water		1.00000	44.2043	50.00	88	43-116		05/04/2001	1120
217857-3	Water		1.00000	41.9712	50.00	84	43-116		05/04/2001	1151
217857-4	Water		1.00000	39.9016	50.00	80	43-116		05/04/2001	1221
217857-5	Water	MS	1.00000	38.6747	50.00	77	43-116		05/04/2001	1252
217857-5	Water		1.00000	38.6747	50.00	77	43-116		05/04/2001	1252
217857-6	Water		1.00000	44.2830	50.00	89	43-116		05/04/2001	1323
217857-6	Water	MSD	1.00000	44.2830	50.00	89	43-116		05/04/2001	1323
217857-7	Water		1.00000	40.3755	50.00	81	43-116		05/04/2001	1353
217857-8	Water		1.00000	44.9578	50.00	90	43-116		05/04/2001	1424
217857-9	Water		1.00000	41.4351	50.00	83	43-116		05/04/2001	1454
217857-10	Water		1.00000	45.1965	50.00	90	43-116		05/04/2001	1524
217857-11	Water		1.00000	44.8997	50.00	90	43-116		05/04/2001	1555
217857-14	Water		1.00000	43.1268	50.00	86	43-116		05/04/2001	1626
217857-6	Water		2.00000	24.5553	50.00	98	43-116		05/07/2001	0951
217857-5	Water		2.00000	19.8098	50.00	79	43-116		05/07/2001	1020
217857-8	Water		2.00000	24.3299	50.00	97	43-116		05/07/2001	1050
217857-10	Water		5.00000	9.84612	50.00	98	43-116		05/07/2001	1120
217857-14	Water		5.00000	9.47853	50.00	95	43-116		05/07/2001	1150
217857-10	Water		10.00000	4.69798	50.00	94	43-116		05/07/2001	1352
217857-10	Water		100.00000	0.54605	50.00	109	43-116		05/07/2001	1422
217857-14	Water		20.00000	2.31562	50.00	93	43-116		05/07/2001	1452

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	35.1166	100.00	35	21-100		05/03/2001	0757
26934	Water	LCS	1.00000	72.4320	100.00	72	21-100		05/03/2001	0827
26934	Water	PB	0.50000	145.227	100.00	73	21-100		05/03/2001	0857
217857-1	Water		1.00000	42.5441	100.00	43	21-100		05/04/2001	1050
217857-2	Water		1.00000	47.9114	100.00	48	21-100		05/04/2001	1120
217857-3	Water		1.00000	29.2756	100.00	29	21-100		05/04/2001	1151
217857-4	Water		1.00000	41.6603	100.00	42	21-100		05/04/2001	1221
217857-5	Water		1.00000	42.4169	100.00	42	21-100		05/04/2001	1252

TRENT SERVICES

STL Houston

SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-5	Water	MS	1.00000	42.4169	100.00	42	21-100		05/04/2001	1252
217857-6	Water	MSD	1.00000	47.8564	100.00	48	21-100		05/04/2001	1323
217857-6	Water		1.00000	47.8564	100.00	48	21-100		05/04/2001	1323
217857-7	Water		1.00000	45.6447	100.00	46	21-100		05/04/2001	1353
217857-8	Water		1.00000	32.7991	100.00	33	21-100		05/04/2001	1424
217857-9	Water		1.00000	46.4780	100.00	46	21-100		05/04/2001	1454
217857-10	Water		1.00000	42.5099	100.00	43	21-100		05/04/2001	1524
217857-11	Water		1.00000	50.2592	100.00	50	21-100		05/04/2001	1555
217857-14	Water		1.00000	41.6000	100.00	42	21-100		05/04/2001	1626
217857-6	Water		2.00000	21.5377	100.00	43	21-100		05/07/2001	0951
217857-5	Water		2.00000	19.0030	100.00	38	21-100		05/07/2001	1020
217857-8	Water		2.00000	21.7658	100.00	44	21-100		05/07/2001	1050
217857-10	Water		5.00000	7.95871	100.00	40	21-100		05/07/2001	1120
217857-14	Water		5.00000	8.02984	100.00	40	21-100		05/07/2001	1150
217857-10	Water		10.00000	4.93955	100.00	49	21-100		05/07/2001	1352
217857-10	Water		100.00000	0.55695	100.00	56	21-100		05/07/2001	1422
217857-14	Water		20.00000	1.63354	100.00	33	21-100		05/07/2001	1452

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	25.2658	50.00	51	35-114		05/03/2001	0757
26934	Water	LCS	1.00000	57.2712	50.00	115	35-114	G	05/03/2001	0827
26934	Water	PB	0.50000	101.718	50.00	102	35-114		05/03/2001	0857
217857-1	Water		1.00000	47.4630	50.00	95	35-114		05/04/2001	1050
217857-2	Water		1.00000	50.4784	50.00	101	35-114		05/04/2001	1120
217857-3	Water		1.00000	46.8603	50.00	94	35-114		05/04/2001	1151
217857-4	Water		1.00000	46.3679	50.00	93	35-114		05/04/2001	1221
217857-5	Water		1.00000	45.5233	50.00	91	35-114		05/04/2001	1252
217857-5	Water	MS	1.00000	45.5233	50.00	91	35-114		05/04/2001	1252
217857-6	Water		1.00000	51.8443	50.00	104	35-114		05/04/2001	1323
217857-6	Water	MSD	1.00000	51.8443	50.00	104	35-114		05/04/2001	1323
217857-7	Water		1.00000	44.0714	50.00	88	35-114		05/04/2001	1353
217857-8	Water		1.00000	51.6245	50.00	103	35-114		05/04/2001	1424
217857-9	Water		1.00000	48.3246	50.00	97	35-114		05/04/2001	1454
217857-10	Water		1.00000	64.0723	50.00	128	35-114	A	05/04/2001	1524
217857-11	Water		1.00000	50.6036	50.00	101	35-114		05/04/2001	1555
217857-14	Water		1.00000	49.4934	50.00	99	35-114		05/04/2001	1626
217857-6	Water		2.00000	27.4565	50.00	110	35-114		05/07/2001	0951
217857-5	Water		2.00000	22.4367	50.00	90	35-114		05/07/2001	1020
217857-8	Water		2.00000	27.2338	50.00	109	35-114		05/07/2001	1050
217857-10	Water		5.00000	10.8143	50.00	108	35-114		05/07/2001	1120
217857-14	Water		5.00000	10.7322	50.00	107	35-114		05/07/2001	1150
217857-10	Water		10.00000	5.36809	50.00	107	35-114		05/07/2001	1352
217857-10	Water		100.00000	0.61058	50.00	122	35-114	D	05/07/2001	1422
217857-14	Water		20.00000	2.69409	50.00	108	35-114		05/07/2001	1452

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SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	18.2668	100.00	18	10-94		05/03/2001	0757
26934	Water	LCS	1.00000	40.8707	100.00	41	10-94		05/03/2001	0827
26934	Water	PB	0.50000	72.9119	100.00	36	10-94		05/03/2001	0857
217857-1	Water		1.00000	31.3848	100.00	31	10-94		05/04/2001	1050
217857-2	Water		1.00000	33.4195	100.00	33	10-94		05/04/2001	1120
217857-3	Water		1.00000	31.2055	100.00	31	10-94		05/04/2001	1151
217857-4	Water		1.00000	29.6987	100.00	30	10-94		05/04/2001	1221
217857-5	Water	MS	1.00000	28.8310	100.00	29	10-94		05/04/2001	1252
217857-5	Water		1.00000	28.8310	100.00	29	10-94		05/04/2001	1252
217857-6	Water	MSD	1.00000	33.2887	100.00	33	10-94		05/04/2001	1323
217857-6	Water		1.00000	33.2887	100.00	33	10-94		05/04/2001	1323
217857-7	Water		1.00000	28.1214	100.00	28	10-94		05/04/2001	1353
217857-8	Water		1.00000	34.2063	100.00	34	10-94		05/04/2001	1424
217857-9	Water		1.00000	30.8190	100.00	31	10-94		05/04/2001	1454
217857-10	Water		1.00000	34.9203	100.00	35	10-94		05/04/2001	1524
217857-11	Water		1.00000	33.1346	100.00	33	10-94		05/04/2001	1555
217857-14	Water		1.00000	34.9511	100.00	35	10-94		05/04/2001	1626
217857-6	Water		2.00000	17.4672	100.00	35	10-94		05/07/2001	0951
217857-5	Water		2.00000	14.2126	100.00	28	10-94		05/07/2001	1020
217857-8	Water		2.00000	17.6678	100.00	35	10-94		05/07/2001	1050
217857-10	Water		5.00000	7.14664	100.00	36	10-94		05/07/2001	1120
217857-14	Water		5.00000	7.20886	100.00	36	10-94		05/07/2001	1150
217857-10	Water		10.00000	3.39638	100.00	34	10-94		05/07/2001	1352
217857-10	Water		100.00000	0.38364	100.00	38	10-94		05/07/2001	1422
217857-14	Water		20.00000	1.79271	100.00	36	10-94		05/07/2001	1452

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
26934	Water	MB	1.00000	30.4553	50.00	61	33-141		05/03/2001	0757
26934	Water	LCS	1.00000	58.4612	50.00	117	33-141		05/03/2001	0827
26934	Water	PB	0.50000	103.647	50.00	104	33-141		05/03/2001	0857
217857-1	Water		1.00000	42.4146	50.00	85	33-141		05/04/2001	1050
217857-2	Water		1.00000	42.3347	50.00	85	33-141		05/04/2001	1120
217857-3	Water		1.00000	40.1471	50.00	80	33-141		05/04/2001	1151
217857-4	Water		1.00000	41.1847	50.00	82	33-141		05/04/2001	1221
217857-5	Water		1.00000	40.1292	50.00	80	33-141		05/04/2001	1252
217857-5	Water	MS	1.00000	40.1292	50.00	80	33-141		05/04/2001	1252
217857-6	Water		1.00000	42.3591	50.00	85	33-141		05/04/2001	1323
217857-6	Water	MSD	1.00000	42.3591	50.00	85	33-141		05/04/2001	1323
217857-7	Water		1.00000	43.2397	50.00	86	33-141		05/04/2001	1353
217857-8	Water		1.00000	44.4649	50.00	89	33-141		05/04/2001	1424
217857-9	Water		1.00000	42.8202	50.00	86	33-141		05/04/2001	1454
217857-10	Water		1.00000	43.2577	50.00	87	33-141		05/04/2001	1524
217857-11	Water		1.00000	46.0871	50.00	92	33-141		05/04/2001	1555
217857-14	Water		1.00000	42.4328	50.00	85	33-141		05/04/2001	1626
217857-6	Water		2.00000	24.0903	50.00	96	33-141		05/07/2001	0951

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SURROGATE RECOVERIES REPORT

Job Number.: 217857

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW/SA-422-009 ATTN: Peter Gagnon

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-5	Water		2.00000	21.4124	50.00	86	33-141		05/07/2001	1020
217857-8	Water		2.00000	25.4272	50.00	102	33-141		05/07/2001	1050
217857-10	Water		5.00000	9.53554	50.00	95	33-141		05/07/2001	1120
217857-14	Water		5.00000	9.28207	50.00	93	33-141		05/07/2001	1150
217857-10	Water		10.00000	4.55898	50.00	91	33-141		05/07/2001	1352
217857-10	Water		100.00000	0.56546	50.00	113	33-141		05/07/2001	1422
217857-14	Water		20.00000	2.34370	50.00	94	33-141		05/07/2001	1452

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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.
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 - Unstable 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.
KK - High recovery will not affect the quality of reported results.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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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TRENT SERVICES

LABORATORY CHRONICLE

Job Number: 217857

Date: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW/SA-422-009

ATTN: Peter Gagnon

Lab ID: 217857-1 Client ID: P-12-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/24/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Data Package Validataion	1	27431		04/04/2001	0800	
	Data Package Validataion	1	28508		05/22/2001	0000	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
	GC/MS Semi-Volatile Package Production	1	28114				
	GC/MS Volatiles Data Package Production	1	27144		05/01/2001	1600	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1624	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1050	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001	1720	1.00000

Lab ID: 217857-2 Client ID: MW-5-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/24/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1651	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1120	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001	1748	1.00000

Lab ID: 217857-3 Client ID: MW-9-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/24/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1718	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1151	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001	1815	1.00000

Lab ID: 217857-4 Client ID: P11-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1746	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1221	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/27/2001	1315	1.00000

Lab ID: 217857-5 Client ID: P11MS-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1812	1.00000
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27567	26934	05/04/2001	1252	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1252	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001	1020	2.00000
SW-846 8260B	Volatile Organics	1	27026		04/27/2001	1343	1.00000

Lab ID: 217857-6 Client ID: P11MSD-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1840	1.00000
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27567	26934	05/04/2001	1323	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1323	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001	0951	2.00000
SW-846 8260B	Volatile Organics	1	27026		04/27/2001	1411	1.00000

Lab ID: 217857-7 Client ID: MW8-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001	1906	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001	1353	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001	1843	1.00000

Lab ID: 217857-8 Client ID: MW8D-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001	0800	

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LABORATORY CHRONICLE

Job Number: 217857

Date: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW/SA-422-009 | ATTN: Peter Gagnon

Lab ID: 217857-8 Client ID: MW8D-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001 1933	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001 1424	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1050	2.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 1910	1.00000

Lab ID: 217857-9 Client ID: MW7-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001 0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001 2000	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001 1454	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 1938	1.00000

Lab ID: 217857-10 Client ID: P10-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001 0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001 2027	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001 1524	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1120	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1352	10.0000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1422	100.000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 2005	1.00000

