Environmental
Resources
Management

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July 18, 2003

Mr. Geoffrey Reeder
Union Pacific Railroad
24125 Aldine Westfield Road
Spring, Texas 77373-9015

W.O. #422-102/60

Subject: Transmittal of Replacement Pages for the final Semiannual Monitoring Report: First Half of 2003, Houston Wood Preserving Works, Houston, Texas

Dear Mr. Reeder:

Please find enclosed replacement pages for the above-referenced report. A new cover page, signature page, page 4, and appendices cover pages are provided. A copy of Appendix C (laboratory analytical reports) is also provided as part of the final document. Please feel free to contact me with any comments or questions at (281) 600-1018.

Sincerely,

Environmental Resources Management

Theodora M Overfelt

Theodora M. Overfelt

TMO/jan
Enclosure

G:\DM\422\102\4066Htmh.doc

July 18, 2003

Dr. Ata-ur-Rhaman
Permits Section
Industrial and Hazardous Waste Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, MC 130
Austin, Texas 78753

Subject: Transmittal of the Semiannual Monitoring: First Half of 2003
Houston Wood Preserving Works, Houston, Texas

Dear Dr. Rahman:

Two copies of the referenced report are enclosed pursuant to the requirements of Section VII.B.2 of Compliance Plan No. CP-50343, issued in conjunction with Post-Closure Care Permit No. HW-50343-000.

Please call me at (281) 350-7197 if you have any questions regarding the enclosed report.

Sincerely,

Geoffrey B. Reeder, P.G.
Manager, Environmental Site Remediation

GBR/mlk
Enclosures

cc: Mark Arthur, TCEQ-Austin
Marsha Hill, TCEQ Region 12 – Houston
Theodora Overfelt, Environmental Resources Management

Geoffrey B. Reeder, P.G.
Manager, Environmental Site Remediation

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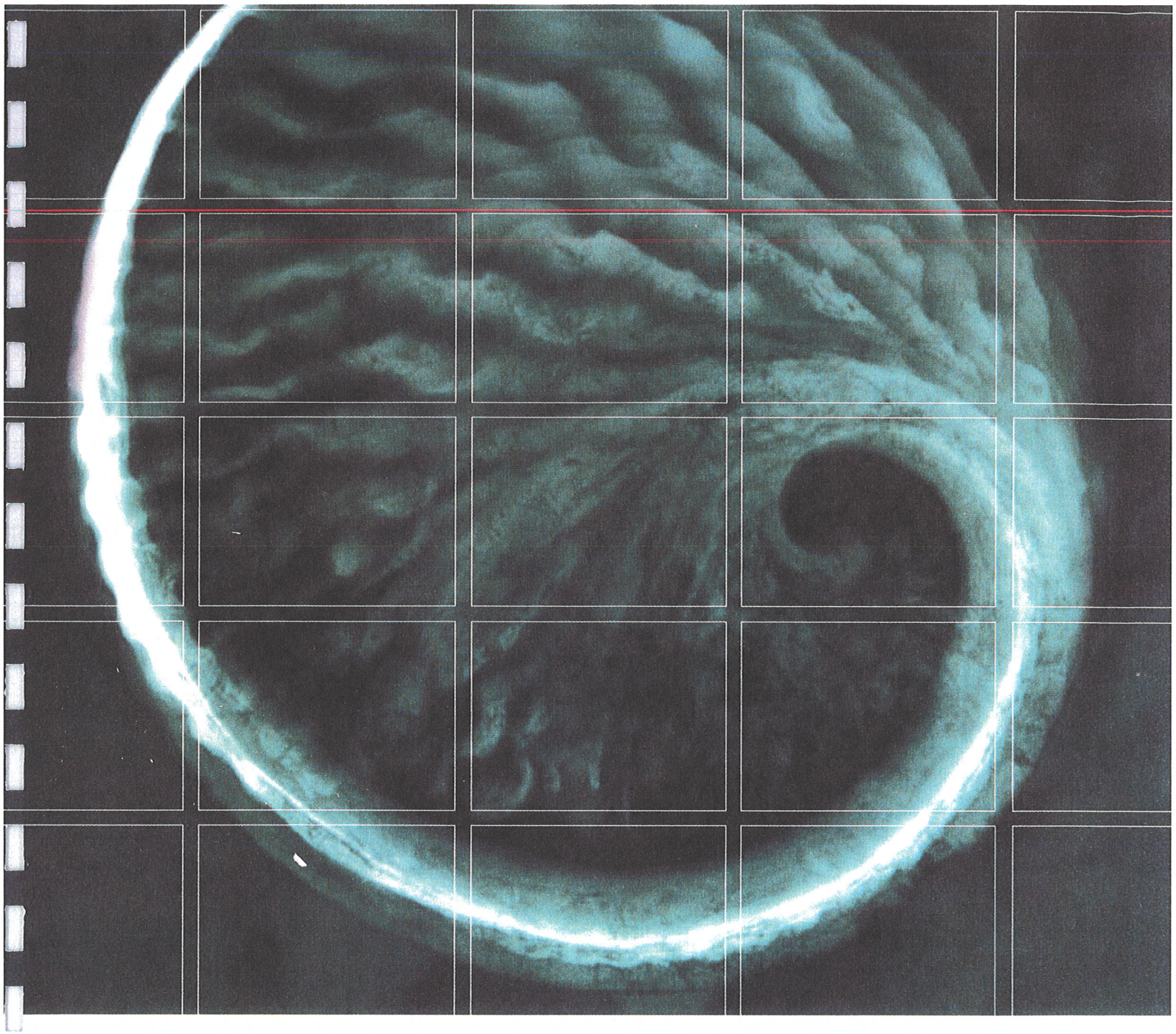

Semiannual Monitoring Report: First Half of 2003

Union Pacific Railroad Company
Houston Wood Preserving Works,
Houston, Texas

July 18, 2003

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ERM

Delivering sustainable solutions in a more competitive world

Union Pacific Railroad Company

Semiannual Monitoring Report: *First Half of 2003*

July 18, 2003

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1.0 INTRODUCTION

Routine semiannual ground water monitoring is required as a condition of the Compliance Plan (CP) for Union Pacific Railroad's Houston Wood Preserving Works (HWPW) site, located at 4910 Liberty Road, Houston, Texas (Figure 1-1). These activities are performed to monitor ground water compliance beneath a closed surface impoundment (Texas Natural Resource Conservation Commission [TNRCC] Permit Unit No. II.B.1). The surface impoundment was described in RCRA Permit No. HW-50343-000 and associated Compliance Plan (CP-50343), both issued by the TNRCC; [now referred to as the Texas Commission on Environmental Quality (TCEQ)]. The sampling event, analytical data, and this data evaluation report represent the first half of 2003 (i.e., January 31 through June 30) and fulfill the semiannual reporting requirements described in the CP, Section VII.B.2.

On March 10 through March 19, 2002, Environmental Resources Management (ERM) conducted ground water sampling activities at the site. These activities included sampling the on-site wells and piezometers associated with the surface impoundment. A comprehensive ground water monitoring evaluation (CME) was also conducted by TCEQ Region 12 during this semiannual ground water sampling event.

Section VII.B.2 of the CP requires that a specific list of provisions be included in each semiannual report. As such, each provision listed below is addressed by number in Section 2 of this report. Some of the provisions listed in the CP refer to evaluation of a recovery system, if present. As of December 31, 2002, 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., provisions 5, 7, and 11), a notation was made in the text, and the provisions, as they relate to recovery wells, were not addressed in this report. The following provisions 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 non-aqueous phase liquids (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 GWPSs;

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 provisions required by CP Section VII.B.2, by reference number to the list of provisions in Section 1.

2.1 NARRATIVE SUMMARY OF SECOND SEMIANNUAL ACTIVITIES

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

2.1.1 *Corrective Action Program*

The existing wells were sampled to assess 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 Uppermost Transmissive Zone (UTZ) and Second Transmissive Zone (STZ), respectively, as defined in CP Provision I.A. and summarized as follows:

- A-TZ refers to the first water-bearing zone encountered at approximately 35 feet above mean sea level (MSL), averaging six to eight feet in thickness.
- B-TZ refers to the second water-bearing zone encountered at approximately 15 feet above MSL, averaging 8 to 10 feet in thickness.

The following monitor wells were sampled (as designated by function in CP Table III; Appendix A to this report):

- A-TZ Point of Compliance (POC) wells: MW-01A, MW-02, MW-07, MW-10A, and MW-11A;
- A-TZ Corrective Action Observation (CAO) wells: MW-04, MW-05, MW-07, MW-08, and MW-09;
- B-TZ POC wells: MW-10B, MW-11B, and P-10; and
- B-TZ CAO wells: P-11 and P-12.

In addition, MW-03, which is screened in the A-TZ within the closed; impoundment, was also sampled.

2.1.2 *Ground Water Monitoring*

ERM performed quarterly well inspections on March 10, 2003 and June 13, 2003 and ground water monitoring activities on March 10 through 19, 2003. 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.

The wells are equipped with dedicated polytetrafluoroethylene (PTFE) tubing for ground water sampling. At MW-11B, the tubing was not apparent in the top of well; therefore, new polyethylene tubing was used for sampling purposes and then removed and disposed of after sampling was complete. A Master-Flex® peristaltic pump was used to collect the ground water samples. A one-foot section of disposable silicon tubing placed around the pump head and attached to the PTFE tubing for proper operation of the pump. Ground water was pumped from the screened interval of the well at a flow rate of less then 0.5 L/min. A flow-through cell and field meters were used to measure and evaluate field parameters including temperature, pH, specific conductivity, dissolved oxygen, and turbidity. When the field parameters had stabilized to the EPA-specified criteria, the well was sampled. The samples were also collected at a flow rate of less then 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 constituent (VOC) analysis] and two 1,000-mL amber glass bottles [for semivolatile organic constituent (SVOC) 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. Samples from P-12 and MW-10A were split with TCEQ on March 11, 2003 for VOC analysis. The coolers with UPRR's samples 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.

The VOC samples were inadvertently unrefrigerated at the laboratory and the sample temperatures exceeded SW-846 specifications. Therefore, MW-04, MW-08, MW-09, MW-10A, MW-10B, and P-12 were resampled for VOCs on March 18 and March 19, 2003. Samples from MW-10A and MW-10B were split with TCEQ for VOCs on March 18, 2003. The volatile laboratory results for the March 11, 2003 and March 18, 2003 TCEQ split samples were comparable to the results ERM received from STL.

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 half of 2003 sampling event are summarized in Tables 2-1 and 2-2, respectively. Those compounds reported by the laboratory at concentrations greater than the GWPS are indicated in boxes on the tables. The CP sets the GWPS at the practical quantitation limit (PQL) for each of the compounds analyzed. Table 2-3 summarizes the field blank and trip blank results for quality assurance/quality control (QA/QC) purposes.

Duplicate sample results are included on Table 2-1 for comparison with the original sample.

2.3 *WELL MEASUREMENT*

The following measurements were collected at each well in order:

Before Sampling

- light non-aqueous phase liquids (LNAPLs); and
- depth to ground water.

After Sampling

- dense non-aqueous phase liquids (DNAPLs); and
- total well depths.

Table 2-4 provides a summary of these measurements. LNAPL and DNAPL were not apparent in any CP well.

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). A review of Figure 2-1 indicates that ground water flow is toward the west with an estimated gradient of 0.0011 feet/foot (ft/ft) in the A-TZ. The flow in the B-TZ is toward the southwest with a gradient of 0.0013 ft/ft (Figure 2-2).

2.5 *POTENTIOMETRIC SURFACE MAPS FOR RECOVERY SYSTEM*

As of June 30, 2003, a recovery system had not been installed at the closed surface impoundment. Therefore, this provision is not applicable.

2.6 *NON-AQUEOUS PHASE LIQUIDS*

As mentioned above, no LNAPL or DNAPL was apparent in any of the CP wells.

2.7 *NAPL RECOVERIES*

As of June 30, 2003, a recovery system had not been installed at the closed surface impoundment. Therefore, this provision is not applicable.

2.8 *ANALYTICAL DATA EVALUATION*

CP Section VI.D describes two methods which may be used to assess the compliance status of a given well. The analytical results may be either directly compared with the GWPS (CP Table I; included in Appendix A) or statistically

compared with the GWPS using the 99% significance level of the t-distribution. Table 2-5 shows the results of a direct comparison of data with 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 GWPS. A Response Action Plan (RAP) will be completed to evaluate alternatives to bring the non-compliant wells into compliance.

2.9 *BTEX, ACENAPHTHENE, AND NAPHTHALENE ISOPLETHS*

As specified by the CP, isopleth maps depicting concentrations of BTEX, acenaphthene, and naphthalene were constructed using the data presented in Tables 2-1 and 2-2. To facilitate generation of the contours, locations with results reported as *Not Detected* were assigned a value equal to one-half of the reported detection limit for contouring purposes. Figures 2-3 through 2-8 illustrate these data.

2.10 *UPDATED COMPLIANCE SCHEDULE*

An updated compliance schedule is included as Appendix D of this report. The schedule has been revised to reflect TCEQ's request that an Affected Property Assessment Report (APAR) not be submitted until the extent of affected media has been delineated to the appropriate standards.

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

No changes have been made to the monitor well network during the first half of 2003.

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.

A review of Figures 2-3 and 2-4 indicates that BTEX was *Not Detected* at the Method Detection Limit (MDL) in the A-TZ and was reported below the GWPS in two wells within the closed impoundment in the B-TZ, respectively. Reported concentrations of acenaphthene and naphthalene were limited to the closed impoundment in both the A-TZ and B-TZ with the exception of a very low detection (0.00010 mg/L) at MW-05 in the A-TZ (Figures 2-5 through 2-8).

Tables

Attachment A

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
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TABLE 2-1

Summary of Analytical Results for the A-Transmissive Zone (A-TZ)
Semiannual Monitoring Report First Half of 2003

Houston Wood Preserving Works
Houston, Texas

Analyte	GWPS	Monitor Well ID	MW-01A	MW-01AD (a)	MW-02	MW-03	MW-04	MW-05 (b)	MW-07	MW-08 (b)	MW-09 (b)	MW-10A (b)	MW-11A (b)
		Sample Date	3/12/03	3/12/03	3/12/03	3/12/03	3/18/03	3/19/03	3/12/03	3/18/03	3/18/03	3/18/03	3/19/03
Volatile Organic Constituents													
Benzene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	0.005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Sample Date	3/12/03	3/12/03	3/12/03	3/12/03	3/11/03	3/11/03	3/12/03	3/11/03	3/11/03	3/11/03	3/11/03
Semivolatile Organic Constituents													
Acenaphthene	0.010 4.4		0.0745	0.0594	0.02033	0.1021	ND	ND	0.00028 J	ND	ND	ND	0.02286
Acenaphthylene	0.010		0.00247	0.0019	0.00096	0.0094	ND	ND	ND	ND	ND	ND	0.00056
Anthracene	0.010		0.00177	0.00133	0.00122	0.00179	0.00067	0.0003 J	0.00061	0.00015 J	0.00042 J	0.0002 J	0.00124
Benzo(a)anthracene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	~~0.010~~ 0.29		0.01984	0.01359	0.01403	0.02265	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00477
2,4-Dimethylphenol	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	0.050		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.010		0.00103	0.00101	0.00109	0.00107	0.00094	0.00093	0.00102	0.00092	0.00094	ND	0.00092
Fluoranthene	0.010		0.00540	0.0046	0.00095	0.00868	ND	ND	ND	ND	ND	ND	0.00271
Fluorene	~~0.010~~ 2.9		0.00782	0.00235	0.0148	0.04378	ND	ND	ND	ND	ND	ND	0.00738
2-Methylnaphthalene	0.010		0.00017 J	ND	0.00120	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	~~0.010~~ 1.5		0.00136	0.00034 J	0.01186	ND	ND	ND	ND	ND	ND	ND	0.00136
Nitrobenzene	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.050		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	0.010		0.00027 J	ND	0.00164	ND	ND	ND	ND	ND	ND	ND	0.00028 J
Phenol	0.010		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.010		0.002	0.00135	0.00048 J	0.00337	ND	ND	0.00012	ND	ND	ND	0.00103

NOTES:

All values reported in mg/L.
ND = Not detected at the Method Detection Limit (MDL), which can be found in the laboratory reports in Appendix C and is less than or equal to the GWPS in all instances
GWPS = Ground Water Protection Standard, as defined on Table I of the Compliance Plan
[ ] indicates value reported above the GWPS
J = Estimated value between the reporting limit and MDL.
(a) MW-01AD is a duplicate of MW-01A.
(b) Monitor wells were resampled for volatile organic constituents due to laboratory temperature issues with original sample.

TABLE 2-2

Summary of Analytical Results for the B-Transmissive Zone (B-TZ)
Semiannual Monitoring Report First Half of 2003

Houston Wood Preserving Works
Houston, Texas

Analyte	GWPS	Monitor Well ID / Sample Date	MW-10B (a) 3/18/03	MW-11B 3/12/03	P-10 3/10/03	P-11 3/10/03	P-12 (a) 3/18/03
Volatile Organic Constituents							
Benzene	0.005		0.00136 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	ND	ND
Ethylbenzene	0.005		0.00128 J	ND	ND	ND	ND
Toluene	0.005		ND	ND	ND	ND	ND
Xylene (total)	0.005		ND	0.00351 J	ND	ND	ND
		Sample Date	3/11/03	3/12/03	3/10/03	3/10/03	3/11/03
Semivolatile Organic Constituents							
Acenaphthene	0.010		0.01436	0.0595	ND	ND	ND
Acenaphthylene	0.010		0.00075	0.0028	ND	ND	ND
Anthracene	0.010		0.00087	0.00079	ND	ND	ND
Benzo(a)anthracene	0.010		ND	ND	ND	ND	ND
Benzo(a)pyrene	0.010		ND	ND	ND	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	ND	ND	ND	ND
Dibenzofuran	0.010		0.0026	0.00461	ND	ND	ND
Di-n-butyl phthalate	0.010		0.00027 J	ND	0.00074	0.00049 J	ND
2,4-Dimethylphenol	0.010		ND	ND	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	0.00129	0.00106	ND	ND
Fluoranthene	0.010		0.00102	0.00277	ND	ND	ND
Fluorene	0.010		0.00113	0.00233	ND	ND	ND
2-Methylnaphthalene	0.010		ND	ND	ND	ND	ND
Naphthalene	0.010		ND	0.00327 J	ND	ND	ND
Nitrobenzene	0.010		ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	0.010		ND	ND	ND	ND	ND
Pentachlorophenol	0.050		ND	ND	ND	ND	ND
Phenanthrene	0.010		ND	ND	ND	ND	ND
Phenol	0.010		ND	0.0001 J	ND	ND	ND
Pyrene	0.010		0.00039 J	0.00137	0.00011 J	ND	0.00745

NOTES:

All values reported in mg/L

ND = Not detected at the Method Detection Limit (MDL), which can be found in the laboratory reports in Appendix C and is less than or equal to the GWPS in all instances

GWPS = Ground Water Protection Standard, as defined on Table I of the Compliance Plan

[ ] indicates value reported above the GWPS

J = Estimated value between the reporting limit and MDL

(a) MW-01AD is a duplicate of MW-01A

(b) Monitor wells were resampled for volatile organic constituents due to laboratory temperature issues with original sample

TABLE 2-3

Summary of Analytical Results for Quality Assurance/Quality Control Samples
Semiannual Monitoring Report: First Half of 2003

Houston Wood Preserving Works
Houston, Texas

Analyte	PQL (GWPS)	Sample Sample Date:	Field Blank FB-031103 3/11/03	Field Blank FB-031903 3/19/03	Trip Blank TB-031003 3/10/03	Trip Blank TB-031203 3/12/03	Trip Blank TB-031803 3/18/03	Trip Blank TB-031903 3/19/03
Volatile Organic Constituents (a)	0.010		NA (b)	ND	ND	ND	ND	ND
Semivolatile Organic Constituents								
bis(2-Ethylhexyl)phthalate	0.010		0.0091	NA (c)	NA	NA	NA	NA

NOTES:

All values reported in mg/L.
ND = Not detected at the Method Detection Limit (MDL), which is less than or equal to the Practical Quantitation Limit (PQL) in all instances and can be found in the laboratory reports in Appendix C.
NA = Not Analyzed.
PQL = *Practical Quantitation Limit*, as defined on Table I of the Compliance Plan and determined by the analytical methods of EPA SW-846 Test Methods for Determining Solid Wastes. The PQL is the Ground Water Protection Standard (GWPS).
(a) Volatile organic constituents were not detected at the MDL in the samples analyzed.
(b) Sample was not analyzed for volatile organic constituents due to laboratory temperature issues.
(c) Sample was only analyzed for volatile organic constituents during resampling event.

TABLE 2-4

Water Level and Total Depth of Well Measurements
Semiannual Monitoring Report: First Half of 2003

Houston Wood Preserving Works
Houston, Texas

Well ID	Top of Casing Elevation (ft MSL)	Depth to Water (ft TOC)	Ground Water Elevation (ft MSL)	Total Depth of Well as Measured (ft TOC)	Total Depth as Completed (ft TOC) *
A-TZ Monitoring Locations					
MW-01A	47.95	2.48	45.47	19.63	20.2
MW-02	48.03	2.54	45.49	18.42	20.3
MW-03	48.55	2.89	45.66	20.20	20.9
MW-04	49.85	4.36	45.49	21.67	23.4
MW-05	49.35	3.77	45.58	27.28	28.3
MW-07	48.86	3.52	45.34	24.70	N/A
MW-08	49.37	3.84	45.53	24.96	26.8
MW-09	49.29	3.59	45.70	25.28	26.8
MW-10A	49.90	4.43	45.47	25.50	25.9
MW-11A	50.04	4.66	45.38	24.90	24.4
B-TZ Monitoring Locations					
MW-10B	49.97	4.59	45.38	46.45	48.8
MW-11B	50.19	4.85	45.34	46.65	46.8
P-10	47.72	2.43	45.29	42.79	N/A
P-11	49.02	3.69	45.33	42.69	51.8
P-12	48.82	3.13	45.69	42.85	51.7

NOTES:

NAPL was not detected in any well.
ft MSL = feet above Mean Sea Level
ft TOC = feet below the Top Of (the well) Casing
* Reported during well installation and completion
N/A = Information not available

TABLE 2-5

Compliance Status of Wells and Piezometers
Semiannual Monitoring Report: First Half of 2003

Houston Wood Preserving Works
Houston, Texas

A-TZ Monitoring Location	Well Designation	Compliance Status (a)
MW-01A	Point of compliance	Non-Compliant
MW-02	Point of compliance	Non-Compliant
MW-07	Point of Compliance/corrective action observation	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-08	Corrective action observation	Compliant
MW-09	Corrective action observation	Compliant

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

NOTE:

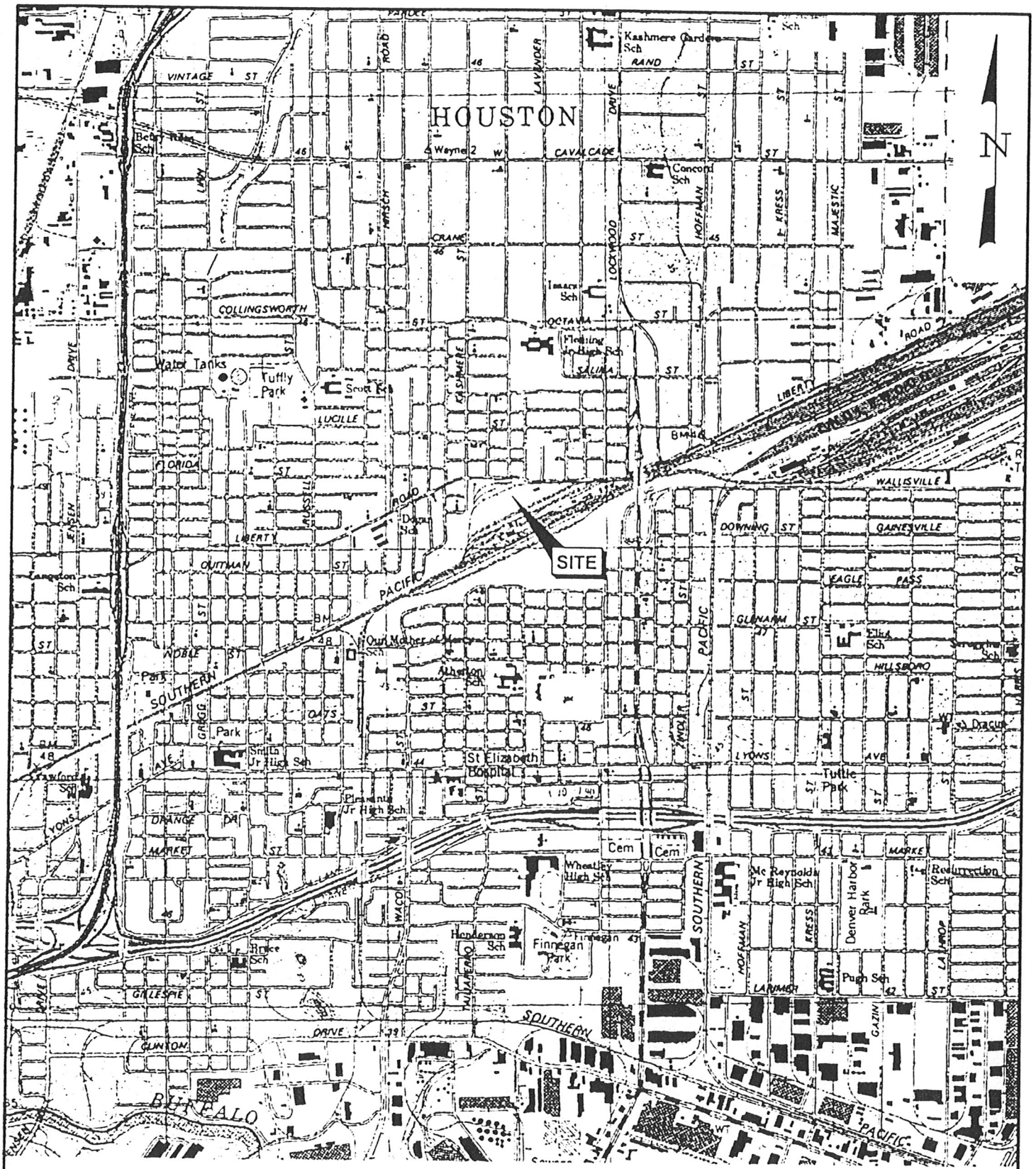
(a) Compliance status is based on a direct comparison of the results on Tables 2-1 and 2-2 with the Ground Water Protection Standards (GWPS).

Figures

Attachment B

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000



SOURCE: U.S.G.S. 7.5 MINUTE QUADRANGLE, SETTEGAST, TEXAS, 1982.

0 2000 4000

SCALE FEET

ERM-Southwest, Inc.