Lab ID: 217857-11 Client ID: MW4-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001 0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001 2054	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001 1555	1.00000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 2033	1.00000

Lab ID: 217857-12 Client ID: TB042401-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/24/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 1652	1.00000

Lab ID: 217857-13 Client ID: TB042501-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	27026		04/27/2001 1219	1.00000

Lab ID: 217857-14 Client ID: MW11B-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	26934		04/26/2001 0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27568	26934	05/03/2001 2121	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/04/2001 1626	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1150	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27567	26934	05/07/2001 1452	20.0000
SW-846 8260B	Volatile Organics	1	27026		04/26/2001 2100	1.00000

Lab ID: 217857-15 Client ID: TB042501B-ISA01

Date Recvd: 04/25/2001 Sample Date: 04/25/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	27026		04/27/2001 1247	1.00000

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

① Company: ERM
Address: 16300 Katy Fwy Su 300 Houston, TX
Tele #: 281-600-1000
Fax #: 281-600-1001

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

Project Name: UPRR - First Semiannual
Project Location: HWPW Impoundment

Sampler(s) Name: (Signature) Chris Young, Chris Young; Andy Sanchez, [signature]
Courier:

② Field Sample ID	③ Sampling Date	③ Sampling Time	④ Matrix: Water	Soil	Sludge	Oil	Other	# of Containers	Haz. Sample (Y/N)	⑥ Request for Analysis: 8260B-VOC	8270C-Low Level	8270C-SIM
1. P-12-1SA01	4/24/01	1423	X					5		X	X	X
2. MW-5-1SA01	4/24/01	1600										
3. MW9-1SA01	4/24/01	1435										
4. P11-1SA01	4/25/01	0835										
5. P11MS-1SA01		0855										
6. P11MSD-1SA01		0910										
7. MW8-1SA01		1015										
8. MW8D-1SA01		1025										
9. MW7-1SA01		1150										
10. P10-1SA01		1420										
11. MW4-1SA01		1520	X									
12. TB042401-1SA01	04/24/01		X							X		
13. TB042501-1SA01	4/25/01		+							X		

Relinquished by Sampler: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
⑦ Chris Young	4/25/01	1657	[signature]	4/25/01	16:57

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/25/01	5:30	RDC		

Relinquished by: (Signature)	Date:	Time:	Received by Laboratory: (Signature)	Date:	Time:
		51	[signature]	4/25/01	1738

⑧ Remarks:
TB042401-1SA01 for blue cooler
TB042501-1SA01 for cooler Kit 219

Requested Turnaround: Standard
GSAI Group: 217857

Special Detection Limits: See project requirements.

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

White Copy to Accompany Samples to Lab Yellow Copy Retained by Client Pink Copy Retained by Sampler

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

STL — Committed To Your Success

Request for Analysis

❶ Company: ERM	Address: 16300 Katy Fwy Su 300 Houston, TX	Tele #: 281-600-1000 Fax #: 281-600-1001
Reports Sent To: Peter Gagnon	P O #:	Project #: 422-009 (SA)
Project Name: UPRR: First Semiannual		Project Location: HWPW Impoundment
Sampler(s) Name: (Signature) Chris Young, [signature] Andy Sanchez [signature]		
Courier:		

❷ Field Sample ID	❸ Sampling Date	Time	❹ Matrix: Water	Soil	Sludge	Oil	Other	# of Containers	Haz. Sample (Y/N)	8260B-VOC	8270C-Low level	8270C-SIM
1. MW11B-1SA01	4/25/01	1626	X					5		X	X	X
2. TB042501B-1SA01	4/25/01		X							X		
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												

❻ Remarks: TB042501B-1SA01 for cooler kit #1248

Requested Turnaround: Standard

GSAI Group: 217857

Special Detection Limits: see project requirements.

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

❼	Date:	Time:		Date:	Time:
Relinquished by Sampler: (Signature) [signature]	4/25/01	1657	Received by: (Signature) [signature]	4/25/01	16:57
Relinquished by: (Signature) [signature]	4/25/01	17:33	Received by: (Signature) [signature]		
Relinquished by: (Signature)			Received by Laboratory: (Signature) [signature]	4/25/01	1733

55

White Copy to Accompany Samples to Lab   Yellow Copy Retained by Client   Pink Copy Retained by Sampler

SEVERN TRENT LABORATORIES-HOUSTON
SAMPLE RECEIPT CHECKLIST

CLIENT: [illegible] CONTACT: [illegible] STL

PROJECT: UPRR - Hwy 90 CARRIER:

DATE SHIPPED: 2001 APR 25 PM 5:33 UNPACKED BY: RR

DATE RECEIVED: UNPACKED STAMP: 2001 APR 25 PM 7:50

NUMBER OF KITS RECEIVED: — JOB# 217857 B.O.# —

KIT CHECKLIST

KIT ID	COC PRESENT	CUSTODY TAPE		COOLER TEMP Thermometer # 337	# OF SAMPLE CONTAINERS
		PRESENT?	INTACT?		
1248	Y S	C Y S	Y S	2-1°	14
		B NO	NO		
219	Y S	C Y S	Y S	2.6°	3
		B NO	NO		
220	Y S	C Y S	Y S	2.9°	44
		B NO	NO		

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~~ 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)

☑ VOA ___ VOA
___ Other ___ Other

NOTES

# Cont.	Matrix
66	GW
Total 66	

Project Manager [signature]

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/25/01 1650

Name/Company Andy Sanchez ERM-SW

Seal broken by WV

Date 4/25/01

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/25/01 1650

Name/Company Andy Sanchez ERM-SW

Seal broken by WV

Date 4/25/01

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/25/01 1650

Name/Company Andy Sanchez ERM-SW

Seal broken by WV

Date 4/25/01

TRENT SERVICES

STL Houston

ANALYTICAL REPORT

JOB NUMBER: 217924

Prepared For:

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

Attention: Peter Gagnon

Date: 05/23/2001

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

05/23/01
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TRENT SERVICES

STL Houston

05/23/2001

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

Reference:
Project : UPRR-HWPW
Project No. : 217924
Date Received : 04/26/2001
STL Job : 217924

Dear Peter Gagnon:

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

1. MW11A-ISA01
2. MW11AD-ISA01
3. MW3-ISA01
4. FB042601-ISA01
5. MW2-ISA01
6. TB042601-ISA01

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.

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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STL Houston

SAMPLE INFORMATION
Date: 05/23/2001

Job Number.: 217924
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Peter Gagnon

Project Number.....: 99000484
Customer Project ID....: HWPW-422-09 (SA)
Project Description....: UPRR-HPW

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
217924-1	MW11A-ISA01	Water	04/26/2001	08:55	04/26/2001	17:54
217924-2	MW11AD-ISA01	Water	04/26/2001	09:10	04/26/2001	17:54
217924-3	MW3-ISA01	Water	04/26/2001	10:25	04/26/2001	17:54
217924-4	FB042601-ISA01	Field Blank	04/26/2001	10:40	04/26/2001	17:54
217924-5	MW2-ISA01	Water	04/26/2001	11:45	04/26/2001	17:54
217924-6	TB042601-ISA01	Trip Blank	04/26/2001	00:01	04/26/2001	17:54

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TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW11A-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 08:55
Sample Matrix.....: Water

Laboratory Sample ID: 217924-1
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27051		04/27/01 0800	m
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27766		05/03/01 2214	l
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27766		05/03/01 2214	l
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27766		05/03/01 2214	l
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27766		05/03/01 2214	l
	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27766		05/03/01 2214	l
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27766		05/03/01 2214	l
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	280			2	12	8.00000	ug/L	27761		05/07/01 1523	l
	Acenaphthylene, Water	4			0.2	2	1.00000	ug/L	27761		05/04/01 1656	l
	Anthracene, Water	14			0.4	2	1.00000	ug/L	27761		05/04/01 1656	l
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27761		05/04/01 1656	l
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27761		05/04/01 1656	l
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1656	l
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1656	l
	Dibenzofuran, Water	140			2	12	8.00000	ug/L	27761		05/07/01 1523	l
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/04/01 1656	l
	Fluoranthene, Water	15			0.4	2	1.00000	ug/L	27761		05/04/01 1656	l
	Fluorene, Water	160			2	12	8.00000	ug/L	27761		05/07/01 1523	l
	2-Methylnaphthalene, Water	14			0.3	2	1.00000	ug/L	27761		05/04/01 1656	l
	Naphthalene, Water	470			5	32	16.00000	ug/L	27761		05/07/01 1653	l
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1656	l
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1656	l
	Phenanthrene, Water	74			0.6	3	2.00000	ug/L	27761		05/07/01 1221	l
	Pyrene, Water	6			0.3	2	1.00000	ug/L	27761		05/04/01 1656	l

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW11A-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 08:55
Sample Matrix.....: Water

Laboratory Sample ID: 217924-1
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	1	J		0.1	2	1.00000	ug/L	27761		05/04/01 1656	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27761		05/04/01 1656	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27761		05/04/01 1656	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/04/01 1656	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	3	J		0.8	5	1.00000	ug/L	27125		04/27/01 1851	yd
CD	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 1851	yd
CD	1,2-Dichloroethane, Water	3	J		1	5	1.00000	ug/L	27125		04/27/01 1851	yd
	Ethylbenzene, Water	3	J		3	5	1.00000	ug/L	27125		04/27/01 1851	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/27/01 1851	yd
	Toluene, Water	2	J		0.7	5	1.00000	ug/L	27125		04/27/01 1851	yd
	Xylenes (total), Water	7	J		2	15	1.00000	ug/L	27125		04/27/01 1851	yd

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW11AD-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 09:10
Sample Matrix.....: Water

Laboratory Sample ID: 217924-2
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27051		04/27/01 0800	n
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27766		05/03/01 2241	l
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27766		05/03/01 2241	l
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27766		05/03/01 2241	l
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27766		05/03/01 2241	l
	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27766		05/03/01 2241	l
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27766		05/03/01 2241	l
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	370			5	30	20.00000	ug/L	27761		05/07/01 1553	l
	Acenaphthylene, Water	4			0.2	2	1.00000	ug/L	27761		05/04/01 1726	l
	Anthracene, Water	16			0.4	2	1.00000	ug/L	27761		05/04/01 1726	l
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27761		05/04/01 1726	l
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27761		05/04/01 1726	l
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1726	l
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1726	l
	Dibenzofuran, Water	180			1	8	5.00000	ug/L	27761		05/07/01 1251	l
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/04/01 1726	l
	Fluoranthene, Water	17			0.4	2	1.00000	ug/L	27761		05/04/01 1726	l
	Fluorene, Water	200			1	8	5.00000	ug/L	27761		05/07/01 1251	l
	2-Methylnaphthalene, Water	25			0.3	2	1.00000	ug/L	27761		05/04/01 1726	l
	Naphthalene, Water	790			7	40	20.00000	ug/L	27761		05/07/01 1553	l
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1726	l
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1726	l
	Phenanthrene, Water	110			1	8	5.00000	ug/L	27761		05/07/01 1251	l
	Pyrene, Water	7			0.3	2	1.00000	ug/L	27761		05/04/01 1726	l

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW11AD-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 09:10
Sample Matrix.....: Water

Laboratory Sample ID: 217924-2
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
	2,4-Dimethylphenol, Water	2			0.1	2	1.00000	ug/L	27761		05/ /01 1726	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27761		05/ /01 1726	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27761		05/ /01 1726	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/ /01 1726	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	3	J		0.8	5	1.00000	ug/L	27125		04/ /01 1919	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/ /01 1919	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27125		04/ /01 1919	yc
	Ethylbenzene, Water	3	J		3	5	1.00000	ug/L	27125		04/ /01 1919	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/ /01 1919	yc
	Toluene, Water	2	J		0.7	5	1.00000	ug/L	27125		04/ /01 1919	yc
	Xylenes (total), Water	7	J		2	15	1.00000	ug/L	27125		04/ /01 1919	yc

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW3-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 217924-3
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27051		04/27/01 0800	n
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27766		05/03/01 2308	l
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27766		05/03/01 2308	l
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27766		05/03/01 2308	l
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27766		05/03/01 2308	l
	Pentachlorophenol, Water	0.2	J		0.2	1	1.00000	ug/L	27766		05/03/01 2308	l
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27766		05/03/01 2308	l
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	250			3	15	10.00000	ug/L	27761		05/07/01 1623	l
	Acenaphthylene, Water	3			0.2	2	1.00000	ug/L	27761		05/04/01 1756	l
	Anthracene, Water	4			0.4	2	1.00000	ug/L	27761		05/04/01 1756	l
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27761		05/04/01 1756	l
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27761		05/04/01 1756	l
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Dibenzofuran, Water	110			1	8	5.00000	ug/L	27761		05/07/01 1322	l
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/04/01 1756	l
	Fluoranthene, Water	15			0.4	2	1.00000	ug/L	27761		05/04/01 1756	l
	Fluorene, Water	140			1	8	5.00000	ug/L	27761		05/07/01 1322	l
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Naphthalene, Water	0.9	J		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Phenanthrene, Water	0.9	J		0.3	2	1.00000	ug/L	27761		05/04/01 1756	l
	Pyrene, Water	6			0.3	2	1.00000	ug/L	27761		05/04/01 1756	l

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: NWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW3-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 217924-3
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TI
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27761		05/[illegible]/01 1756	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27761		05/[illegible]/01 1756	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27761		05/[illegible]/01 1756	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/[illegible]/01 1756	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27125		04/27/01 1947	yc
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 1947	yc
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27125		04/27/01 1947	yc
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27125		04/27/01 1947	yc
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/27/01 1947	yc
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 1947	yc
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27125		04/27/01 1947	yc

* In Description = Dry Wgt.

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TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: FB042601-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 10:40
Sample Matrix.....: Field Blank

Laboratory Sample ID: 217924-4
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27051		04/27/01 0800	n
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27766		05/03/01 2335	l
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27766		05/03/01 2335	l
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27766		05/03/01 2335	l
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27766		05/03/01 2335	l
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	27766		05/03/01 2335	l
	1,2-Diphenylhydrazine, Water	2			0.05	1	1.00000	ug/L	27766		05/03/01 2335	l
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/07/01 0850	l
	Anthracene, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/07/01 0850	l
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27761		05/07/01 0850	l
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27761		05/07/01 0850	l
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/07/01 0850	l
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/07/01 0850	l
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Naphthalene, Water	1	J		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0850	l

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STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: FB042601-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 10:40
Sample Matrix.....: Field Blank

Laboratory Sample ID: 217924-4
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27761		05/07/01 0850	lg
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27761		05/07/01 0850	lg
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27761		05/07/01 0850	lg
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/07/01 0850	lg
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27125		04/27/01 2015	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 2015	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27125		04/27/01 2015	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27125		04/27/01 2015	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/27/01 2015	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 2015	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27125		04/27/01 2015	yd

* In Description = Dry Wgt.

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STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW2-1SA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 11:45
Sample Matrix.....: Water

Laboratory Sample ID: 217924-5
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27051		04/27/01 0800	m
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.2	J		0.03	0.2	1.00000	ug/L	27766		05/04/01 0001	l
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27766		05/04/01 0001	l
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27766		05/04/01 0001	l
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27766		05/04/01 0001	l
	Pentachlorophenol, Water	0.2	J		0.2	1	1.00000	ug/L	27766		05/04/01 0001	l
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27766		05/04/01 0001	l
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	10			0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Acenaphthylene, Water	0.3	J		0.2	2	1.00000	ug/L	27761		05/07/01 0920	l
	Anthracene, Water	2			0.4	2	1.00000	ug/L	27761		05/07/01 0920	l
	Benzo(a)anthracene, Water	0.4	J		0.4	1	1.00000	ug/L	27761		05/07/01 0920	l
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27761		05/07/01 0920	l
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Chrysene, Water	0.3	J		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Dibenzofuran, Water	8			0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27761		05/07/01 0920	l
	Fluoranthene, Water	3			0.4	2	1.00000	ug/L	27761		05/07/01 0920	l
	Fluorene, Water	9			0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	2-Methylnaphthalene, Water	0.9	J		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Naphthalene, Water	28			0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Phenanthrene, Water	2			0.3	2	1.00000	ug/L	27761		05/07/01 0920	l
	Pyrene, Water	2	J		0.3	2	1.00000	ug/L	27761		05/07/01 0920	l

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217924

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: MW2-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 11:45
Sample Matrix.....: Water

Laboratory Sample ID: 217924-5
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27761		05/07/01 0920	l
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27761		05/07/01 0920	l
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27761		05/07/01 0920	l
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27761		05/07/01 0920	l
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27125		04/27/01 2042	y
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 2042	y
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27125		04/27/01 2042	y
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27125		04/27/01 2042	y
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/27/01 2042	y
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/27/01 2042	y
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27125		04/27/01 2042	y

01-I

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 217924

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: HWPW-422-09 (SA)

ATTN: Peter Gagnon

Customer Sample ID: TB042601-ISA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 217924-6
Date Received.....: 04/26/2001
Time Received.....: 17:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
SW-846 8260B	Volatile Organics										
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27125		04/30/01 1224
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/30/01 1224
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27125		04/30/01 1224
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27125		04/30/01 1224
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27125		04/30/01 1224
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27125		04/30/01 1224
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27125		04/30/01 1224

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TRENT SERVICES

Houston

QUALITY CONTROL RESULTS

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS040201C	27051		05/03/2001	2148

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics - SIM Analysis
Units.....: ug/L
Batch(s)...: 27766
Analyst...: lg1

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene	0							
Bis(2-chloroethoxy)methane	0							
2,4-Dinitrotoluene	0							
2,6-Dinitrotoluene	0							
Pentachlorophenol	0.05921							
1,2-Diphenylhydrazine	0							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS040201C	27051		05/04/2001	0820

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics, Low Level
Units.....: ug/L
Batch(s)...: 27761
Analyst...: lg1

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	0							
Acenaphthylene	0							
Anthracene	0							
Benzo(a)anthracene	0							
Bis(2-ethylhexyl)phthalate	0							
2-Chloronaphthalene	0							
Chrysene	0							
Dibenzofuran	0							
Di-n-butyl Phthalate	0							
Fluoranthene	0							
Fluorene	0							
2-Methylnaphthalene	0							
Naphthalene	0							
Nitrobenzene	0							
n-Nitrosodiphenylamine	0							
Phenanthrene	0							
Pyrene	0							
2,4-Dimethylphenol	0							
2-Methyl-4,6-dinitrophenol	0							
4-Nitrophenol	0							
Phenol	0							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS042501A	27051		05/04/2001	0850

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.43624		5.000000		88.7		32-165	
Acenaphthylene	4.04902		5.000000		81.0		10-150	
Anthracene	4.54847		5.000000		91.0		23-178	
Benzo(a)anthracene	4.43355		5.000000		88.7		25-180	
Bis(2-ethylhexyl)phthalate	4.14664		5.000000		82.9		25-173	
2-Chloronaphthalene	3.72396		5.000000		74.5		23-143	
Chrysene	4.48170		5.000000		89.6		23-180	

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

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TRENT SERVICES

STL Houston

QUALITY CONTROL RESULTS

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW-422-09 (SA) ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS042501A	27051		05/04/2001	0850

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ibenzofuran	4.30767		5.000000		86.2		35-153	
i-n-butyl Phthalate	4.26613		5.000000		85.3		28-185	
luoranthene	4.50588		5.000000		90.1		28-180	
luorene	4.29773		5.000000		86.0		30-189	
-Methylnaphthalene	4.46974		5.000000		89.4		26-168	
aphthalene	4.49022		5.000000		89.8		36-139	
itrobenzene	5.05804		5.000000		101.2		17-163	
-Nitrosodiphenylamine	4.90211		5.000000		98.0		58-174	
henanthrene	4.55127		5.000000		91.0		26-166	
yrene	4.80294		5.000000		96.1		28-173	
,4-Dimethylphenol	3.55314		5.000000		71.1		23-157	
-Methyl-4,6-dinitrophenol	4.50230		5.000000		90.0		17-164	
-Nitrophenol	1.71782		5.000000		34.4		10-92	
henol	1.92780		5.000000		38.6		20-83	

MS	Matrix Spike	SVS022801A	217923-7		05/08/2001	1320

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene	5.75276		5.000000	0	115		46-118	
rene	7.17437		5.000000	0	143		52-127	A
Nitrophenol	4.35965		10.000000	0	44		10-80	
enol	3.83065		10.000000	0	38		10-112	

MSD	Matrix Spike Duplicate	SVS022801A	217923-8		05/08/2001	1350

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene	6.78058	5.75276	5.000000	0	136		46-118	A
					16.4		31.0	
rene	7.61538	7.17437	5.000000	0	152		52-127	A
					6.0		31.0	
Nitrophenol	4.69542	4.35965	10.000000	0	47		10-80	
					7.4		50.0	
enol	4.65804	3.83065	10.000000	0	47		10-112	
					19.5		23.0	

Test Method.....: SW-846 8260B
Method Description.: Volatile Organics

Units.....: ug/L
Batch(s)...: 27125

Analyst...: ydy

LCS	Laboratory Control Sample	VS042401E			04/27/2001	1055

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene	44.5004		50.00	ND	89.0		68-127	
omodichloromethane	45.3818		50.00	ND	90.8		64-129	
omoform	47.3110		50.00	ND	94.6		45-147	
omomethane	34.5769		50.00	ND	69.2		32-143	
bon Tetrachloride	45.3330		50.00	ND	90.7		54-140	
orobenzene	47.0909		50.00	ND	94.2		65-129	

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

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QUALITY CONTROL RESULTS

Job Number.: 217924 — Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston — PROJECT: HWPW-422-09 (SA) — ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/27/2001	1055

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Chloroethane	43.0009		50.00	ND	86.0		47-157	
Chloroform	45.6629		50.00	ND	91.3		71-131	
Chloromethane	34.1567		50.00	ND	68.3		22-160	
Dibromochloromethane	45.6561		50.00	ND	91.3		64-131	
1,2-Dichlorobenzene	47.9843		50.00	ND	96.0		59-133	
1,3-Dichlorobenzene	47.3780		50.00	ND	94.8		61-132	
1,4-Dichlorobenzene	47.5664		50.00	ND	95.1		46-142	
1,1-Dichloroethane	45.8929		50.00	ND	91.8		62-138	
1,2-Dichloroethane	44.6993		50.00	ND	89.4		65-133	
1,1-Dichloroethene	46.1190		50.00	ND	92.2		48-147	
cis-1,2-Dichloroethene	43.9061		50.00	ND	87.8		61-129	
trans-1,2-Dichloroethene	46.1921		50.00	ND	92.4		73-138	
1,2-Dichloropropane	42.2010		50.00	ND	84.4		60-124	
Ethylbenzene	48.1358		50.00	ND	96.3		64-132	
Methylene Chloride	45.1786		50.00	ND	90.4		54-133	
Styrene	43.2000		50.00	ND	86.4		20-156	
1,1,2,2-Tetrachloroethane	46.2029		50.00	ND	92.4		70-130	
Tetrachloroethene	46.0425		50.00	ND	92.1		59-134	
Toluene	46.6124		50.00	ND	93.2		63-127	
1,1,1-Trichloroethane	45.5743		50.00	ND	91.1		70-130	
1,1,2-Trichloroethane	45.7888		50.00	ND	91.6		70-130	
Trichloroethene	44.1112		50.00	ND	88.2		64-130	
Vinyl Chloride	41.3974		50.00	ND	82.8		35-155	
Xylenes (total)	143.952		150.00	ND	96.0		37-161	
m,p-Xylene	96.1968		100.00	ND	96.2		37-160	
o-Xylene	47.7550		50.00	ND	95.5		37-161	
Acetone	28.2782		50.00	ND	56.6		38-190	
Carbon Disulfide	38.8708		50.00	ND	77.7		68-158	
Methyl Ethyl Ketone (2-Butanone)	32.4295		50.00	ND	64.9		38-186	
cis-1,3-Dichloropropene	45.4236		50.00	ND	90.8		66-130	
trans-1,3-Dichloropropene	41.7686		50.00	ND	83.5		71-139	
2-Hexanone	35.2015		50.00	ND	70.4		29-173	
4-Methyl-2-pentanone (MIBK)	37.7249		50.00	ND	75.4		40-144	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/27/2001	1151

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	ND							
Bromodichloromethane	ND							
Bromoform	ND							
Bromomethane	ND							
Carbon Tetrachloride	ND							
Chlorobenzene	ND							
Chloroethane	ND							
Chloroform	ND							
Chloromethane	ND							
Dibromochloromethane	ND							
1,2-Dichlorobenzene	ND							
1,3-Dichlorobenzene	ND							
1,4-Dichlorobenzene	ND							
1,1-Dichloroethane	ND							
1,2-Dichloroethane	ND							

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

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TRENT SERVICES

STL Houston

QUALITY CONTROL RESULTS

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/27/2001	1151

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
,1-Dichloroethene	ND							
is-1,2-Dichloroethene	ND							
rans-1,2-Dichloroethene	ND							
,2-Dichloropropane	ND							
thylbenzene	ND							
ethylene Chloride	ND							
tyrene	ND							
1,2,2-Tetrachloroethane	ND							
trachloroethene	ND							
oluene	ND							
1,1-Trichloroethane	ND							
1,2-Trichloroethane	ND							
richloroethene	ND							
nyl Chloride	ND							
lenes (total)	ND							
p-Xylene	ND							
Xylene	ND							
etone	ND							
rbon Disulfide	ND							
thyl Ethyl Ketone (2-Butanone)	ND							
s-1,3-Dichloropropene	ND							
ans-1,3-Dichloropropene	ND							
Hexanone	ND							
Methyl-2-pentanone (MIBK)	ND							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	VS042401F	217857-5		04/27/2001	1343

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene	50.2070		50.00	ND	100		65-125	
lorobenzene	51.9136		50.00	ND	104		74-122	
1-Dichloroethene	57.4128		50.00	ND	115		22-123	
luene	53.6590		50.00	ND	107		76-125	
ichloroethene	49.3969		50.00	ND	99		56-118	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	VS042401F	217857-6		04/27/2001	1411

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene	48.9232	50.2070	50.00	ND	98		65-125	
					2.6		30.0	
orobenzene	53.1651	51.9136	50.00	ND	106		74-122	
					2.4		30.0	
l-Dichloroethene	52.9611	57.4128	50.00	ND	106		22-123	
					8.1		30.0	
uene	52.7124	53.6590	50.00	ND	105		76-125	
					1.8		30.0	
chloroethene	49.1529	49.3969	50.00	ND	98		56-118	
					0.5		30.0	