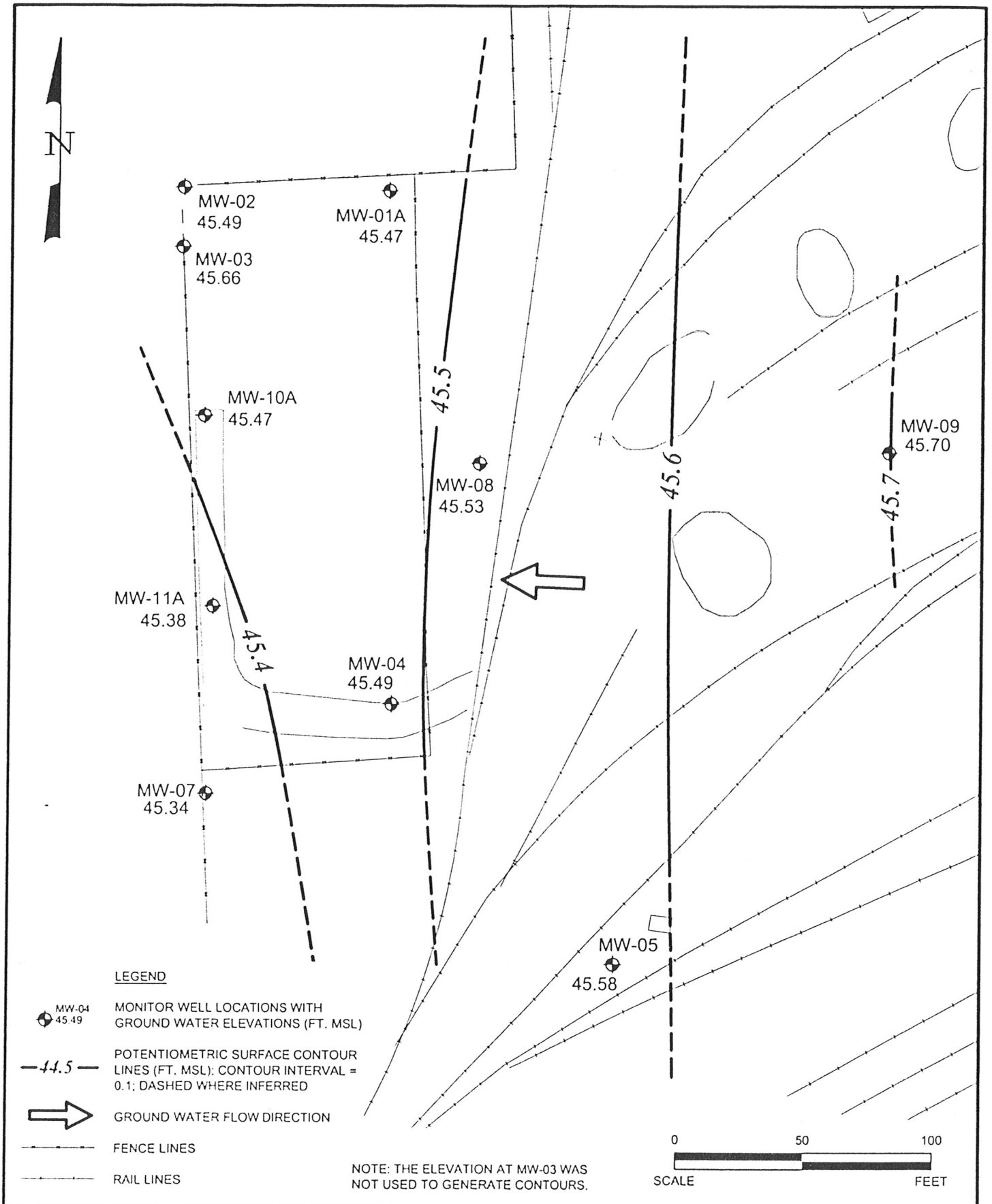
HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

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

DESIGN:	DRAWN: CAK	CHKD.: PJG
DATE: 07/23/02	SCALE: AS SHOWN	REV.:

W.O.NO.: N:\OLDDWG\2002\G02\422102A252.dwg 11/18/2002 2:14:34 PM

ERM



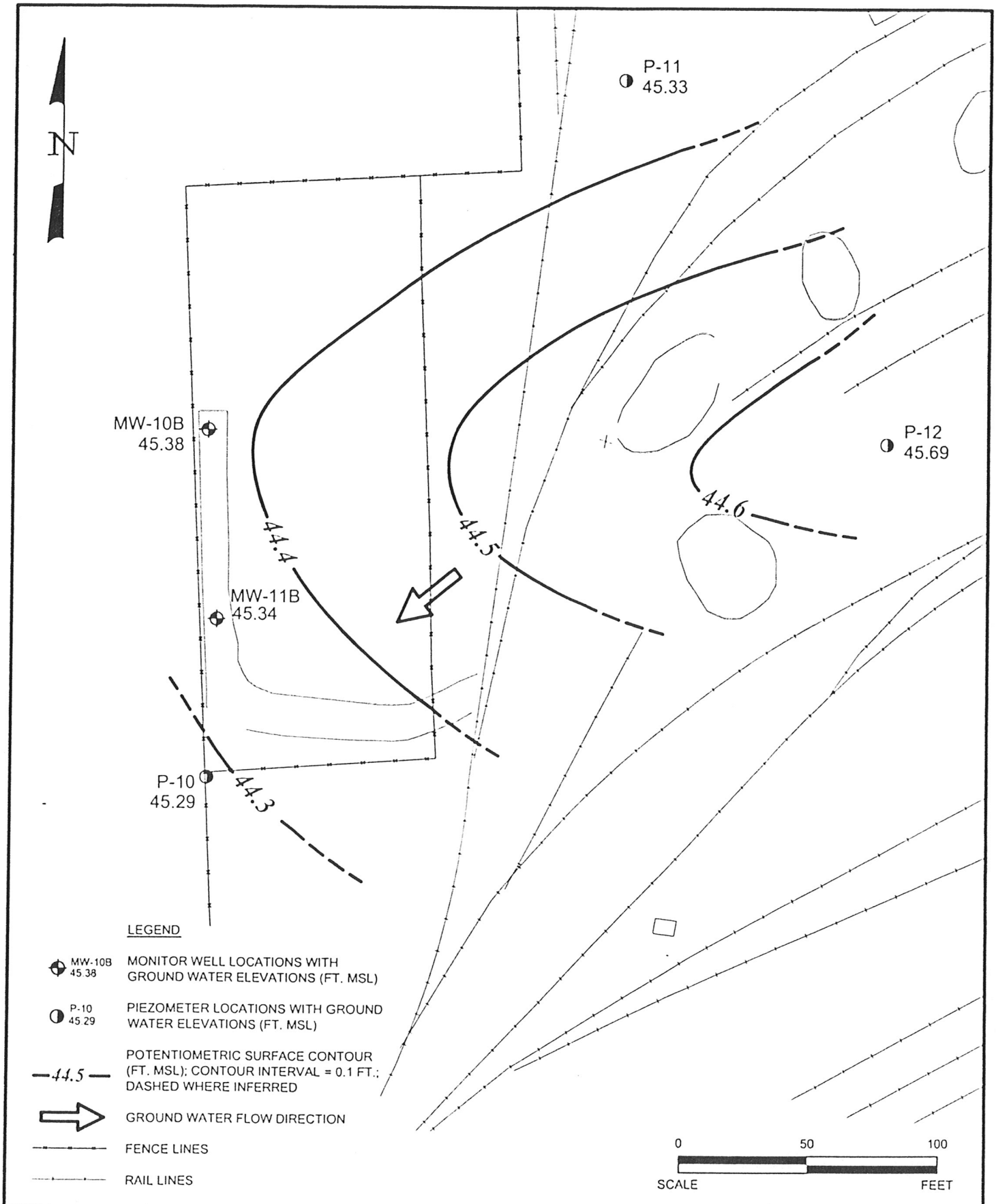
ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC/LMc	CHKD.: MGS
DATE: 07/11/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A002.dwg, 7/11/2003 7:11:07 AM		

FIGURE 2-1
A-TZ POTENTIOMETRIC SURFACE
MARCH 10, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



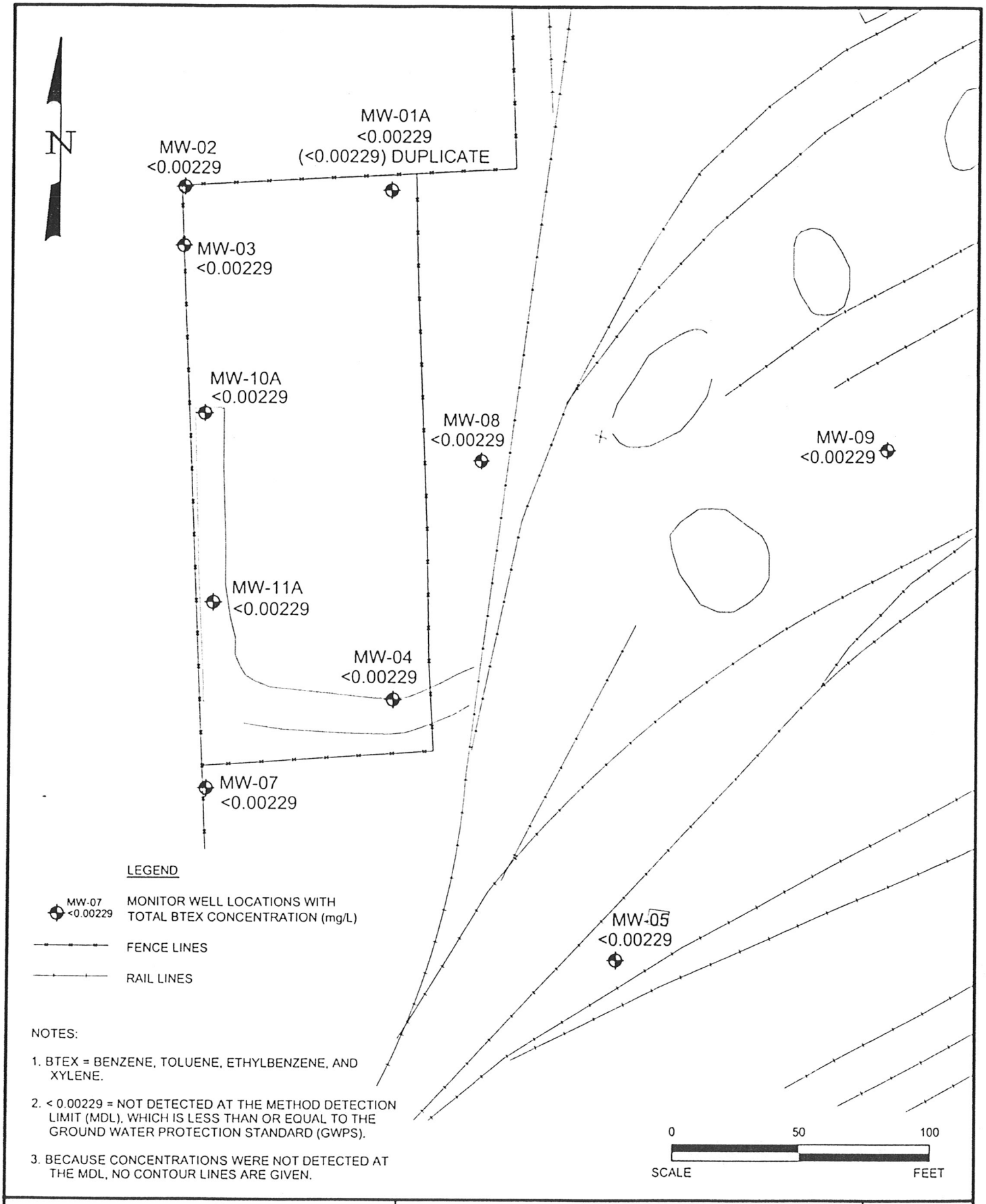
ERM-Southwest, Inc.

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

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 02/02/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A003.dwg, 7/9/2003 9:18:18 AM		

FIGURE 2-2
B-TZ POTENTIOMETRIC SURFACE
MARCH 10, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



NOTES:

1. BTEX = BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE.
2. < 0.00229 = NOT DETECTED AT THE METHOD DETECTION LIMIT (MDL), WHICH IS LESS THAN OR EQUAL TO THE GROUND WATER PROTECTION STANDARD (GWPS).
3. BECAUSE CONCENTRATIONS WERE NOT DETECTED AT THE MDL, NO CONTOUR LINES ARE GIVEN.

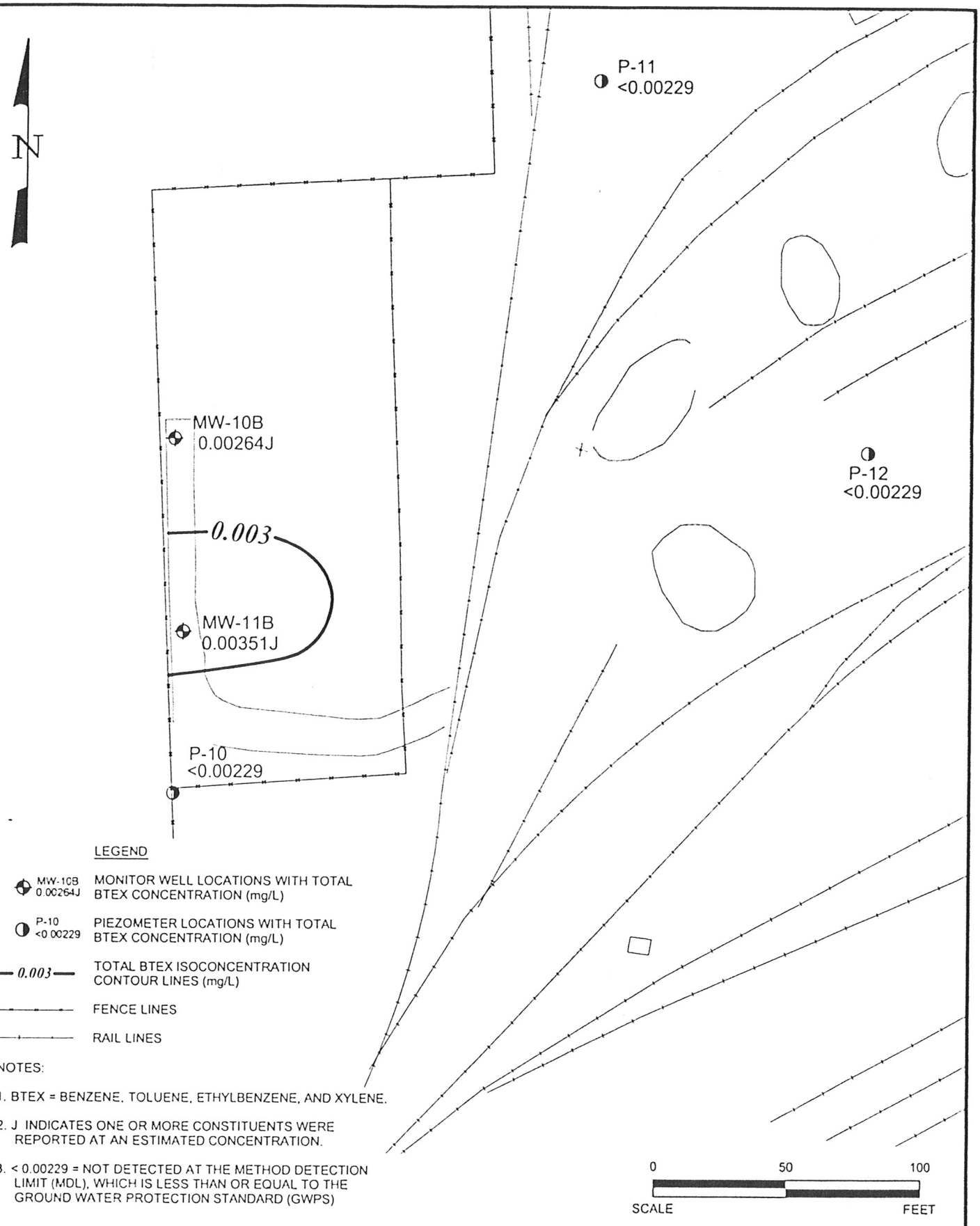
ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A004.dwg, 7/10/2003 10:53:42 AM		

FIGURE 2-3
TOTAL BTEX IN A-TZ GROUND WATER
MARCH 19, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



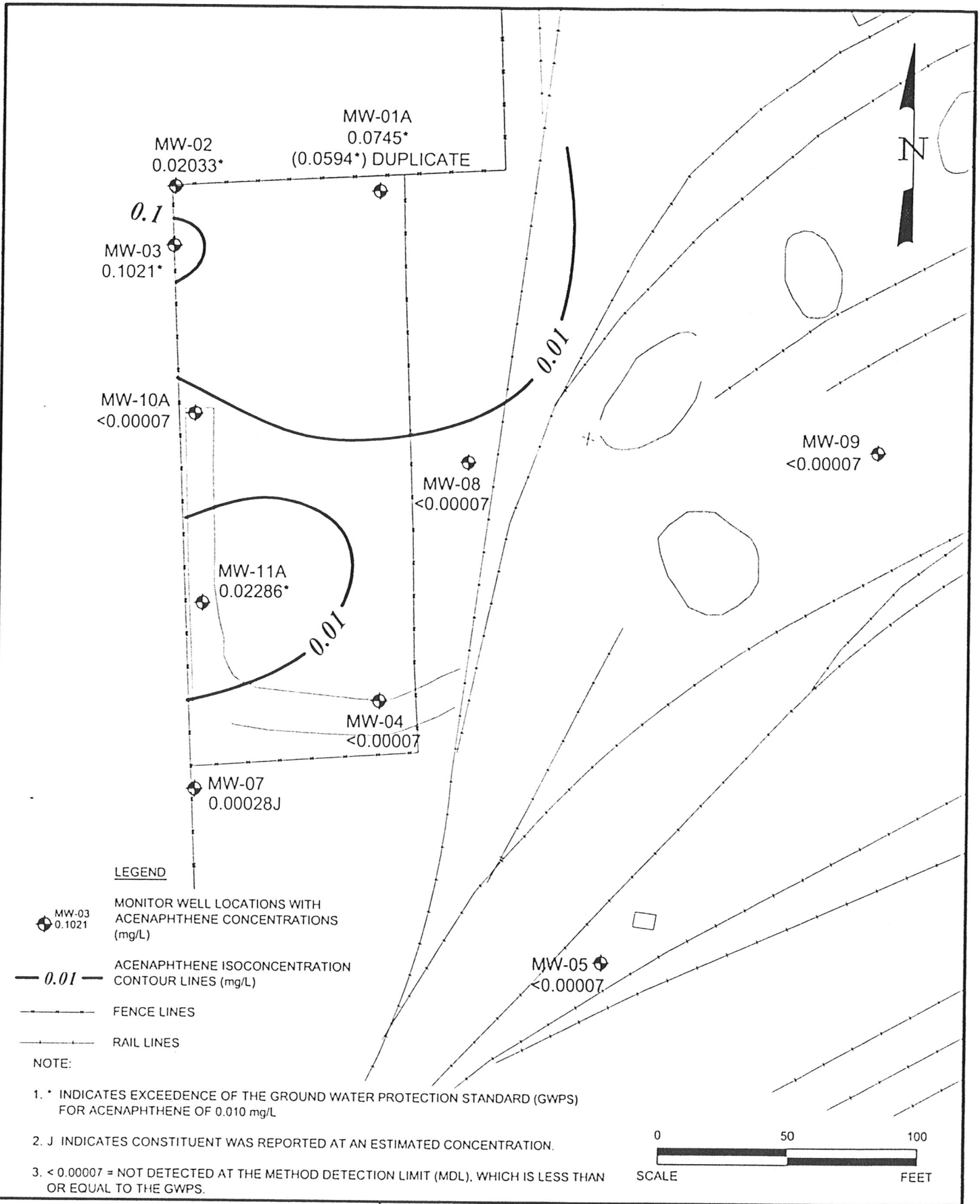
ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A005.dwg, 7/10/2003 10:53:01 AM		

FIGURE 2-4
TOTAL BTEX IN B-TZ GROUND WATER
MARCH 10-12, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



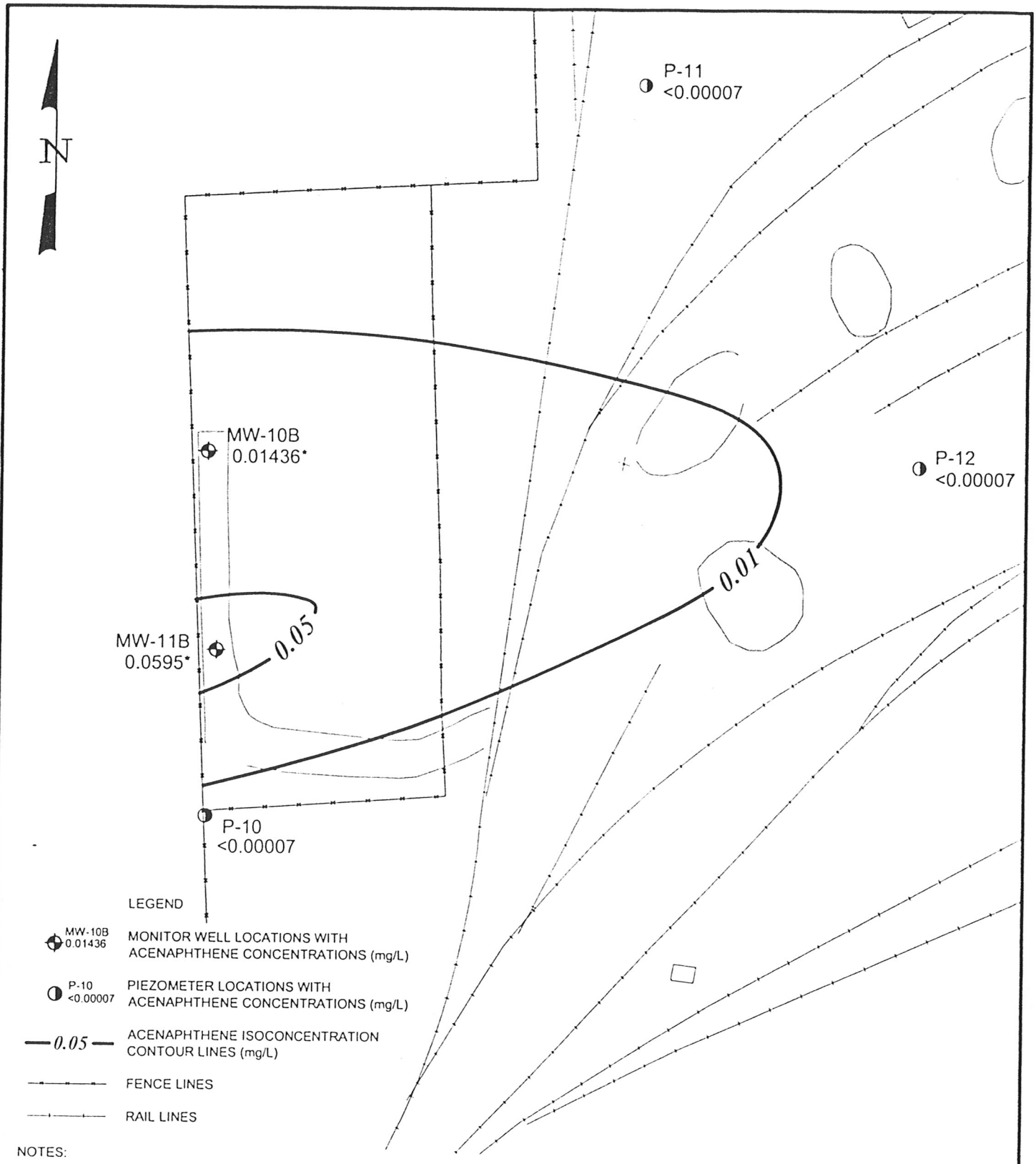
ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A006.dwg, 7/10/2003 11:00:49 AM		

FIGURE 2-5
ACENAPHTHENE IN A-TZ GROUND WATER
MARCH 10-12, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



NOTES:

1. * INDICATES EXCEEDENCE OF THE GROUND WATER PROTECTION STANDARD (GWPS) FOR ACENAPHTHENE OF 0.010 mg/L.
2. < 0.00007 = NOT DETECTED AT THE METHOD DETECTION LIMIT (MDL), WHICH IS LESS THAN OR EQUAL TO THE GWPS.