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

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QUALITY CONTROL RESULTS

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/30/2001	1127

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

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/30/2001	1156

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	48.5185		50.00	ND	97.0		68-127	
Bromodichloromethane	51.2108		50.00	ND	102.4		64-129	
Bromoform	52.2109		50.00	ND	104.4		45-147	
Bromomethane	35.4740		50.00	ND	70.9		32-143	
Carbon Tetrachloride	49.8249		50.00	ND	99.6		54-140	
Chlorobenzene	51.5249		50.00	ND	103.0		65-129	
Chloroethane	45.6318		50.00	ND	91.3		47-157	
Chloroform	50.6918		50.00	ND	101.4		71-131	
Chloromethane	34.3723		50.00	ND	68.7		22-160	

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

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TRENT SERVICES

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QUALITY CONTROL RESULTS

Job Number.: 217924 — Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston — PROJECT: HWPW-422-09 (SA) — ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/30/2001	1156

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Dibromochloromethane	50.9804		50.00	ND	102.0		64-131	
1,2-Dichlorobenzene	48.7980		50.00	ND	97.6		59-133	
1,3-Dichlorobenzene	49.3113		50.00	ND	98.6		61-132	
1,4-Dichlorobenzene	49.8957		50.00	ND	99.8		46-142	
1,1-Dichloroethane	50.9369		50.00	ND	101.9		62-138	
1,2-Dichloroethane	50.6375		50.00	ND	101.3		65-133	
1,1-Dichloroethene	52.5423		50.00	ND	105.1		48-147	
cis-1,2-Dichloroethene	49.6413		50.00	ND	99.3		61-129	
trans-1,2-Dichloroethene	53.2107		50.00	ND	106.4		73-138	
1,2-Dichloropropane	46.0835		50.00	ND	92.2		60-124	
Ethylbenzene	51.5166		50.00	ND	103.0		64-132	
Methylene Chloride	50.9336		50.00	ND	101.9		54-133	
Styrene	46.4747		50.00	ND	92.9		20-156	
1,1,2,2-Tetrachloroethane	51.4437		50.00	ND	102.9		70-130	
Tetrachloroethene	49.7569		50.00	ND	99.5		59-134	
Toluene	51.1248		50.00	ND	102.2		63-127	
1,1,1-Trichloroethane	49.7549		50.00	ND	99.5		70-130	
1,1,2-Trichloroethane	50.5795		50.00	ND	101.2		70-130	
Trichloroethene	49.0128		50.00	ND	98.0		64-130	
Vinyl Chloride	44.1931		50.00	ND	88.4		35-155	
Xylenes (total)	154.841		150.00	ND	103.2		37-161	
m,p-Xylene	104.699		100.00	ND	104.7		37-160	
o-Xylene	50.1413		50.00	ND	100.3		37-161	
Acetone	48.0094		50.00	ND	96.0		38-190	
Carbon Disulfide	43.8744		50.00	ND	87.7		68-158	
Methyl Ethyl Ketone (2-Butanone)	37.5548		50.00	ND	75.1		38-186	
cis-1,3-Dichloropropene	49.9631		50.00	ND	99.9		66-130	
trans-1,3-Dichloropropene	46.1282		50.00	ND	92.3		71-139	
2-Hexanone	38.5756		50.00	ND	77.2		29-173	
4-Methyl-2-pentanone (MIBK)	42.4724		50.00	ND	84.9		40-144	

MS	Matrix Spike	VS042401F	217923-7		04/30/2001	1322

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	49.5111		50.00	ND	99		65-125	
Chlorobenzene	52.2028		50.00	ND	104		74-122	
1,1-Dichloroethene	56.2481		50.00	ND	112		22-123	
Toluene	52.8760		50.00	ND	106		76-125	
Trichloroethene	48.9854		50.00	ND	98		56-118	

MSD	Matrix Spike Duplicate	VS042401F	217923-8		04/30/2001	1350

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	47.8379	49.5111	50.00	ND	96		65-125	
					3.4		30.0	
Chlorobenzene	52.1307	52.2028	50.00	ND	104		74-122	
					0.1		30.0	
1,1-Dichloroethene	51.2592	56.2481	50.00	ND	103		22-123	
					9.3		30.0	
Toluene	49.1490	52.8760	50.00	ND	98		76-125	
					7.3		30.0	

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

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TRENT SERVICES

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QUALITY CONTROL RESULTS

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	VS042401F	217923-8		04/30/2001	1350

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Trichloroethene	47.6463	48.9854	50.00	ND	95		56-118	
					2.8		30.0	

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

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SURROGATE RECOVERIES REPORT

Job Number.: 217924
Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

Method.....: Volatile Organics
Method Code.....: 8260
Batch..: 27125
Analyst.....: ydy

Surrogate	Units
1,2-Dichloroethane-d4	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	44.1225	50.00	88.2	70-130		04/27/2001	1055
	Water	MB	1.00000	45.0048	50.00	90.0	70-130		04/27/2001	1151
217857-5	Water	MS	1.00000	45.5391	50.00	91.1	70-130		04/27/2001	1343
217857-6	Water	MSD	1.00000	46.4238	50.00	92.8	70-130		04/27/2001	1411
217924-1	Water		1.00000	46.0095	50.00	92.0	70-130		04/27/2001	1851
217924-2	Water		1.00000	45.3667	50.00	90.7	70-130		04/27/2001	1919
217924-3	Water		1.00000	46.3675	50.00	92.7	70-130		04/27/2001	1947
217924-4	Water		1.00000	48.1460	50.00	96.3	70-130		04/27/2001	2015
217924-5	Water		1.00000	43.6664	50.00	87.3	70-130		04/27/2001	2042
	Water	MB	1.00000	53.7207	50.00	107.4	70-130		04/30/2001	1127
	Water	LCS	1.00000	49.2410	50.00	98.5	70-130		04/30/2001	1156
217924-6	Water		1.00000	45.6995	50.00	91.4	70-130		04/30/2001	1224
217923-7	Water	MS	1.00000	48.3570	50.00	96.7	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	45.3916	50.00	90.8	70-130		04/30/2001	1350

Surrogate	Units
4-Bromofluorobenzene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	48.0490	50.00	96.1	70-130		04/27/2001	1055
	Water	MB	1.00000	48.0493	50.00	96.1	70-130		04/27/2001	1151
217857-5	Water	MS	1.00000	49.5446	50.00	99.1	70-130		04/27/2001	1343
217857-6	Water	MSD	1.00000	49.0977	50.00	98.2	70-130		04/27/2001	1411
217924-1	Water		1.00000	51.0031	50.00	102.0	70-130		04/27/2001	1851
217924-2	Water		1.00000	50.1613	50.00	100.3	70-130		04/27/2001	1919
217924-3	Water		1.00000	49.4332	50.00	98.9	70-130		04/27/2001	1947
217924-4	Water		1.00000	51.0451	50.00	102.1	70-130		04/27/2001	2015
217924-5	Water		1.00000	50.5657	50.00	101.1	70-130		04/27/2001	2042
	Water	MB	1.00000	57.7324	50.00	115.5	70-130		04/30/2001	1127
	Water	LCS	1.00000	54.3576	50.00	108.7	70-130		04/30/2001	1156
217924-6	Water		1.00000	50.0910	50.00	100.2	70-130		04/30/2001	1224
217923-7	Water	MS	1.00000	50.4721	50.00	100.9	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	47.9335	50.00	95.9	70-130		04/30/2001	1350

Surrogate	Units
Dibromofluoromethane	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	45.8469	50.00	91.7	70-130		04/27/2001	1055
	Water	MB	1.00000	46.5611	50.00	93.1	70-130		04/27/2001	1151

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TRENT SERVICES

Houston

SURROGATE RECOVERIES REPORT

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

Surrogate	Units
Dibromofluoromethane	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217857-5	Water	MS	1.00000	48.0440	50.00	96.1	70-130		04/27/2001	1343
217857-6	Water	MSD	1.00000	47.0927	50.00	94.2	70-130		04/27/2001	1411
217924-1	Water		1.00000	47.6660	50.00	95.3	70-130		04/27/2001	1851
217924-2	Water		1.00000	45.8288	50.00	91.7	70-130		04/27/2001	1919
217924-3	Water		1.00000	47.6155	50.00	95.2	70-130		04/27/2001	1947
217924-4	Water		1.00000	48.6095	50.00	97.2	70-130		04/27/2001	2015
217924-5	Water		1.00000	46.0800	50.00	92.2	70-130		04/27/2001	2042
	Water	MB	1.00000	54.7153	50.00	109.4	70-130		04/30/2001	1127
	Water	LCS	1.00000	52.3106	50.00	104.6	70-130		04/30/2001	1156
217924-6	Water		1.00000	46.9817	50.00	94.0	70-130		04/30/2001	1224
217923-7	Water	MS	1.00000	50.6063	50.00	101.2	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	47.8721	50.00	95.7	70-130		04/30/2001	1350

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	LCS	1.00000	45.5877	50.00	91.2	70-130		04/27/2001	1055
	Water	MB	1.00000	46.2762	50.00	92.6	70-130		04/27/2001	1151
217857-5	Water	MS	1.00000	48.0674	50.00	96.1	70-130		04/27/2001	1343
217857-6	Water	MSD	1.00000	47.8655	50.00	95.7	70-130		04/27/2001	1411
217924-1	Water		1.00000	48.5831	50.00	97.2	70-130		04/27/2001	1851
217924-2	Water		1.00000	46.6843	50.00	93.4	70-130		04/27/2001	1919
217924-3	Water		1.00000	47.8133	50.00	95.6	70-130		04/27/2001	1947
217924-4	Water		1.00000	47.0104	50.00	94.0	70-130		04/27/2001	2015
217924-5	Water		1.00000	46.9367	50.00	93.9	70-130		04/27/2001	2042
	Water	MB	1.00000	52.8079	50.00	105.6	70-130		04/30/2001	1127
	Water	LCS	1.00000	51.3107	50.00	102.6	70-130		04/30/2001	1156
217924-6	Water		1.00000	45.6519	50.00	91.3	70-130		04/30/2001	1224
217923-7	Water	MS	1.00000	48.3497	50.00	96.7	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	45.4590	50.00	90.9	70-130		04/30/2001	1350

Method.....: Semivolatile Organics, Low Level
Method Code.....: 8270LL

Batch..: 27761
Analyst.....: lg1

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	103.849	100.00	104	10-123		05/04/2001	0820
27051	Water	LCS	1.00000	94.0435	100.00	94	10-123		05/04/2001	0850
217924-1	Water		1.00000	108.565	100.00	109	10-123		05/04/2001	1656
217924-2	Water		1.00000	118.752	100.00	119	10-123		05/04/2001	1726

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SURROGATE RECOVERIES REPORT

Job Number.: 217924 Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW-422-09 (SA) ATTN: Peter Gagnon

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217924-3	Water		1.00000	113.913	100.00	114	10-123		05/04/2001	1756
217924-4	Water		1.00000	108.678	100.00	109	10-123		05/07/2001	0850
217924-5	Water		1.00000	74.7413	100.00	75	10-123		05/07/2001	0920
217924-1	Water		2.00000	44.5538	100.00	89	10-123		05/07/2001	1221
217924-2	Water		5.00000	24.9173	100.00	125	10-123	D	05/07/2001	1251
217924-3	Water		5.00000	22.9522	100.00	115	10-123		05/07/2001	1322
217924-1	Water		8.00000	12.7777	100.00	102	10-123		05/07/2001	1523
217924-2	Water		20.00000	6.10905	100.00	122	10-123		05/07/2001	1553
217924-3	Water		10.00000	10.7719	100.00	108	10-123		05/07/2001	1623
217924-1	Water		16.00000	6.17306	100.00	99	10-123		05/07/2001	1653
217923-7	Water	MS	1.00000	109.268	100.00	109	10-123		05/08/2001	1320
217923-8	Water	MSD	1.00000	117.701	100.00	118	10-123		05/08/2001	1350

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	43.6103	50.00	87	43-116		05/04/2001	0820
27051	Water	LCS	1.00000	42.6640	50.00	85	43-116		05/04/2001	0850
217924-1	Water		1.00000	42.3627	50.00	85	43-116		05/04/2001	1656
217924-2	Water		1.00000	47.5810	50.00	95	43-116		05/04/2001	1726
217924-3	Water		1.00000	42.7184	50.00	85	43-116		05/04/2001	1756
217924-4	Water		1.00000	46.0636	50.00	92	43-116		05/07/2001	0850
217924-5	Water		1.00000	41.7575	50.00	84	43-116		05/07/2001	0920
217924-1	Water		2.00000	17.6941	50.00	71	43-116		05/07/2001	1221
217924-2	Water		5.00000	11.2509	50.00	113	43-116		05/07/2001	1251
217924-3	Water		5.00000	9.65220	50.00	97	43-116		05/07/2001	1322
217924-1	Water		8.00000	5.37119	50.00	86	43-116		05/07/2001	1523
217924-2	Water		20.00000	2.78723	50.00	111	43-116		05/07/2001	1553
217924-3	Water		10.00000	4.55282	50.00	91	43-116		05/07/2001	1623
217924-1	Water		16.00000	2.60946	50.00	84	43-116		05/07/2001	1653
217923-7	Water	MS	1.00000	44.8429	50.00	90	43-116		05/08/2001	1320
217923-8	Water	MSD	1.00000	52.1729	50.00	104	43-116		05/08/2001	1350

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	58.4443	100.00	58	21-100		05/04/2001	0820
27051	Water	LCS	1.00000	56.4032	100.00	56	21-100		05/04/2001	0850
217924-1	Water		1.00000	41.2220	100.00	41	21-100		05/04/2001	1656
217924-2	Water		1.00000	49.1087	100.00	49	21-100		05/04/2001	1726
217924-3	Water		1.00000	61.3011	100.00	61	21-100		05/04/2001	1756
217924-4	Water		1.00000	50.0319	100.00	50	21-100		05/07/2001	0850

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TRENT SERVICES

SURROGATE RECOVERIES REPORT

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW-422-09 (SA) ATTN: Peter Gagnon

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217924-5	Water		1.00000	27.4558	100.00	27	21-100		05/07/2001	0920
217924-1	Water		2.00000	15.0357	100.00	30	21-100		05/07/2001	1221
217924-2	Water		5.00000	10.3557	100.00	52	21-100		05/07/2001	1251
217924-3	Water		5.00000	8.17045	100.00	41	21-100		05/07/2001	1322
217924-1	Water		8.00000	5.26605	100.00	42	21-100		05/07/2001	1523
217924-2	Water		20.00000	2.51770	100.00	50	21-100		05/07/2001	1553
217924-3	Water		10.00000	3.86585	100.00	39	21-100		05/07/2001	1623
217924-1	Water		16.00000	1.84736	100.00	30	21-100		05/07/2001	1653
217923-7	Water	MS	1.00000	57.4848	100.00	57	21-100		05/08/2001	1320
217923-8	Water	MSD	1.00000	68.4550	100.00	68	21-100		05/08/2001	1350

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	51.3883	50.00	103	35-114		05/04/2001	0820
27051	Water	LCS	1.00000	49.1169	50.00	98	35-114		05/04/2001	0850
217924-1	Water		1.00000	44.1341	50.00	88	35-114		05/04/2001	1656
217924-2	Water		1.00000	51.4806	50.00	103	35-114		05/04/2001	1726
217924-3	Water		1.00000	45.6306	50.00	91	35-114		05/04/2001	1756
217924-4	Water		1.00000	52.5505	50.00	105	35-114		05/07/2001	0850
217924-5	Water		1.00000	46.7895	50.00	94	35-114		05/07/2001	0920
217924-1	Water		2.00000	18.2388	50.00	73	35-114		05/07/2001	1221
217924-2	Water		5.00000	11.9511	50.00	120	35-114	D	05/07/2001	1251
217924-3	Water		5.00000	9.90491	50.00	99	35-114		05/07/2001	1322
217924-1	Water		8.00000	5.66879	50.00	91	35-114		05/07/2001	1523
217924-2	Water		20.00000	3.04039	50.00	122	35-114	D	05/07/2001	1553
217924-3	Water		10.00000	4.80090	50.00	96	35-114		05/07/2001	1623
217924-1	Water		16.00000	2.81972	50.00	90	35-114		05/07/2001	1653
217923-7	Water	MS	1.00000	47.9867	50.00	96	35-114		05/08/2001	1320
217923-8	Water	MSD	1.00000	57.5607	50.00	115	35-114	D	05/08/2001	1350

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	38.1205	100.00	38	10-94		05/04/2001	0820
27051	Water	LCS	1.00000	35.4153	100.00	35	10-94		05/04/2001	0850
217924-1	Water		1.00000	32.4918	100.00	32	10-94		05/04/2001	1656
217924-2	Water		1.00000	37.1276	100.00	37	10-94		05/04/2001	1726
217924-3	Water		1.00000	31.2373	100.00	31	10-94		05/04/2001	1756
217924-4	Water		1.00000	34.0590	100.00	34	10-94		05/07/2001	0850
217924-5	Water		1.00000	23.9952	100.00	24	10-94		05/07/2001	0920
217924-1	Water		2.00000	12.4296	100.00	25	10-94		05/07/2001	1221

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SURROGATE RECOVERIES REPORT

Job Number.: 217924

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: HWPW-422-09 (SA) | ATTN: Peter Gagnon

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
217924-2	Water		5.00000	8.16866	100.00	41	10-94		05/07/2001	1251
217924-3	Water		5.00000	6.85380	100.00	34	10-94		05/07/2001	1322
217924-1	Water		8.00000	3.78561	100.00	30	10-94		05/07/2001	1523
217924-2	Water		20.00000	1.93400	100.00	39	10-94		05/07/2001	1553
217924-3	Water		10.00000	3.32276	100.00	33	10-94		05/07/2001	1623
217924-1	Water		16.00000	1.96497	100.00	31	10-94		05/07/2001	1653
217923-7	Water	MS	1.00000	32.1305	100.00	32	10-94		05/08/2001	1320
217923-8	Water	MSD	1.00000	38.6721	100.00	39	10-94		05/08/2001	1350

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27051	Water	MB	1.00000	47.3332	50.00	95	33-141		05/04/2001	0820
27051	Water	LCS	1.00000	47.2082	50.00	94	33-141		05/04/2001	0850
217924-1	Water		1.00000	42.0356	50.00	84	33-141		05/04/2001	1656
217924-2	Water		1.00000	44.4252	50.00	89	33-141		05/04/2001	1726
217924-3	Water		1.00000	46.0034	50.00	92	33-141		05/04/2001	1756
217924-4	Water		1.00000	52.1965	50.00	104	33-141		05/07/2001	0850
217924-5	Water		1.00000	43.6079	50.00	87	33-141		05/07/2001	0920
217924-1	Water		2.00000	17.9697	50.00	72	33-141		05/07/2001	1221
217924-2	Water		5.00000	10.6639	50.00	107	33-141		05/07/2001	1251
217924-3	Water		5.00000	11.0955	50.00	111	33-141		05/07/2001	1322
217924-1	Water		8.00000	5.39571	50.00	86	33-141		05/07/2001	1523
217924-2	Water		20.00000	2.64001	50.00	106	33-141		05/07/2001	1553
217924-3	Water		10.00000	5.34947	50.00	107	33-141		05/07/2001	1623
217924-1	Water		16.00000	2.64024	50.00	84	33-141		05/07/2001	1653
217923-7	Water	MS	1.00000	53.0708	50.00	106	33-141		05/08/2001	1320
217923-8	Water	MSD	1.00000	55.5141	50.00	111	33-141		05/08/2001	1350

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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 MDL.
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.
D - Sample required dilution due to matrix interference.
D - Spike and/or surrogate diluted out.
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 - Unstable 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.
KK - High recovery will not affect the quality of reported results.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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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TRENT SERVICES

LABORATORY CHRONICLE

Job Number: 217924

Date: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: HWPW-422-09 (SA) ATTN: Peter Gagnon

Lab ID: 217924-1 Client ID: MW11A-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Data Package Validataion	1	27431		04/04/2001	0800	
	Data Package Validataion	1	28508		05/22/2001	0000	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27051		04/27/2001	0800	
	GC/MS Semi-Volatile Package Production	1	28114				
	GC/MS Volatiles Data Package Production	1	27144		05/01/2001	1600	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27766	27051	05/03/2001	2214	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/04/2001	1656	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1221	2.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1523	8.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1653	16.0000
SW-846 8260B	Volatile Organics	1	27125		04/27/2001	1851	1.00000

Lab ID: 217924-2 Client ID: MW11AD-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27051		04/27/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27766	27051	05/03/2001	2241	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/04/2001	1726	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1251	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1553	20.0000
SW-846 8260B	Volatile Organics	1	27125		04/27/2001	1919	1.00000

Lab ID: 217924-3 Client ID: MW3-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27051		04/27/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27766	27051	05/03/2001	2308	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/04/2001	1756	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1322	5.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	1623	10.0000
SW-846 8260B	Volatile Organics	1	27125		04/27/2001	1947	1.00000

Lab ID: 217924-4 Client ID: FB042601-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27051		04/27/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27766	27051	05/03/2001	2335	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	0850	1.00000
SW-846 8260B	Volatile Organics	1	27125		04/27/2001	2015	1.00000

Lab ID: 217924-5 Client ID: MW2-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27051		04/27/2001	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27766	27051	05/04/2001	0001	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27761	27051	05/07/2001	0920	1.00000
SW-846 8260B	Volatile Organics	1	27125		04/27/2001	2042	1.00000

Lab ID: 217924-6 Client ID: TB042601-ISA01 Date Recvd: 04/26/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 8260B	Volatile Organics	1	27125		04/30/2001	1224	1.00000

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

Request for Analysis

Company: ERM
Address: 16300 Katy Fwy Su. 300 Houston, TX
Tele #: 281-600-1000
Fax #: 281-600-1001

Reports Sent To: Peter Gagnon
PO#:
Project #: 422-09 (SA)

Project Name: UPRR First Semiannual
Project Location: HWPW Impoundment

Sampler(s) Name: (Signature) Andy Sanchez [signature]

Courier:

Field Sample ID	Sampling Date	Sampling Time	Water	Soil	Sludge	Oil	Other	# of Containers	Haz. Sample (Y/N)	8260B - VOC	8270C - low level	8270C - SIM
1. MW11A-1SA01	4/26/01	0855	X					5		X	X	X
2. MW11AD-1SA01	4/26/01	0910	X					5		X	X	X
3. MW3-1SA01	4/26/01	1035	X					5		X	X	X
4. FB042601-1SA01	4/26/01	1040	X					5		X	X	X
5. MW2-1SA01	4/26/01	1145	X					5		X	X	X
~~6. MW10B-1SA01~~	~~4/26/01~~	~~1455~~	~~X~~					~~5~~		~~X~~	~~X~~	~~X~~
7. TB042601-1SA01	4/26/01		X					*8 2		X	✱	✱
8.												
9.												
10.												
11.												
12.												
13.												

✱ Do not run for those [initials]

Relinquished by Sampler: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/26/01	1715	[signature]	4/26/01	5:15

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/26/01	5:54	[signature]		

Relinquished by: (Signature)	Date:	Time:	Received by Laboratory: (Signature)	Date:	Time:
			[signature]	4/26/01	1754

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Remarks: ~~AS TB042601 is for Kit # 1643~~
AS ~~is~~ TB042601-1SA01 for Kit # 1643
↳ only run for VOC

Requested Turnaround: Standard

GSAI Group: 217924

Special Detection Limits: See project requirements

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

White Copy to Accompany Samples to Lab · Yellow Copy Retained by Client · Pink Copy Retained by Sampler

rpjsckl | Job Sample Receipt Checklist Report 04/26/2001 | V2

Job Number.....: 217924 Location.: 57216 Customer Job ID.....:
Project Number.: 99000484 Project Description.: UPRR-HWPW
Customer.....: ERM Southwest, Inc.- Houston Contact.: Peter Gagnon
Job Check List Date.: 04/26/2001
Project Manager.....: sgk

Questions ?	(Y/N)	Comments
Chain of Custody Received?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	Y	
...If "yes", custody seal intact?	Y	
Custody seals on sample containers?	N	
...If "yes", custody seal intact?		
Samples chilled?	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	2.9, 2.2, 2.4
Thermometer ID		337
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		4-26-01

CLIENT: ERM | CONTACT: PG

PROJECT: UPRR - HanPW | CARRIER: STC

DATE SHIPPED: ✓ | UNPACKED BY: RR

DATE RECEIVED: | UNPACKED STAMP:

2001 APR 26 PM 5:54 | 2001 APR 26 PM 7:34

NUMBER OF KITS RECEIVED: | JOB# 217924 | B.O.#

KIT CHECKLIST

KIT ID	COC PRESENT	CUSTODY TAPE		COOLER TEMP Thermometer #	# OF SAMPLE CONTAINERS
		PRESENT?	INTACT?	337	
1643	Y-S	C Y-S	Y-S	2.9	27
		B NO	NO		
1348	Y-S	C Y-S	Y-S	2.2	38 40 32
		B NO	NO		
0624	Y-S	C Y-S	Y-S	2.4	32
		B NO	NO		

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)

17 VOA ___ Other

30 VOA 10 ___ Other

# Cont.	Matrix
81	W
27	W
Total 79	

NOTES

Project Manager

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/26/01 1700

Name/Company Andy Sanchez ERM-SW

Seal broken by W V

Date 4/26/01

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/26/01 1700

Name/Company Chris Young / ERM

Seal broken by W V

Date 4/26/01

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/26/01 1700

Name/Company Andy Sanchez ERM-SW

Seal broken by W V

Date 4/26/01

TRENT SERVICES

STL Houston

ANALYTICAL REPORT

JOB NUMBER: 217978

Prepared For:

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

Attention: Peter Gagnon

Date: 05/23/2001

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

05/23/01
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TRENT SERVICES

Houston

05/23/2001

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

Reference:
Project : UPRR-HWPW
Project No. : 217978
Date Received : 04/27/2001
STL Job : 217978

Dear Peter Gagnon:

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

1. MW10B-1SA01
2. MW10A-1SA01
3. MW1A-1SA01
4. TB042701-1SA01

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.