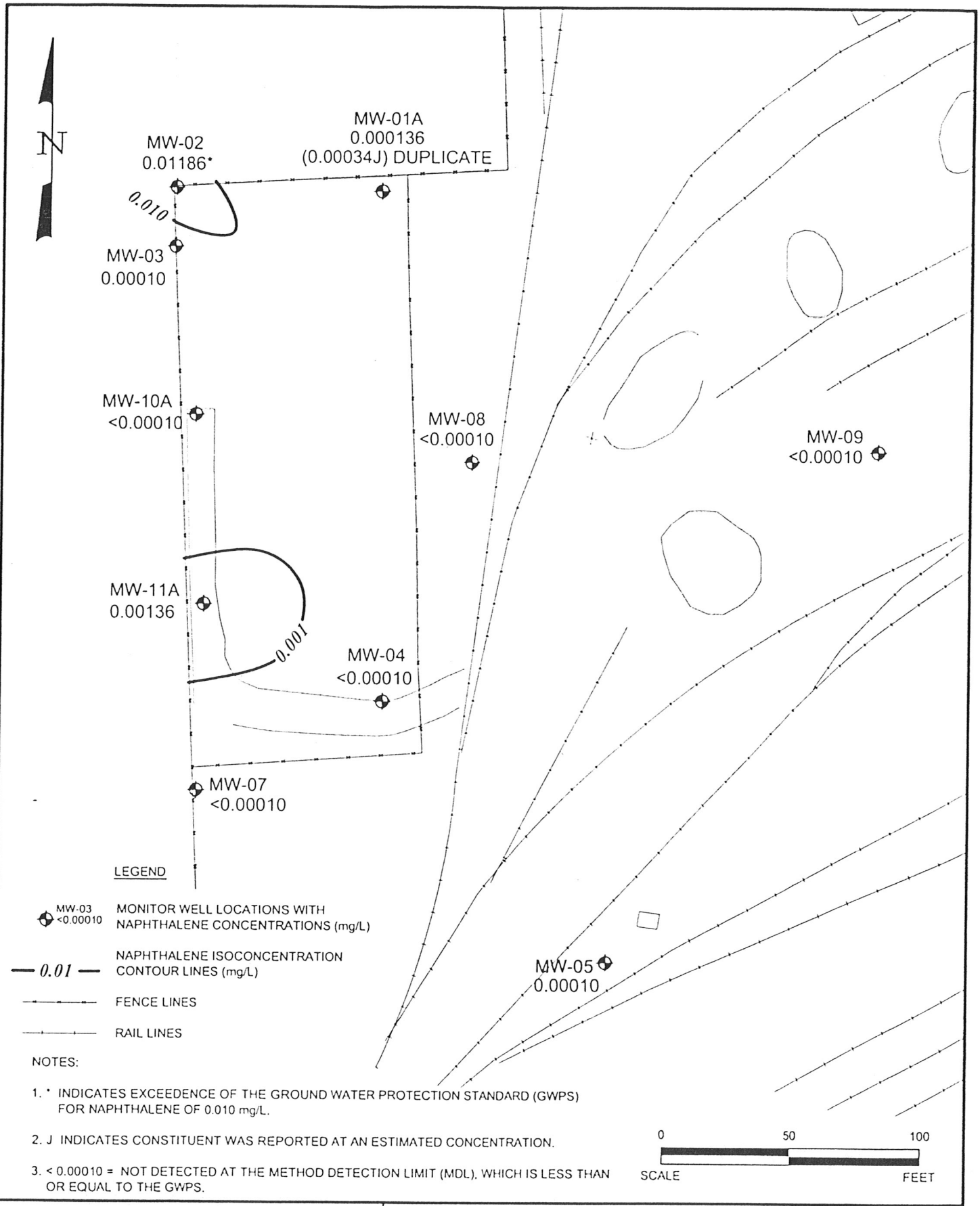
0 50 100
SCALE FEET

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

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A007.dwg, 7/10/2003 11:04:09 AM		

FIGURE 2-6
ACENAPHTHENE IN B-TZ GROUND WATER
MARCH 10-12, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



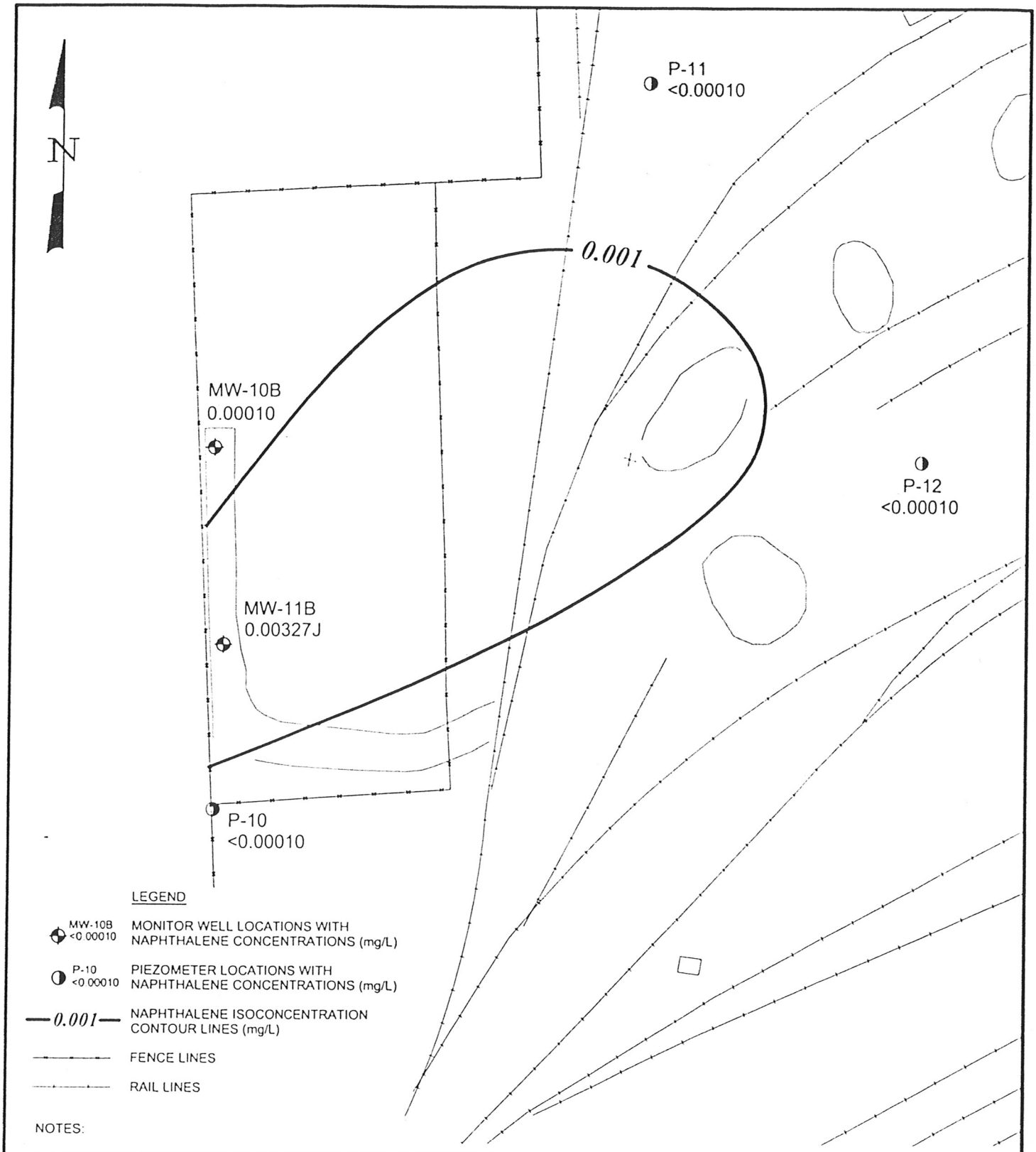
ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A008.dwg, 7/10/2003 11:07:34 AM		

FIGURE 2-7
NAPHTHALENE IN A-TZ GROUND WATER
MARCH 10-12, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM



ERM-Southwest, Inc.

HOUSTON NEW ORLEANS AUSTIN DALLAS BEAUMONT BATON ROUGE CORPUS CHRISTI

DESIGN: VMR	DRAWN: EFC	CHKD.: MGS
DATE: 07/10/03	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\DWG\G03\422102A009.dwg, 7/10/2003 11:09:07 AM		

FIGURE 2-8
NAPHTHALENE IN B-TZ GROUND WATER
MARCH 10-12, 2003
TCEQ PERMIT UNIT No. II.B.1.
Houston Wood Preserving Works
Houston, Texas

ERM

Compliance Plan Tables

Appendix A

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

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-Chloroethoxy)methane	ND (0.010)
Chlorobenzene	ND (0.005)
2-Chloranaphthalene	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-Nitrophenal	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)

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.

TABLE II

Table of Indicator Parameters and Concentration Limits for
Ground-water Protection Standard

COLUMN A Hazardous Constituents	COLUMN 3 Concentration Limits (mg/l)
Acenaphthene	ND (0.010)
Anthracene	NO (0.010)
Benzene	ND (O.OOS)
bis(2-Ethylhexyl)phthalate	NO (0.010)
Dibenzofuran	ND (0.010)
2,4-Dimethylphenol	ND (0.010)
Ethylbenzene	ND (0.005)
Fluoranthene	NO (0.010)
Fluorene	ND (0.010)
Methylene Chloride	ND (0.010)
2-Methylnaphthalene	ND (0.010)
Naphthalene	ND (0.010)
Phenanthrene	ND (0.010)
Pyrene	ND (0.010)
Toluene	ND (0.005)
Xylenes	ND (0.005)

N.D. Non-detectable at Practical (2uantitation 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.

TABLE III

Designation of Wells by Function

1. POINT OF COMPLIANCE WELLS	SAMPLING FREQUENCY
A. Upper Transmissive Zone (existing)	
MW-1	Semi-annual
MW-2	Semi-annual
MW-7	Semi-annual
KW-10*	Semi-annual
MW-11*	Semi-annual

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 Uppermost Transmissive Zone (existing)	
MW-4	Semi-annual
MW-5	Semi-annual
MW-7	Semi-annual
MW-8	Semi-annual
MW-9	Semi-annual

*Point of Compliance wells noted with an asterisk are to be installed within ninety (90) days of issuance of this Compliance Plan along the property boundary between existing monitor wells MW-2 and MW-7.

Table IV
COMPLIANCE PERIOD
Closed Surface Imipaundment

Year in Operation	1979
Year closed	1984
Compliance Period.....	S Years

The Compliance Period was based upon the active life of the impoundment. The impoundment was initially put into operation in 1979 and closed in 1984 according to the May 13, 1991, Compliance Plan Application.

Field Parameters

Appendix B

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

TABLE B-1

Ground Water Sampling Field Parameters
Semiannual Monitoring Report: First Half of 2003

Houston Wood Preserving Works
Houston, Texas

Parameter	Well ID: / Date Sampled:	MW-01A 3/12/03	MW-02 3/12/03	MW-03 3/12/03	MW-04 (a) 3/11/03	MW-04 (a) 3/18/03	MW-05 (a) 3/11/03	MW-05 (a) 3/19/03	MW-07 3/12/03	MW-08 (a) 3/11/03	MW-08 (a) 3/18/03	MW-09 (a) 3/11/03	MW-09 (a) 3/18/03
Time Sampled (hrs CST)		1615	1138	1445	1040	1324	1210	1103	1127	0922	1107	1448	1232
Temperature (°C)		19.0	17.8	18.3	18.3	25.1	20.6	21.2	19.6	18.4	21.2	22.1	19.1
pH (Standard Units)		7.01	6.72	6.88	6.71	6.62	7.09	6.69	6.15	7.81	7.21	7.26	6.72
Specific Conductivity (uS)		1530	7600	1040	1096	1109	615	651	865	512	485	901	861
Dissolved Oxygen (mg/L)			0.2	0.0	1.6	0.06	2.9	0.70	3.8	6.1	4.45	4.9	2.62
Turbidity (NTU)		37.34	3.17	0.00	1.09	0.00	1.58	2.52	0.52	0.00	0.00	0.60	1.06

Parameter	Well ID: / Date Sampled:	MW-10A (a) 3/11/03	MW-10A (a) 3/18/03	MW-10B (a) 3/11/03	MW-10B (a) 3/18/03	MW-11A (a) 3/11/03	MW-11A (a) 3/19/03	MW-11B 3/12/03	P-10 3/10/03	P-11 3/10/03	P-12 (a) 3/11/03 (a)	P-12 (a) 3/18/03
Time Sampled (hrs CST)		1140	1218	1442	1303	1556	1214	1500	1615	1718	942	1052
Temperature (°C)		18.1	18.6	19.4	19.4	20.0	21.1	21.3	18.8	20.2	20.5	22.9
pH (Standard Units)		7.08	7.03	6.96	6.99	7.10	6.75	8.24	7.72	7.47	6.71	6.70
Specific Conductivity (uS)		1073	1104	1350	1357	1223	1480	1254	1089	1115	1409	1411
Dissolved Oxygen (mg/L)		1.4	2.39	-1.8 (b)	0.45	-1.5 (b)	1.8	-0.8 (b)	0.2	4.9	-1.3 (b)	0.82
Turbidity (NTU)		0.00	0.07	14.56	5.17	57	3.02	10.64	5.74	0.00	0.0	0.79

NOTES:

CST = Central Standard Time
NTU = Natural Turbidity Unit
(a) Monitor well was resampled for volatile organic constituents due to laboratory issues.
(b) Recorded negative dissolved oxygen concentrations are likely due to meter calibration issues.

Laboratory Analytical Reports

Appendix C

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

SEVERN TRENT STL

ANALYTICAL REPORT

JOB NUMBER: 250642

Prepared For:

ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Attention: Theodora Overfelt

Date: 04/02/2003

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

04/02/03
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TOTAL NO. OF PAGES 28

SEVERN TRENT STL

04/02/2003

Theodora Overfelt
ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Reference:
Project : UPRR-HWPW-422-102/60
Project No. : 250642
Date Received : 03/10/2003
STL Job : 250642

Dear Theodora Overfelt:

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

1. P-10
2. P-11
3. TB031003-1SA03

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

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

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

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

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

We look forward to working with you on future projects.

Sincerely,

SKudchadkar

Sachin G. Kudchadkar
Project Manager

6310 Rothway Drive • Houston, TX 77040 • Tel: 713 690 4444 • Fax: 713 690 5646 • www.stl-inc.com

SEVERN TRENT STL

SAMPLE INFORMATION
Date: 04/02/2003

Job Number.: 250642
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Theodora Overfelt

Project Number.....: 99000484
Customer Project ID....: 1ST SEMI ANNUAL 2003
Project Description....: UPRR-HWPW-422-102/60

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
250642-1	P-10 P10	Water	03/10/2003	15:48	03/10/2003	18:47
250642-2	P-11 P11	Water	03/10/2003	17:18	03/10/2003	18:47
250642-3	TB031003-1SA03 TB03	Trip Blank	03/10/2003	00:00	03/10/2003	18:47

6310 Rothway Drive • Houston, TX 77040 • Tel: 713 690 4444 • Fax: 713 690 5646 www.stl-inc.com

TRENT STL

Job Number: 250642

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-10
Date Sampled.....: 03/10/2003
Time Sampled.....: 15:48
Sample Matrix.....: Water

Laboratory Sample ID: 250642-1
Date Received.....: 03/10/2003
Time Received.....: 18:47

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70430		03/11/03 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 1955	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 1955	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 1955	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 1955	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 1955	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 1955	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Anthracene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	bis(2-ethylhexyl)phthalate, Water	1.06			0.35	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Di-n-butyl Phthalate, Water	0.74			0.26	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250642

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-10
Date Sampled.....: 03/10/2003
Time Sampled.....: 15:48
Sample Matrix.....: Water

Laboratory Sample ID: 250642-1
Date Received.....: 03/10/2003
Time Received.....: 18:47

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Pyrene, Water	0.11	J		0.09	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	70692		03/13/03 1844	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	70692		03/13/03 1844	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70609		03/12/03 2139	ydy
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70609		03/12/03 2139	ydy

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250642

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-11
Date Sampled.....: 03/10/2003
Time Sampled.....: 17:18
Sample Matrix.....: Water

Laboratory Sample ID: 250642-2
Date Received.....: 03/10/2003
Time Received.....: 18:47

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70430		03/11/03 1000	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2022	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2022	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2022	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2022	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2022	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2022	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Anthracene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	bis(2-ethylhexyl)phthalate, Water	0.35	U		0.35	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Di-n-butyl Phthalate, Water	0.49	J		0.26	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1

* In Description = Dry Wgt.

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SEVERN TRENT STL

Job Number: 250642

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-11
Date Sampled.....: 03/10/2003
Time Sampled.....: 17:18
Sample Matrix.....: Water

Laboratory Sample ID: 250642-2
Date Received.....: 03/10/2003
Time Received.....: 18:47

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	70692		03/13/03 1913	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	70692		03/13/03 1913	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70609		03/12/03 2206	ydy
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70609		03/12/03 2206	ydy

* In Description = Dry Wgt.

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SEVERN TRENT STL

Job Number: 250642

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: TB031003-1SA03
Date Sampled.....: 03/10/2003
Time Sampled.....: 00:00
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 250642-3
Date Received.....: 03/10/2003
Time Received.....: 18:47

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70609		03/12/03 2112	ydy
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70609		03/12/03 2112	ydy

* In Description = Dry Wgt.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

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)...: 71220

Analyst...: lg1

LCS	Laboratory Control Sample	SVS030703A	70730-1		03/19/2003 1559

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.11304		0.250000		45.2		30-130	
Bis(2-chloroethoxy)methane, Water	0.14500		0.250000		58.0		30-130	
2,4-Dinitrotoluene, Water	0.14239		0.250000		57.0		60-140	P
2,6-Dinitrotoluene, Water	0.14182		0.250000		56.7		30-130	
Pentachlorophenol, Water	0.03121		0.250000		12.5		70-130	P
1,2-Diphenylhydrazine, Water	0.16147		0.000000		64.6		50-150	

MB	Method Blank	SVS012203A	70730-1		03/19/2003 1440

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

SB	Spiked Blank	SVS030703A	70730-1		03/19/2003 1506

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.12750		0.250000	0	51		30.0-130.0	
Bis(2-chloroethoxy)methane, Water	0.15471		0.250000	0	62		30-130	
2,4-Dinitrotoluene, Water	0.15429		0.250000	0	62		60.0-140.0	
2,6-Dinitrotoluene, Water	0.14309		0.250000	0	57		30-130	
Pentachlorophenol, Water	0.07774		0.250000	0	31		30.0-130.0	
1,2-Diphenylhydrazine, Water	0.16688		0.000000	0	67		50-150	

SBD	Spiked Blank Duplicate	SVS030703A	70730-1		03/19/2003 1532

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.12797	0.12750	0.250000	0	51.2		30-130	
					0.4		40	
Bis(2-chloroethoxy)methane, Water	0.14915	0.15471	0.250000	0	59.7		30-130	
					3		40	
2,4-Dinitrotoluene, Water	0.15491	0.15429	0.250000	0	62.0		60-140	
					0.4		40	
2,6-Dinitrotoluene, Water	0.14175	0.14309	0.250000	0	56.7		30-130	
					0		40	
Pentachlorophenol, Water	0.04018	0.07774	0.250000	0	16.1		30-130	P
					63.7		40	r
1,2-Diphenylhydrazine, Water	0.18461	0.16688	0.000000	0	73.8		50-150	
					10		30	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS031003B	70430-1		03/13/2003	1746

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: lg1
Method Description.: Semivolatile Organics, Low Level Batch(s)...: 70692

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	3.72599		5.000000		74.5		32-165	
Acenaphthylene, Water	3.54354		5.000000		70.9		10-150	
Anthracene, Water	3.60659		5.000000		72.1		23-178	
Benzo(a)anthracene, Water	3.87120		5.000000		77.4		25-180	
Benzo(b)fluoranthene, Water	4.36823		5.000000		87.4		24-175	
Benzo(k)fluoranthene, Water	3.74156		5.000000		74.8		15-185	
Benzo(ghi)perylene, Water	3.97597		5.000000		79.5		15-182	
Benzo(a)pyrene, Water	3.94407		5.000000		78.9		19-182	
Butyl Benzyl Phthalate, Water	3.97209		5.000000		79.4		23-171	
Bis(2-chloroethoxy)methane, Water	4.42236		5.000000		88.4		47-148	
Bis(2-Chloroethyl)ether, Water	4.44691		5.000000		88.9		13-154	
Bis(2-chloroisopropyl)ether, Water	4.74983		5.000000		95.0		20-154	
Bis(2-ethylhexyl)phthalate, Water	3.69320		5.000000		73.9		25-173	
4-Bromophenyl Phenyl Ether, Water	3.58491		5.000000		71.7		28-121	
4-Chloroaniline, Water	2.74607		5.000000		54.9		11-114	
2-Chloronaphthalene, Water	3.91878		5.000000		78.4		23-143	
4-Chlorophenyl Phenyl Ether, Water	4.46922		5.000000		89.4		46-120	
Chrysene, Water	3.90780		5.000000		78.2		23-180	
Dibenzo(a,h)anthracene, Water	3.81787		5.000000		76.4		12-178	
Dibenzofuran, Water	4.03372		5.000000		80.7		35-153	
1,2-Dichlorobenzene, Water	3.50909		5.000000		70.2		16-130	
1,3-Dichlorobenzene, Water	3.91805		5.000000		78.4		25-105	
1,4-Dichlorobenzene, Water	3.08699		5.000000		61.7		16-125	
Diethyl Phthalate, Water	4.28678		5.000000		85.7		24-166	
Dimethyl Phthalate, Water	4.06787		5.000000		81.4		70-116	
Di-n-butyl Phthalate, Water	4.04186		5.000000		80.8		28-185	
Di-n-octyl Phthalate, Water	3.68681		5.000000		73.7		21-176	
2,4-Dinitrotoluene, Water	4.57998		5.000000		91.6		13-175	
2,6-Dinitrotoluene, Water	4.22574		5.000000		84.5		17-180	
Fluoranthene, Water	4.15026		5.000000		83.0		28-180	
Fluorene, Water	3.96378		5.000000		79.3		30-189	
Hexachlorobenzene, Water	2.97328		5.000000		59.5		18-165	
Hexachlorobutadiene, Water	4.20389		5.000000		84.1		14-145	
Hexachlorocyclopentadiene, Water	3.10659		5.000000		62.1		12-85	
Hexachloroethane, Water	3.91414		5.000000		78.3		15-120	
Indeno(1,2,3-cd)pyrene, Water	3.85768		5.000000		77.2		16-180	
Isophorone, Water	4.72861		5.000000		94.6		70-114	
2-Methylnaphthalene, Water	3.64617		5.000000		72.9		26-168	
Naphthalene, Water	3.56236		5.000000		71.2		36-139	
Nitrobenzene, Water	4.49034		5.000000		89.8		17-163	
n-Nitrosodi-n-propylamine, Water	5.33603		5.000000		106.7		20-161	
n-Nitrosodiphenylamine, Water	4.79809		5.000000		96.0		58-174	
Phenanthrene, Water	3.73836		5.000000		74.8		26-166	
Pyrene, Water	3.98698		5.000000		79.7		28-173	
1,2,4-Trichlorobenzene, Water	3.66281		5.000000		73.3		16-133	
4-Chloro-3-methylphenol, Water	4.22125		5.000000		84.4		60-114	
2-Chlorophenol, Water	3.11076		5.000000		62.2		53-116	
2,4-Dichlorophenol, Water	3.51448		5.000000		70.3		54-119	
2,4-Dimethylphenol, Water	4.00223		5.000000		80.0		23-157	
2,4-Dinitrophenol, Water	5.23611		5.000000		104.7		10-144	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
LCS	Laboratory Control Sample	SVS031003B	70430-1		03/13/2003 1746

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
-Methyl-4,6-dinitrophenol, Water	5.25615		5.000000		105.1		17-164	
-Methylphenol (o-Cresol), Water	3.17052		5.000000		63.4		17-117	
-Methylphenol (p-Cresol), Water	2.98902		5.000000		59.8		12-111	
-Nitrophenol, Water	3.85165		5.000000		77.0		39-121	
-Nitrophenol, Water	2.70734		5.000000		54.1		10-92	
ntachlorophenol, Water	4.04000		5.000000		80.8		10-130	
nol, Water	1.87553		5.000000		37.5		20-83	
,4,5-Trichlorophenol, Water	3.88737		5.000000		77.7		37-129	
,4,6-Trichlorophenol, Water	3.50734		5.000000		70.1		42-133	
-Nitroaniline, Water	5.43886		5.000000		108.8		61-132	
-Nitroaniline, Water	4.32744		5.000000		86.5		33-122	
-Nitroaniline, Water	4.05334		5.000000		81.1		11-129	
rbazole, Water	4.00869		5.000000		80.2		24-169	
,3'-Dichlorobenzidine, Water	3.21471		5.000000		64.3		30-130	

MB	Method Blank	SVS012203A	70430-1		03/13/2003 1619

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	0							
enaphthylene, Water	0							
thracene, Water	0							
nzo(a)anthracene, Water	0							
nzo(b)fluoranthene, Water	0							
nzo(k)fluoranthene, Water	0							
nzo(ghi)perylene, Water	0							
nzo(a)pyrene, Water	0							
utyl Benzyl Phthalate, Water	0							
s(2-chloroethoxy)methane, Water	0							
s(2-Chloroethyl)ether, Water	0							
s(2-chloroisopropyl)ether, Water	0							
s(2-ethylhexyl)phthalate, Water	0							
-Bromophenyl Phenyl Ether, Water	0							
-Chloroaniline, Water	0							
-Chloronaphthalene, Water	0							
-Chlorophenyl Phenyl Ether, Water	0							
rysene, Water	0							
benzo(a,h)anthracene, Water	0							
benzofuran, Water	0							
,2-Dichlorobenzene, Water	0							
,3-Dichlorobenzene, Water	0							
,4-Dichlorobenzene, Water	0							
ethyl Phthalate, Water	0							
methyl Phthalate, Water	0							
-n-butyl Phthalate, Water	0							
-n-octyl Phthalate, Water	0							
,4-Dinitrotoluene, Water	0							
,6-Dinitrotoluene, Water	0							
uoranthene, Water	0							
uorene, Water	0							
exachlorobenzene, Water	0							
exachlorobutadiene, Water	0							
exachlorocyclopentadiene, Water	0							

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	SVS012203A	70430-1		03/13/2003 1619

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
exachloroethane, Water	0							
ndeno(1,2,3-cd)pyrene, Water	0							
ophorone, Water	0							
-Methylnaphthalene, Water	0							
aphthalene, Water	0							
itrobenzene, Water	0							
-Nitrosodi-n-propylamine, Water	0							
-Nitrosodiphenylamine, Water	0							
enanthrene, Water	0							
rene, Water	0							
,2,4-Trichlorobenzene, Water	0							
-Chloro-3-methylphenol, Water	0							
-Chlorophenol, Water	0							
,4-Dichlorophenol, Water	0							
,4-Dimethylphenol, Water	0							
,4-Dinitrophenol, Water	0							
-Methyl-4,6-dinitrophenol, Water	0							
Methylphenol (o-Cresol), Water	0							
Methylphenol (p-Cresol), Water	0							
-Nitrophenol, Water	0							
-Nitrophenol, Water	0							
ntachlorophenol, Water	0							
enol, Water	0							
,4,5-Trichlorophenol, Water	0							
,4,6-Trichlorophenol, Water	0							
-Methylnaphthalene, Water	0							
-Nitroaniline, Water	0							
-Nitroaniline, Water	0							
-Nitroaniline, Water	0							
rbazole, Water	0							
,3'-Dichlorobenzidine, Water	0							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SB	Spiked Blank	SVS031003B	70430-1		03/13/2003 1648

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene, Water	3.94275		5.000000	0	79		46.0-118.0	
cenaphthylene, Water	3.75241		5.000000	0	75		30.0-130.0	
thracene, Water	3.87019		5.000000	0	77		30.0-130.0	
enzo(a)anthracene, Water	3.99966		5.000000	0	80		60.0-140.0	
enzo(b)fluoranthene, Water	4.45050		5.000000	0	89		60.0-140.0	
enzo(k)fluoranthene, Water	3.74291		5.000000	0	75		30.0-130.0	
enzo(ghi)perylene, Water	3.99693		5.000000	0	80		60.0-140.0	
enzo(a)pyrene, Water	4.09789		5.000000	0	82		60.0-140.0	
utyl Benzyl Phthalate, Water	4.19162		5.000000	0	84		30.0-130.0	
is(2-chloroethoxy)methane, Water	4.65651		5.000000	0	93		30.0-130.0	
is(2-Chloroethyl)ether, Water	4.65051		5.000000	0	93		30.0-130.0	
is(2-chloroisopropyl)ether, Water	5.26338		5.000000	0	105		30.0-130.0	
is(2-ethylhexyl)phthalate, Water	4.09280		5.000000	0	82		60.0-140.0	
-Bromophenyl Phenyl Ether, Water	3.69982		5.000000	0	74		30.0-130.0	
-Chloroaniline, Water	2.19919		5.000000	0	44		30.0-130.0	
-Chloronaphthalene, Water	4.09245		5.000000	0	82		30.0-130.0	
-Chlorophenyl Phenyl Ether, Water	4.46541		5.000000	0	89		30.0-130.0	

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SB	Spiked Blank	SVS031003B	70430-1		03/13/2003 1648