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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TRENT SERVICES

STL Houston

SAMPLE INFORMATION
Date: 05/23/2001

Job Number.: 217978
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Peter Gagnon

Project Number.....: 99000484
Customer Project ID....: UPRR FIRST SEMIANNUA
Project Description....: UPRR-HWPW

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
217978-1	MW10B-1SA01	Water	04/26/2001	14:55	04/27/2001	11:32
217978-2	MW10A-1SA01	Water	04/27/2001	08:25	04/27/2001	11:32
217978-3	MW1A-1SA01	Water	04/27/2001	09:40	04/27/2001	11:32
217978-4	TB042701-1SA01	Trip Blank	04/27/2001	00:01	04/27/2001	11:32

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SEVERN TRENT SERVICES

STL Houston

LABORATORY TEST RESULTS

Job Number: 217978

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW10B-1SA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 217978-1
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27281		05/[illegible]/01 0900	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27776		05/[illegible]/01 0055	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27776		05/04/01 0055	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27776		05/[illegible]/01 0055	lg1
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27776		05/[illegible]/01 0055	lg1
	Pentachlorophenol, Water	0.6	J		0.2	1	1.00000	ug/L	27776		05/[illegible]/01 0055	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27776		05/04/01 0055	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	87			1	6	4.00000	ug/L	27773		05/[illegible]/01 1823	lg1
	Acenaphthylene, Water	2			0.2	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Anthracene, Water	4			0.4	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27773		05/08/01 1521	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Dibenzofuran, Water	36			0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Fluoranthene, Water	3			0.4	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Fluorene, Water	47			0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	2-Methylnaphthalene, Water	0.5	J		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Naphthalene, Water	180			1	8	4.00000	ug/L	27773		05/08/01 1823	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Phenanthrene, Water	14			0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1
	Pyrene, Water	1	J		0.3	2	1.00000	ug/L	27773		05/08/01 1521	lg1

* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217978

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW10B-1SA01
Date Sampled.....: 04/26/2001
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 217978-1
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
	2,4-Dimethylphenol, Water	2			0.1	2	1.00000	ug/L	27773		05/08/01 1521	l
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27773		05/08/01 1521	l
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27773		05/08/01 1521	l
	Phenol, Water	2			0.2	2	1.00000	ug/L	27773		05/08/01 1521	l
SW-846 8260B	Volatile Organics											
	Benzene, Water	2	J		0.8	5	1.00000	ug/L	27132		04/30/01 1839	y
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/30/01 1839	y
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27132		04/30/01 1839	y
	Ethylbenzene, Water	4	J		3	5	1.00000	ug/L	27132		04/30/01 1839	y
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27132		04/30/01 1839	y
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/30/01 1839	y
	Xylenes (total), Water	3	J		2	15	1.00000	ug/L	27132		04/30/01 1839	y

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217978

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW10A-1SA01
Date Sampled.....: 04/27/2001
Time Sampled.....: 08:25
Sample Matrix.....: Water

Laboratory Sample ID: 217978-2
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27281		05/02/01 0900	br
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27776		05/04/01 0122	lg
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27776		05/04/01 0122	lg
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27776		05/04/01 0122	lg
	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27776		05/04/01 0122	lg
	Pentachlorophenol, Water	0.2	U		0.2	1	1.00000	ug/L	27776		05/04/01 0122	lg
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27776		05/04/01 0122	lg
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	3			0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Acenaphthylene, Water	0.2	U		0.2	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Anthracene, Water	0.6	J		0.4	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27773		05/08/01 1622	lg
	Bis(2-ethylhexyl)phthalate, Water	0.7	J		0.5	2	1.00000	ug/L	27773		05/08/01 1622	lg
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Dibenzofuran, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Di-n-butyl Phthalate, Water	0.6	J		0.4	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Fluoranthene, Water	0.4	U		0.4	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Fluorene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	2-Methylnaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Naphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Phenanthrene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg
	Pyrene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1622	lg

* In Description = Dry Wgt.

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Job Number: 217978

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW10A-1SA01
Date Sampled.....: 04/27/2001
Time Sampled.....: 08:25
Sample Matrix.....: Water

Laboratory Sample ID: 217978-2
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
	2,4-Dimethylphenol, Water	0.1	U		0.1	2	1.00000	ug/L	27773		05/08/01 1622	lg1
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27773		05/08/01 1622	lg1
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27773		05/08/01 1622	lg1
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27773		05/08/01 1622	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/30/01 1907	ydy
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27132		04/30/01 1907	ydy

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* In Description = Dry Wgt.

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SEVERN TRENT SERVICES

STL Houston

Job Number: 217978

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW1A-1SA01
Date Sampled.....: 04/27/2001
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 217978-3
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TEC
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		27281		05/02/01 0900	bnt
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.03	U		0.03	0.2	1.00000	ug/L	27776		05/04/01 0148	lg1
	Bis(2-chloroethoxy)methane, Water	0.1	U		0.1	0.1	1.00000	ug/L	27776		05/04/01 0148	lg1
	2,4-Dinitrotoluene, Water	0.02	U		0.02	1	1.00000	ug/L	27776		05/04/01 0148	lg1
89	2,6-Dinitrotoluene, Water	0.03	U		0.03	1	1.00000	ug/L	27776		05/04/01 0148	lg1
88	Pentachlorophenol, Water	0.4	J		0.2	1	1.00000	ug/L	27776		05/04/01 0148	lg1
	1,2-Diphenylhydrazine, Water	0.05	U		0.05	1	1.00000	ug/L	27776		05/04/01 0148	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	170			1	6	4.00000	ug/L	27773		05/08/01 1854	lg1
	Acenaphthylene, Water	4			0.2	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Anthracene, Water	5			0.4	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Benzo(a)anthracene, Water	0.4	U		0.4	1	1.00000	ug/L	27773		05/08/01 1551	lg1
	Bis(2-ethylhexyl)phthalate, Water	0.5	U		0.5	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	2-Chloronaphthalene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Chrysene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Dibenzofuran, Water	91			1	6	4.00000	ug/L	27773		05/08/01 1854	lg1
	Di-n-butyl Phthalate, Water	0.4	U		0.4	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Fluoranthene, Water	7			0.4	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Fluorene, Water	92			1	6	4.00000	ug/L	27773		05/08/01 1854	lg1
	2-Methylnaphthalene, Water	12			0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Naphthalene, Water	240			3	16	8.00000	ug/L	27773		05/09/01 1207	lg1
	Nitrobenzene, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	n-Nitrosodiphenylamine, Water	0.3	U		0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Phenanthrene, Water	42			0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1
	Pyrene, Water	3			0.3	2	1.00000	ug/L	27773		05/08/01 1551	lg1

* In Description = Dry Wgt.

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STL Houston

Job Number: 217978

LABORATORY TEST RESULTS

Date:05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Customer Sample ID: MW1A-1SA01
Date Sampled.....: 04/27/2001
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 217978-3
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	T
	2,4-Dimethylphenol, Water	0.9	J		0.1	2	1.00000	ug/L	27773		05/08/01 1551	l
	2-Methyl-4,6-dinitrophenol, Water	2	U		2	10	1.00000	ug/L	27773		05/08/01 1551	l
	4-Nitrophenol, Water	1	U		1	7	1.00000	ug/L	27773		05/08/01 1551	l
	Phenol, Water	0.2	U		0.2	2	1.00000	ug/L	27773		05/08/01 1551	l
SW-846 8260B	Volatile Organics											
	Benzene, Water	1	J		0.8	5	1.00000	ug/L	27132		04/30/01 1935	y
	Chlorobenzene, Water	0.7	J		0.7	5	1.00000	ug/L	27132		04/30/01 1935	y
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27132		04/30/01 1935	y
	Ethylbenzene, Water	4	J		3	5	1.00000	ug/L	27132		04/30/01 1935	y
	Methylene Chloride, Water	2	J		2	5	1.00000	ug/L	27132		04/30/01 1935	y
	Toluene, Water	0.7	J		0.7	5	1.00000	ug/L	27132		04/30/01 1935	y
	Xylenes (total), Water	7	J		2	15	1.00000	ug/L	27132		04/30/01 1935	y

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STL Houston

Job Number: 217978

LABORATORY TEST RESULTS

Date: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR FIRST SEMIANNUA ATTN: Peter Gagnon

Customer Sample ID: [illegible]
Date Sampled.....: 04/27/2001
Time Sampled.....: 00:01
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 217978-4
Date Received.....: 04/27/2001
Time Received.....: 11:32

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TE
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.8	U		0.8	5	1.00000	ug/L	27132		04/[illegible]01 1810	yd
	Chlorobenzene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/[illegible]01 1810	yd
	1,2-Dichloroethane, Water	1	U		1	5	1.00000	ug/L	27132		04/30/01 1810	yd
	Ethylbenzene, Water	3	U		3	5	1.00000	ug/L	27132		04/30/01 1810	yd
	Methylene Chloride, Water	2	U		2	5	1.00000	ug/L	27132		04/30/01 1810	yd
	Toluene, Water	0.7	U		0.7	5	1.00000	ug/L	27132		04/30/01 1810	yd
	Xylenes (total), Water	2	U		2	15	1.00000	ug/L	27132		04/30/01 1810	yd

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* In Description = Dry Wgt.

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QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR FIRST SEMIANNUA ATTN: Peter Gagnon

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

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics - SIM Analysis
Units.....: ug/L
Batch(s)...: 27776
Analyst...: lg1

MB	Method Blank	SVS040201C	27281			05/04/2001 0028

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene	0							
Bis(2-chloroethoxy)methane	0							
2,4-Dinitrotoluene	0							
2,6-Dinitrotoluene	0							
Pentachlorophenol	0.04712							
1,2-Diphenylhydrazine	0							

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics, Low Level
Units.....: ug/L
Batch(s)...: 27279 27773
Analyst...: lg1

MB	Method Blank	SVS040201C	27281			05/02/2001 1555

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	0							
Acenaphthylene	0							
Anthracene	0							
Benzo(a)anthracene	0							
Chrysene	0							
Fluoranthene	0							
Fluorene	0							
1-Methylnaphthalene	0							
Naphthalene	0							
Phenanthrene	0							
Pyrene	0							

SB	Spiked Blank	SVS043001N	27281			05/02/2001 1623

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.22914		5.000000	0	85		46-118	
Pyrene	4.61381		5.000000	0	92		26-127	

SBD	Spiked Blank Duplicate	SVS043001N	27281			05/02/2001 1651

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.68129	4.22914	5.000000	0	93.6		46-118	
					10.1		31	
Pyrene	5.24853	4.61381	5.000000	0	105.0		26-127	
					12.9		31	

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QUALITY CONTROL RESULTS

Job Number.: 217978 | Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR FIRST SEMIANNUA | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS042501A	27281		05/02/2001	1718

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	3.97979		5.000000		79.6		32-165	
Acenaphthylene	3.99918		5.000000		80.0		10-150	
Anthracene	4.39717		5.000000		87.9		23-178	
Benzo(a)anthracene	4.71501		5.000000		94.3		25-180	
Chrysene	4.31729		5.000000		86.3		23-180	
Fluoranthene	4.77638		5.000000		95.5		28-180	
Fluorene	4.19079		5.000000		83.8		30-189	
2-Methylnaphthalene	4.12992		5.000000		82.6		26-168	
Naphthalene	3.73485		5.000000		74.7		36-139	
Phenanthrene	4.19911		5.000000		84.0		26-166	
Pyrene	4.67482		5.000000		93.5		28-173	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS040201C	27281		05/08/2001	1048

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	0							
Acenaphthylene	0							
Anthracene	0							
Benzo(a)anthracene	0							
Bis(2-ethylhexyl)phthalate	0							
2-Chloronaphthalene	0							
Chrysene	0							
Dibenzofuran	0							
Di-n-butyl Phthalate	0							
Fluoranthene	0							
Fluorene	0							
2-Methylnaphthalene	0.07994							
Naphthalene	0.11297							
Nitrobenzene	0							
n-Nitrosodiphenylamine	0							
Phenanthrene	0							
Pyrene	0							
2,4-Dimethylphenol	0							
2-Methyl-4,6-dinitrophenol	0							
4-Nitrophenol	0							
Phenol	0							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SB	Spiked Blank	SVS043001N	27281		05/08/2001	1118

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.49684		5.000000	0	90		46-118	
Pyrene	5.21254		5.000000	0	104		26-127	
4-Nitrophenol	3.36659		10.000000	0	34		10-80	
Phenol	3.73992		10.000000	0	37		10-112	

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QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR FIRST SEMIANNUA | ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SBD	Spiked Blank Duplicate	SVS043001N	27281		05/08/2001	1148

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.90849	4.49684	5.000000	0	98.2		46-118	
					8.8		31	
Pyrene	5.68084	5.21254	5.000000	0	113.6		26-127	
					8.6		31	
4-Nitrophenol	3.00596	3.36659	10.000000	0	30.1		10-80	
					11.3		50	
Phenol	3.60319	3.73992	10.000000	0	36.0		10-112	
					3.7		23	

LCS	Laboratory Control Sample	SVS042501A	27281		05/08/2001 1219

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene	4.25699		5.000000		85.1		32-165	
Acenaphthylene	3.98149		5.000000		79.6		10-150	
Anthracene	4.64538		5.000000		92.9		23-178	
Benzo(a)anthracene	4.77416		5.000000		95.5		25-180	
Bis(2-ethylhexyl)phthalate	4.24655		5.000000		84.9		25-173	
2-Chloronaphthalene	3.35757		5.000000		67.2		23-143	
Chrysene	4.78194		5.000000		95.6		23-180	
Dibenzofuran	4.22666		5.000000		84.5		35-153	
Di-n-butyl Phthalate	4.53033		5.000000		90.6		28-185	
Fluoranthene	4.89853		5.000000		98.0		28-180	
Fluorene	4.33597		5.000000		86.7		30-189	
2-Methylnaphthalene	3.94446		5.000000		78.9		26-168	
Naphthalene	4.09776		5.000000		82.0		36-139	
Nitrobenzene	5.06998		5.000000		101.4		17-163	
N-Nitrosodiphenylamine	4.70790		5.000000		94.2		58-174	
Phenanthrene	4.60986		5.000000		92.2		26-166	
Pyrene	4.92736		5.000000		98.5		28-173	
2,4-Dimethylphenol	3.80241		5.000000		76.0		23-157	
4-Methyl-4,6-dinitrophenol	3.92609		5.000000		78.5		17-164	
4-Nitrophenol	1.72580		5.000000		34.5		10-92	
Phenol	2.07684		5.000000		41.5		20-83	

Test Method.....: SW-846 8260B | Units.....: ug/L | Analyst...: ydy

Method Description.: Volatile Organics | Batch(s)...: 27132

MB	Method Blank	VS042401C				04/30/2001 1127

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	ND							
Bromodichloromethane	ND							
Bromoform	ND							
Bromomethane	ND							
Carbon Tetrachloride	ND							
Chlorobenzene	ND							
Chloroethane	ND							
Chloroform	ND							
Chloromethane	ND							

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

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QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR FIRST SEMIANNUA ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	VS042401C			04/30/2001	1127

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

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/30/2001	1156

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene	48.5185		50.00	ND	97.0		68-127	
Bromodichloromethane	51.2108		50.00	ND	102.4		64-129	
Bromoform	52.2109		50.00	ND	104.4		45-147	
Bromomethane	35.4740		50.00	ND	70.9		32-143	
Carbon Tetrachloride	49.8249		50.00	ND	99.6		54-140	
Chlorobenzene	51.5249		50.00	ND	103.0		65-129	
Chloroethane	45.6318		50.00	ND	91.3		47-157	
Chloroform	50.6918		50.00	ND	101.4		71-131	
Chloromethane	34.3723		50.00	ND	68.7		22-160	
Dibromochloromethane	50.9804		50.00	ND	102.0		64-131	
1,2-Dichlorobenzene	48.7980		50.00	ND	97.6		59-133	
1,3-Dichlorobenzene	49.3113		50.00	ND	98.6		61-132	
1,4-Dichlorobenzene	49.8957		50.00	ND	99.8		46-142	
1,1-Dichloroethane	50.9369		50.00	ND	101.9		62-138	
1,2-Dichloroethane	50.6375		50.00	ND	101.3		65-133	
1,1-Dichloroethene	52.5423		50.00	ND	105.1		48-147	
cis-1,2-Dichloroethene	49.6413		50.00	ND	99.3		61-129	
trans-1,2-Dichloroethene	53.2107		50.00	ND	106.4		73-138	

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TRENT SERVICES

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QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR FIRST SEMIANNUA ATTN: Peter Gagnon

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	VS042401E			04/30/2001	1156

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
,2-Dichloropropane	46.0835		50.00	ND	92.2		60-124	
thylbenzene	51.5166		50.00	ND	103.0		64-132	
ethylene Chloride	50.9336		50.00	ND	101.9		54-133	
tyrene	46.4747		50.00	ND	92.9		20-156	
,1,2,2-Tetrachloroethane	51.4437		50.00	ND	102.9		70-130	
etrachloroethene	49.7569		50.00	ND	99.5		59-134	
oluene	51.1248		50.00	ND	102.2		63-127	
,1,1-Trichloroethane	49.7549		50.00	ND	99.5		70-130	
,1,2-Trichloroethane	50.5795		50.00	ND	101.2		70-130	
richloroethene	49.0128		50.00	ND	98.0		64-130	
inyl Chloride	44.1931		50.00	ND	88.4		35-155	
ylenes (total)	154.841		150.00	ND	103.2		37-161	
,p-Xylene	104.699		100.00	ND	104.7		37-160	
-Xylene	50.1413		50.00	ND	100.3		37-161	
etone	48.0094		50.00	ND	96.0		38-190	
arbon Disulfide	43.8744		50.00	ND	87.7		68-158	
ethyl Ethyl Ketone (2-Butanone)	37.5548		50.00	ND	75.1		38-186	
is-1,3-Dichloropropene	49.9631		50.00	ND	99.9		66-130	
rans-1,3-Dichloropropene	46.1282		50.00	ND	92.3		71-139	
Hexanone	38.5756		50.00	ND	77.2		29-173	
Methyl-2-pentanone (MIBK)	42.4724		50.00	ND	84.9		40-144	

MS	Matrix Spike	VS042401F	217923-7		04/30/2001	1322

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzene	49.5111		50.00	ND	99		65-125	
lorobenzene	52.2028		50.00	ND	104		74-122	
1-Dichloroethene	56.2481		50.00	ND	112		22-123	
oluene	52.8760		50.00	ND	106		76-125	
richloroethene	48.9854		50.00	ND	98		56-118	

MSD	Matrix Spike Duplicate	VS042401F	217923-8		04/30/2001	1350

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzene	47.8379	49.5111	50.00	ND	96		65-125	
					3.4		30.0	
lorobenzene	52.1307	52.2028	50.00	ND	104		74-122	
					0.1		30.0	
1-Dichloroethene	51.2592	56.2481	50.00	ND	103		22-123	
					9.3		30.0	
oluene	49.1490	52.8760	50.00	ND	98		76-125	
					7.3		30.0	
richloroethene	47.6463	48.9854	50.00	ND	95		56-118	
					2.8		30.0	

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SURROGATE RECOVERIES REPORT

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR FIRST SEMIANNUA | ATTN: Peter Gagnon

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

Batch..: 27132
Analyst.....: ydy

Surrogate	Units
1,2-Dichloroethane-d4	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	MB	1.00000	53.7207	50.00	107.4	70-130		04/30/2001	1127
	Water	LCS	1.00000	49.2410	50.00	98.5	70-130		04/30/2001	1156
217923-7	Water	MS	1.00000	48.3570	50.00	96.7	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	45.3916	50.00	90.8	70-130		04/30/2001	1350
217978-4	Water		1.00000	45.7045	50.00	91.4	70-130		04/30/2001	1810
217978-1	Water		1.00000	42.5911	50.00	85.2	70-130		04/30/2001	1839
217978-2	Water		1.00000	45.7046	50.00	91.4	70-130		04/30/2001	1907
217978-3	Water		1.00000	43.1011	50.00	86.2	70-130		04/30/2001	1935

Surrogate	Units
4-Bromofluorobenzene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	MB	1.00000	57.7324	50.00	115.5	70-130		04/30/2001	1127
	Water	LCS	1.00000	54.3576	50.00	108.7	70-130		04/30/2001	1156
217923-7	Water	MS	1.00000	50.4721	50.00	100.9	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	47.9335	50.00	95.9	70-130		04/30/2001	1350
217978-4	Water		1.00000	49.9234	50.00	99.8	70-130		04/30/2001	1810
217978-1	Water		1.00000	50.0645	50.00	100.1	70-130		04/30/2001	1839
217978-2	Water		1.00000	50.1763	50.00	100.4	70-130		04/30/2001	1907
217978-3	Water		1.00000	49.4758	50.00	99.0	70-130		04/30/2001	1935

Surrogate	Units
Dibromofluoromethane	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	MB	1.00000	54.7153	50.00	109.4	70-130		04/30/2001	1127
	Water	LCS	1.00000	52.3106	50.00	104.6	70-130		04/30/2001	1156
217923-7	Water	MS	1.00000	50.6063	50.00	101.2	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	47.8721	50.00	95.7	70-130		04/30/2001	1350
217978-4	Water		1.00000	48.0143	50.00	96.0	70-130		04/30/2001	1810
217978-1	Water		1.00000	46.3696	50.00	92.7	70-130		04/30/2001	1839
217978-2	Water		1.00000	47.6404	50.00	95.3	70-130		04/30/2001	1907
217978-3	Water		1.00000	45.1588	50.00	90.3	70-130		04/30/2001	1935

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SURROGATE RECOVERIES REPORT

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR FIRST SEMIANNUA | ATTN: Peter Gagnon

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
	Water	MB	1.00000	52.8079	50.00	105.6	70-130		04/30/2001	1127
	Water	LCS	1.00000	51.3107	50.00	102.6	70-130		04/30/2001	1156
217923-7	Water	MS	1.00000	48.3497	50.00	96.7	70-130		04/30/2001	1322
217923-8	Water	MSD	1.00000	45.4590	50.00	90.9	70-130		04/30/2001	1350
217978-4	Water		1.00000	47.9439	50.00	95.9	70-130		04/30/2001	1810
217978-1	Water		1.00000	48.7154	50.00	97.4	70-130		04/30/2001	1839
217978-2	Water		1.00000	48.1176	50.00	96.2	70-130		04/30/2001	1907
217978-3	Water		1.00000	47.3787	50.00	94.8	70-130		04/30/2001	1935

Method.....: Semivolatile Organics, Low Level
Method Code.....: 8270LL

Batch..: 27279 27773
Analyst.....: lg1

Surrogate	Units
2,4,6-Tribromophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	97.3779	100.00	97	10-123		05/02/2001	1555
27281	Water	SB	1.00000	92.9438	100.00	93	10-123		05/02/2001	1623
27281	Water	SBD	1.00000	92.1477	100.00	92	10-123		05/02/2001	1651
27281	Water	LCS	1.00000	91.8806	100.00	92	10-123		05/02/2001	1718
27281	Water	MB	1.00000	105.938	100.00	106	10-123		05/08/2001	1048
27281	Water	SB	1.00000	100.443	100.00	100	10-123		05/08/2001	1118
27281	Water	SBD	1.00000	99.5221	100.00	100	10-123		05/08/2001	1148
27281	Water	LCS	1.00000	97.9937	100.00	98	10-123		05/08/2001	1219
217978-1	Water		1.00000	103.901	100.00	104	10-123		05/08/2001	1521
217978-3	Water		1.00000	104.774	100.00	105	10-123		05/08/2001	1551
217978-2	Water		1.00000	108.741	100.00	109	10-123		05/08/2001	1622
217978-1	Water		4.00000	26.2697	100.00	105	10-123		05/08/2001	1823
217978-3	Water		4.00000	27.2256	100.00	109	10-123		05/08/2001	1854
217978-3	Water		8.00000	12.1786	100.00	97	10-123		05/09/2001	1207

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	47.9140	50.00	96	43-116		05/02/2001	1555
27281	Water	SB	1.00000	45.0846	50.00	90	43-116		05/02/2001	1623
27281	Water	SBD	1.00000	47.2334	50.00	94	43-116		05/02/2001	1651
27281	Water	LCS	1.00000	43.0699	50.00	86	43-116		05/02/2001	1718

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SEVERN TRENT SERVICES

SURROGATE RECOVERIES REPORT

Job Number.: 217978 — Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston — PROJECT: UPRR FIRST SEMIANNUA — ATTN: Peter Gagnon

Surrogate	Units
2-Fluorobiphenyl	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	48.5944	50.00	97	43-116		05/08/2001	1048
27281	Water	SB	1.00000	46.1696	50.00	92	43-116		05/08/2001	1118
27281	Water	SBD	1.00000	47.5734	50.00	95	43-116		05/08/2001	1148
27281	Water	LCS	1.00000	44.4526	50.00	89	43-116		05/08/2001	1219
217978-1	Water		1.00000	43.0815	50.00	86	43-116		05/08/2001	1521
217978-3	Water		1.00000	45.2707	50.00	91	43-116		05/08/2001	1551
217978-2	Water		1.00000	43.5296	50.00	87	43-116		05/08/2001	1622
217978-1	Water		4.00000	11.9724	50.00	96	43-116		05/08/2001	1823
217978-3	Water		4.00000	12.2267	50.00	98	43-116		05/08/2001	1854
217978-3	Water		8.00000	6.30017	50.00	101	43-116		05/09/2001	1207

Surrogate	Units
2-Fluorophenol	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	66.0095	100.00	66	21-100		05/02/2001	1555
27281	Water	SB	1.00000	60.5372	100.00	61	21-100		05/02/2001	1623
27281	Water	SBD	1.00000	58.8625	100.00	59	21-100		05/02/2001	1651
27281	Water	LCS	1.00000	57.9646	100.00	58	21-100		05/02/2001	1718
27281	Water	MB	1.00000	78.2994	100.00	78	21-100		05/08/2001	1048
27281	Water	SB	1.00000	73.1872	100.00	73	21-100		05/08/2001	1118
27281	Water	SBD	1.00000	76.7289	100.00	77	21-100		05/08/2001	1148
27281	Water	LCS	1.00000	65.7531	100.00	66	21-100		05/08/2001	1219
217978-1	Water		1.00000	54.1094	100.00	54	21-100		05/08/2001	1521
217978-3	Water		1.00000	55.0255	100.00	55	21-100		05/08/2001	1551
217978-2	Water		1.00000	61.4241	100.00	61	21-100		05/08/2001	1622
217978-1	Water		4.00000	16.0863	100.00	64	21-100		05/08/2001	1823
217978-3	Water		4.00000	16.3406	100.00	65	21-100		05/08/2001	1854
217978-3	Water		8.00000	8.97295	100.00	72	21-100		05/09/2001	1207

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	53.2132	50.00	106	35-114		05/02/2001	1555
27281	Water	SB	1.00000	49.6752	50.00	99	35-114		05/02/2001	1623
27281	Water	SBD	1.00000	53.5282	50.00	107	35-114		05/02/2001	1651
27281	Water	LCS	1.00000	48.6049	50.00	97	35-114		05/02/2001	1718

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TRENT SERVICES

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SURROGATE RECOVERIES REPORT

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: UPRR FIRST SEMIANNUA ATTN: Peter Gagnon

Surrogate	Units
Nitrobenzene-d5	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	55.6281	50.00	111	35-114		05/08/2001	1048
27281	Water	SB	1.00000	51.9353	50.00	104	35-114		05/08/2001	1118
27281	Water	SBD	1.00000	55.4900	50.00	111	35-114		05/08/2001	1148
27281	Water	LCS	1.00000	50.3877	50.00	101	35-114		05/08/2001	1219
217978-1	Water		1.00000	46.3255	50.00	93	35-114		05/08/2001	1521
217978-3	Water		1.00000	47.6305	50.00	95	35-114		05/08/2001	1551
217978-2	Water		1.00000	45.8154	50.00	92	35-114		05/08/2001	1622
217978-1	Water		4.00000	12.6794	50.00	101	35-114		05/08/2001	1823
217978-3	Water		4.00000	13.0443	50.00	104	35-114		05/08/2001	1854
217978-3	Water		8.00000	6.74697	50.00	108	35-114		05/09/2001	1207