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
rysene, Water	3.88971		5.000000	0	78		30.0-130.0	
benzo(a,h)anthracene, Water	3.88684		5.000000	0	78		60.0-140.0	
benzofuran, Water	4.18017		5.000000	0	84		30.0-130.0	
,2-Dichlorobenzene, Water	3.91183		5.000000	0	78		30.0-130.0	
,3-Dichlorobenzene, Water	4.22167		5.000000	0	84		30.0-130.0	
,4-Dichlorobenzene, Water	3.49670		5.000000	0	70		36.0-97.0	
ethyl Phthalate, Water	4.23828		5.000000	0	85		60.0-140.0	
imethyl Phthalate, Water	4.20468		5.000000	0	84		30.0-130.0	
-n-butyl Phthalate, Water	4.22769		5.000000	0	85		30.0-130.0	
-n-octyl Phthalate, Water	4.18879		5.000000	0	84		30.0-130.0	
,4-Dinitrotoluene, Water	4.63438		5.000000	0	93		24.0-96.0	
,6-Dinitrotoluene, Water	4.17656		5.000000	0	84		30.0-130.0	
uoranthene, Water	4.09229		5.000000	0	82		30.0-130.0	
uorene, Water	4.05006		5.000000	0	81		30.0-130.0	
exachlorobenzene, Water	3.05037		5.000000	0	61		30.0-130.0	
exachlorobutadiene, Water	4.44712		5.000000	0	89		30.0-130.0	
exachlorocyclopentadiene, Water	3.34228		5.000000	0	67		30.0-130.0	
exachloroethane, Water	4.13062		5.000000	0	83		30.0-130.0	
deno(1,2,3-cd)pyrene, Water	4.22248		5.000000	0	84		60.0-140.0	
ophorone, Water	5.08418		5.000000	0	102		30.0-130.0	
Methylnaphthalene, Water	3.90994		5.000000	0	78		60.0-140.0	
phthalene, Water	3.82121		5.000000	0	76		30.0-130.0	
trobenzene, Water	4.84236		5.000000	0	97		30.0-130.0	
Nitrosodi-n-propylamine, Water	5.55749		5.000000	0	111		41.0-116.0	
Nitrosodiphenylamine, Water	4.99784		5.000000	0	100		30.0-130.0	
enanthrene, Water	3.83947		5.000000	0	77		30.0-130.0	
ene, Water	3.91966		5.000000	0	78		26.0-115.0	
,2,4-Trichlorobenzene, Water	3.87595		5.000000	0	78		39.0-98.0	
Chloro-3-methylphenol, Water	4.28939		5.000000	0	86		43.0-97.0	
Chlorophenol, Water	3.47220		5.000000	0	69		27.0-123.0	
,4-Dichlorophenol, Water	3.85915		5.000000	0	77		30.0-130.0	
,4-Dimethylphenol, Water	4.24385		5.000000	0	85		30.0-130.0	
,4-Dinitrophenol, Water	6.21713		5.000000	0	124		30.0-130.0	
Methyl-4,6-dinitrophenol, Water	5.73772		5.000000	0	115		30.0-130.0	
Methylphenol (o-Cresol), Water	3.29611		5.000000	0	66		30.0-130.0	
Methylphenol (p-Cresol), Water	3.22933		5.000000	0	65		30.0-130.0	
Nitrophenol, Water	4.14226		5.000000	0	83		30.0-130.0	
Nitrophenol, Water	3.62144		5.000000	0	72		10.0-80.0	
ntachlorophenol, Water	4.18302		5.000000	0	84		9.0-103.0	
nol, Water	1.96119		5.000000	0	39		10.0-112.0	
,4,5-Trichlorophenol, Water	4.30713		5.000000	0	86		30.0-130.0	
,4,6-Trichlorophenol, Water	4.15640		5.000000	0	83		30.0-130.0	
Nitroaniline, Water	5.72301		5.000000	0	114		30.0-130.0	
Nitroaniline, Water	3.82047		5.000000	0	76		30.0-130.0	
Nitroaniline, Water	3.88275		5.000000	0	78		30.0-130.0	
bazole, Water	4.11690		5.000000	0	82		30.0-130.0	
,3'-Dichlorobenzidine, Water	3.26100		5.000000	0	65		30.0-130.0	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SBD	Spiked Blank Duplicate	SVS031003B	70430-1		03/13/2003 1717

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene, Water	3.97772	3.94275	5.000000	0	79.6		46-118	
					0.9		31	
cenaphthylene, Water	3.89826	3.75241	5.000000	0	78.0		30-130	
					3.8		50	
thracene, Water	3.84448	3.87019	5.000000	0	76.9		30-130	
					0.7		50	
enzo(a)anthracene, Water	4.11150	3.99966	5.000000	0	82.2		60-140	
					2.8		30	
enzo(b)fluoranthene, Water	4.73360	4.45050	5.000000	0	94.7		60-140	
					6.2		30	
enzo(k)fluoranthene, Water	3.78004	3.74291	5.000000	0	75.6		30-130	
					1.0		50	
enzo(ghi)perylene, Water	4.23137	3.99693	5.000000	0	84.6		60-140	
					5.7		50	
enzo(a)pyrene, Water	4.24261	4.09789	5.000000	0	84.9		60-140	
					3.5		30	
utyl Benzyl Phthalate, Water	4.25293	4.19162	5.000000	0	85.1		30-130	
					1.5		50	
is(2-chloroethoxy)methane, Water	4.96355	4.65651	5.000000	0	99.3		30-130	
					6.4		50	
is(2-Chloroethyl)ether, Water	4.93090	4.65051	5.000000	0	98.6		30-130	
					5.9		50	
is(2-chloroisopropyl)ether, Water	5.56199	5.26338	5.000000	0	111.2		30-130	
					5.5		50	
is(2-ethylhexyl)phthalate, Water	4.03265	4.09280	5.000000	0	80.7		60-140	
					1.5		30	
-Bromophenyl Phenyl Ether, Water	4.00936	3.69982	5.000000	0	80.2		30-130	
					8.0		50	
-Chloroaniline, Water	2.67153	2.19919	5.000000	0	53.4		30-130	
					19.4		50	
-Chloronaphthalene, Water	4.19710	4.09245	5.000000	0	83.9		30-130	
					2.5		50	
-Chlorophenyl Phenyl Ether, Water	4.62927	4.46541	5.000000	0	92.6		30-130	
					3.6		50	
rysene, Water	4.04581	3.88971	5.000000	0	80.9		30-130	
					3.9		50	
benzo(a,h)anthracene, Water	4.41418	3.88684	5.000000	0	88.3		60-140	
					12.7		30	
benzofuran, Water	4.30545	4.18017	5.000000	0	86.1		30-130	
					3.0		50	
,2-Dichlorobenzene, Water	4.01266	3.91183	5.000000	0	80.3		30-130	
					2.5		50	
,3-Dichlorobenzene, Water	4.64273	4.22167	5.000000	0	92.9		30-130	
					9.5		50	
,4-Dichlorobenzene, Water	3.60294	3.49670	5.000000	0	72.1		36-97	
					3.0		28	
ethyl Phthalate, Water	5.11694	4.23828	5.000000	0	102.3		60-140	
					18.8		30	
imethyl Phthalate, Water	4.29790	4.20468	5.000000	0	86.0		30-130	
					2.2		50	
-n-butyl Phthalate, Water	4.29676	4.22769	5.000000	0	85.9		30-130	
					1.6		50	
-n-octyl Phthalate, Water	4.07452	4.18879	5.000000	0	81.5		30-130	
					2.8		50	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SBD	Spiked Blank Duplicate	SVS031003B	70430-1		03/13/2003	1717

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
2,4-Dinitrotoluene, Water	4.62127	4.63438	5.000000	0	92.4		24-96	
					0.3		38	
2,6-Dinitrotoluene, Water	4.45992	4.17656	5.000000	0	89.2		30-130	
					6.6		50	
Fluoranthene, Water	4.29046	4.09229	5.000000	0	85.8		30-130	
					4.7		50	
Fluorene, Water	4.16332	4.05006	5.000000	0	83.3		30-130	
					2.8		50	
Hexachlorobenzene, Water	3.20821	3.05037	5.000000	0	64.2		30-130	
					5.0		50	
Hexachlorobutadiene, Water	4.78189	4.44712	5.000000	0	95.6		30-130	
					7.3		50	
Hexachlorocyclopentadiene, Water	3.28716	3.34228	5.000000	0	65.7		30-130	
					1.7		50	
Hexachloroethane, Water	4.48561	4.13062	5.000000	0	89.7		30-130	
					8.2		50	
Indeno(1,2,3-cd)pyrene, Water	4.25737	4.22248	5.000000	0	85.1		60-140	
					0.8		30	
Isophorone, Water	5.37054	5.08418	5.000000	0	107.4		30-130	
					5.5		50	
2-Methylnaphthalene, Water	4.14182	3.90994	5.000000	0	82.8		60-140	
					5.8		30	
Naphthalene, Water	4.01729	3.82121	5.000000	0	80.3		30-130	
					5.0		50	
Nitrobenzene, Water	4.97332	4.84236	5.000000	0	99.5		30-130	
					2.7		50	
N-Nitrosodi-n-propylamine, Water	6.13353	5.55749	5.000000	0	122.7		41-116	K
					9.9		38	
N-Nitrosodiphenylamine, Water	5.01897	4.99784	5.000000	0	100.4		30-130	
					0.4		50	
Phenanthrene, Water	3.90426	3.83947	5.000000	0	78.1		30-130	
					1.7		50	
Pyrene, Water	4.12571	3.91966	5.000000	0	82.5		26-115	
					5.1		31	
1,2,4-Trichlorobenzene, Water	4.02336	3.87595	5.000000	0	80.5		39-98	
					3.7		28	
4-Chloro-3-methylphenol, Water	4.44110	4.28939	5.000000	0	88.8		43-97	
					3.5		42	
2-Chlorophenol, Water	3.53061	3.47220	5.000000	0	70.6		27-123	
					1.7		40	
2,4-Dichlorophenol, Water	4.01661	3.85915	5.000000	0	80.3		30-130	
					4.0		50	
2,4-Dimethylphenol, Water	4.45799	4.24385	5.000000	0	89.2		30-130	
					4.9		50	
2,4-Dinitrophenol, Water	6.29836	6.21713	5.000000	0	126.0		30-130	
					1.3		50	
2-Methyl-4,6-dinitrophenol, Water	5.81061	5.73772	5.000000	0	116.2		30-130	
					1.3		50	
2-Methylphenol (o-Cresol), Water	3.38580	3.29611	5.000000	0	67.7		30-130	
					2.7		50	
4-Methylphenol (p-Cresol), Water	3.44480	3.22933	5.000000	0	68.9		30-130	
					6.5		50	
2-Nitrophenol, Water	4.47965	4.14226	5.000000	0	89.6		30-130	
					7.8		50	

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SBD	Spiked Blank Duplicate	SVS031003B	70430-1		03/13/2003 1717

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
-Nitrophenol, Water	3.61536	3.62144	5.000000	0	72.3		10-80	
					0.2		50	
entachlorophenol, Water	4.22925	4.18302	5.000000	0	84.6		9-103	
					1.1		50	
enol, Water	2.18706	1.96119	5.000000	0	43.7		10-112	
					10.9		23	
,4,5-Trichlorophenol, Water	4.33358	4.30713	5.000000	0	86.7		30-130	
					0.6		50	
,4,6-Trichlorophenol, Water	4.33939	4.15640	5.000000	0	86.8		30-130	
					4.3		50	
-Nitroaniline, Water	5.75519	5.72301	5.000000	0	115.1		30-130	
					0.6		50	
-Nitroaniline, Water	4.24221	3.82047	5.000000	0	84.8		30-130	
					10.5		50	
-Nitroaniline, Water	4.01570	3.88275	5.000000	0	80.3		30-130	
					3.4		50	
rbazole, Water	4.20234	4.11690	5.000000	0	84.0		30-130	
					2.1		50	
,3'-Dichlorobenzidine, Water	3.46988	3.26100	5.000000	0	69.4		30-130	
					6.2		50	

Test Method.....: SW-846 8260B Units.....: ug/L Analyst...: ydy
Method Description.: Volatile Organics Batch(s)...: 70609

LCS	Laboratory Control Sample	VS030603E			03/11/2003 1136

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	55.8972		50.00	ND	111.8		68-127	
nlorobenzene, Water	60.7641		50.00	ND	121.5		65-129	
,2-Dichloroethane, Water	37.8835		50.00	ND	75.8		65-133	
thylbenzene, Water	61.3741		50.00	ND	122.7		64-132	
thylene Chloride, Water	51.6576		50.00	1.90518	103.3		54-133	
luene, Water	62.3407		50.00	ND	124.7		63-127	
ylenes (total), Water	187.798		150.00	ND	125.2		37-161	

LCS	Laboratory Control Sample	VS030603E			03/12/2003 1416

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	52.1264		50.00	ND	104.3		68-127	
nlorobenzene, Water	52.7366		50.00	ND	105.5		65-129	
,2-Dichloroethane, Water	35.1212		50.00	ND	70.2		65-133	
thylbenzene, Water	53.7127		50.00	ND	107.4		64-132	
thylene Chloride, Water	51.8312		50.00	4.37301	103.7		54-133	
luene, Water	54.8652		50.00	ND	109.7		63-127	
ylenes (total), Water	162.578		150.00	ND	108.4		37-161	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	VS030603C			03/11/2003 1232

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	ND							
nlorobenzene, Water	ND							
,2-Dichloroethane, Water	ND							
thylbenzene, Water	ND							
ethylene Chloride, Water	1.90518							
luene, Water	ND							
ylenes (total), Water	ND							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	VS030603C			03/12/2003 1225

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	ND							
nlorobenzene, Water	ND							
,2-Dichloroethane, Water	ND							
thylbenzene, Water	ND							
ethylene Chloride, Water	4.37301							
luene, Water	ND							
ylenes (total), Water	ND							

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MS	Matrix Spike	VS030603E	249914-2	20.00000	03/11/2003 1423

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, TCLP	60.4604		50.00	ND	121		63-123	
nlorobenzene, TCLP	60.8530		50.00	ND	122		61-126	
,2-Dichloroethane, TCLP	39.9721		50.00	ND	80		66-135	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MS	Matrix Spike	VS030603E	250716-1	20.00000	03/12/2003 1443

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, TCLP	61.3442		50.00	ND	123			
nlorobenzene, TCLP	63.2297		50.00	ND	126			A
,2-Dichloroethane, TCLP	42.3098		50.00	ND	85			

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MSD	Matrix Spike Duplicate	VS030603E	249914-2	20.00000	03/11/2003 1451

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, TCLP	52.6858	60.4604	50.00	ND	105		63-123	
					13.7		30.0	
nlorobenzene, TCLP	50.4818	60.8530	50.00	ND	101		61-126	
					18.6		30.0	
,2-Dichloroethane, TCLP	33.9528	39.9721	50.00	ND	68		66-135	
					16.3		30.0	

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250642

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MSD	Matrix Spike Duplicate	VS030603E	250716-1	20.00000	03/12/2003 1511

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, TCLP	46.1472	61.3442	50.00	ND	92 28.3		63-123	
hlorobenzene, TCLP	47.6975	63.2297	50.00	ND	95 28.0		61-126	
,2-Dichloroethane, TCLP	33.7136	42.3098	50.00	ND	67 22.6		66-135	

PB	Prep. Blank	VS030603C		20.00000	03/12/2003 1158

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, TCLP	ND						68-127	
hlorobenzene, TCLP	ND						65-129	
,2-Dichloroethane, TCLP	ND						65-133	
luene, TCLP	ND						63-127	
ylenes (total), TCLP	ND						37-161	

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

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SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Volatile Organics Method Code...: 8260 Prep Batch....:
Batch(s).....: 70609 Test Matrix...: Water Equipment Code: GCMSVOA04

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
50642- 1		P-10	03/12/2003	76.5	108.8	93.9	106.7
50642- 2		P-11	03/12/2003	85.3	116.3	103.9	113.7
50642- 3		TB031003-1SA03	03/12/2003	78.3	107.9	96.7	102.1
06091--21 LCS			03/11/2003	84.6	114.5	107.8	129.4
06091--21 MB			03/11/2003	91.2	115.4	113.2	122.7
06092--21 LCS			03/12/2003	76.2	105.9	95.2	110.9
06092--21 MB			03/12/2003	73.8	105.6	94.8	101.0

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

Method.....: Volatile Organics Method Code...: 8260 Prep Batch....:
Batch(s).....: 70609 Test Matrix...: TCLP Equipment Code: GCMSVOA04

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
49914- 2 MS		DIGESTER TCLP	03/11/2003	88.5	121.3	112.2	124.7
49914- 2 MSD		DIGESTER TCLP	03/11/2003	77.6	110.8	99.3	108.8
50716- 1 MS		MAPS48-FRC-G83-WL0L-01	03/12/2003	86.4	119.9	111.8	126.7
50716- 1 MSD		MAPS48-FRC-G83-WL0L-01	03/12/2003	72.1	96.0	89.5	99.3
06092--21 PB			03/12/2003	77.3	117.4	100.2	115.5

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

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SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 250642 Report Date.: 04/02/2003

CUSTOMER: 483648 PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics, Low Level Method Code...: 8270LL Prep Batch....: 70430
Batch(s).....: 70692 Test Matrix...: Water Equipment Code: EGCMS06

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
/0430- 1	LCS		03/13/2003	95.1	79.1	37.5	100.3	38.3	75.8
/0430- 1	MB		03/13/2003	98.0	75.7	48.3	95.1	37.5	76.8
/0430- 1	SB		03/13/2003	104.3	83.3	52.6	109.3	40.7	78.2
/0430- 1	SBD		03/13/2003	104.0	87.3	60.9	109.7	42.2	79.6
0642- 1		P-10	03/13/2003	105.3	56.4	43.8	76.1	38.5	83.5
0642- 2		P-11	03/13/2003	105.5	61.9	45.6	74.0	37.8	80.8

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

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SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 250642

Report Date.: 04/02/2003

CUSTOMER: 483648 PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics - SIM Analysis
Batch(s).....: 71220

Method Code...: 8270SI
Test Matrix...: Water

Prep Batch....: 70730
Equipment Code: EGCMS06

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	NITRD5	TERD14
70730- 1	LCS		03/19/2003	95.1	83.4	78.8	85.9
70730- 1	MB		03/19/2003	83.0	76.1	76.3	72.3
70730- 1	SB		03/19/2003	100.0	87.4	82.6	91.9
70730- 1	SBD		03/19/2003	103.1	84.8	79.6	90.4
250642- 1		P-10	03/19/2003	103.7	76.3	70.8	92.0
250642- 2		P-11	03/19/2003	106.8	73.3	70.0	91.4

Test	Test Description	Limits
246TBP	2,4,6-Tribromophenol	10 - 123
2FLUBP	2-Fluorobiphenyl	43 - 116
NITRD5	Nitrobenzene-d5	35 - 114
TERD14	Terphenyl-d14	33 - 141

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

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.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- 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.

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 RL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL 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.
b - Target analyte was found in the method blank.
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 RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. 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.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - 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.

Abbreviations:

Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV - Continuing Calibration Verification
CRA - Low level standard check - GFAA, Mercury
CRI - Low level standard check - ICP
Dil Fac - Dilution Factor - Secondary dilution analysis
DLFac - Detection Limit Factor
EB - Extraction Blank (TCLP, SPLP, etc.)
ICAL - Initial Calibration
ICB - Initial Calibration Blank
ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
LCD - Laboratory Control Duplicate
LCS - Laboratory Control Sample
MB - Method Blank
MD - Method Duplicate
MDL - Method Detection Limit
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

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), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(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.
(7) ASTM Annual Book of Methods (Various Years)
(8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

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SEVERN TRENT STL

LABORATORY CHRONICLE

Job Number: 250642

Date: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 250642-1 Client ID: P-10

Date Recvd: 03/10/2003 Sample Date: 03/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Data Package Validation	1	71707		03/28/2003	0000	
	Electronic Data Deliverables	1					
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70430		03/11/2003	1000	
	GC/MS Semi-Volatile Package Production	1	71331				
	GC/MS Volatiles Data Package Production	1	71411		03/21/2003	1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	1955	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	70692	70430	03/13/2003	1844	1.00000
SW-846 8260B	Volatile Organics	1	70609		03/12/2003	2139	1.00000

Lab ID: 250642-2 Client ID: P-11

Date Recvd: 03/10/2003 Sample Date: 03/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Electronic Data Deliverables	1					
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70430		03/11/2003	1000	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2022	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	70692	70430	03/13/2003	1913	1.00000
SW-846 8260B	Volatile Organics	1	70609		03/12/2003	2206	1.00000

Lab ID: 250642-3 Client ID: TB031003-1SA03

Date Recvd: 03/10/2003 Sample Date: 03/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 8260B	Volatile Organics	1	70609		03/12/2003	2112	1.00000

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SEVERN TRENT SERVICES

STL Houston
6310 Rothway Drive
Houston, TX 77040

No.

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: ERM Southwest	PROJECT NAME/NUMBER: UPRR HWPW/422-10… FIRST SEMIANNUAL 2003
SEND REPORT TO: Theodora Overfelt	BILLING INFORMATION
ADDRESS: 15810 Park 10 Place	BILL TO:
Houston, TX 77084	ADDRESS:
PHONE: 281-600-1000	PHONE:
FAX: 281-600-1001	FAX: PO NO.:

ANALYSIS/METHOD REQUEST: 8260B - VOCs; 8270C - lowlevel; 8270C - SIM

LAB JOB NO. 250642

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	8260B - VOCs	8270C - lowlevel	8270C - SIM	REMARKS/PRECAUTIONS
	P-10	3-10-03	1548	water	5			X	X	X	
	P-11	"	1718	"	5			X	X	X	
	TB031003-1SAC3	—	—	"	2			X			

SAMPLER: Andy Waters | SHIPMENT METHOD: | AIRBILL NO.:

REQUIRED TURNAROUND*: SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / 10 DAYS / ROUTINE / X OTHER standard

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE: [signature]	3-10-03	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: Andy Waters/ERM	TIME 1847	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE: [signature]	3/10/03	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: STL	TIME 1847	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

STL Houston is a part of Severn Trent Laboratories, Inc.

STL8222 H (0700)

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 250642 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 03/11/2003 Date of the Report..: 03/11/2003
Project Number.: 99000484 Project Description.: UPRR-HWPW-422-102/60 Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.- Houston Contact.: Chris Young

Questions ?	(Y/N)	Comments
Chain of Custody Received?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	N	
...If "yes", custody seal intact?		
Custody seals on sample containers?	N	
...If "yes", custody seal intact?		
Samples chilled?	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	3.1
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	371
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	EIB

JB 3/11/03

Page 1

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STL HOUSTON - SAMPLE RECEIPT CHECKLIST

GENERAL SHIPMENT INFORMATION

CLIENT NAME: ERM
DATE SHIPPED: _____
DATE RECEIVED: _____
TOTAL # COOLERS RECEIVED: 1

CARRIER/DRIVER NAME: _____
UNPACKED BY: JB
UNPACKED STAMP: _____
TRACKING NUMBER(S): _____
(retain air bills in project folder)

COOLER CHECKLIST

COOLER ID	COC Present (Y/N)	CUSTODY TAPE Present (Y/N)	CUSTODY TAPE Intact (Y/N/NA)	COOLER TEMP (deg C)	THERMOMETER #
		C	C		
		B N	B N		
		C	C		
		B	B		
		C	C		
		B	B		

C-Cooler B-Bottles

COOLER(S) SCREENED FOR RADIATION? Yes ✓ No _____
SHORT HOLD / RUSH SAMPLES (include department and time delivered)

_____

_____

SPECIFIC PROJECT INFORMATION

JOB NUMBER 250642
PROJECT NAME: _____

VOLATILE HEADSPACE ACCEPTABLE? Yes ✓ No _____ NA _____ Preserved? Yes ✓ No _____
(If headspace is present, list details in INCONSISTENCIES section) Number of VOA vials: 8

pH OF WATER SAMPLES:

PRESERVATION	# BOTTLES	CORRECT PH Y/N	(If N, list sample ID and corresponding pH)
H2SO4 (<2)			
HNO3 (<2)			
HCl (<2) (not VOA vials)			
NaOH-Cyanide (>12)			
NaOH/Zn Acetate-Sulfide (>9)			
Other NA2S2O3	4	NA	

OF NEAT BOTTLES: _____ # OF SOILS JARS: _____

INCONSISTENCIES

_____

_____

_____

ACTION TAKEN

PERSON CONTACTED: _____ DATE: _____
RESOLUTION _____

_____

NOTES: _____

_____

Project Manager: _____ (use back of sheet if necessary)

000018

SEVERN TRENT STL

ANALYTICAL REPORT

JOB NUMBER: 250717

Prepared For:

ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Attention: Theodora Overfelt

Date: 04/02/2003

SKudchadkar
Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

04/02/03
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TOTAL NO. OF PAGES 29 35

SEVERN TRENT STL

04/02/2003

Theodora Overfelt
ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Project : UPRR-HWPW-422-102/60
Project No. : 250717
Date Received : 03/11/2003
STL Job : 250717

Dear Theodora Overfelt:

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

1. P-12-1SA03
2. MW-10B1SA03
3. MW-10A1SA03
4. MW-81SA03
5. MW-41SA03
6. MW-51SA03
7. FB031103
8. MW-91SA03
9. MW-11A1SA03
10. TRIP BLANK

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

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

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements will be noted and included in a case narrative as a part of this report.

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

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

We look forward to working with you on future projects.

Sincerely,

SKudchadkar

Sachin G. Kudchadkar
Project Manager

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SEVERN TRENT STL

SAMPLE INFORMATION
Date: 04/02/2003

Job Number.: 250717
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Theodora Overfelt

Project Number.....: 99000484
Customer Project ID....: 1ST SEMI ANNUAL 2003
Project Description....: UPRR-HWPW-422-102/60

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
250717-1	P-12-1SA03 P1215A	Water	03/11/2003	09:42	03/11/2003	18:09
250717-2	MW-10B1SA03 MW10B	Water	03/11/2003	14:42	03/11/2003	18:09
250717-3	MW-10A1SA03 MW10A	Water	03/11/2003	11:40	03/11/2003	18:09
250717-4	MW-81SA03 MW815A	Water	03/11/2003	09:22	03/11/2003	18:09
250717-5	MW-41SA03 MW415A	Water	03/11/2003	10:40	03/11/2003	18:09
250717-6	MW-51SA03 MW515A	Water	03/11/2003	12:10	03/11/2003	18:09
250717-7	FB031103 FB03	Field Blank	03/11/2003	12:30	03/11/2003	18:09
250717-8	MW-91SA03 MW915A	Water	03/11/2003	14:48	03/11/2003	18:09
250717-9	MW-11A1SA03 MW11A	Water	03/11/2003	15:56	03/11/2003	18:09
250717-10	TRIP BLANK	Trip Blank	03/11/2003	00:00	03/11/2003	18:09

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-12-1SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 09:42
Sample Matrix.....: Water

Laboratory Sample ID: 250717-1
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	Data Package Validation											
	GC/MS SVOA Validation, Water	Complete					1		71788		03/28/03 0000	qle
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2048	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2048	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2048	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2048	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2048	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2048	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Anthracene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	bis(2-ethylhexyl)phthalate, Water	0.35	U		0.35	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P-12-1SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 09:42
Sample Matrix.....: Water

Laboratory Sample ID: 250717-1
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Pyrene, Water	7.45			0.09	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1301	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1301	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-1081SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 14:42
Sample Matrix.....: Water

Laboratory Sample ID: 250717-2
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2114	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2114	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2114	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2114	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2114	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2114	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	14.36			0.07	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Acenaphthylene, Water	0.75			0.06	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Anthracene, Water	0.87			0.09	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	bis(2-ethylhexyl)phthalate, Water	0.35	U		0.35	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Dibenzofuran, Water	2.60			0.07	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Di-n-butyl Phthalate, Water	0.27	J		0.26	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Fluoranthene, Water	1.02			0.09	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Fluorene, Water	1.13			0.07	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-10B1SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 14:42
Sample Matrix.....: Water

Laboratory Sample ID: 250717-2
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Pyrene, Water	0.39	J		0.09	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1331	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1331	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-81SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 09:22
Sample Matrix.....: Water

Laboratory Sample ID: 250717-4
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2206	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2206	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2206	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2206	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2206	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2206	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Anthracene, Water	0.15	J		0.09	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	bis(2-ethylhexyl)phthalate, Water	0.92			0.35	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: MW-81SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 09:22
Sample Matrix.....: Water

Laboratory Sample ID: 250717-4
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1432	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1432	lg1

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: MW-41SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 250717-5
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2233	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2233	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2233	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2233	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2233	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2233	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Anthracene, Water	0.67			0.09	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	bis(2-ethylhexyl)phthalate, Water	0.94			0.35	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: MW-41SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 250717-5
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1504	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1504	lg1

* In Description = Dry Wgt.

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SEVERN TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-51SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 12:10
Sample Matrix.....: Water

Laboratory Sample ID: 250717-6
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2259	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2259	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2259	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2259	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2259	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2259	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Anthracene, Water	0.30	J		0.09	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	bis(2-ethylhexyl)phthalate, Water	0.93			0.35	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: MW-51SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 12:10
Sample Matrix.....: Water

Laboratory Sample ID: 250717-6
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1534	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1534	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: FB031103
Date Sampled.....: 03/11/2003
Time Sampled.....: 12:30
Sample Matrix.....: Field Blank

Laboratory Sample ID: 250717-7
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2325	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2325	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2325	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2325	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2325	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2325	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Anthracene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	bis(2-ethylhexyl)phthalate, Water	0.91			0.35	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: FB031103
Date Sampled.....: 03/11/2003
Time Sampled.....: 12:30
Sample Matrix.....: Field Blank

Laboratory Sample ID: 250717-7
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
45	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1604	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1604	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-91SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 14:48
Sample Matrix.....: Water

Laboratory Sample ID: 250717-8
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/19/03 2351	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/19/03 2351	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/19/03 2351	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/19/03 2351	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/19/03 2351	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/19/03 2351	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Anthracene, Water	0.42	J		0.09	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	bis(2-ethylhexyl)phthalate, Water	0.94			0.35	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-91SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 14:48
Sample Matrix.....: Water

Laboratory Sample ID: 250717-8
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Pyrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1634	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1634	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-11A1SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 15:56
Sample Matrix.....: Water

Laboratory Sample ID: 250717-9
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70730		03/13/03 1500	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70728		03/13/03 1500	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71220		03/20/03 0017	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71220		03/20/03 0017	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71220		03/20/03 0017	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71220		03/20/03 0017	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71220		03/20/03 0017	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71220		03/20/03 0017	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	22.86			0.07	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Acenaphthylene, Water	0.56			0.06	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Anthracene, Water	1.24			0.09	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	bis(2-ethylhexyl)phthalate, Water	0.92			0.35	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Dibenzofuran, Water	4.77			0.07	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Fluoranthene, Water	2.71			0.09	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Fluorene, Water	7.38			0.07	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Naphthalene, Water	1.36			0.10	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1

* In Description = Dry Wgt.

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TRENT STL

Job Number: 250717

LABORATORY TEST RESULTS

Date:04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-11A1SA03
Date Sampled.....: 03/11/2003
Time Sampled.....: 15:56
Sample Matrix.....: Water

Laboratory Sample ID: 250717-9
Date Received.....: 03/11/2003
Time Received.....: 18:09

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Phenanthrene, Water	0.28	J		0.09	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Pyrene, Water	1.03			0.09	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	1.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71223		03/17/03 1704	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71223		03/17/03 1704	lg1

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* In Description = Dry Wgt.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250717

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS030703A	70730-1		03/19/2003	1559

Test Method.....: SW-846 8270C | Units.....: ug/L | Analyst...: lg1
Method Description.: Semivolatile Organics - SIM Analysis | Batch(s)...: 71220

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzo(a)pyrene, Water	0.11304		0.250000		45.2		30-130	
s(2-chloroethoxy)methane, Water	0.14500		0.250000		58.0		30-130	
,4-Dinitrotoluene, Water	0.14239		0.250000		57.0		60-140	P
,6-Dinitrotoluene, Water	0.14182		0.250000		56.7		30-130	
ntachlorophenol, Water	0.03121		0.250000		12.5		70-130	P
,2-Diphenylhydrazine, Water	0.16147		0.000000		64.6		50-150	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS012203A	70730-1		03/19/2003	1440

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

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SB	Spiked Blank	SVS030703A	70730-1		03/19/2003	1506

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzo(a)pyrene, Water	0.12750		0.250000	0	51		30.0-130.0	
s(2-chloroethoxy)methane, Water	0.15471		0.250000	0	62		30-130	
,4-Dinitrotoluene, Water	0.15429		0.250000	0	62		60.0-140.0	
,6-Dinitrotoluene, Water	0.14309		0.250000	0	57		30-130	
ntachlorophenol, Water	0.07774		0.250000	0	31		30.0-130.0	
,2-Diphenylhydrazine, Water	0.16688		0.000000	0	67		50-150	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SBD	Spiked Blank Duplicate	SVS030703A	70730-1		03/19/2003	1532

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzo(a)pyrene, Water	0.12797	0.12750	0.250000	0	51.2 0.4		30-130 40	
s(2-chloroethoxy)methane, Water	0.14915	0.15471	0.250000	0	59.7 3		30-130 40	
,4-Dinitrotoluene, Water	0.15491	0.15429	0.250000	0	62.0 0.4		60-140 40	
,6-Dinitrotoluene, Water	0.14175	0.14309	0.250000	0	56.7 0		30-130 40	
ntachlorophenol, Water	0.04018	0.07774	0.250000	0	16.1 63.7		30-130 40	P r
,2-Diphenylhydrazine, Water	0.18461	0.16688	0.000000	0	73.8 10		50-150 30	

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250717 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

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, Low Level Batch(s)...: 71223

LCS	Laboratory Control Sample	SVS0310038	70728-1		03/17/2003 0959

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	3.87186		5.000000		77.4		32-165	
Acenaphthylene, Water	3.61366		5.000000		72.3		10-150	
Anthracene, Water	4.27324		5.000000		85.5		23-178	
Benzo(a)anthracene, Water	4.04038		5.000000		80.8		25-180	
Bis(2-ethylhexyl)phthalate, Water	3.50805		5.000000		70.2		25-173	
2-Chloronaphthalene, Water	4.10022		5.000000		82.0		23-143	
Chrysene, Water	4.25275		5.000000		85.1		23-180	
Dibenzofuran, Water	4.16156		5.000000		83.2		35-153	
Di-n-butyl Phthalate, Water	4.43395		5.000000		88.7		28-185	
Fluoranthene, Water	4.39263		5.000000		87.9		28-180	
Fluorene, Water	4.16313		5.000000		83.3		30-189	
2-Methylnaphthalene, Water	4.26821		5.000000		85.4		26-168	
Naphthalene, Water	3.99728		5.000000		79.9		36-139	
Nitrobenzene, Water	3.87888		5.000000		77.6		17-163	
n-Nitrosodiphenylamine, Water	4.94886		5.000000		99.0		58-174	
Phenanthrene, Water	4.11277		5.000000		82.3		26-166	
Pyrene, Water	3.91484		5.000000		78.3		28-173	
2,4-Dimethylphenol, Water	3.62990		5.000000		72.6		23-157	
2-Methyl-4,6-dinitrophenol, Water	6.08293		5.000000		121.7		17-164	
4-Nitrophenol, Water	1.38873		5.000000		27.8		10-92	
Phenol, Water	1.57653		5.000000		31.5		20-83	

MB	Method Blank	SVS012203A	70728-1		03/17/2003 0829

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	0							
Acenaphthylene, Water	0							
Anthracene, Water	0							
Benzo(a)anthracene, Water	0							
Bis(2-ethylhexyl)phthalate, Water	0.44388							
2-Chloronaphthalene, Water	0							
Chrysene, Water	0							
Dibenzofuran, Water	0							
Di-n-butyl Phthalate, Water	0.09592							
Fluoranthene, Water	0							
Fluorene, Water	0							
2-Methylnaphthalene, Water	0							
Naphthalene, Water	0							
Nitrobenzene, Water	0							
n-Nitrosodiphenylamine, Water	0							
Phenanthrene, Water	0							
Pyrene, Water	0							
2,4-Dimethylphenol, Water	0							
2-Methyl-4,6-dinitrophenol, Water	0							
4-Nitrophenol, Water	0							
Phenol, Water	0							

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 250717 Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SB	Spiked Blank	SVS031003B	70728-1		03/17/2003 0859

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	3.86182		5.000000	0	77		46.0-118.0	
enaphthylene, Water	3.62716		5.000000	0	73		30.0-130.0	
thracene, Water	4.17148		5.000000	0	83		30.0-130.0	
nzo(a)anthracene, Water	3.90164		5.000000	0	78		60.0-140.0	
s(2-ethylhexyl)phthalate, Water	3.21550		5.000000	0.44388	55		60.0-140.0	P
chloronaphthalene, Water	4.11255		5.000000	0	82		30.0-130.0	
rysene, Water	4.04161		5.000000	0	81		30.0-130.0	
benzofuran, Water	4.11429		5.000000	0	82		30.0-130.0	
n-butyl Phthalate, Water	4.40787		5.000000	0.09592	86		30.0-130.0	
oranthene, Water	4.28425		5.000000	0	86		30.0-130.0	
orene, Water	4.06870		5.000000	0	81		30.0-130.0	
ethylnaphthalene, Water	4.15690		5.000000	0	83		60.0-140.0	
hthalene, Water	3.96154		5.000000	0	79		30.0-130.0	
robenzene, Water	3.76868		5.000000	0	75		30.0-130.0	
Nitrosodiphenylamine, Water	4.86890		5.000000	0	97		30.0-130.0	
nanthrene, Water	4.04543		5.000000	0	81		30.0-130.0	
ene, Water	3.79310		5.000000	0	76		26.0-115.0	
-Dimethylphenol, Water	3.51159		5.000000	0	70		30.0-130.0	
ethyl-4,6-dinitrophenol, Water	5.90255		5.000000	0	118		30.0-130.0	
itrophenol, Water	1.53195		5.000000	0	31		10.0-80.0	
nol, Water	1.59979		5.000000	0	32		10.0-112.0	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
SBD	Spiked Blank Duplicate	SVS031003B	70728-1		03/17/2003 0929

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
naphthene, Water	3.84283	3.86182	5.000000	0	76.9		46-118	
					0.5		31	
enaphthylene, Water	3.57827	3.62716	5.000000	0	71.6		30-130	
					1.4		50	
hracene, Water	4.13924	4.17148	5.000000	0	82.8		30-130	
					0.8		50	
nzo(a)anthracene, Water	3.85208	3.90164	5.000000	0	77.0		60-140	
					1.3		30	
s(2-ethylhexyl)phthalate, Water	3.17678	3.21550	5.000000	0.44388	54.7		60-140	P
					1.2		30	
hloronaphthalene, Water	4.04645	4.11255	5.000000	0	80.9		30-130	
					1.6		50	
ysene, Water	4.04097	4.04161	5.000000	0	80.8		30-130	
					0.0		50	
enzofuran, Water	4.14844	4.11429	5.000000	0	83.0		30-130	
					0.8		50	
n-butyl Phthalate, Water	4.24817	4.40787	5.000000	0.09592	83.0		30-130	
					3.7		50	
oranthene, Water	4.23223	4.28425	5.000000	0	84.6		30-130	
					1.2		50	
orene, Water	4.09995	4.06870	5.000000	0	82.0		30-130	
					0.8		50	
ethylnaphthalene, Water	4.14484	4.15690	5.000000	0	82.9		60-140	
					0.3		30	
nthalene, Water	3.96227	3.96154	5.000000	0	79.2		30-130	
					0.0		50	
robenzene, Water	3.86160	3.76868	5.000000	0	77.2		30-130	
					2.4		50	

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

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QUALITY CONTROL RESULTS

Job Number.: 250717

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SBD	Spiked Blank Duplicate	SVS031003B	70728-1		03/17/2003	0929

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
n-Nitrosodiphenylamine, Water	4.85775	4.86890	5.000000	0	97.2		30-130	
					0.2		50	
Phenanthrene, Water	3.99619	4.04543	5.000000	0	79.9		30-130	
					1.2		50	
Pyrene, Water	3.84486	3.79310	5.000000	0	76.9		26-115	
					1.4		31	
2,4-Dimethylphenol, Water	3.61336	3.51159	5.000000	0	72.3		30-130	
					2.9		50	
2-Methyl-4,6-dinitrophenol, Water	5.38574	5.90255	5.000000	0	107.7		30-130	
					9.2		50	
4-Nitrophenol, Water	1.25914	1.53195	5.000000	0	25.2		10-80	
					19.5		50	
Phenol, Water	1.53055	1.59979	5.000000	0	30.6		10-112	
					4.4		23	

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

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SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 250717

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics, Low Level
Batch(s).....: 71223

Method Code...: 8270LL
Test Matrix...: Water

Prep Batch....: 70728
Equipment Code: EGCMS07

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
70728- 1	LCS		03/17/2003	99.0	82.4	37.8	81.6	29.6	78.2
70728- 1	MB		03/17/2003	91.7	76.8	43.8	77.5	30.9	73.8
70728- 1	SB		03/17/2003	96.6	82.3	37.4	77.7	32.2	76.5
70728- 1	SBD		03/17/2003	93.6	82.4	36.1	79.4	30.7	77.2
250717- 1		P-12-1SA03	03/17/2003	108.7	77.0	31.7	70.8	26.7	80.3
250717- 2		MW-10B1SA03	03/17/2003	109.3	82.4	29.5	74.3	27.2	81.3
250717- 3		MW-10A1SA03	03/17/2003	113.5	82.8	34.6	75.6	28.1	87.8
250717- 4		MW-81SA03	03/17/2003	97.5	68.4	28.1	66.0	23.6	77.3
250717- 5		MW-41SA03	03/17/2003	105.4	81.8	30.8	75.5	27.1	79.1
250717- 6		MW-51SA03	03/17/2003	97.5	76.8	29.7	73.5	25.2	79.4
250717- 7		FB031103	03/17/2003	99.0	79.7	37.9	77.9	26.9	78.1
250717- 8		MW-91SA03	03/17/2003	102.1	77.8	27.7	71.9	24.7	80.7
250717- 9		MW-11A1SA03	03/17/2003	102.1	80.2	29.5	76.2	28.2	77.3

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

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SURROGATE RECOVERIES REPORT

Job Number.: 250717

Report Date.: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics - SIM Analysis
Batch(s).....: 71220

Method Code...: 8270SI
Test Matrix...: Water

Prep Batch....: 70730
Equipment Code: EGCMS06

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	NITRD5	TERD14
70730- 1	LCS		03/19/2003	95.1	83.4	78.8	85.9
70730- 1	MB		03/19/2003	83.0	76.1	76.3	72.3
70730- 1	SB		03/19/2003	100.0	87.4	82.6	91.9
70730- 1	SBD		03/19/2003	103.1	84.8	79.6	90.4
70717- 1		P-12-1SA03	03/19/2003	89.0	74.3	71.4	77.8
70717- 2		MW-10B1SA03	03/19/2003	103.0	78.7	75.7	76.3
70717- 3		MW-10A1SA03	03/19/2003	107.1	77.7	75.1	82.3
70717- 4		MW-81SA03	03/19/2003	93.5	64.7	64.1	71.4
70717- 5		MW-41SA03	03/19/2003	90.5	76.2	74.1	74.3
70717- 6		MW-51SA03	03/19/2003	84.3	75.1	73.1	74.0
70717- 7		FB031103	03/19/2003	87.2	74.7	78.1	74.6
70717- 8		MW-91SA03	03/19/2003	93.9	75.2	70.0	77.8
70717- 9		MW-11A1SA03	03/20/2003	91.7	80.9	76.1	75.6

Test	Test Description	Limits
246TBP	2,4,6-Tribromophenol	10 - 123
2FLUBP	2-Fluorobiphenyl	43 - 116
NITRD5	Nitrobenzene-d5	35 - 114
TERD14	Terphenyl-d14	33 - 141

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

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.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- 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.

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 RL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL 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.
b - Target analyte was found in the method blank.
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 RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. 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.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - 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.

Abbreviations:

Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV - Continuing Calibration Verification
CRA - Low level standard check - GFAA, Mercury
CRI - Low level standard check - ICP
Dil Fac - Dilution Factor - Secondary dilution analysis
DLFac - Detection Limit Factor
EB - Extraction Blank (TCLP, SPLP, etc.)
ICAL - Initial Calibration
ICB - Initial Calibration Blank
ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
LCD - Laboratory Control Duplicate
LCS - Laboratory Control Sample
MB - Method Blank
MD - Method Duplicate
MDL - Method Detection Limit
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/02/2003

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

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), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(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.
(7) ASTM Annual Book of Methods (Various Years)
(8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

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SEVERN TRENT STL

LABORATORY CHRONICLE

Job Number: 250717 Date: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 250717-1 Client ID: P-12-1SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Data Package Validation	1	71788		03/28/2003	0000	
	Electronic Data Deliverables	1					
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
	GC/MS Semi-Volatile Package Production	1	71332				
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2048	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1301	1.00000

Lab ID: 250717-2 Client ID: MW-10B1SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2114	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1331	1.00000

Lab ID: 250717-3 Client ID: MW-10A1SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2140	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1402	1.00000

Lab ID: 250717-4 Client ID: MW-81SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2206	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1432	1.00000

Lab ID: 250717-5 Client ID: MW-41SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2233	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1504	1.00000

Lab ID: 250717-6 Client ID: MW-51SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2259	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1534	1.00000

Lab ID: 250717-7 Client ID: FB031103 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2325	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1604	1.00000

Lab ID: 250717-8 Client ID: MW-91SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/19/2003	2351	1.00000

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LABORATORY CHRONICLE

Job Number: 250717

Date: 04/02/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 250717-8 Client ID: MW-91SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1634	1.00000

Lab ID: 250717-9 Client ID: MW-11A1SA03 Date Recvd: 03/11/2003 Sample Date: 03/11/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70730		03/13/2003	1500	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70728		03/13/2003	1500	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71220	70730	03/20/2003	0017	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71223	70728	03/17/2003	1704	1.00000

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Houston, TX 77040

250717

No. 006214

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: ERM SOUTHWEST	PROJECT NAME/NUMBER: 422-102-60
SEND REPORT TO: THEODORA OVERFELT	**BILLING INFORMATION**
ADDRESS: 15810 KATY FRWY	BILL TO: UPRR - Geoffrey Reader
STE # 350	ADDRESS:
HOUSTON, TX 77084	
PHONE: 281.600 1000	PHONE:
FAX: 281.600 1001	FAX: PO NO.:

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	8260B - VOC's	8270C - LOW LEVEL	8270C - SIM	REMARKS/PRECAUTIONS
1.	P-12-15A03	03/11/03	0942	W	S	YES		X	X	X	
2.	MW-103-15A03		~~1110~~ 1442					X	X	X	
3.	MW-18A-15A03		1140					X	X	X	
4.	MW-8-15A03		0922					X	X	X	
5.	MW-4-18A03		1040					X	X	X	
6.	MW-5-18A03		1210					X	X	X	
7.	FB031103		1230					X	X	X	
8.	MW-9-15A03		1448					X	X	X	
9.	MW-11A-18A03		1556					X	X	X	
10.	TRIP BLANK	—	—	W	2	NO		X			

LAB JOB NO. 250717

SAMPLER: CHRIS YOUNG Tristram Dodds — SHIPMENT METHOD: Hand Deliver — AIRBILL NO.:

REQUIRED TURNAROUND: ☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☒ ROUTINE ☐ OTHER

1. RELINQUISHED BY: Tristram Dodds	DATE 03/11/03	2. RELINQUISHED BY:	DATE 3/11/03	3. RELINQUISHED BY:	DATE
SIGNATURE:	TIME 16:09	SIGNATURE:	TIME 18:09	SIGNATURE:	TIME
PRINTED NAME/COMPANY:		PRINTED NAME/COMPANY: STL		PRINTED NAME/COMPANY:	
1. RECEIVED BY:	DATE 3/11/03	2. RECEIVED BY:	DATE 3/11/03	3. RECEIVED BY:	DATE
SIGNATURE:		SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: STL	TIME 18:09	PRINTED NAME/COMPANY: STL	TIME 18:09	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

STL Houston is a part of Severn Trent Laboratories, Inc

STL 8222 11 (07/00)

Projsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 250717 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 03/11/2003 Date of the Report..: 03/11/2003
Project Number.: 99000484 Project Description.: UPRR-HWPW-422-102/60 Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.- Houston Contact.: Chris Young

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	2.0, 2.0, 2.1
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	337, 368, 324
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	

3-11-03

STL HOUSTON - SAMPLE RECEIPT CHECKIST

GENERAL SHIPMENT INFORMATION

CLIENT NAME: ERM 5/W | CARRIER/DRIVER NAME: Client
DATE SHIPPED: | UNPACKED BY: OK
DATE RECEIVED: | UNPACKED STAMP:
TOTAL # COOLERS RECEIVED: 3 | TRACKING NUMBER(S): [illegible] 4 83
(retain air bills in project folder)

COOLER CHECKLIST

COOLER ID	COC Present (Y/N)	CUSTODY TAPE Present (Y/N) Intact (Y/N/NA)		COOLER TEMP (deg C)	THERMOMETER #
1/4 190	Y	C Y	C Y	2.0	337
		B N	B N		
1/4 551	Y	C Y	C	2.0	36.8
		B N	B N		
1/4 522	Y	C Y	C Y	2.1	324
		B N	B N		

C-Cooler B-Bottles

COOLER(S) SCREENED FOR RADIATION? Yes ✓ No ____
SHORT HOLD / RUSH SAMPLES (include department and time delivered)

SPECIFIC PROJECT INFORMATION

JOB NUMBER: 450717
PROJECT NAME: 422-102-60
VOLATILE HEADSPACE ACCEPTABLE? Yes ✓ No ____ NA ____ Preserved? Yes ✓ No ____
(If headspace is present, list details in INCONSISTENCIES section) Number of VOA vials: 87 +2 TP 29 Total
pH OF WATER SAMPLES:

PRESERVATION	# BOTTLES	CORRECT PH Y/N	(If N, list sample ID and corresponding pH)
H2SO4 (<2)			
HNO3 (<2)			
HCl (<2) (not VOA vials)			
NaOH-Cyanide (>12)			
NaOH/Zn Acetate-Sulfide (>9)			
Other	18	NA	

OF NEAT BOTTLES: ____ # OF SOILS JARS: ____

INCONSISTENCIES

ACTION TAKEN

PERSON CONTACTED ____ DATE: ____
RESOLUTION ____

NOTES: ____

Project Manager: ____ (use back of sheet if necessary)

SEVERN TRENT STL

REVISED

ANALYTICAL REPORT

JOB NUMBER: 250930

Prepared For:

ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Attention: Theodora Overfelt

Date: 04/18/2003

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

04/18/03
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TOTAL NO. OF PAGES 38

64

SEVERN TRENT STL

REVISED

04/18/2003

Theodora Overfelt
ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Project : UPRR-HWPW-422-102/60
Project No. : 250930
Date Received : 03/14/2003
STL Job : 250930

Dear Theodora Overfelt:

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

1. MW-07-1SA03
2. MW-07MS-1SA03
3. MW-07MSD-1SA03
4. MW-11B-1SA03
5. MW-02-1SA03
6. MW-03-1SA03
7. MW-01A-1SA03
8. MW-01AD-1SA03
9. TB031203-1SA03

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

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

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements will be noted and included in a case narrative as a part of this report.

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

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

We look forward to working with you on future projects.

Sincerely,

Sachin G. Kudchadkar
Project Manager

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SEVERN TRENT STL

REVISED

SAMPLE INFORMATION
Date: 04/18/2003

Job Number.: 250930
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Theodora Overfelt

Project Number.....: 99000484
Customer Project ID....: 1ST SEMI ANNUAL 2003
Project Description....: UPRR-HWPW-422-102/60

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
250930-1	MW-07-1SA03 MW07	Water	03/12/2003	11:27	03/14/2003	14:55
250930-2	MW-07MS-1SA03 MW07MS	Water	03/12/2003	11:40	03/14/2003	14:55
250930-3	MW-07MSD-1SA03 MW07MSD	Water	03/12/2003	11:53	03/14/2003	14:55
250930-4	MW-11B-1SA03 MW11B	Water	03/12/2003	15:00	03/14/2003	14:55
250930-5	MW-02-1SA03 MW02	Water	03/12/2003	11:38	03/14/2003	14:55
250930-6	MW-03-1SA03 MW03	Water	03/12/2003	14:45	03/14/2003	14:55
250930-7	MW-01A-1SA03 MW10A	Water	03/12/2003	16:15	03/14/2003	14:55
250930-8	MW-01AD-1SA03 MW10AD	Water	03/12/2003	16:15	03/14/2003	14:55
250930-9	TB031203-1SA03 TB0312	Water	03/12/2003	00:00	03/14/2003	14:55

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TRENT STL

REVISED

LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:27
Sample Matrix.....: Water

Laboratory Sample ID: 250930-1
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/19/03 1810	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/19/03 1810	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/19/03 1810	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/19/03 1810	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/19/03 1810	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/19/03 1810	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	0.28	J		0.07	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Acenaphthylene, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Anthracene, Water	0.61			0.09	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	bis(2-ethylhexyl)phthalate, Water	1.02			0.35	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Dibenzofuran, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Fluoranthene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Fluorene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1

* In Description = Dry Wgt.

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TRENT STL

REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:27
Sample Matrix.....: Water

Laboratory Sample ID: 250930-1
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Pyrene, Water	0.12	J		0.09	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1501	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1501	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1501	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1435	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1435	zfl

* In Description = Dry Wgt.

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TRENT STL

REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07MS-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:40
Sample Matrix.....: Water

Laboratory Sample ID: 250930-2
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.263			0.01242	0.10	1.00000	ug/L	71364		03/19/03 1837	lg1
	bis(2-chloroethoxy)methane, Water	0.308			0.03919	0.10	1.00000	ug/L	71364		03/19/03 1837	lg1
	2,4-Dinitrotoluene, Water	0.326			0.01798	0.10	1.00000	ug/L	71364		03/19/03 1837	lg1
	2,6-Dinitrotoluene, Water	0.285			0.00825	0.10	1.00000	ug/L	71364		03/19/03 1837	lg1
	Pentachlorophenol, Water	0.858			0.013	0.30	1.00000	ug/L	71364		03/19/03 1837	lg1
	1,2-Diphenylhydrazine, Water	0.338			0.00584	0.10	1.00000	ug/L	71364		03/19/03 1837	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	7.68			0.07	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Acenaphthylene, Water	6.98			0.06	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Anthracene, Water	8.49			0.09	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Benzo(a)anthracene, Water	6.54			0.11	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	bis(2-ethylhexyl)phthalate, Water	4.86			0.35	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	2-Chloronaphthalene, Water	7.91			0.07	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Chrysene, Water	5.98			0.10	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Dibenzofuran, Water	7.85			0.07	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Di-n-butyl Phthalate, Water	8.35			0.26	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Fluoranthene, Water	8.10			0.09	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Fluorene, Water	7.81			0.07	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	2-Methylnaphthalene, Water	8.04			0.08	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Naphthalene, Water	7.51			0.10	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Nitrobenzene, Water	7.39			0.29	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1

* In Description = Dry Wgt.

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TRENT STL

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LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07MS-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:40
Sample Matrix.....: Water

Laboratory Sample ID: 250930-2
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	9.05			0.11	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Phenanthrene, Water	7.34			0.09	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Pyrene, Water	7.33			0.09	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	2,4-Dimethylphenol, Water	7.52			0.14	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	2-Methyl-4,6-dinitrophenol, Water	11.01			0.43	10.0	1.00000	ug/L	71360		03/18/03 1531	lg1
	4-Nitrophenol, Water	2.23			0.41	1.50	1.00000	ug/L	71360		03/18/03 1531	lg1
	Phenol, Water	2.32			0.06	0.50	1.00000	ug/L	71360		03/18/03 1531	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	49.9			0.77	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	Chlorobenzene, Water	49.4			0.68	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	1,2-Dichloroethane, Water	55.1			1.01	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	Ethylbenzene, Water	50.2			0.77	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	Methylene Chloride, Water	45.0			2.45	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	Toluene, Water	50.1			0.79	5	1.00000	ug/L	70900		03/17/03 1501	zfl
	Xylenes (total), Water	151			2.29	15	1.00000	ug/L	70900		03/17/03 1501	zfl

* In Description = Dry Wgt.

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TRENT STL

REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07MSD-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:53
Sample Matrix.....: Water

Laboratory Sample ID: 250930-3
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.259			0.01242	0.10	1.00000	ug/L	71364		03/19/03 1903	lg1
	bis(2-chloroethoxy)methane, Water	0.277			0.03919	0.10	1.00000	ug/L	71364		03/19/03 1903	lg1
	2,4-Dinitrotoluene, Water	0.301			0.01798	0.10	1.00000	ug/L	71364		03/19/03 1903	lg1
	2,6-Dinitrotoluene, Water	0.282			0.00825	0.10	1.00000	ug/L	71364		03/19/03 1903	lg1
	Pentachlorophenol, Water	0.748			0.013	0.30	1.00000	ug/L	71364		03/19/03 1903	lg1
	1,2-Diphenylhydrazine, Water	0.349			0.00584	0.10	1.00000	ug/L	71364		03/19/03 1903	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	7.51			0.07	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Acenaphthylene, Water	6.64			0.06	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Anthracene, Water	8.11			0.09	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Benzo(a)anthracene, Water	6.51			0.11	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	bis(2-ethylhexyl)phthalate, Water	4.95			0.35	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	2-Chloronaphthalene, Water	7.59			0.07	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Chrysene, Water	6.30			0.10	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Dibenzofuran, Water	7.57			0.07	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Di-n-butyl Phthalate, Water	8.04			0.26	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Fluoranthene, Water	7.82			0.09	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Fluorene, Water	7.52			0.07	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	2-Methylnaphthalene, Water	7.84			0.08	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Naphthalene, Water	7.38			0.10	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Nitrobenzene, Water	7.27			0.29	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-07MSD-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:53
Sample Matrix.....: Water

Laboratory Sample ID: 250930-3
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	8.94			0.11	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Phenanthrene, Water	7.08			0.09	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	Pyrene, Water	6.90			0.09	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	2,4-Dimethylphenol, Water	7.14			0.14	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
	2-Methyl-4,6-dinitrophenol, Water	10.94			0.43	10.0	1.00000	ug/L	71360		03/18/03 1602	lg1
	4-Nitrophenol, Water	2.58			0.41	1.50	1.00000	ug/L	71360		03/18/03 1602	lg1
72	Phenol, Water	2.30			0.06	0.50	1.00000	ug/L	71360		03/18/03 1602	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	49.7			0.77	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	Chlorobenzene, Water	49.7			0.68	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	1,2-Dichloroethane, Water	55.0			1.01	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	Ethylbenzene, Water	50.9			0.77	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	Methylene Chloride, Water	45.3			2.45	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	Toluene, Water	50.2			0.79	5	1.00000	ug/L	70900		03/17/03 1527	zfl
	Xylenes (total), Water	154			2.29	15	1.00000	ug/L	70900		03/17/03 1527	zfl

* In Description = Dry Wgt.

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TRENT STL

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Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-11B-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 15:00
Sample Matrix.....: Water

Laboratory Sample ID: 250930-4
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/19/03 1929	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/19/03 1929	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/19/03 1929	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/19/03 1929	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/19/03 1929	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/19/03 1929	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	59.5			0.1	1.0	2.00000	ug/L	71360		03/19/03 1346	lg1
	Acenaphthylene, Water	2.80			0.06	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Anthracene, Water	0.79			0.09	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	bis(2-ethylhexyl)phthalate, Water	1.29			0.35	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Dibenzofuran, Water	4.61			0.07	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Fluoranthene, Water	2.77			0.09	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Fluorene, Water	2.33			0.07	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Naphthalene, Water	3.27			0.10	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1

* In Description = Dry Wgt.

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REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-11B-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 15:00
Sample Matrix.....: Water

Laboratory Sample ID: 250930-4
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Pyrene, Water	1.37			0.09	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1631	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1631	lg1
	Phenol, Water	0.1	J		0.06	0.50	1.00000	ug/L	71360		03/18/03 1631	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1553	zfl
	Xylenes (total), Water	3.51	J		2.29	15	1.00000	ug/L	70900		03/17/03 1553	zfl

* In Description = Dry Wgt.

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Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-02-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:38
Sample Matrix.....: Water

Laboratory Sample ID: 250930-5
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/20/03 0842	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/20/03 0842	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/20/03 0842	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/20/03 0842	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/20/03 0842	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/20/03 0842	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	20.33			0.07	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Acenaphthylene, Water	0.96			0.06	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Anthracene, Water	1.22			0.09	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	bis(2-ethylhexyl)phthalate, Water	1.09			0.35	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Dibenzofuran, Water	14.03			0.07	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Fluoranthene, Water	0.95			0.09	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Fluorene, Water	14.80			0.07	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	2-Methylnaphthalene, Water	1.20			0.08	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Naphthalene, Water	11.86			0.10	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-02-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 11:38
Sample Matrix.....: Water

Laboratory Sample ID: 250930-5
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Phenanthrene, Water	1.64			0.09	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Pyrene, Water	0.48	J		0.09	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1701	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1701	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1701	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1619	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1619	zfl

* In Description = Dry Wgt.

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TRENT STL

REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-03-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 14:45
Sample Matrix.....: Water

Laboratory Sample ID: 250930-6
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/20/03 0908	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/20/03 0908	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/20/03 0908	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/20/03 0908	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/20/03 0908	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/20/03 0908	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	102.1			0.3	2.0	4.00000	ug/L	71360		03/19/03 1417	lg1
	Acenaphthylene, Water	0.94			0.06	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Anthracene, Water	1.79			0.09	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	bis(2-ethylhexyl)phthalate, Water	1.07			0.35	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Dibenzofuran, Water	22.65			0.07	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Fluoranthene, Water	8.68			0.09	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Fluorene, Water	43.78			0.07	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Naphthalene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-03-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 14:45
Sample Matrix.....: Water

Laboratory Sample ID: 250930-6
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	Pyrene, Water	3.37			0.09	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1731	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1731	lg1
78	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1731	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1645	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1645	zfl

* In Description = Dry Wgt.

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Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-01A-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 16:15
Sample Matrix.....: Water

Laboratory Sample ID: 250930-7
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/20/03 0934	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/20/03 0934	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/20/03 0934	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/20/03 0934	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/20/03 0934	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/20/03 0934	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	74.5			0.1	1.0	2.00000	ug/L	71360		03/19/03 1447	lg1
	Acenaphthylene, Water	2.47			0.06	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Anthracene, Water	1.77			0.09	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	bis(2-ethylhexyl)phthalate, Water	1.03			0.35	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Dibenzofuran, Water	19.84			0.07	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Fluoranthene, Water	5.40			0.09	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Fluorene, Water	7.82			0.07	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	2-Methylnaphthalene, Water	0.17	J		0.08	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Naphthalene, Water	1.36			0.10	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1

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LABORATORY TEST RESULTS

Job Number: 250930

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-01A-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 16:15
Sample Matrix.....: Water

Laboratory Sample ID: 250930-7
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Phenanthrene, Water	0.27	J		0.09	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Pyrene, Water	1.70			0.09	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1801	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1801	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1801	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1711	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1711	zfl

* In Description = Dry Wgt.

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SEVERN TRENT STL

REVISED

Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-01AD-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 16:15
Sample Matrix.....: Water

Laboratory Sample ID: 250930-8
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70887		03/17/03 0800	mra
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level											
	Separatory Funnel Liq/Liq Extraction, Water	Complete					1		70884		03/17/03 0800	mra
SW-846 8270C	Semivolatile Organics - SIM Analysis											
	Benzo(a)pyrene, Water	0.01242	U		0.01242	0.10	1.00000	ug/L	71364		03/20/03 1001	lg1
	bis(2-chloroethoxy)methane, Water	0.03919	U		0.03919	0.10	1.00000	ug/L	71364		03/20/03 1001	lg1
	2,4-Dinitrotoluene, Water	0.01798	U		0.01798	0.10	1.00000	ug/L	71364		03/20/03 1001	lg1
	2,6-Dinitrotoluene, Water	0.00825	U		0.00825	0.10	1.00000	ug/L	71364		03/20/03 1001	lg1
	Pentachlorophenol, Water	0.013	U		0.013	0.30	1.00000	ug/L	71364		03/20/03 1001	lg1
	1,2-Diphenylhydrazine, Water	0.00584	U		0.00584	0.10	1.00000	ug/L	71364		03/20/03 1001	lg1
SW-846 8270C	Semivolatile Organics, Low Level											
	Acenaphthene, Water	59.4			0.1	1.0	2.00000	ug/L	71360		03/19/03 1517	lg1
	Acenaphthylene, Water	1.90			0.06	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Anthracene, Water	1.33			0.09	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Benzo(a)anthracene, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	bis(2-ethylhexyl)phthalate, Water	1.01			0.35	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	2-Chloronaphthalene, Water	0.07	U		0.07	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Chrysene, Water	0.10	U		0.10	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Dibenzofuran, Water	13.59			0.07	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Di-n-butyl Phthalate, Water	0.26	U		0.26	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Fluoranthene, Water	4.60			0.09	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Fluorene, Water	2.35			0.07	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	2-Methylnaphthalene, Water	0.08	U		0.08	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Naphthalene, Water	0.34	J		0.10	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Nitrobenzene, Water	0.29	U		0.29	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1

* In Description = Dry Wgt.

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TRENT STL

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Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-01AD-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 16:15
Sample Matrix.....: Water

Laboratory Sample ID: 250930-8
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	n-Nitrosodiphenylamine, Water	0.11	U		0.11	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Phenanthrene, Water	0.09	U		0.09	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Pyrene, Water	1.35			0.09	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	2,4-Dimethylphenol, Water	0.14	U		0.14	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	2-Methyl-4,6-dinitrophenol, Water	0.43	U		0.43	10.0	1.00000	ug/L	71360		03/18/03 1831	lg1
	4-Nitrophenol, Water	0.41	U		0.41	1.50	1.00000	ug/L	71360		03/18/03 1831	lg1
	Phenol, Water	0.06	U		0.06	0.50	1.00000	ug/L	71360		03/18/03 1831	lg1
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1737	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1737	zfl

* In Description = Dry Wgt.

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Job Number: 250930

LABORATORY TEST RESULTS

Date:04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: TB031203-1SA03
Date Sampled.....: 03/12/2003
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 250930-9
Date Received.....: 03/14/2003
Time Received.....: 14:55

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	70900		03/17/03 1409	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	70900		03/17/03 1409	zfl

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* In Description = Dry Wgt.

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SEVERN TRENT STL

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QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

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)...: 71364 71441
Analyst...: lg1

LCS	Laboratory Control Sample	SVS030703A	70887-1		03/19/2003 1718

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.11880		0.250000		47.5		30-130	
Bis(2-chloroethoxy)methane, Water	0.15521		0.250000		62.1		30-130	
2,4-Dinitrotoluene, Water	0.14527		0.250000		58.1		60-140	P
2,6-Dinitrotoluene, Water	0.15377		0.250000		61.5		30-130	
Pentachlorophenol, Water	0.16726		0.250000		66.9		70-130	P
1,2-Diphenylhydrazine, Water	0.18764		0.000000		75.1		50-150	

MB	Method Blank	SVS012203A	70887-1		03/19/2003 1651

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

MS	Matrix Spike	SVS030703A	250930-2		03/19/2003 1837

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.13130		0.250000	0	53		30-130	
Bis(2-chloroethoxy)methane, Water	0.15424		0.250000	0	62		30-130	
2,4-Dinitrotoluene, Water	0.16287		0.250000	0	65		60-140	
2,6-Dinitrotoluene, Water	0.14248		0.250000	0	57		30-130	
Pentachlorophenol, Water	0.42902		0.250000	0	86		30-130	
1,2-Diphenylhydrazine, Water	0.16914		0.000000	0	68		50-150	

MSD	Matrix Spike Duplicate	SVS030703A	250930-3		03/19/2003 1903

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzo(a)pyrene, Water	0.12965	0.13130	0.250000	0	52 1.3		30-130 40.0	
Bis(2-chloroethoxy)methane, Water	0.13847	0.15424	0.250000	0	55 12		30-130 40	
2,4-Dinitrotoluene, Water	0.15042	0.16287	0.250000	0	60 8		60-140 40	
2,6-Dinitrotoluene, Water	0.14121	0.14248	0.250000	0	56 2		30-130 40	
Pentachlorophenol, Water	0.37384	0.42902	0.250000	0	75 14		30-130 40	
1,2-Diphenylhydrazine, Water	0.17458	0.16914	0.000000	0	70 3		50-150 30	

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

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QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
LCS	Laboratory Control Sample	SVS021003H	70887-1		03/20/2003 1642

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene, Water	0.22414		0.250000		89.7		30-130	
cenaphthylene, Water	0.19665		0.250000		78.7		30-130	
nthracene, Water	0.23570		0.250000		94.3		30-130	
enzo(a)anthracene, Water	0.21365		0.250000		85.5		30-130	
enzo(b)fluoranthene, Water	0.18533		0.250000		74.1		30-130	
enzo(k)fluoranthene, Water	0.22642		0.250000		90.6		30-130	
enzo(ghi)perylene, Water	0.16216		0.250000		64.9		30-130	
enzo(a)pyrene, Water	0.20095		0.250000		80.4		30-130	
rysene, Water	0.23692		0.250000		94.8		30-130	
benzo(a,h)anthracene, Water	0.14208		0.250000		56.8		30-130	
uoranthene, Water	0.25070		0.250000		100.3		30-130	
uorene, Water	0.25038		0.250000		100.2		30-130	
deno(1,2,3-cd)pyrene, Water	0.20467		0.250000		81.9		30-130	
-Methylnaphthalene, Water	0.28745		0.250000		115.0		30-130	
phthalene, Water	0.20018		0.250000		80.1		30-130	
enanthrene, Water	0.27353		0.250000		109.4		30-130	
rene, Water	0.25194		0.250000		100.8		30-130	

MB	Method Blank	SVS012203A	70887-1		03/20/2003 1615

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene, Water	0							
cenaphthylene, Water	0							
thracene, Water	0							
enzo(a)anthracene, Water	0							
enzo(b)fluoranthene, Water	0							
enzo(k)fluoranthene, Water	0							
enzo(ghi)perylene, Water	0							
enzo(a)pyrene, Water	0							
rysene, Water	0							
benzo(a,h)anthracene, Water	0							
uoranthene, Water	0							
uorene, Water	0							
deno(1,2,3-cd)pyrene, Water	0							
-Methylnaphthalene, Water	0							
phthalene, Water	0							
enanthrene, Water	0							
rene, Water	0							
-Methylnaphthalene, Water	0							

MS	Matrix Spike	SVS021003H	250910-12		03/20/2003 2304

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
cenaphthene, Water	0.50786		0.500000	0.16507	69		30-130	
cenaphthylene, Water	0.35618		0.500000	0	71		30-130	
nthracene, Water	0.43206		0.500000	0.07809	71		30-130	
enzo(a)anthracene, Water	0.37331		0.500000	0	75		30-130	
enzo(b)fluoranthene, Water	0.37090		0.500000	0	74		30-130	
enzo(k)fluoranthene, Water	0.38725		0.500000	0	77		30-130	
enzo(ghi)perylene, Water	0.34568		0.500000	0	69		30-130	

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

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QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MS	Matrix Spike	SVS021003H	250910-12		03/20/2003 2304

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enzo(a)pyrene, Water	0.37176		0.500000	0	74		30-130	
rysene, Water	0.37336		0.500000	0	75		30-130	
benzo(a,h)anthracene, Water	0.29111		0.500000	0	58		30-130	
luoranthene, Water	0.72555		0.500000	0.20883	103		30-130	
uorene, Water	0.58188		0.500000	0.19535	77		30-130	
deno(1,2,3-cd)pyrene, Water	0.43632		0.500000	0	87		30-130	
-Methylnaphthalene, Water	0.41450		0.500000	0.04042	75		30-130	
phthalene, Water	0.34345		0.500000	0.06013	57		30-130	
enanthrene, Water	1.00320		0.500000	0.52734	95		30-130	
ene, Water	0.55986		0.500000	0.13247	85		30-130	
-Methylnaphthalene, Water	0.43584		0.500000	0.02847	81		30-130	

MSD	Matrix Spike Duplicate	SVS021003H	250910-13		03/20/2003 2331

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	0.42887	0.50786	0.500000	0.16507	53		30-130	
					16.9		40.0	
enaphthylene, Water	0.35798	0.35618	0.500000	0	72		30-130	
					0.5		40.0	
thracene, Water	0.36996	0.43206	0.500000	0.07809	58		30-130	
					15.5		40.0	
nzo(a)anthracene, Water	0.38233	0.37331	0.500000	0	76		30-130	
					2.4		40.0	
nzo(b)fluoranthene, Water	0.42434	0.37090	0.500000	0	85		30-130	
					13.4		40.0	
nzo(k)fluoranthene, Water	0.41037	0.38725	0.500000	0	82		30-130	
					5.8		40.0	
nzo(ghi)perylene, Water	0.38904	0.34568	0.500000	0	78		30-130	
					11.8		40.0	
nzo(a)pyrene, Water	0.40755	0.37176	0.500000	0	82		30-130	
					9.2		40.0	
rysene, Water	0.39108	0.37336	0.500000	0	78		30-130	
					4.6		40.0	
benzo(a,h)anthracene, Water	0.33566	0.29111	0.500000	0	67		30-130	
					14.2		40.0	
uoranthene, Water	0.53973	0.72555	0.500000	0.20883	66		30-130	
					29.4		40.0	
orene, Water	0.47518	0.58188	0.500000	0.19535	56		30-130	
					20.2		40.0	
deno(1,2,3-cd)pyrene, Water	0.49103	0.43632	0.500000	0	98		30-130	
					11.8		40.0	
-Methylnaphthalene, Water	0.43153	0.41450	0.500000	0.04042	78		30-130	
					4.0		40.0	
phthalene, Water	0.35301	0.34345	0.500000	0.06013	59		30-130	
					2.7		40.0	
nanthrene, Water	0.55208	1.00320	0.500000	0.52734	5		30-130	A
					58.0		40.0	A
ene, Water	0.43821	0.55986	0.500000	0.13247	61		30-130	
					24.4		40.0	
-Methylnaphthalene, Water	0.45834	0.43584	0.500000	0.02847	86		30-130	
					5.0		40.0	

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

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QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	SVS031003B	70884-1		03/18/2003	1102

Test Method.....: SW-846 8270C
Method Description.: Semivolatile Organics, Low Level
Units.....: ug/L
Batch(s)...: 71360
Analyst...: lg1

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	3.96886		5.000000		79.4		32-165	
enaphthylene, Water	3.76188		5.000000		75.2		10-150	
thracene, Water	4.23614		5.000000		84.7		23-178	
nzo(a)anthracene, Water	4.23966		5.000000		84.8		25-180	
nzo(b)fluoranthene, Water	4.28333		5.000000		85.7		24-175	
nzo(k)fluoranthene, Water	3.80565		5.000000		76.1		15-185	
nzo(ghi)perylene, Water	3.80829		5.000000		76.2		15-182	
nzo(a)pyrene, Water	4.03463		5.000000		80.7		19-182	
s(2-ethylhexyl)phthalate, Water	4.01223		5.000000		80.2		25-173	
chloronaphthalene, Water	4.28310		5.000000		85.7		23-143	
ysene, Water	3.92815		5.000000		78.6		23-180	
benzo(a,h)anthracene, Water	4.44171		5.000000		88.8		12-178	
benzofuran, Water	4.25768		5.000000		85.2		35-153	
n-butyl Phthalate, Water	4.53388		5.000000		90.7		28-185	
uoranthene, Water	4.32624		5.000000		86.5		28-180	
orene, Water	4.15687		5.000000		83.1		30-189	
eno(1,2,3-cd)pyrene, Water	4.15105		5.000000		83.0		16-180	
ethylnaphthalene, Water	4.47251		5.000000		89.5		26-168	
phthalene, Water	4.13707		5.000000		82.7		36-139	
trobenzene, Water	4.00525		5.000000		80.1		17-163	
Nitrosodiphenylamine, Water	4.92919		5.000000		98.6		58-174	
enanthrene, Water	4.03005		5.000000		80.6		26-166	
ene, Water	3.84105		5.000000		76.8		28-173	
-Dimethylphenol, Water	3.82628		5.000000		76.5		23-157	
ethyl-4,6-dinitrophenol, Water	6.00127		5.000000		120.0		17-164	
Nitrophenol, Water	1.36420		5.000000		27.3		10-92	
nol, Water	1.49355		5.000000		29.9		20-83	
bazole, Water	4.20317		5.000000		84.1		24-169	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	SVS012203A	70884-1		03/18/2003	1232

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	0							
enaphthylene, Water	0							
thracene, Water	0							
nzo(a)anthracene, Water	0							
nzo(b)fluoranthene, Water	0							
nzo(k)fluoranthene, Water	0							
nzo(ghi)perylene, Water	0							
nzo(a)pyrene, Water	0							
s(2-ethylhexyl)phthalate, Water	0.53208							
chloronaphthalene, Water	0							
ysene, Water	0							
benzo(a,h)anthracene, Water	0							
benzofuran, Water	0							
n-butyl Phthalate, Water	0.10242							
uoranthene, Water	0							
orene, Water	0							

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

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QUALITY CONTROL RESULTS

Job Number.: 250930 Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	SVS012203A	70884-1		03/18/2003 1232

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ndeno(1,2,3-cd)pyrene, Water	0							
-Methylnaphthalene, Water	0							
phthalene, Water	0							
itrobenzene, Water	0							
-Nitrosodiphenylamine, Water	0							
enanthrene, Water	0							
ene, Water	0							
,4-Dimethylphenol, Water	0							
-Methyl-4,6-dinitrophenol, Water	0							
-Nitrophenol, Water	0							
nol, Water	0							
-Methylnaphthalene, Water	0							
rbazole, Water	0							

MS	Matrix Spike	SVS031003B	250930-2		03/18/2003 1531

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	3.84121		5.000000	0.13862	74		46-118	
enaphthylene, Water	3.48792		5.000000	0	70		30-130	
thracene, Water	4.24539		5.000000	0.30392	79		30-130	
nzo(a)anthracene, Water	3.27212		5.000000	0	65		60-140	
s(2-ethylhexyl)phthalate, Water	2.43196		5.000000	0.51043	38		60-140	P
-Chloronaphthalene, Water	3.95281		5.000000	0	79		30-130	
rysene, Water	2.99026		5.000000	0	60		30-130	
benzofuran, Water	3.92393		5.000000	0	78		30-130	
-n-butyl Phthalate, Water	4.17621		5.000000	0.06381	82		30-130	
uoranthene, Water	4.04924		5.000000	0	81		30-130	
uorene, Water	3.90404		5.000000	0	78		30-130	
-Methylnaphthalene, Water	4.01935		5.000000	0	80		60-140	
phthalene, Water	3.75619		5.000000	0	75		30-130	
itrobenzene, Water	3.69556		5.000000	0	74		30-130	
-Nitrosodiphenylamine, Water	4.52305		5.000000	0	90		30-130	
enanthrene, Water	3.66906		5.000000	0	73		30-130	
ene, Water	3.66651		5.000000	0.06105	72		26-115	
,4-Dimethylphenol, Water	3.76157		5.000000	0	75		30-130	
Methyl-4,6-dinitrophenol, Water	5.50281		5.000000	0	110		30-130	
Nitrophenol, Water	1.11316		5.000000	0	22		10-80	
nol, Water	1.16116		5.000000	0	23		10-112	

MSD	Matrix Spike Duplicate	SVS031003B	250930-3		03/18/2003 1602

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
enaphthene, Water	3.75489	3.84121	5.000000	0.13862	72		46-118	
					2.3		31.0	
enaphthylene, Water	3.31928	3.48792	5.000000	0	66		30-130	
					5.0		50.0	
thracene, Water	4.05733	4.24539	5.000000	0.30392	75		30-130	
					4.5		50.0	
nzo(a)anthracene, Water	3.25457	3.27212	5.000000	0	65		60-140	
					0.5		30.0	

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

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SEVERN TRENT STL

REVISED

QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MSD	Matrix Spike Duplicate	SVS031003B	250930-3		03/18/2003 1602

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
is(2-ethylhexyl)phthalate, Water	2.47289	2.43196	5.000000	0.51043	39		60-140	P
					1.7		30.0	
-Chloronaphthalene, Water	3.79660	3.95281	5.000000	0	76		30-130	
					4.0		50.0	
rysene, Water	3.15082	2.99026	5.000000	0	63		30-130	
					5.2		50.0	
benzofuran, Water	3.78553	3.92393	5.000000	0	76		30-130	
					3.6		50.0	
-n-butyl Phthalate, Water	4.02199	4.17621	5.000000	0.06381	79		30-130	
					3.8		50.0	
uoranthene, Water	3.91092	4.04924	5.000000	0	78		30-130	
					3.5		50.0	
uorene, Water	3.75786	3.90404	5.000000	0	75		30-130	
					3.8		50.0	
-Methylnaphthalene, Water	3.92204	4.01935	5.000000	0	78		60-140	
					2.5		30.0	
phthalene, Water	3.69079	3.75619	5.000000	0	74		30-130	
					1.8		50.0	
trobenzene, Water	3.63648	3.69556	5.000000	0	73		30-130	
					1.6		50.0	
-Nitrosodiphenylamine, Water	4.47188	4.52305	5.000000	0	89		30-130	
					1.1		50.0	
enanthrene, Water	3.53863	3.66906	5.000000	0	71		30-130	
					3.6		50.0	
ene, Water	3.44898	3.66651	5.000000	0.06105	68		26-115	
					6.1		31.0	
-Dimethylphenol, Water	3.57089	3.76157	5.000000	0	71		30-130	
					5.2		50.0	
Methyl-4,6-dinitrophenol, Water	5.46792	5.50281	5.000000	0	109		30-130	
					0.6		50.0	
Nitrophenol, Water	1.28808	1.11316	5.000000	0	26		10-80	
					14.6		50.0	
nol, Water	1.15234	1.16116	5.000000	0	23		10-112	
					0.8		23.0	

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

Method Description.: Volatile Organics Batch(s)...: 70900

LCS	Laboratory Control Sample	VS030603E			03/17/2003 1224

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	46.8526		50.00	ND	93.7		68-127	
lorobenzene, Water	46.4008		50.00	ND	92.8		65-129	
-Dichloroethane, Water	51.9831		50.00	ND	104.0		65-133	
ylbenzene, Water	47.3499		50.00	ND	94.7		64-132	
thylene Chloride, Water	44.3110		50.00	1.02350	88.6		54-133	
uene, Water	47.0572		50.00	ND	94.1		63-127	
lenes (total), Water	142.381		150.00	ND	94.9		37-161	

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

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SEVERN TRENT STL

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QUALITY CONTROL RESULTS

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	VS030603C			03/17/2003 1343

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	ND							
nlorobenzene, Water	ND							
,2-Dichloroethane, Water	ND							
thylbenzene, Water	ND							
thylene Chloride, Water	1.02350							
luene, Water	ND							
ylenes (total), Water	ND							

MS	Matrix Spike	VS030603E	250930-2		03/17/2003 1501

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	49.8514		50.00	ND	100		65-125	
nlorobenzene, Water	49.4106		50.00	ND	99		74-122	
,2-Dichloroethane, Water	55.0799		50.00	ND	110		60-140	
thylbenzene, Water	50.1918		50.00	ND	100		60-140	
thylene Chloride, Water	44.9729		50.00	ND	90		60-140	
luene, Water	50.1202		50.00	ND	100		76-125	
ylenes (total), Water	151.425		150.00	ND	101		60-140	

MSD	Matrix Spike Duplicate	VS030603E	250930-3		03/17/2003 1527

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	49.7121	49.8514	50.00	ND	99		65-125	
					0.3		30.0	
nlorobenzene, Water	49.7429	49.4106	50.00	ND	99		74-122	
					0.7		30.0	
,2-Dichloroethane, Water	55.0129	55.0799	50.00	ND	110		60-140	
					0.1		30.0	
thylbenzene, Water	50.8547	50.1918	50.00	ND	102		60-140	
					1.3		30.0	
thylene Chloride, Water	45.2575	44.9729	50.00	ND	91		60-140	
					0.6		30.0	
luene, Water	50.2363	50.1202	50.00	ND	100		76-125	
					0.2		30.0	
ylenes (total), Water	153.856	151.425	150.00	ND	103		60-140	
					1.6		30.0	

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

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SURROGATE RECOVERIES REPORT

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Volatile Organics
Batch(s).....: 70900

Method Code...: 8260
Test Matrix...: Water

Prep Batch....:
Equipment Code: GCMSVOA07

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
70900--21	LCS		03/17/2003	99.9	102.1	93.5	92.4
70900--21	MB		03/17/2003	100.2	114.4	95.3	98.6
50930- 1		MW-07-1SA03	03/17/2003	101.5	119.2	96.5	101.6
50930- 2		MW-07MS-1SA03	03/17/2003	103.2	111.5	96.9	97.3
50930- 2	MS	MW-07MS-1SA03	03/17/2003	103.2	111.5	96.9	97.3
50930- 3		MW-07MSD-1SA03	03/17/2003	103.0	112.7	99.1	100.1
50930- 3	MSD	MW-07MSD-1SA03	03/17/2003	103.0	112.7	99.1	100.1
50930- 4		MW-11B-1SA03	03/17/2003	105.0	110.8	97.1	99.9
50930- 5		MW-02-1SA03	03/17/2003	103.3	114.8	96.1	98.5
50930- 6		MW-03-1SA03	03/17/2003	100.7	113.9	93.8	99.4
50930- 7		MW-01A-1SA03	03/17/2003	102.2	110.9	95.5	97.1
50930- 8		MW-01AD-1SA03	03/17/2003	101.6	111.5	94.3	96.3
50930- 9		TB031203-1SA03	03/17/2003	95.3	106.1	86.4	89.7

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

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SURROGATE RECOVERIES REPORT

Job Number.: 250930 Report Date.: 04/18/2003

CUSTOMER: 483648 PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics, Low Level Method Code...: 8270LL Prep Batch....: 70884
Batch(s).....: 71360 Test Matrix...: Water Equipment Code: EGCMS07

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
70884- 1	LCS		03/18/2003	107.0	86.0	40.3	84.6	33.4	80.1
70884- 1	MB		03/18/2003	103.8	83.0	42.7	85.2	38.4	80.6
250930- 1		MW-07-1SA03	03/18/2003	89.1	71.0	29.4	72.0	27.0	68.4
250930- 2		MW-07MS-1SA03	03/18/2003	104.7	80.0	30.7	75.8	28.5	65.5
250930- 2	MS	MW-07MS-1SA03	03/18/2003	104.7	80.0	30.7	75.8	28.5	65.5
250930- 3		MW-07MSD-1SA03	03/18/2003	97.3	77.0	29.4	73.9	30.1	64.8
250930- 3	MSD	MW-07MSD-1SA03	03/18/2003	97.3	77.0	29.4	73.9	30.1	64.8
250930- 4		MW-11B-1SA03	03/18/2003	102.4	78.9	37.3	77.3	30.4	77.2
250930- 4		MW-11B-1SA03	03/19/2003	99.6	92.3	47.8	81.8	32.3	85.1
250930- 5		MW-02-1SA03	03/18/2003	97.0	78.1	45.5	74.9	28.7	77.3
250930- 6		MW-03-1SA03	03/18/2003	96.8	75.9	32.1	74.3	29.5	76.4
250930- 6		MW-03-1SA03	03/19/2003	91.6	100.1	50.5	85.7	33.5	96.2
250930- 7		MW-01A-1SA03	03/18/2003	97.3	75.7	28.9	76.5	31.0	73.3
250930- 7		MW-01A-1SA03	03/19/2003	87.5	93.0	45.1	80.4	30.7	84.2
250930- 8		MW-01AD-1SA03	03/18/2003	93.8	72.6	30.6	73.5	26.3	70.4
250930- 8		MW-01AD-1SA03	03/19/2003	89.8	84.3	47.9	75.7	30.8	80.1

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

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SURROGATE RECOVERIES REPORT

Job Number.: 250930

Report Date.: 04/18/2003

CUSTOMER: 483648 PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Semivolatile Organics - SIM Analysis
Batch(s).....: 71364 71441

Method Code...: 8270SI
Test Matrix...: Water

Prep Batch....: 70887
Equipment Code: EGCMS06

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	NITRD5	TERD14
70887- 1	LCS		03/19/2003	97.2	89.7	84.0	91.7
70887- 1	LCS		03/20/2003		92.0	70.4	102.2
70887- 1	MB		03/19/2003	84.2	80.3	81.7	76.4
70887- 1	MB		03/20/2003		81.9	68.9	83.9
50910- 12	MS	PMT-25 MS	03/20/2003		84.1	58.6	89.9
50910- 13	MSD	PMT-25 MSD	03/20/2003		86.2	66.1	94.0
50930- 1		MW-07-1SA03	03/19/2003	86.0	69.0	71.1	64.7
50930- 2		MW-07MS-1SA03	03/19/2003	104.9	88.7	81.2	89.4
50930- 2	MS	MW-07MS-1SA03	03/19/2003	104.9	88.7	81.2	89.4
50930- 3		MW-07MSD-1SA03	03/19/2003	102.7	81.2	73.0	84.3
50930- 3	MSD	MW-07MSD-1SA03	03/19/2003	102.7	81.2	73.0	84.3
50930- 4		MW-11B-1SA03	03/19/2003	101.5	76.1	77.6	71.5
50930- 5		MW-02-1SA03	03/20/2003	95.9	75.4	76.4	70.4
50930- 6		MW-03-1SA03	03/20/2003	93.4	72.6	72.7	73.0
50930- 7		MW-01A-1SA03	03/20/2003	96.5	73.3	75.2	69.8
50930- 8		MW-01AD-1SA03	03/20/2003	97.0	69.8	71.4	67.7

Test	Test Description	Limits
46TBP	2,4,6-Tribromophenol	10 - 123
2FLUBP	2-Fluorobiphenyl	43 - 116
NITRD5	Nitrobenzene-d5	35 - 114
TERD14	Terphenyl-d14	33 - 141

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/18/2003

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

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.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- 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.

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 RL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL 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.
b - Target analyte was found in the method blank.
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 RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

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Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. 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.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - 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.

Abbreviations:

Batch	- Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV	- Continuing Calibration Verification
CRA	- Low level standard check - GFAA, Mercury
CRI	- Low level standard check - ICP
Dil Fac	- Dilution Factor - Secondary dilution analysis
DLFac	- Detection Limit Factor
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected

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PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

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), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(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.
(7) ASTM Annual Book of Methods (Various Years)
(8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

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LABORATORY CHRONICLE

Job Number: 250930 Date: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 250930-1 Client ID: MW-07-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
	Data Package Validation	1	71806		03/28/2003	0000	
	Electronic Data Deliverables	1	72445		04/15/2003	1611	
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
	GC/MS Semi-Volatile Package Production	1	71405				
	GC/MS Volatiles Data Package Production	1	71523		03/25/2003	1700	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/19/2003	1810	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1501	1.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1435	1.00000

Lab ID: 250930-2 Client ID: MW-07MS-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/19/2003	1837	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1531	1.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1501	1.00000

Lab ID: 250930-3 Client ID: MW-07MSD-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/19/2003	1903	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1602	1.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1527	1.00000

Lab ID: 250930-4 Client ID: MW-11B-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846-3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/19/2003	1929	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1631	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/19/2003	1346	2.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1553	1.00000

Lab ID: 250930-5 Client ID: MW-02-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/20/2003	0842	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1701	1.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1619	1.00000

Lab ID: 250930-6 Client ID: MW-03-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/20/2003	0908	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1731	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/19/2003	1417	4.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1645	1.00000

Lab ID: 250930-7 Client ID: MW-01A-1SA03 Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	

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SEVERN TRENT STL

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LABORATORY CHRONICLE

Job Number: 250930

Date: 04/18/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 250930-7 Client ID: MW-01A-1SA03

Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/20/2003	0934	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1801	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/19/2003	1447	2.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1711	1.00000

Lab ID: 250930-8 Client ID: MW-01AD-1SA03

Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC - SIM	1	70887		03/17/2003	0800	
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	70884		03/17/2003	0800	
SW-846 8270C	Semivolatile Organics - SIM Analysis	1	71364	70887	03/20/2003	1001	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/18/2003	1831	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	71360	70884	03/19/2003	1517	2.00000
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1737	1.00000

Lab ID: 250930-9 Client ID: TB031203-1SA03

Date Recvd: 03/14/2003 Sample Date: 03/12/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
SW-846 8260B	Volatile Organics	1	70900		03/17/2003	1409	1.00000

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SEVERN TRENT SERVICES

STL Houston
6310 Rothway Drive
Houston, TX 77040

No. 0065[illegible]5

REVISED CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	
COMPANY:	ERM - Southwest
SEND REPORT TO:	Theccina Overfelt
ADDRESS:	15810 Park Ten Place Suite 3C Houston, TX 77084
PHONE:	281-600-1000
FAX:	281-600-1001

PROJECT INFORMATION	
PROJECT NAME/NUMBER:	UPRR - [illegible] 422-102/EC
BILLING INFORMATION	
BILL TO:	UPRR
ADDRESS:	
PHONE:	
FAX:	PO NO.:

LAB JOB NO.: 250930

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	8260B - VOCs	8270C - limited	8270C - SIM						REMARKS/PRECAUTIONS
	MW-07-ISA03	3/13/03	1137	Water	5	Y		X	X	X						
	MW-07MS-ISA03	"	1140	"	5	Y		X	X	X						
	MW-07MSD-ISA03	"	1153	"	5	Y		X	X	X						
	MW-11B-ISA03	"	1500	"	5	Y		X	X	X						
	MW-02-ISA03	"	1138	"	5	Y		X	X	X						
	MW-03-ISA03	"	1445	"	5	Y		X	X	X						
	MW10A-ISA03	"	1615	"	5	Y		X	X	X						
	MW10AD-ISA03	"	1615	"	5	Y		X	X	X						
	TB031303-ISA03	"	0:00	"	2	N		X								

SAMPLER: Vivian Rohlack, Scarlet King

SHIPMENT METHOD:

AIRBILL NO.:

REQUIRED TURNAROUND: ☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☐ ROUTINE ☐ OTHER Standard

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE: Vivian Rohlack	3/13/03	SIGNATURE: [signature]	3/14/03	SIGNATURE:	
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY: STL	TIME 2:55	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	**DATE**	**2. RECEIVED BY:**	**DATE**	**3. RECEIVED BY:**	**DATE**
SIGNATURE: [signature]	3/14/03	SIGNATURE: Iris Benitez	3/14/03	SIGNATURE:	
PRINTED NAME/COMPANY: STL	TIME 2122	PRINTED NAME/COMPANY: STL	TIME 14:55	PRINTED NAME/COMPANY:	TIME

RUSH TURNAROUND MAY REQUIRE SURCHARGE

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STL 8222-H (0700)

000014

REVISED

,sckl | Job Sample Receipt Checklist Report | V2

Job Number.: 250930 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 03/14/2003 Date of the Report..: 03/14/2003
Project Number.: 99000484 Project Description.: UPRR-HWPW-422-102/60 Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.- Houston Contact.: Theodora Overfelt

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	2.4,2.2,2.9
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	368
Samples received intact (good condition)?	Y	JB 3/14/03
Volatile samples acceptable? (no headspace)		
...rect 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	EIB

000015

STL HOUSTON - SAMPLE RECEIPT CHECKLIST

RUSH

REVISED

GENERAL SHIPMENT INFORMATION

CLIENT NAME: E.R.M. CARRIER/DRIVER NAME: UPS

DATE SHIPPED: UNPACKED BY: IB

DATE RECEIVED: 10-6-05 UNPACKED STAMP:

TOTAL # COOLERS RECEIVED: 3 TRACKING NUMBER(S): [illegible] (retain air bills in project folder) 13:22

COOLER CHECKLIST

COOLER ID	COC Present (Y/N)	CUSTODY TAPE Present (Y/N)	CUSTODY TAPE Intact (Y/N/NA)	COOLER TEMP (deg C)	THERMOMETER #
w/B 61	Yes	C Yes	C Yes	2.4°C	368
		B N	B N		
w/B 0201	Yes	C no	C no	2.2°C	368
		B N	B N		
w/B 668	Yes	C no	C no	2.9°C	368
		B N	B N		

C-Cooler · B-Bottles

COOLER(S) SCREENED FOR RADIATION? Yes ✓ No ____

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

SPECIFIC PROJECT INFORMATION

JOB NUMBER: 250930

PROJECT NAME: 422-197/60

VOLATILE HEADSPACE ACCEPTABLE? Yes ✓ No ____ NA ____ Preserved? Yes ✓ No ____

(If headspace is present, list details in INCONSISTENCIES section) Number of VOA vials: 30

pH OF WATER SAMPLES:

PRESERVATION	# BOTTLES	CORRECT PH Y/N	(If N, list sample ID and corresponding pH)
H2SO4 (<2)			
HNO3 (<2)			
HCl (<2) (not VOA vials)			
NaOH-Cyanide (>12)			
NaOH/Zn Acetate-Sulfide (>9)			
Other Na2S2O3	10	NA	

OF NEAT BOTTLES: ____ # OF SOILS JARS: ____

INCONSISTENCIES

ACTION TAKEN

PERSON CONTACTED: ____ DATE: ____

RESOLUTION ____

NOTES: ____

Project Manager: ____ (use back of sheet if necessary)

000016

SEVERN TRENT STL

REVISED

ANALYTICAL REPORT

JOB NUMBER: 251063

Prepared For:

ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Attention: Theodora Overfelt

Date: 04/14/2003

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

04/14/03
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

TOTAL NO. OF PAGES 21
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SEVERN TRENT STL

03/31/2003

Theodora Overfelt
ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Reference:
Project : UPRR-HWPW-422-102/60
Project No. : 251063
Date Received : 03/18/2003
STL Job : 251063

Dear Theodora Overfelt:

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

1. P12-1SA03
2. MW-10A-1SA03
3. MW-10B-1SA03
4. MW-08-1SA03
5. MW-09-1SA03
6. MW-04-1SA03
7. TB031803

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

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

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements will be noted and included in a case narrative as a part of this report.

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

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

We look forward to working with you on future projects.

Sincerely,

SKudchadkar

Sachin G. Kudchadkar
Project Manager

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SEVERN TRENT STL

SAMPLE INFORMATION
Date: 04/14/2003

Job Number.: 251063
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Theodora Overfelt

Project Number.....: 99000484
Customer Project ID....: 1ST SEMI ANNUAL 2003
Project Description....: UPRR-HWPW-422-102/60

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
251063-1	P12-1SA03	Water	03/18/2003	10:52	03/18/2003	15:36
251063-2	MW-10A-1SA03	Water	03/18/2003	12:18	03/18/2003	15:36
251063-3	MW-10B-1SA03	Water	03/18/2003	13:03	03/18/2003	15:36
251063-4	MW-08-1SA03	Water	03/18/2003	11:07	03/18/2003	15:36
251063-5	MW-09-1SA03	Water	03/18/2003	12:32	03/18/2003	15:36
251063-6	MW-04-1SA03	Water	03/18/2003	13:24	03/18/2003	15:36
251063-7	TB031803	Trip Blank	03/18/2003	00:00	03/18/2003	15:36

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: P12-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 10:52
Sample Matrix.....: Water

Laboratory Sample ID: 251063-1
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	Data Package Validation											
	GC/MS VOA Validation, Water	Complete					1		71932		03/31/03 0000	qle
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 1747	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 1747	zfl

* In Description = Dry Wgt.

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-10A-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 12:18
Sample Matrix.....: Water

Laboratory Sample ID: 251063-2
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 1905	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 1905	zfl

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-10B-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 13:03
Sample Matrix.....: Water

Laboratory Sample ID: 251063-3
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	1.36	J		0.77	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	Ethylbenzene, Water	1.28	J		0.77	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 1931	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 1931	zfl

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-08-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 11:07
Sample Matrix.....: Water

Laboratory Sample ID: 251063-4
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 1957	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 1957	zfl

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-09-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 12:32
Sample Matrix.....: Water

Laboratory Sample ID: 251063-5
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/21/03 1533	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/21/03 1533	zfl

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-04-1SA03
Date Sampled.....: 03/18/2003
Time Sampled.....: 13:24
Sample Matrix.....: Water

Laboratory Sample ID: 251063-6
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 2050	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 2050	zfl

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TRENT STL

Job Number: 251063

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: TB031803
Date Sampled.....: 03/18/2003
Time Sampled.....: 00:00
Sample Matrix.....: Trip Blank

Laboratory Sample ID: 251063-7
Date Received.....: 03/18/2003
Time Received.....: 15:36

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 2116	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 2116	zfl

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* In Description = Dry Wgt.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251063

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

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

Test Method.....: SW-846 8260B | Units.....: ug/L | Analyst...: zfl
Method Description.: Volatile Organics | Batch(s)...: 71313

LCS	Laboratory Control Sample	VS032003E			03/20/2003	1629

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	54.3444		50.00	ND	108.7		68-127	
orobenzene, Water	55.1168		50.00	ND	110.2		65-129	
2-Dichloroethane, Water	54.7320		50.00	ND	109.5		65-133	
ylbenzene, Water	58.2448		50.00	ND	116.5		64-132	
thylene Chloride, Water	51.0189		50.00	ND	102.0		54-133	
uene, Water	58.4545		50.00	ND	116.9		63-127	
lenes (total), Water	171.641		150.00	ND	114.4		37-161	

LCS	Laboratory Control Sample	VS032003E			03/21/2003	1349

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	57.2079		50.00	ND	114.4		68-127	
orobenzene, Water	54.3087		50.00	ND	108.6		65-129	
2-Dichloroethane, Water	61.7557		50.00	ND	123.5		65-133	
ylbenzene, Water	56.1637		50.00	ND	112.3		64-132	
thylene Chloride, Water	58.3173		50.00	1.08034	116.6		54-133	
uene, Water	56.7045		50.00	ND	113.4		63-127	
lenes (total), Water	167.806		150.00	ND	111.9		37-161	

MB	Method Blank	VS032003C			03/20/2003	1655

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	ND							
orobenzene, Water	ND							
2-Dichloroethane, Water	ND							
ylbenzene, Water	ND							
thylene Chloride, Water	ND							
uene, Water	ND							
lenes (total), Water	ND							

MB	Method Blank	VS032003C			03/21/2003	1441

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	ND							
orobenzene, Water	ND							
2-Dichloroethane, Water	ND							
ylbenzene, Water	ND							
thylene Chloride, Water	1.08034							
uene, Water	ND							
lenes (total), Water	ND							

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251063

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MS	Matrix Spike	VS032003E	251063-1		03/20/2003 1813

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	53.4946		50.00	ND	107		65-125	
orobenzene, Water	50.6350		50.00	ND	101		74-122	
2-Dichloroethane, Water	51.5498		50.00	ND	103		66-123	
ylbenzene, Water	52.7465		50.00	ND	105		70-122	
thylene Chloride, Water	50.6723		50.00	ND	101		55-127	
uene, Water	52.2758		50.00	ND	105		76-125	
enes (total), Water	157.974		150.00	ND	105		71-128	

MS	Matrix Spike	VS032003E	251138-1		03/21/2003 1625

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	50.6876		50.00	ND	101		65-125	
orobenzene, Water	49.5629		50.00	ND	99		74-122	
2-Dichloroethane, Water	60.4642		50.00	ND	121		66-123	
ylbenzene, Water	49.1028		50.00	ND	98		70-122	
thylene Chloride, Water	52.2478		50.00	ND	104		55-127	
uene, Water	50.2564		50.00	ND	101		76-125	
enes (total), Water	149.483		150.00	ND	100		71-128	

MSD	Matrix Spike Duplicate	VS032003E	251063-1		03/20/2003 1839

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	50.4148	53.4946	50.00	ND	101		65-125	
					5.9		30.0	
orobenzene, Water	49.4957	50.6350	50.00	ND	99		74-122	
					2.3		30.0	
-Dichloroethane, Water	46.5302	51.5498	50.00	ND	93		66-123	
					10.2		30.0	
ylbenzene, Water	51.3553	52.7465	50.00	ND	103		70-122	
					2.7		30.0	
thylene Chloride, Water	45.5902	50.6723	50.00	ND	91		55-127	
					10.6		30.0	
ene, Water	50.9433	52.2758	50.00	ND	102		76-125	
					2.6		30.0	
enes (total), Water	153.438	157.974	150.00	ND	102		71-128	
					2.9		30.0	

MSD	Matrix Spike Duplicate	VS032003E	251138-1		03/21/2003 1651

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ene, Water	52.2915	50.6876	50.00	ND	105		65-125	
					3.1		30.0	
orobenzene, Water	52.0654	49.5629	50.00	ND	104		74-122	
					4.9		30.0	
-Dichloroethane, Water	52.2199	60.4642	50.00	ND	104		66-123	
					14.6		30.0	
lbenzene, Water	53.5165	49.1028	50.00	ND	107		70-122	
					8.6		30.0	

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251063

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MSD	Matrix Spike Duplicate	VS032003E	251138-1		03/21/2003 1651

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
thylene Chloride, Water	48.4697	52.2478	50.00	ND	97		55-127	
					7.5		30.0	
uene, Water	52.4599	50.2564	50.00	ND	105		76-125	
					4.3		30.0	
enes (total), Water	159.830	149.483	150.00	ND	107		71-128	
					6.7		30.0	

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

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SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 251063

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Volatile Organics
Batch(s).....: 71313

Method Code...: 8260
Test Matrix...: Water

Prep Batch....:
Equipment Code: GCMSVOA06

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
1063- 1		P12-1SA03	03/20/2003	99.7	105.2	97.5	104.9
1063- 1	MS	P12-1SA03	03/20/2003	96.2	106.5	95.0	104.5
1063- 1	MSD	P12-1SA03	03/20/2003	88.6	104.5	91.8	101.0
1063- 2		MW-10A-1SA03	03/20/2003	105.6	110.3	103.9	109.4
1063- 3		MW-10B-1SA03	03/20/2003	125.0	104.9	118.9	108.7
1063- 4		MW-08-1SA03	03/20/2003	103.8	109.0	102.9	108.2
1063- 5		MW-09-1SA03	03/21/2003	102.9	107.7	96.4	106.1
1063- 6		MW-04-1SA03	03/20/2003	89.3	108.8	91.3	106.6
1063- 7		TB031803	03/20/2003	129.9	102.9	125.0	104.5
1138- 1	MS	MW-05-1SA03	03/21/2003	123.4	106.6	117.6	110.0
1138- 1	MSD	MW-05-1SA03	03/21/2003	94.0	103.9	93.3	102.8
3131--21	LCS		03/20/2003	104.0	108.9	114.8	108.2
3131--21	MB		03/20/2003	98.0	90.9	90.9	86.9
3132--21	LCS		03/21/2003	119.8	107.5	112.5	105.9
3132--21	MB		03/21/2003	100.2	101.8	98.2	99.7

Test	Test Description	Limits
DCED	1,2-Dichloroethane-d4	70 - 130
FLBE	4-Bromofluorobenzene	70 - 130
RFLM	Dibromofluoromethane	70 - 130
D8	Toluene-d8	70 - 130

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

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.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- 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.

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 RL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL 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.
b - Target analyte was found in the method blank.
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 RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. 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.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - 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.

Abbreviations:

Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV - Continuing Calibration Verification
CRA - Low level standard check - GFAA, Mercury
CRI - Low level standard check - ICP
Dil Fac - Dilution Factor - Secondary dilution analysis
DLFac - Detection Limit Factor
EB - Extraction Blank (TCLP, SPLP, etc.)
ICAL - Initial Calibration
ICB - Initial Calibration Blank
ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
LCD - Laboratory Control Duplicate
LCS - Laboratory Control Sample
MB - Method Blank
MD - Method Duplicate
MDL - Method Detection Limit
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

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), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(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.
(7) ASTM Annual Book of Methods (Various Years)
(8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

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SEVERN TRENT STL

LABORATORY CHRONICLE

Job Number: 251063

Date: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Lab ID: 251063-1 Client ID: P12-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Data Package Validation	1	71932		03/31/2003 0000	
	Electronic Data Deliverables	1				
	GC/MS Volatiles Data Package Production	1	71523		03/25/2003 1700	
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 1747	1.00000

Lab ID: 251063-2 Client ID: MW-10A-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 1905	1.00000

Lab ID: 251063-3 Client ID: MW-10B-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 1931	1.00000

Lab ID: 251063-4 Client ID: MW-08-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 1957	1.00000

Lab ID: 251063-5 Client ID: MW-09-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/21/2003 1533	1.00000

Lab ID: 251063-6 Client ID: MW-04-1SA03

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 2050	1.00000

Lab ID: 251063-7 Client ID: TB031803

Date Recvd: 03/18/2003 Sample Date: 03/18/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 2116	1.00000

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STL Houston
6310 Rothway Drive
Houston, TX 77040

No. 006..8

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: ERM Southwest	PROJECT NAME/NUMBER:
SEND REPORT TO: Theodora Overfelt	**BILLING INFORMATION**
ADDRESS: 15810 Park Ten Place, Su 300	BILL TO: STL : contact Sachin
Houston, TX 77084	ADDRESS:
PHONE: 281-600-1000	PHONE:
FAX: 281-600-1001	FAX: PO NO.:

LAB JOB NO. 25/063

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	ANALYSIS/METHOD REQUEST: Volatiles SW-846 8260B	REMARKS/PRECAUTIONS
	P12-1SA03	3/18/03	1052	water	40mL	HCl	3	X	
	MW-10A-1SA03		1218						
	MW-10B-1SA03		1303						
	MW-08-1SA03		1107						
	MW-09-1SA03		1232						
	MW-04-1SA03		1324						
	TB031803		—		—	—	—		

SAMPLER: Chris Young SHIPMENT METHOD: Hand Deliver AIRBILL NO.:

REQUIRED TURNAROUND: [ ] SAME DAY [ ] 24 HOURS [ ] 48 HOURS [ ] 72 HOURS [ ] 5 DAYS [ ] 10 DAYS [X] ROUTINE [ ] OTHER _____

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE: Chris Young	3/18/03	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: Chris M. Young/ERM	TIME 1538	PRINTED NAME/COMPANY: John K. Dawson/ERM	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE: Amare	3/18/03	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY:	TIME 15:38	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

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STL-8222-H (0700)

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 251063 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 03/18/2003 Date of the Report..: 03/18/2003
Project Number.: 99000484 Project Description.: UPRR-HWPW-422-102/60 Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.- Houston Contact.: Theodora Overfelt

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	2.3c
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	368
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	tth

tth
3.18.03

000011

STL HOUSTON - SAMPLE RECEIPT CHECKLIST

GENERAL SHIPMENT INFORMATION

CLIENT NAME: ERM Southwest
CARRIER/DRIVER NAME: Client.
DATE SHIPPED: 3.18.03
UNPACKED BY: HH
DATE RECEIVED:
UNPACKED STAMP:
TOTAL # COOLERS RECEIVED: 1 Kit
TRACKING NUMBER(S):
(retain air bills in project folder)

COOLER CHECKLIST

COOLER ID	COC Present (Y/N)	CUSTODY TAPE Present (Y/N)	CUSTODY TAPE Intact (Y/N/NA)	COOLER TEMP (deg C)	THERMOMETER #
5/0					
1&4	yes	C yes	C yes	2.3	318
		B	B		
		C	C		
		B	B		
		C	C		
		B	B		

C-Cooler B-Bottles

COOLER(S) SCREENED FOR RADIATION? Yes ✓ No ____
SHORT HOLD / RUSH SAMPLES (include department and time delivered)

SPECIFIC PROJECT INFORMATION

JOB NUMBER: 251063
PROJECT NAME:

VOLATILE HEADSPACE ACCEPTABLE? Yes ✓ No ____ NA ____ Preserved? Yes ✓ No ____
(If headspace is present, list details in INCONSISTENCIES section) Number of VOA vials: 20

pH OF WATER SAMPLES:

PRESERVATION	# BOTTLES	CORRECT PH Y/N	(If N, list sample ID and corresponding pH)
H2SO4 (<2)			
HNO3 (<2)			
HCl (<2) (not VOA vials)			
NaOH-Cyanide (>12)			
NaOH/Zn Acetate-Sulfide (>9)			
Other		NA	

OF NEAT BOTTLES: ____ # OF SOILS JARS: ____

INCONSISTENCIES

ACTION TAKEN

PERSON CONTACTED: ____ DATE: ____
RESOLUTION ____

NOTES ____

Project Manager: ____ (use back of sheet if necessary)

SEVERN TRENT STL REVISED

ANALYTICAL REPORT

JOB NUMBER: 251138

Prepared For:

ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Attention: Theodora Overfelt

Date: 04/14/2003

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

04/14/03
Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

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TOTAL NO. OF PAGES 18

SEVERN TRENT STL

03/31/2003

Theodora Overfelt
ERM Southwest, Inc.- Houston
15810 Park Ten Place
Suite 300
Houston, TX 77084

Reference:
Project : UPRR-HWPW-422-102/60
Project No. : 251138
Date Received : 03/19/2003
STL Job : 251138

Dear Theodora Overfelt:

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

1. MW-05-1SA03
2. FB031903-1SA03
3. MW-11A-1SA03
4. TB031903-1SA03

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

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

The test results in this report meet all NELAP requirements for STL Houston's NELAP accredited parameters. Any exceptions to NELAP requirements will be noted and included in a case narrative as a part of this report.

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

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

We look forward to working with you on future projects.

Sincerely,

Sachin G. Kudchadkar
Project Manager

6310 Rothway Drive • Houston, TX 77040 • Tel: 713 690 4444 Fax: 713 690 5646

SEVERN TRENT STL

SAMPLE INFORMATION
Date: 04/14/2003

Job Number.: 251138
Customer...: ERM Southwest, Inc.- Houston
Attn.....: Theodora Overfelt

Project Number.....: 99000484
Customer Project ID....: 1ST SEMI ANNUAL 2003
Project Description....: UPRR-HWPW-422-102/60

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
251138-1	MW-05-1SA03	Water	03/19/2003	11:03	03/19/2003	14:54
251138-2	FB031903-1SA03	Water	03/19/2003	11:16	03/19/2003	14:54
251138-3	MW-11A-1SA03	Water	03/19/2003	12:14	03/19/2003	14:54
251138-4	TB031903-1SA03	Water	03/19/2003	00:01	03/19/2003	14:54

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TRENT STL

Job Number: 251138

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-05-1SA03
Date Sampled.....: 03/19/2003
Time Sampled.....: 11:03
Sample Matrix.....: Water

Laboratory Sample ID: 251138-1
Date Received.....: 03/19/2003
Time Received.....: 14:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	Data Package Validation											
	GC/MS VOA Validation, Water	Complete					1		71932		03/31/03 0000	qle
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/21/03 1559	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/21/03 1559	zfl

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 251138

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

Customer Sample ID: FB031903-1SA03
Date Sampled.....: 03/19/2003
Time Sampled.....: 11:16
Sample Matrix.....: Water

Laboratory Sample ID: 251138-2
Date Received.....: 03/19/2003
Time Received.....: 14:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 2142	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 2142	zfl

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* In Description = Dry Wgt.

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TRENT STL

Job Number: 251138

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: MW-11A-1SA03
Date Sampled.....: 03/19/2003
Time Sampled.....: 12:14
Sample Matrix.....: Water

Laboratory Sample ID: 251138-3
Date Received.....: 03/19/2003
Time Received.....: 14:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 2300	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 2300	zfl

1
2
3

* In Description = Dry Wgt.

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TRENT STL

Job Number: 251138

LABORATORY TEST RESULTS

Date:04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston

PROJECT: 1ST SEMI ANNUAL 2003

ATTN: Theodora Overfelt

Customer Sample ID: TB031903-1SA03
Date Sampled.....: 03/19/2003
Time Sampled.....: 00:01
Sample Matrix.....: Water

Laboratory Sample ID: 251138-4
Date Received.....: 03/19/2003
Time Received.....: 14:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8260B	Volatile Organics											
	Benzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	Chlorobenzene, Water	0.68	U		0.68	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	1,2-Dichloroethane, Water	1.01	U		1.01	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	Ethylbenzene, Water	0.77	U		0.77	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	Methylene Chloride, Water	2.45	U		2.45	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	Toluene, Water	0.79	U		0.79	5	1.00000	ug/L	71313		03/20/03 2208	zfl
	Xylenes (total), Water	2.29	U		2.29	15	1.00000	ug/L	71313		03/20/03 2208	zfl

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* In Description = Dry Wgt.

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251138

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston | PROJECT: 1ST SEMI ANNUAL 2003 | ATTN: Theodora Overfelt

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

est Method.....: SW-846 82608
Method Description.: Volatile Organics
Units.....: ug/L
Batch(s)...: 71313
Analyst...: zfl

LCS	Laboratory Control Sample	VS032003E			03/20/2003	1629

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	54.3444		50.00	ND	108.7		68-127	
orobenzene, Water	55.1168		50.00	ND	110.2		65-129	
-Dichloroethane, Water	54.7320		50.00	ND	109.5		65-133	
ylbenzene, Water	58.2448		50.00	ND	116.5		64-132	
nylene Chloride, Water	51.0189		50.00	ND	102.0		54-133	
uene, Water	58.4545		50.00	ND	116.9		63-127	
enes (total), Water	171.641		150.00	ND	114.4		37-161	

LCS	Laboratory Control Sample	VS032003E			03/21/2003	1349

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	57.2079		50.00	ND	114.4		68-127	
orobenzene, Water	54.3087		50.00	ND	108.6		65-129	
-Dichloroethane, Water	61.7557		50.00	ND	123.5		65-133	
ylbenzene, Water	56.1637		50.00	ND	112.3		64-132	
nylene Chloride, Water	58.3173		50.00	1.08034	116.6		54-133	
zene, Water	56.7045		50.00	ND	113.4		63-127	
enes (total), Water	167.806		150.00	ND	111.9		37-161	

B	Method Blank	VS032003C			03/20/2003	1655

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	ND							
orobenzene, Water	ND							
-Dichloroethane, Water	ND							
ylbenzene, Water	ND							
nylene Chloride, Water	ND							
zene, Water	ND							
enes (total), Water	ND							

B	Method Blank	VS032003C			03/21/2003	1441

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ene, Water	ND							
robenzene, Water	ND							
Dichloroethane, Water	ND							
lbenzene, Water	ND							
ylene Chloride, Water	1.08034							
ene, Water	ND							
nes (total), Water	ND							

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

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SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251138

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MS	Matrix Spike	VS032003E	251063-1		03/20/2003 1813

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
nzene, Water	53.4946		50.00	ND	107		65-125	
lorobenzene, Water	50.6350		50.00	ND	101		74-122	
.2-Dichloroethane, Water	51.5498		50.00	ND	103		66-123	
hylbenzene, Water	52.7465		50.00	ND	105		70-122	
thylene Chloride, Water	50.6723		50.00	ND	101		55-127	
uene, Water	52.2758		50.00	ND	105		76-125	
lenes (total), Water	157.974		150.00	ND	105		71-128	

MS	Matrix Spike	VS032003E	251138-1		03/21/2003 1625

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	50.6876		50.00	ND	101		65-125	
lorobenzene, Water	49.5629		50.00	ND	99		74-122	
-Dichloroethane, Water	60.4642		50.00	ND	121		66-123	
ylbenzene, Water	49.1028		50.00	ND	98		70-122	
thylene Chloride, Water	52.2478		50.00	ND	104		55-127	
uene, Water	50.2564		50.00	ND	101		76-125	
lenes (total), Water	149.483		150.00	ND	100		71-128	

MSD	Matrix Spike Duplicate	VS032003E	251063-1		03/20/2003 1839

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
zene, Water	50.4148	53.4946	50.00	ND	101		65-125	
					5.9		30.0	
orobenzene, Water	49.4957	50.6350	50.00	ND	99		74-122	
					2.3		30.0	
-Dichloroethane, Water	46.5302	51.5498	50.00	ND	93		66-123	
					10.2		30.0	
ylbenzene, Water	51.3553	52.7465	50.00	ND	103		70-122	
					2.7		30.0	
hylene Chloride, Water	45.5902	50.6723	50.00	ND	91		55-127	
					10.6		30.0	
ene, Water	50.9433	52.2758	50.00	ND	102		76-125	
					2.6		30.0	
nes (total), Water	153.438	157.974	150.00	ND	102		71-128	
					2.9		30.0	

MSD	Matrix Spike Duplicate	VS032003E	251138-1		03/21/2003 1651

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ene, Water	52.2915	50.6876	50.00	ND	105		65-125	
					3.1		30.0	
robenzene, Water	52.0654	49.5629	50.00	ND	104		74-122	
					4.9		30.0	
-Dichloroethane, Water	52.2199	60.4642	50.00	ND	104		66-123	
					14.6		30.0	
ylbenzene, Water	53.5165	49.1028	50.00	ND	107		70-122	
					8.6		30.0	

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

SEVERN TRENT STL

QUALITY CONTROL RESULTS

Job Number.: 251138 Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	VS032003E	251138-1		03/21/2003	1651

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
...thylene Chloride, Water	48.4697	52.2478	50.00	ND	97		55-127	
					7.5		30.0	
...uene, Water	52.4599	50.2564	50.00	ND	105		76-125	
					4.3		30.0	
...enes (total), Water	159.830	149.483	150.00	ND	107		71-128	
					6.7		30.0	

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

SEVERN TRENT STL

SURROGATE RECOVERIES REPORT

Job Number.: 251138

Report Date.: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Method.....: Volatile Organics
Batch(s).....: 71313

Method Code...: 8260
Test Matrix...: Water

Prep Batch....:
Equipment Code: GCMSVOA06

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
51063- 1	MS	P12-1SA03	03/20/2003	96.2	106.5	95.0	104.5
51063- 1	MSD	P12-1SA03	03/20/2003	88.6	104.5	91.8	101.0
51138- 1		MW-05-1SA03	03/21/2003	94.7	104.3	96.7	101.5
51138- 1	MS	MW-05-1SA03	03/21/2003	123.4	106.6	117.6	110.0
51138- 1	MSD	MW-05-1SA03	03/21/2003	94.0	103.9	93.3	102.8
51138- 2		FB031903-1SA03	03/20/2003	129.9	103.2	123.2	98.2
51138- 3		MW-11A-1SA03	03/20/2003	122.2	107.7	122.7	113.7
51138- 4		TB031903-1SA03	03/20/2003	104.9	106.0	96.4	99.3
13131--21	LCS		03/20/2003	104.0	108.9	114.8	108.2
13131--21	MB		03/20/2003	98.0	90.9	90.9	86.9
13132--21	LCS		03/21/2003	119.8	107.5	112.5	105.9
13132--21	MB		03/21/2003	100.2	101.8	98.2	99.7

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

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SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

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.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- 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.

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 RL and the MDL.
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL 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.
b - Target analyte was found in the method blank.
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 RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. 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.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - 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.

Abbreviations:

Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV - Continuing Calibration Verification
CRA - Low level standard check - GFAA, Mercury
CRI - Low level standard check - ICP
Dil Fac - Dilution Factor - Secondary dilution analysis
DLFac - Detection Limit Factor
EB - Extraction Blank (TCLP, SPLP, etc.)
ICAL - Initial Calibration
ICB - Initial Calibration Blank
ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
LCD - Laboratory Control Duplicate
LCS - Laboratory Control Sample
MB - Method Blank
MD - Method Duplicate
MDL - Method Detection Limit
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected

SEVERN TRENT STL

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 04/14/2003

PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

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), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(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.
(7) ASTM Annual Book of Methods (Various Years)
(8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

SEVERN TRENT STL

LABORATORY CHRONICLE

Job Number: 251138

Date: 04/14/2003

CUSTOMER: ERM Southwest, Inc.- Houston PROJECT: 1ST SEMI ANNUAL 2003 ATTN: Theodora Overfelt

Lab ID: 251138-1 Client ID: MW-05-1SA03 Date Recvd: 03/19/2003 Sample Date: 03/19/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Data Package Validation	1	71932		03/31/2003 0000	
	Electronic Data Deliverables	1				
	GC/MS Volatiles Data Package Production	1	71523		03/25/2003 1700	
SW-846 8260B	Volatile Organics	1	71313		03/21/2003 1559	1.00000

Lab ID: 251138-2 Client ID: FB031903-1SA03 Date Recvd: 03/19/2003 Sample Date: 03/19/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 2142	1.00000

Lab ID: 251138-3 Client ID: MW-11A-1SA03 Date Recvd: 03/19/2003 Sample Date: 03/19/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 2300	1.00000

Lab ID: 251138-4 Client ID: TB031903-1SA03 Date Recvd: 03/19/2003 Sample Date: 03/19/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8260B	Volatile Organics	1	71313		03/20/2003 2208	1.00000

TRENT SERVICES

STL Houston
6310 Rothway Drive
Houston, TX 77040

No. 00643

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: ERM-Southwest	PROJECT NAME/NUMBER: UPRR: First Semiannual 2003/999.9999
SEND REPORT TO: Theodora Oorfeff	**BILLING INFORMATION**
ADDRESS: 15810 Park Ten Place #300	BILL TO: ——— (STL)
Houston, TX 77084	ADDRESS: ———
PHONE: (281) 600-1000	PHONE: ———
FAX: (281) 600-1001	FAX: ——— PO NO.: ———

LAB JOB NO. 25138

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	ANALYSIS/METHOD REQUEST: 8260B - VOCs	REMARKS/PRECAUTIONS
1	MW-05-1SA03	03/19/03	11:03	water	(3) 40mL vials	HCL	(3)	✓	
2	FB031903-1SA03	03/19/03	11:16	↓	↓	↓	↓	✓	
3	MW-11A-1SA03	03/19/03	12:14	↓	↓	↓	↓	✓	
4	TB031903-1SA03	—	—	WATER X	(3) 40mL vials	HCL	(3)	✓	

SAMPLER: Jim Davidson

SHIPMENT METHOD:

AIRBILL NO.:

REQUIRED TURNAROUND* ☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☐ ROUTINE ☒ OTHER standard

1. RELINQUISHED BY: SIGNATURE:	DATE 03/19/03	2. RELINQUISHED BY: SIGNATURE:	DATE 3-19-03	3. RELINQUISHED BY: SIGNATURE:	DATE
PRINTED NAME/COMPANY: Jim Davidson/ERM-SW	TIME 15:00	PRINTED NAME/COMPANY:	TIME 1454	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY: SIGNATURE:	DATE 3/19/03	2. RECEIVED BY: SIGNATURE:	DATE 3-19-03	3. RECEIVED BY: SIGNATURE:	DATE
PRINTED NAME/COMPANY:	TIME 1454	PRINTED NAME/COMPANY:	TIME 1454	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

STL Houston is a part of Severn Trent Laboratories, Inc

STL-8222-H (0700)

rpjsckl | Job Sample Receipt Checklist Report | V2

Job Number.: 251138 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 03/19/2003 Date of the Report..: 03/19/2003
Project Number.: 99000484 Project Description.: UPRR-HWPW-422-102/60 Project Manager.....: sgk
Customer.....: ERM Southwest, Inc.· Houston Contact.: Theodora Overfelt

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	2.3C
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	337
Samples received intact (good condition)?	Y	
Volatile samples acceptable? (no headspace)		
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	TTH

TTH
3.19.03

STL HOUSTON - SAMPLE RECEIPT CHECKIST

GENERAL SHIPMENT INFORMATION

CLIENT NAME: E2M-SW
DATE SHIPPED: 3.19.03
DATE RECEIVED:
TOTAL # COOLERS RECEIVED:

CARRIER/DRIVER NAME: client
UNPACKED BY: HL
UNPACKED STAMP:
TRACKING NUMBER(S):
(retain airbills in project folder)

COOLER CHECKLIST

COOLER ID	COC Present (Y/N)	CUSTODY TAPE Present (Y/N)	CUSTODY TAPE Intact (Y/N/NA)	COOLER TEMP (deg C)	THERMOMETER #
B/W 1	yes	C Y-S	C yes	2.3°C	337
		B	B		
		C	C		
		B	B		
		C	C		
		B	B		

C-Cooler B-Bottles

COOLER(S) SCREENED FOR RADIATION? Yes ✓ No ____
SHORT HOLD / RUSH SAMPLES (include department and time delivered)

SPECIFIC PROJECT INFORMATION

JOB NUMBER: 251138
PROJECT NAME: WPRR

VOLATILE HEADSPACE ACCEPTABLE? Yes ✓ No____ NA____
(If headspace is present, list details in INCONSISTENCIES section)

Preserved? Yes ✓ No____
Number of VOA vials: 12

pH OF WATER SAMPLES:

PRESERVATION	# BOTTLES	CORRECT PH Y/N	(If N, list sample ID and corresponding pH)
H2SO4 (<2)			
HNO3 (<2)			
HCl (<2) (not VOA vials)			
NaOH-Cyanide (>12)			
NaOH/Zn Acetate-Sulfide (>9)			
Other		NA	

OF NEAT BOTTLES: ________ # OF SOILS JARS: ________

INCONSISTENCIES

ACTION TAKEN

PERSON CONTACTED: ________ DATE: ________
RESOLUTION ________

NOTES: ________

Project Manager: ________ (use back of sheet if necessary)

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Updated Compliance Schedule

Appendix D

July 18, 2003
W.O. #422-102

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

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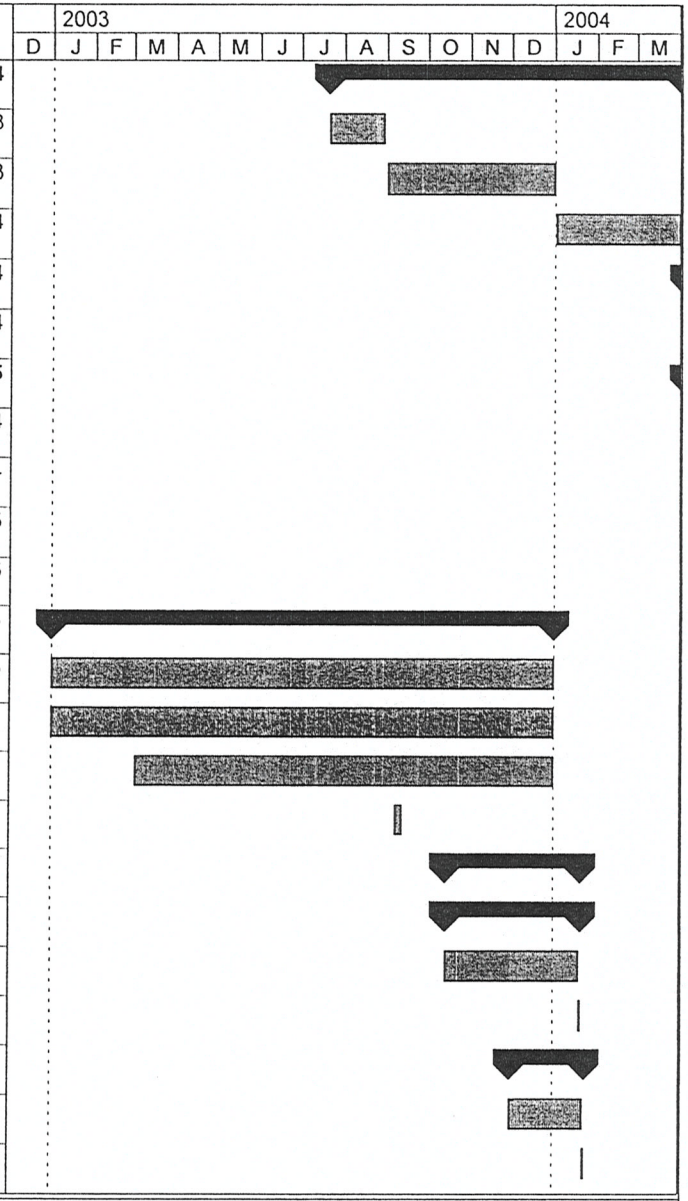
ID	Task Name/Permit or CP Section No.	Start	Finish
1	**Addendum to RFI Report {Permit VIII.I}**	**Mon 7/21/03**	**Fri 4/2/04**
2	Field Investigation Activities	Mon 7/21/03	Fri 8/29/03
3	Prepare and Submit Affected Property Assessment Report (APAR)	Mon 9/1/03	Wed 12/31/03
4	TCEQ Review Process	Fri 1/2/04	Fri 4/2/04
5	**Corrective Measures Study {Permit VIII.I and CP IX}**	**Mon 4/5/04**	**Mon 4/5/04**
6	Not Required under the Texas Risk Reduction Program (TRRP) for RCRA sites	Mon 4/5/04	Mon 4/5/04
7	**Corrective Measures Implementation {Permit VIII.J and CP X}**	**Mon 4/5/04**	**Wed 6/15/05**
8	Prepare and Submit Response Action Plan (RAP)	Mon 4/5/04	Fri 8/6/04
9	TCEQ Review Process	Mon 8/9/04	Thu 12/9/04
10	Implement Corrective Action	Fri 12/10/04	Fri 2/11/05
11	Prepare and Submit Corrective Measures Report (RAER/RACR/PRACR)	Mon 2/14/05	Wed 6/15/05
12	**Compliance Activities {Permit IV,C and CP VI}**	**Wed 1/1/03**	**Wed 12/31/03**
13	Impoundment Inspections (Weekly)	Wed 1/1/03	Wed 12/31/03
14	Water Level Measurements (Semiannually)	Wed 1/1/03	Wed 12/31/03
15	Monitor Well Inspections (Quarterly)	Mon 3/3/03	Wed 12/31/03
16	Ground Water Sampling (Second Semiannual)	Mon 9/8/03	Fri 9/12/03
17	**Post-Closure Care Reporting**	**Wed 10/15/03**	**Tue 1/20/04**
18	**Semiannual Report - January 21, 2004 {CP VII.B.2}**	**Wed 10/15/03**	**Tue 1/20/04**
19	Perform Data Evaluation	Wed 10/15/03	Mon 1/19/04
20	Submit Report to TCEQ	Tue 1/20/04	Tue 1/20/04
21	**2003 Annual Report - January 25, 2004 {Permit V.F and III.B.1}**	**Mon 12/1/03**	**Fri 1/23/04**
22	Perform Data Evaluation	Mon 12/1/03	Thu 1/22/04
23	Submit Report to TCEQ	Fri 1/23/04	Fri 1/23/04



Compliance Schedule
UPRR Houston Wood Preserving Works Site
Houston, Texas

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

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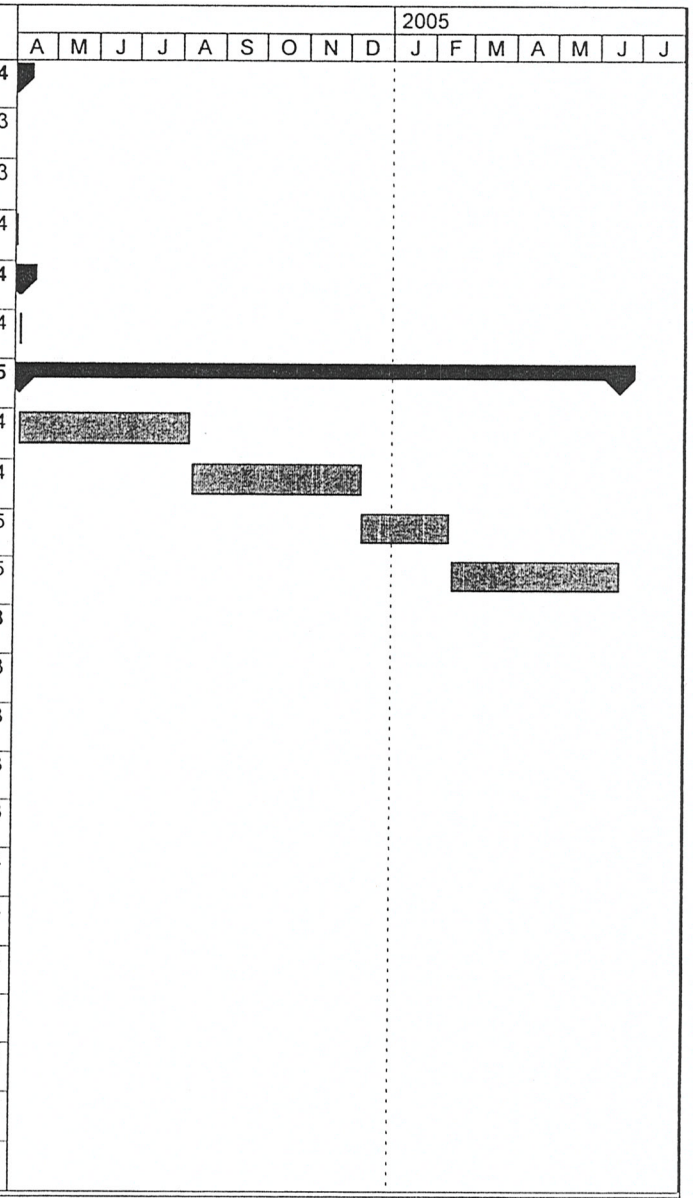

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UPRR Houston Wood Preserving Works Site
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