Surrogate	Units
Phenol-d6	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	43.3451	100.00	43	10-94		05/02/2001	1555
27281	Water	SB	1.00000	41.2256	100.00	41	10-94		05/02/2001	1623
27281	Water	SBD	1.00000	42.1670	100.00	42	10-94		05/02/2001	1651
27281	Water	LCS	1.00000	41.0333	100.00	41	10-94		05/02/2001	1718
27281	Water	MB	1.00000	41.1333	100.00	41	10-94		05/08/2001	1048
27281	Water	SB	1.00000	39.8325	100.00	40	10-94		05/08/2001	1118
27281	Water	SBD	1.00000	40.1495	100.00	40	10-94		05/08/2001	1148
27281	Water	LCS	1.00000	38.8432	100.00	39	10-94		05/08/2001	1219
217978-1	Water		1.00000	34.4658	100.00	34	10-94		05/08/2001	1521
217978-3	Water		1.00000	36.2688	100.00	36	10-94		05/08/2001	1551
217978-2	Water		1.00000	33.6855	100.00	34	10-94		05/08/2001	1622
217978-1	Water		4.00000	8.99658	100.00	36	10-94		05/08/2001	1823
217978-3	Water		4.00000	8.16217	100.00	33	10-94		05/08/2001	1854
217978-3	Water		8.00000	4.29786	100.00	34	10-94		05/09/2001	1207

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	46.3122	50.00	93	33-141		05/02/2001	1555
27281	Water	SB	1.00000	43.8257	50.00	88	33-141		05/02/2001	1623
27281	Water	SBD	1.00000	48.3342	50.00	97	33-141		05/02/2001	1651
27281	Water	LCS	1.00000	44.9750	50.00	90	33-141		05/02/2001	1718

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SURROGATE RECOVERIES REPORT

Job Number.: 217978

Report Date.: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: UPRR FIRST SEMIANNUA | ATTN: Peter Gagnon

Surrogate	Units
Terphenyl-d14	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
27281	Water	MB	1.00000	54.3612	50.00	109	33-141		05/08/2001	1048
27281	Water	SB	1.00000	51.3729	50.00	103	33-141		05/08/2001	1118
27281	Water	SBD	1.00000	52.6262	50.00	105	33-141		05/08/2001	1148
27281	Water	LCS	1.00000	48.7736	50.00	98	33-141		05/08/2001	1219
217978-1	Water		1.00000	41.6252	50.00	83	33-141		05/08/2001	1521
217978-3	Water		1.00000	41.6031	50.00	83	33-141		05/08/2001	1551
217978-2	Water		1.00000	49.6892	50.00	99	33-141		05/08/2001	1622
217978-1	Water		4.00000	12.6041	50.00	101	33-141		05/08/2001	1823
217978-3	Water		4.00000	12.0641	50.00	97	33-141		05/08/2001	1854
217978-3	Water		8.00000	6.28275	50.00	101	33-141		05/09/2001	1207

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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.
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 - Unstable 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.
KK - High recovery will not affect the quality of reported results.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/23/2001

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.
Da - 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 - BCO/cBOO seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
l - BCO/cBOO 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: 217978

Date: 05/23/2001

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: UPRR FIRST SEMIANNUA

ATTN: Peter Gagnon

Lab ID: 217978-1 Client ID: MW10B-1SA01

Date Recvd: 04/27/2001 Sample Date: 04/26/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Data Package Validataion	1	28591		05/22/2001 0000	
	Data Package Validataion	1	28592		05/22/2001 0000	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27281		05/02/2001 0900	
	GC/MS Semi-Volatile Package Production	1	28319			
	GC/MS Volatiles Data Package Production	1	27911		05/11/2001 1800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27776	27281	05/04/2001 0055	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/08/2001 1521	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/08/2001 1823	4.00000
SW-846 8260B	Volatile Organics	1	27132		04/30/2001 1839	1.00000

Lab ID: 217978-2 Client ID: MW10A-1SA01

Date Recvd: 04/27/2001 Sample Date: 04/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27281		05/02/2001 0900	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27776	27281	05/04/2001 0122	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/08/2001 1622	1.00000
SW-846 8260B	Volatile Organics	1	27132		04/30/2001 1907	1.00000

Lab ID: 217978-3 Client ID: MW1A-1SA01

Date Recvd: 04/27/2001 Sample Date: 04/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	27281		05/02/2001 0900	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	27776	27281	05/04/2001 0148	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/08/2001 1551	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/08/2001 1854	4.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	27773	27281	05/09/2001 1207	8.00000
SW-846 8260B	Volatile Organics	1	27132		04/30/2001 1935	1.00000

Lab ID: 217978-4 Client ID: TB042701-1SA01

Date Recvd: 04/27/2001 Sample Date: 04/27/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	27132		04/30/2001 1810	1.00000

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SEVERN TRENT LABORATORIES

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

Company: ERM
Address: 16300 Katy Fwy Su 300, Houston, TX
Tele #: 281-600-1000
Fax #: 281-600-1001
Reports Sent To: Peter Gagnon
PO #:
Project #: 422-009(SA)
Project Name: UPRR: First Semi Annual
Project Location: HWPW Impoundment
Sampler(s) Name: (Signature) Andy Sanchez
Courier:

Field Sample ID	Sampling Date	Sampling Time	Water	Soil	Sludge	Oil	Other	# of Containers	Haz Sample (Y/N)	8260B - VOC	8270C - Low Level	8270C - SIM
1. MW10B-1SA01	4/26/01	1455	X					5		X	X	X
2. MW10A-1SA01	4/27/01	0825	X					5		X	X	X
3. MW1A-1SA01	4/27/01	0940	X					5		X	X	X
4. TB042701-1SA01	4/27/01		X					2		X		
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: (Signature) [signature]	4/27/01	1000	Received by: (Signature) [signature]	4/27/01	1000
Relinquished by: (Signature) [signature]	4/27/01	1132	Received by: (Signature) 114		
Relinquished by: (Signature)			Received by Laboratory: (Signature) [signature]	4/27/01	1132

Remarks: TB042701-1SA01 is for Cooler Kit 1374.

Requested Turnaround: Standard

GSAI Group: 2-(

Special Detection Limits: See project requirements.

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

White Copy to Accompany Samples to Lab

rpjsckl | Job Sample Receipt Checklist Report 04/27/2001 | V2

Job Number.....: 217978 Location.: 57216 Customer Job ID.....:
Project Number.: 99000484 Project Description.: UPRR-HWPW
Customer.....: ERM Southwest, Inc.- Houston Contact.: Peter Gagnon
Job Check List Date.: 04/27/2001
Project Manager.....: sgk

Questions ?	(Y/N)	Comments
Chain of Custody Received?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	Y	
...If "yes", custody seal intact?	Y	
Custody seals on sample containers?	N	
...If "yes", custody seal intact?		
Samples chilled?	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	3.1
Thermometer ID	Y	339
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	JPC

JC
4/27/01

SAMPLE RECEIPT CHECKLIST

CLIENT: ERM

CONTACT: P. Gegan

PROJECT: [illegible]

CARRIER: Client

DATE SHIPPED: 4/27/01

UNPACKED BY: [illegible]

DATE RECEIVED: 2001 APR 27 AM 11:32

UNPACKED STAMP: 2001 APR 27 PM 1:59

NUMBER OF KITS RECEIVED: 1

JOB# 217576 B.O.# —

KIT CHECKLIST

KIT ID	COC PRESENT	CUSTODY TAPE			COOLER TEMP Thermometer # 339	# OF SAMPLE CONTAINERS
			PRESENT?	INTACT?		
1374	Y	C	Y	Y	3.1	17
		B	N	N		
		C				
		B				
		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 ☐ 4 HCL ☐ H_2SO_4 ☐ NaOH (Water Only) ☐ 6 $Na_2S_2O_3$ ☐ NEAT ☐ $NaHSO_4$ ☐ OT/PRE.

4 VOA
___Other

___VOA
___Other

# Cont.	Matrix
17	W
Total 17	W

NOTES_______________

Project Manager_______________

SA 152, Rev 3, August 10, 2000

SEVERN TRENT SERVICES

CUSTODY SEAL

Date/Time 4/27/01 1000

Name/Company Andy Sanchez ERM-SW

Seal broken by

Date 4/27/01

Updated Compliance Schedule

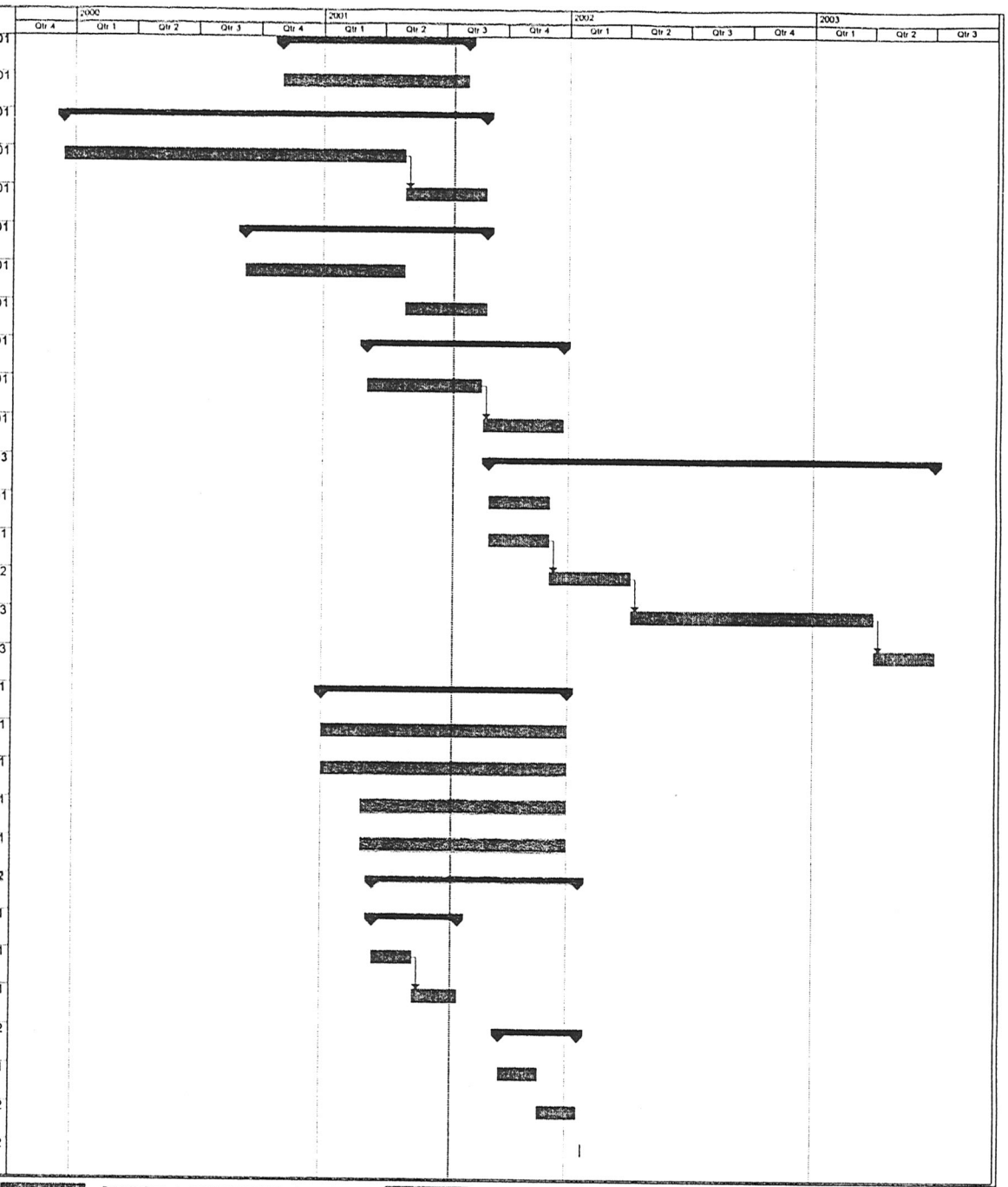
Appendix D

July 19, 2001
W.O. #422-009

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

G:\WO\422\br-bz\bz554rpt.doc

ID	Task Name/Permit or CP Section No	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 Report 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	Mon 12/31/01
19	Impoundment Inspections (weekly)	Mon 01/01/01	Mon 12/31/01
20	Water Level Measurements (Monthly)	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 (Semiannual)	Thu 03/01/01	Mon 12/31/01
23	**Post-Closure Care Reporting 2000-2001**	Mon 03/19/01	Fri 01/18/02
24	**Semiannual Report - July 21, 2001 (CP VII.B.2)**	Mon 03/19/01	Mon 07/23/01
25	Perform Data Evaluation	Mon 03/19/01	Thu 05/17/01
26	Submit Report to TNRCC	Fri 05/18/01	Mon 07/23/01
27	**Semiannual Report - January 21, 2002 (CP VII.B.2)**	Mon 09/24/01	Fri 01/18/02
28	Perform Data Evaluation	Mon 09/24/01	Wed 11/21/01
29	Submit Report to TNRCC	Wed 11/21/01	Fri 01/18/02
30	2001 Annual Report - January 25, 2002 (Permit V.F and III.B.1)	Fri 01/25/02	Fri 01/25/02



Project: sch_7_5_00
Date: Thu 07/12/01

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | External Milestone
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline