UNION PACIFIC RAILROAD COMPANY

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January 20, 1998

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Subject:

Transmittal, Second Semiannual Report - July 1, 1997 through December 31,

1997, Houston Wood Preserving Works Site, Houston, Texas

Dear Dr. Rahman:

Pursuant to Compliance Plan No. CP-50343, issued in conjunction with Post-Closure Care Permit No. HW-50343-000, please find enclosed two copies of the referenced report. Please note that engineering management of the site changed from Terranext to ERM-Southwest, Inc. on August 1, 1997. We are pleased to introduce ERM to you as part of this transition. If you have any questions regarding the enclosed report, please call me at (402) 271-5979.

Sincerely,

UNION PACIFIC RAILROAD

Ed Honig, P.E.

Environmental Site Remediation Manager

EHH/

Enclosure

CC:

Ray Risner, TNRCC - Austin

Marsha Hill, TNRCC Region 12 - Houston

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Semiannual Monitoring Report: Second Semiannual Event 1997

Southern Pacific Transportation Company Houston Wood Preserving Works Houston, Texas

January 20, 1998 W.O. #422-09

ERM-SOUTHWEST, INC.

16300 Katy Freeway, Suite 300 Houston, Texas 77094-1611 (281) 578-8999



Semiannual Monitoring Report: Second Semiannual Event 1997

Southern Pacific Transportation Company Houston Wood Preserving Works Houston, Texas

January 20, 1998

W.O. #422-09

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1.0 INTRODUCTION

1.1 BACKGROUND

On September 24 and 25, 1997, ERM-Southwest, Inc. (ERM) conducted ground water sampling operations at Southern Pacific Transportation Company's Houston Wood Preserving Works (HWPW) site, located at 4910 Liberty Road, Houston, Texas (Figure 1-1). This semiannual sampling event included all of the on-site wells and piezometers associated with a closed surface impoundment (TNRCC Permit Unit No. II.B.1) as described in the RCRA Permit No. HW-50343-000 (the Permit) and associated Compliance Plan (CP-50343), both issued by the Texas Natural Resource Commission (TNRCC). The sampling event, analytical data, and this data evaluation report represent the second semiannual monitoring period for 1997 (i.e., July 1 through December 31) and fulfill the semiannual reporting requirements defined in Compliance Plan Provision VII.B.2.

1.2 REPORT CONTENT AND ORGANIZATION

Provision VII.B.2 of the Compliance Plan requires that a specific list of items be included in each Semiannual Report. As such, each item listed below is addressed by number in Section 2 of this report. As of December 31, 1997, a recovery system had not been installed at this facility. Therefore, in the few instances where a provision refers to a recovery system (i.e., items 5, 7, and 11), a notation was made in the text and the items, as they relate to recovery wells, were not addressed in this report. The following items are required for the Semiannual Report, pursuant to CP Provision VII.B.2:

- 1. A narrative summary of the evaluations made in accordance with Sections V, VI, and VII of this Compliance Plan for the preceding six (6) 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. 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 (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;
- A notation of the presence or absence of NAPLs, both light and dense phases, in each well during each sampling event since the last event covered in the previous semiannual report and tabulation of depth and thickness of NAPLs, if detected;
- 7. If a recovery system is installed, monthly tabulations of quantities of recovered ground-water and NAPLs (if encountered), and graphs of weekly recorded flow rates versus time for the Recovery Wells during each quarter;
- 8. Tabulation of all data evaluation results pursuant to Section VI.D and status of each well of Table III with regard to compliance with the Corrective Action objectives and compliance with the Ground-water Protection Standards;
- 9. Maps of the contaminated area depicting concentrations of Naphthalene, Acenaphthene, and total BTEX as isopleth contours;
- 10. An updated schedule summary as required by Section XI.A;
- 11. Summary of any changes made to the monitoring/corrective action program and a summary of Recovery Well inspections, repairs, and any operational difficulties;
- 12. Recommendation for any changes; and,
- 13. Any other items requested by the Executive Director.

2.0 SECOND SEMIANNUAL GROUND WATER SAMPLING EVENT

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

2.1 NARRATIVE SUMMARY OF SECOND SEMIANNUAL ACTIVITIES

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

2.1.1 Corrective Action Program

For simplicity and organizational reasons, the nomenclature used to designate strata has been modified somewhat from that used in previous reports. The native cohesive and transmissive zones underlying the site have been re-designated alphabetically from shallowest to deepest. For example, the shallowest or uppermost transmissive zone (formerly called the Upper Transmissive Zone, or UTZ) is referred to as the A-Transmissive Zone, or A-TZ.

Existing wells were sampled to evaluate the extent of affected ground water in the A-Transmissive Zone (A-TZ) and the B-Transmissive Zone (B-TZ). The definition of the A-TZ and B-TZ is consistent with the UTZ and STZ defined in CP Provision I.A.

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

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

2.1.2 Ground Water Monitoring

ERM personnel completed monitoring activities at the site on September 24 and 25, 1997. The 15 A-TZ and B-TZ wells and piezometers listed in Section 2.1.1 were located and inspected in preparation for the sampling event.

Ground water sampling was performed using procedures outlined in an 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 which drew a sample directly from the screened interval of the well.

Dedicated polyethylene tubing was prepared for each well by cutting a length of tubing such that one end would hang at the center of the screened interval. Several extra feet were included in each length allowing the tubing to reach a peristaltic pump sitting next to the well. Once placed in the well, the tubing was left in place for subsequent sampling events.

A Master-Flex® peristaltic pump was placed next to each well during sampling. Using a one-foot section of disposable silicon Redi-Flo® tubing placed around the pump head and attached to the dedicated polyethylene tubing, ground water was pumped from the screened interval of the well at a flow rate of about 0.5 L/min. A one-liter Pyrex® measuring cup was used to collect purge water in one liter increments to evaluate field parameters (temperature, pH, specific conductivity, and turbidity). When three successive readings indicated that the field parameters had stabilized, the well was sampled. A compilation of recorded field parameters is included as Appendix B to this report.

For each well, one -250 mL polyethylene bottle, two -40 mL glass volatile organic compound bottles, and two -1000 mL amber glass semivolatile organic compounds bottles were filled directly from the sample tubing. The bottles, which had been previously preserved by the lab, were sealed and packed in coolers with sufficient ice to maintain a sample temperature of 4° C. The coolers were delivered to Pace Analytical Services, Inc. for analysis. Chain-of-Custody (COC) forms were completed and kept with their respective samples. Copies of the COCs are included with the analytical data in Appendix C.

2.2 ANALYTICAL RESULTS

The results of the chemical analyses performed on the A-TZ and B-TZ ground water samples taken during the second semiannual sampling event of 1997 are summarized in Tables 2-1 and 2-2, respectively. Those compounds reported by the laboratory to be above the Ground Water Protection Standard (GWPS) are indicated by shading on the tables. The Compliance Plan set the GWPS at the practical quantitation limit (PQL) for all compounds.

2.3 WATER LEVEL AND TOTAL DEPTH MEASUREMENT

Because low-flow sampling procedures were utilized for this sampling event, it was critical to minimize disruption of the water column prior to sampling. To accomplish this, water levels were measured on the afternoon of September 24, prior to sampling, using a Solinst® Model 101 electronic water level meter capable

of producing measurements to a depth of 100 feet with an accuracy of 0.01 feet. Since the meter came into contact with only the upper surface of the water column, disruption was minimized. Total depth measurements were collected following ground water sampling because the method required that a probe be dropped through the water column to the bottom of the well. Table 2-3 summarizes the results of the depth-to-water and total well depth measurements.

2.4 POTENTIOMETRIC SURFACE MAPS

The ground water elevation data described in Section 2.3 was used to create potentiometric surface maps of the A-TZ and B-TZ. The equipotential lines were generated by applying a linear Kriging algorithm to the data. Figure 2-1 and 2-2 show potentiometric surface maps of the A-TZ and B-TZ, respectively.

2.5 POTENTIOMETRIC SURFACE MAPS FOR RECOVERY SYSTEM

As of December 31, 1997, no recovery system had been installed at the closed surface impoundment. Therefore, this item was not addressed in this semiannual report.

2.6 NON-AQUEOUS PHASE LIQUIDS

The wells and piezometers were examined for the presence of non-aqueous phase liquids (NAPLs) after low-flow sampling was completed, in order to minimize disruption of the water column prior to sampling. An MMC® Model D-240 oil/water interface probe was used to detect light and heavy NAPLs. No NAPLs were detected in any of the wells sampled during this semiannual event.

2.7 NAPL RECOVERIES

As of December 31, 1997, no recovery system had been installed at the closed surface impoundment. Therefore, this item was not addressed in this semiannual report.

2.8 ANALYTICAL DATA EVALUATION

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

2.9 BTEX, ACENAPHTHENE, AND NAPHTHALENE ISOPLETHS

The concentration contours of these constituents were prepared using the data presented in Table 2-3. The contours were generated using a logarithmic Kriging method. Locations with reported non-detects were assigned a value equal to one-half of the reported detection limit.

A-TZ and B-TZ BTEX concentrations determined during the second semiannual sampling event of 1997 are illustrated in Figure 2-3 and 2-4, respectively. Similarly, acenaphthene and naphthalene isopleths are provided in Figures 2-5 through 2-8.

2.10 UPDATED COMPLIANCE SCHEDULE

An updated compliance schedule is included as Appendix D of this report.

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

No changes were made to the monitoring/corrective action program during the second semiannual period of 1997. No recovery wells or ground water recovery system is present on site. Accordingly, there were no recovery well inspections, repairs, or operations conducted. However, the POC and CAO wells were inspected twice during the semiannual monitoring period. Based on the results of the inspections, no repairs or corrective actions were warranted. A summary of the well inspections is included in the 1997 Annual Report.

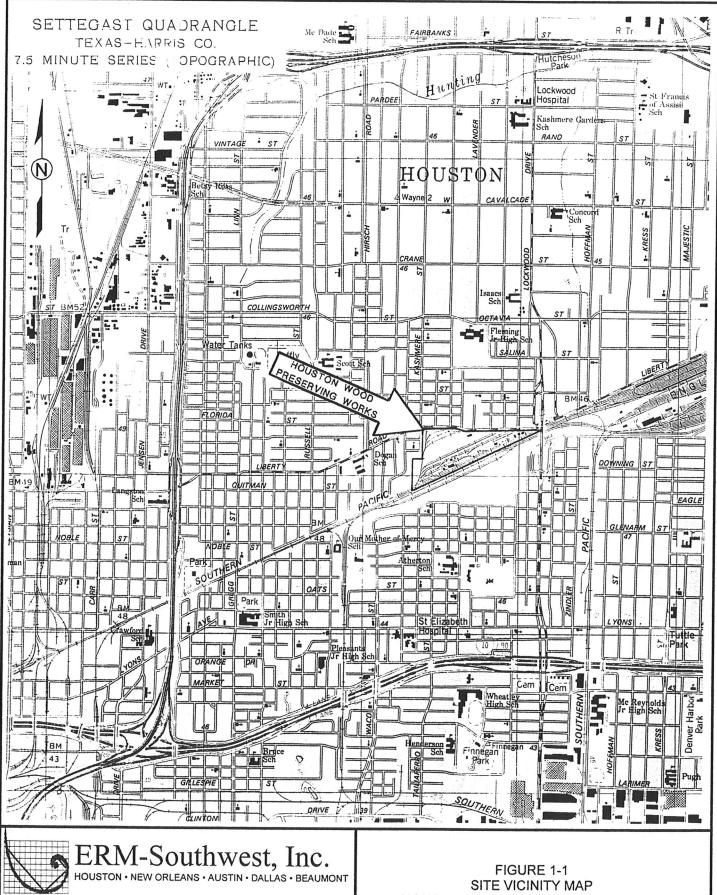
2.12 RECOMMENDATIONS FOR CHANGES

At this time, no changes are recommended.

2.13 OTHER REQUESTED ITEMS

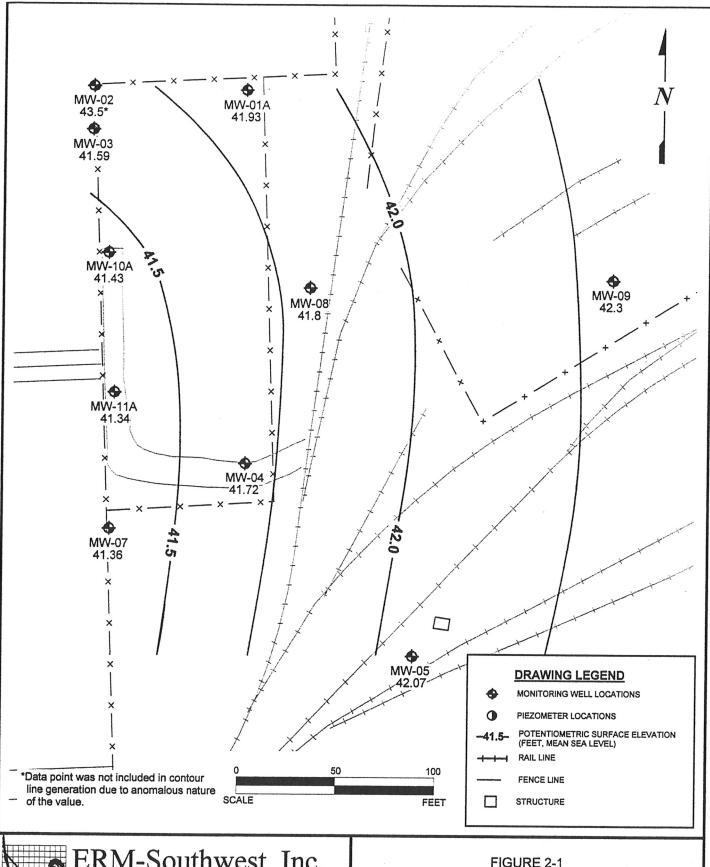
To date, no other items have been requested by the Executive Director.

Figures



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HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS



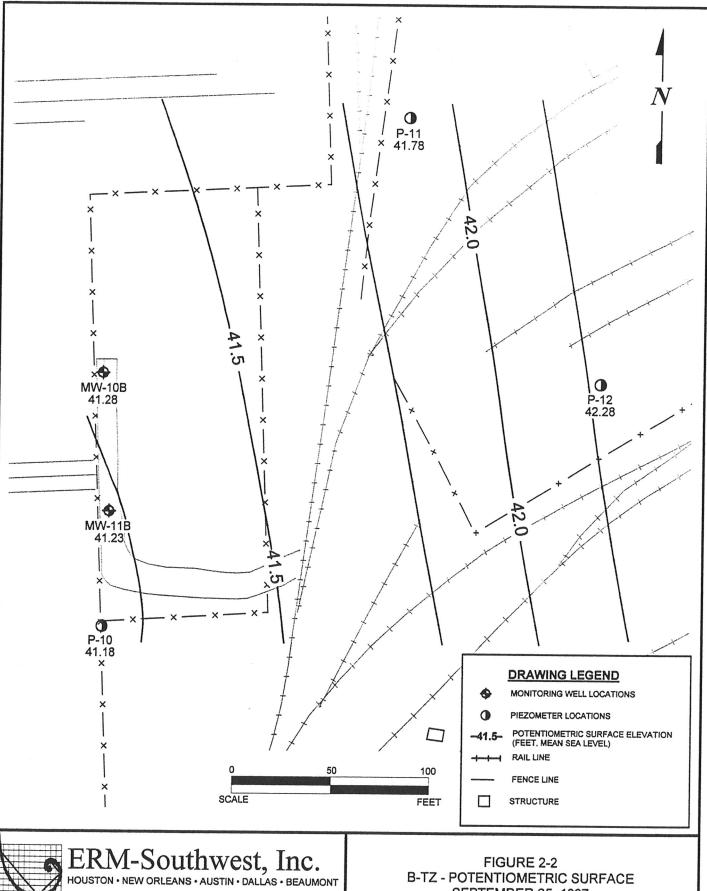


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DATE: 1/20/98

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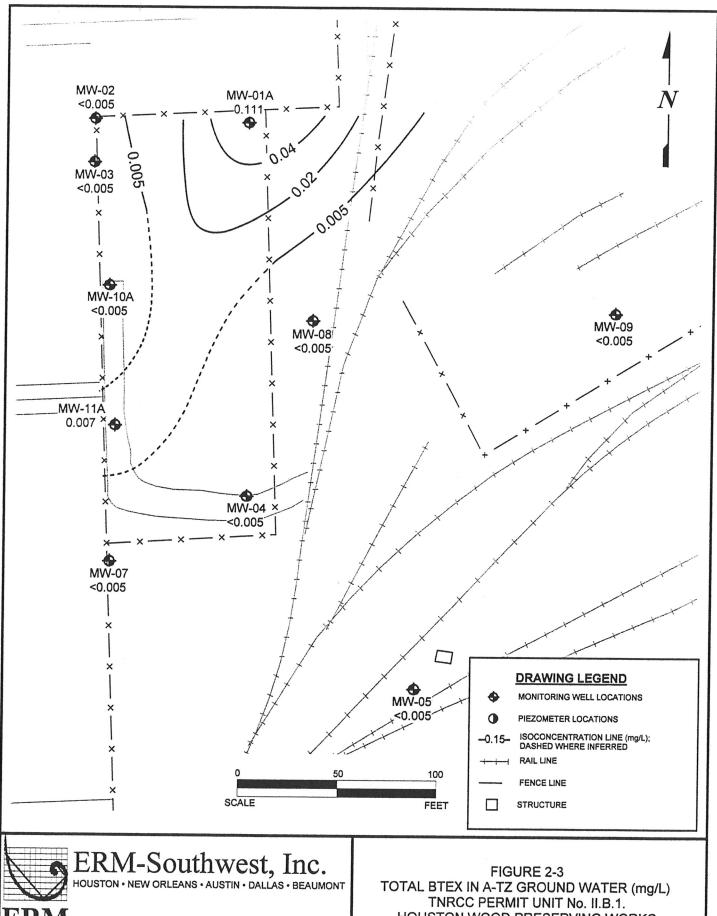
FIGURE 2-1 A-TZ - POTENTIOMETRIC SURFACE **SEPTEMBER 24, 1997** TNRCC PERMIT UNIT No. II.B.1. HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS





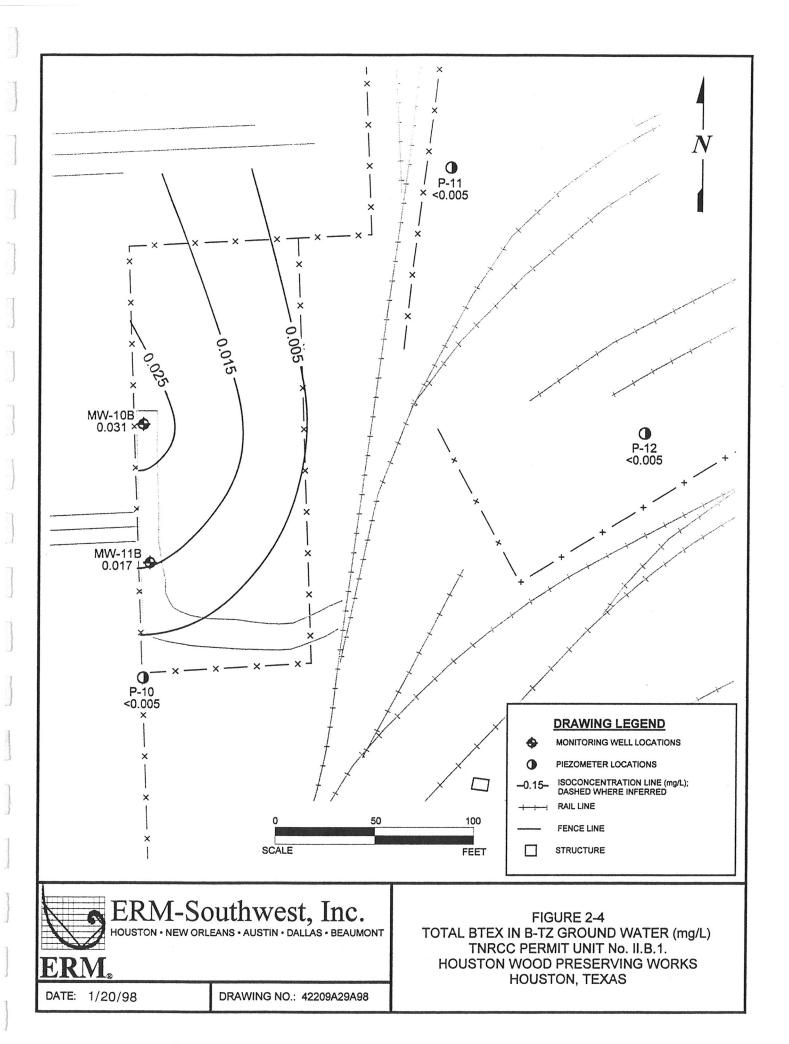
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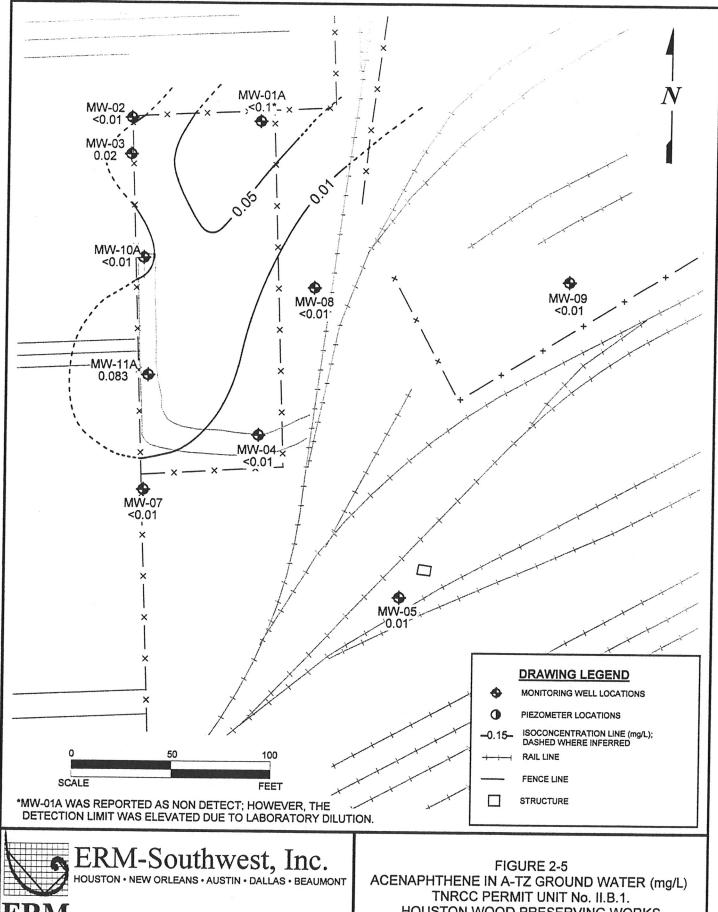
B-TZ - POTENTIOMETRIC SURFACE SEPTEMBER 25, 1997 TNRCC PERMIT UNIT No. II.B.1. HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS



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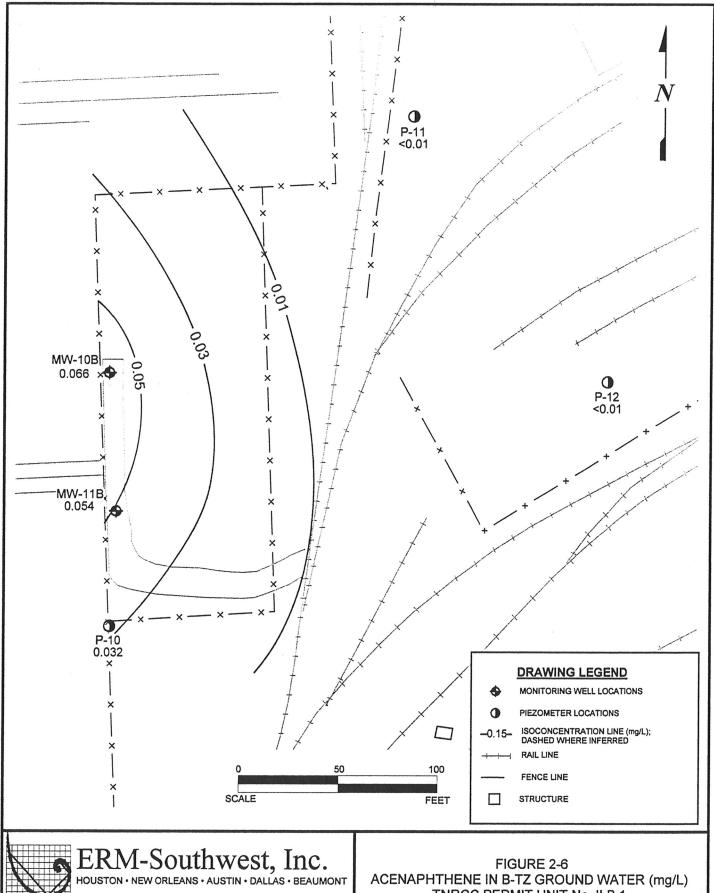
HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS





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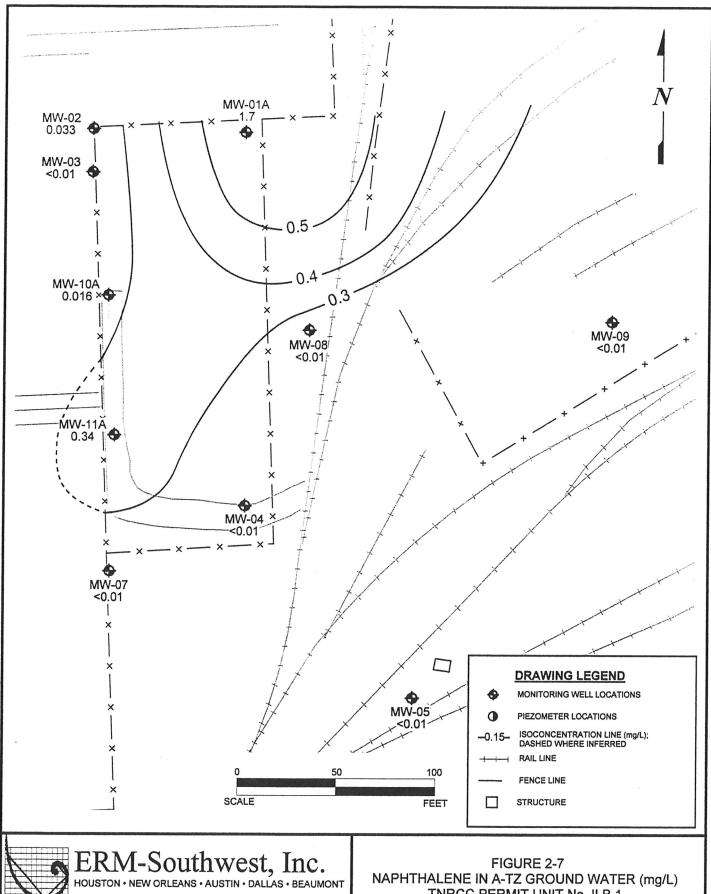
HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS





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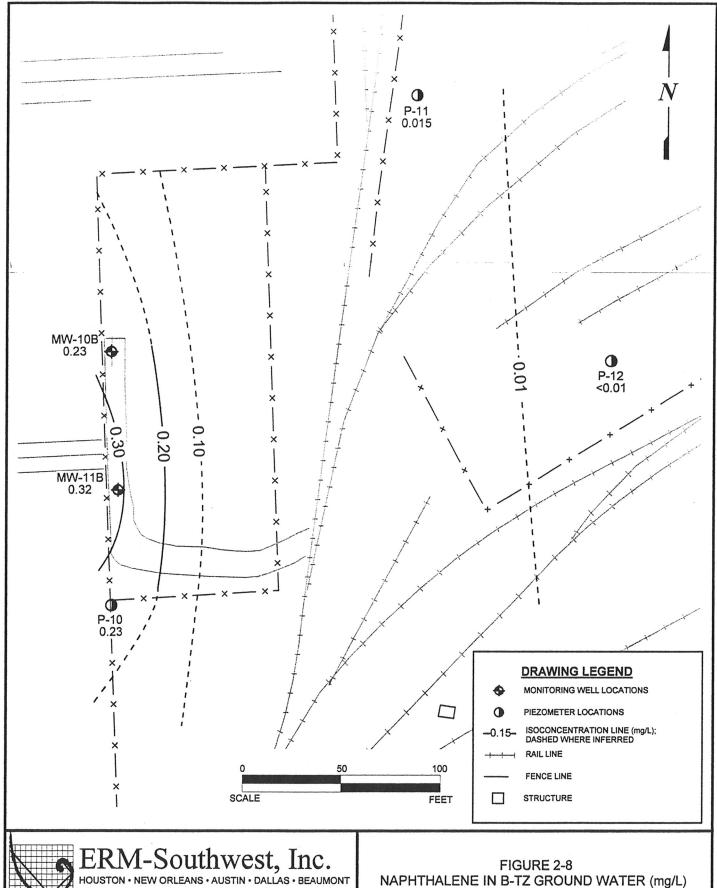
ACENAPHTHENE IN B-TZ GROUND WATER (mg/L) TNRCC PERMIT UNIT No. II.B.1. HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS





DRAWING NO.: 42209A32A98

TNRCC PERMIT UNIT No. II.B.1. HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS





DRAWING NO.: 42209A33A98

NAPHTHALENE IN B-TZ GROUND WATER (mg/L) TNRCC PERMIT UNIT No. II.B.1. HOUSTON WOOD PRESERVING WORKS HOUSTON, TEXAS

Tables

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

2nd Semiannual Sampling Event, 1997 Houston Wood Preserving Works Houston, Texas

| Analyte | PQL (GWPS) ¹ | MW-01A | MW-02 | MW-03 | MW-04 | MW-05 | MW-07 | MW-08 | MW-09 | MW-10A | MW-11A |
|----------------------------|----------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|----------|----------|
| Benzene | 0.005 | 0.015 ² | ND | | 1 |
| 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 |
| Methylene chloride | 0.010 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 0.005 | 0.038 | ND | ND |
| Toluene | 0.005 | 0.011 | ND | ND ND |
| Xylene (total) | 0.005 | 0.047 | ND | 0.007 |
| Acenaphthene | 0.010 | ND ³ | ND | 0.020 | ND | 0.010 | ND | ND | ND | ND | 0.007 |
| Acenaphthylene | 0.010 | ND ³ | ND | ND |
| Anthracene | 0.010 | ND ³ | ND | ND |
| Benzo(a)anthracene | 0.010 | ND ³ | ND | ND |
| Benzo(a)pyrene | 0.010 | ND ³ | ND | ND |
| bis(2-Chloroethoxy)methane | 0.010 | ND ³ | ND | ND |
| 2-Chloronaphthalene | 0.010 | ND ³ | ND | ND |
| Chrysene | 0.010 | ND ³ | ND | ND |
| Dibenzofuran | 0.010 | ND ³ | ND | 0.015 | ND | ND | ND | ND | ND | ND | 0.037 |
| Di-n-butylphthalate | 0.010 | ND ³ | ND | ND ND |
| 2,4-Dimethylphenol | 0.010 | ND ³ | ND | ND |
| 4,6-Dinitro-o-cresol | 0.050 | ND ³ | ND | ND |
| 2,4-Dinitrotoluene | 0.010 | ND ³ | ND | ND |
| 2,6-Dinitrotoluene | 0.010 | ND ³ | ND | ND |
| 1,2-Diphenylhydrazine | 0.010 | ND ³ | ND | ND |
| bis(2-Ethylhexyl)phthalate | 0.010 | ND ³ | ND | ND |
| Fluoranthene | 0.010 | ND ³ | ND | ND |
| Fluorene | 0.010 | ND ³ | ND | 0.015 | ND | ND | ND | ND | ND | ND | 0.047 |
| 2-Methylnaphthalene | 0.010 | ND ³ | ND | 0.011 |
| Naphthalene | 0.010 | 1.700 | 0.033 | ND | ND | ND | ND | ND | ND | 0.016 | 0.340 |
| Nitrobenzene | 0.010 | ND ³ | ND | ND |
| p-Nitrophenol | 0.050 | ND ³ | ND | ND |
| N-Nitrosodiphenylamine | 0.010 | ND ³ | ND | ND |
| Pentachlorophenol | 0.050 | ND ³ | ND | ND |
| Phenanthrene | 0.010 | ND ³ | ND | 0.018 |
| Phenol | 0.010 | ND ³ | ND | ND |
| Pyrene | 0.010 | ND ³ | ND | ND |

NOTES:

All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).

¹PQL - Practical Quantitation Limit as defined on Table I of the Compliance Plan, and determined by the analytical methods of the EPA Publication SW-846, Test Methods for Evaluating Solid Waste, 3rd ed., November 1986, and as listed in the July 8, 1987 edition of the Federal Register and later editions. The PQL is the Ground Water Protection Standard.

²Bold-italic indicates values reported above the Ground Water Protection Standard (GWPS).

³The compound was not detected but the reported detection limit was greater than the PQL.

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

2nd Semiannual Sampling Event, 1997 Houston Wood Preserving Works Houston, Texas

| Analyte | PQL (GWPS) ¹ | MW-10B | MW-11B | P-10 | P-11 | D 40 |
|----------------------------|-------------------------|--------|--------|-------|----------|------|
| Benzene | 0.005 | ND | ND | ND | | P-12 |
| 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 | 0.015 | 0.009 | ND | ND | ND |
| Toluene | 0.005 | ND | ND | ND | ND | ND |
| Xylene (total) | 0.005 | 0.016 | 0.008 | ND | ND | ND |
| Acenaphthene | 0.010 | 0.066 | 0.069 | ND | ND | ND |
| Acenaphthylene | 0.010 | ND | ND | 0.032 | ND | ND |
| Anthracene | 0.010 | ND | | ND | ND | ND |
| Benzo(a)anthracene | 0.010 | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 0.010 | ND | ND | ND | ND | ND |
| pis(2-Chloroethoxy)methane | 0.010 | | ND | ND | ND | ND |
| 2-Chloronaphthalene | 0.010 | ND | ND | ND | ND | ND |
| Chrysene | 0.010 | ND | ND | ND ND | ND | ND |
| Dibenzofuran | 0.010 | ND | ND | ND | ND | ND |
| Pi-n-butylphthalate | 0.010 | 0.041 | 0.049 | 0.012 | ND | ND |
| ,4-Dimethylphenol | | ND | ND | ND | ND | ND |
| ,6-Dinitro-o-cresol | 0.010 | ND | ND | ND | ND | ND |
| ,4-Dinitrotoluene | 0.050 | ND | ND | ND | ND | ND |
| 6-Dinitrotoluene | 0.010 | ND | ND | ND | ND | ND |
| 2-Diphenylhydrazine | 0.010 | ND | ND | ND | ND | ND |
| s(2-Ethylhexyl)phthalate | 0.010 | ND | ND | ND | ND | ND |
| uoranthene | 0.010 | ND | ND | ND | ND | ND |
| uorantiilene | 0.010 | ND | ND | ND | ND | ND |
| | 0.010 | 0.043 | 0.054 | 0.022 | 0.016 | ND |
| Methylnaphthalene | 0.010 | 0.010 | 0.025 | ND | ND | ND |
| aphthalene | 0.010 | 0.230 | 0.370 | 0.230 | 0.015 | ND |
| trobenzene | 0.010 | ND | ND | ND | ND | ND |
| Nitrophenol | 0.050 | ND | ND | ND | ND | ND |
| Nitrosodiphenylamine | 0.010 | ND | ND | ND | ND | ND |
| ntachlorophenol | 0.050 | ND | ND | ND | ND | |
| enanthrene | 0.010 | 0.034 | 0.058 | 0.011 | ND ND | ND |
| enol | 0.010 | ND | ND | ND ND | | ND |
| ene | 0.010 | ND | ND | ND | ND ND | ND |

NOTES:

All values reported in mg/L. ND - Not detected at the Practical Quantitation Limit (PQL).

PQL - Practical Quanititation Limit as defined on Table I of the Compliance Plan, and determined by the analytical methods of the EPA Publication SW-846, Test Methods for Evaluating Solid Waste, 3rd ed., November 1986, and as listed in the July 8, 1987 edition of the Federal Register and later editions. The PQL is the Ground Water Protection Standard.

²Bold-italic indicates values reported above the Ground Water Protection Standard (GWPS).

³The compound was not detected but the reported detection limit was greater than the PQL.

TABLE 2-3
Water Level and Total Depth of Well Measurement

2nd Semi-Annual Sampling Event, 1997 Houston Wood Preserving Works Houston, Texas

| | Top of Casing | Depth to | Water Surface | Total Depth | Well Bottom |
|---------|-----------------|-------------|-----------------|--------------|-----------------|
| Well ID | Elevation (msl) | Water (DTW) | Elevation (msl) | of Well (TD) | Elevation (msl) |
| MW-01A | 47.95' | 6.02' | 41.93' | 19.65' | 28.30' |
| MW-02 | 48.03' | 4.53' | 43.50' | 18.49' | 29.54' |
| MW-03 | 48.55' | 6.96' | 41.59' | 20.56' | 27.99' |
| MW-04 | 49.85' | 8.13' | 41.72' | 21.80' | 28.05' |
| MW-05 | 49.35' | 7.28' | 42.07' | 27.36' | 21.99' |
| MW-07 | 48.86' | 7.50' | 41.36' | 24.76' | 24.10' |
| MW-08 | 49.37' | 7.57' | 41.80' | 25.03' | 24.34' |
| MW-09 | 49.29' | 6.99' | 42.30' | 25.39' | 23.90' |
| P-10 | 47.72' | 6.54' | 41.18' | 42.83' | 4.89' |
| P-11 | 49.02' | 7.24' | 41.78' | 42.78' | 6.24' |
| P-12 | 48.82' | 6.54' | 42.28' | 42.85' | 5.97' |
| MW-10A | 49.90' | 8.47' | 41.43' | 25.57' | 24.33' |
| //W-10B | 49.97' | 8.69' | 41.28' | 46.50' | 3.47' |
| /W-11A | 50.04' | 8.70' | 41.34' | 23.88' | 26.16' |
| /W-11B | 50.19' | 8.96' | 41.23' | 46.64' | 3.55' |

TABLE 2-4

Compliance Status of Wells and Piezometers

2nd Semi-Annual Sampling Event, 1997 Houston Wood Preserving Works Houston, Texas

| | 1 | |
|---------------------|-----------|---------------|
| Monitoring Location | Compliar | nce Status |
| A-TZ Wells | Compliant | Non-Compliant |
| MW-01A | | Х |
| MW-02 | | X |
| MW-03 | | Х |
| MW-04 | X | |
| MW-05 | X | |
| MW-07 | Х | |
| MW-08 | Х | |
| MW-09 | Х | |
| MW-10A | | Х |
| MW-11A | | Х |
| B-TZ Wells | Compliant | Non-Compliant |
| MW-10B | | Х |
| MW-11B | | Х |
| P-10 | | Х |
| P-11 | | Х |
| P-12 | Х | |

Compliance Plan Tables

Appendix A

January 20, 1998 W.O. #422-09

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

TABLE I

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

| COLUMN A | CO | LUMN B |
|--------------------------------|-------|--------------------|
| Hazardous Constituents | | tion Limits (mg/l) |
| Acenaphthene |).III | (0.010) |
| Acenaphthylene | NE | () |
| Anthracene | NE | () |
| Benzene | NE | , |
| Benzo(a)anthracene | ND | () |
| Benzo(A)pyrene | ND | () |
| Bis(2ethylhexyl)phthalate | ND | () |
| Bis(2-chlororethoxy)methane | ND | , |
| Chlorobenzene | ND | () |
| 2-Chloranaphthalene | ND | , |
| Chrysene | ND | (5.525) |
| Dibenzofuran | ND | () |
| 1,2-Dichlorethane | ND | (5.515) |
| Dichloromethane | ND | (5.555) |
| 2,4-Dimethylphenol | ND | , |
| Di-n-butyl phthalate | ND | (*****) |
| 4,6-Dinitro-o-cresol | ND | () |
| 2,4-Dinitrotoluene | ND | (0.050) |
| 2,6-Dinitrotoluene | ND | (0.010) |
| 1,2-Diphenylhydrazine | ND | (0.010) |
| Ethylbenzene | ND | (0.010) |
| Fluoranthene | ND | (0.005) |
| Fluorene | ND | (0.010) |
| Methylene chloride | ND | (0.010) |
| 2-Methylnaphthalene | ND | (0.010) |
| Naphthalene | ND | (0.010) |
| Nitrobenzene | ND | (0.010) |
| | ND | (0.010) |
| 4-Nitrophenal | ND | (0.050) |
| N-Nitrosodiphenylamine | ND | (0.010) |
| Pentachlorophenol Phenanthrene | ND | (0.050) |
| | 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 <u>Test Methods for Evaluating Solid Waste</u>, 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 Semiannual MW-2 Semiannual MW-3 Semiannual MW-10* Semiannual MW-11* Semiannual Semiannual MW-11*

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
MW-5
Semiannual
MW-7
Semiannual
MW-8
Semiannual
Semiannual
Semiannual

^{*} 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.

Field Parameters

Appendix B

January 20, 1998 W.O. #422-09

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

TABLE B-1

Ground Water Sampling Field Parameters

2nd Semiannual Sampling Event, 1997 Houston Wood Preserving Works Houston, Texas

| 0854 25.8 6.61 1227 0.54 | 0854 0953 25.8 26.4 6.61 6.75 1227 476 0.54 15.00 | 1020 26.6 6.78 995 0.23 | MW-04 0817 27.3 6.65 833 0.59 | MW-05 015 26.5 6.80 521 1.83 | 1418 25.4 6.73 985 0.75 | 1555 26.3 6.73 674 0.53 |
|--|---|--|--|--|--------------------------------------|--------------------------------------|
| MW-10A 1055 25.6 6.71 1480 0.63 | .6 23.8 71 6.65 80 1356 | MW-11A 1152 26.6 6.66 1146 | MW-11B 1221 26.1 6.72 1108 | P-10 1450 24.6 6.84 1100 0.38 | P-11 1618 25.9 6.68 1300 | P-12 1715 25.6 6.72 1313 |

Laboratory Analytical Reports

Appendix C

January 20, 1998 W.O. #422-09

ERM-SOUTHWEST, INC. 16300 Katy Freeway, Suite 300 Houston, Texas 77094-1611 (281) 579-8999 Data File: /var/chem/insty.i/y103097.b/ys103012.d

Report Date: 30-Oct-97 18:04:09

PACE ANALYTICAL SERVICES, INC.

RECOVERY REPORT

Client Name:

Client SDG: b103097

Sample Matrix: LIQUID

Fraction: VOA

Lab Smp Id: Level: MED

Client Smp ID: H460358 Operator: TS

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File:

Quant Type: ISTD

Method File: /var/chem/insty.i/y103097.b/Y8260J28.m

Misc Info:

| SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|-------------------------|-----------------------|---------------------------|----------------|--------|
| \$ 5 Dibromofluorometha | 50.00 | 45.43 | 90.86 | 86-118 |
| \$ 6 Toluene-d8 (surr) | 50.00 | 49.48 | 98.96 | 88-110 |
| \$ 7 4-Bromofluorobenze | 50.00 | 47.09 | 94.18 | 86-115 |

Data File: /var/chem/insta.i/102997_b/av102908.d

Report Date: 30-Oct-97 13:31:41

PACE ANALYTICAL SERVICES, INC.

RECOVERY REPORT

Client Name:

Client SDG: 102997

Sample Matrix: LIQUID

Fraction: SV

Lab Smp Id:

Operator: HGV

Level: LOW Data Type: MS DATA

SampleType: LCS Quant Type: ISTD

SpikeList File: lcsms.spk

Method File: /var/chem/insta.i/102997.b/1028SVA.m

Misc Info:

| SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|--------------------------|-----------------------|---------------------------|----------------|--------|
| \$ 7 2-Fluorophenol | 200.00 | 69.06 | 34.53 | 21-100 |
| \$ 8 Phenol-d5 | 200.00 | 91.42 | 45.71 | 10-94 |
| \$ 9 Nitrobenzene-d5 | 100.00 | 82.71 | 82.71 | 35-114 |
| \$ 10 2-Fluorobiphenyl | 100.00 | 78.07 | 78.07 | 43-116 |
| \$ 11 2,4,6-Tribromophen | 200.00 | 119.47 | 59.73 | 10-123 |
| \$ 12 Terphenyl-d14 | 100.00 | 77.74 | 77.74 | 33-141 |

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November 05, 1997 Report No.: 00064878 Section A Page 1

< 200 ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300
HOUSTON, TX 77094
LIMS CLIENT: 0119 0025
PACE PROJECT: H47151
PACE CLIENT: 621284

ATTENTION: TOM PACIONI P.O. NO: HWPW 422-09

SAMPLE ID: HWPW-MW-1A

SAMPLE NO: H459494

SAMPLE MATRIX: WATER

DATE SAMPLED: 25-SEP-97 0854

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

TEST CODE LN DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene 15 ug/L Chlorobenzene < 5 ug/L Ethylbenzene 38 ug/L Methylene chloride < 5 ug/L Toluene 11 ug/L Xylenes (total) 47 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 200 ug/L 2,4-Dimethylphenol < 200 ug/L 2,4-Dinitrotoluene < 200 ug/L 2,6-Dinitrotoluene < 200 ug/L 2-Chloronaphthalene < 200 ug/L 2-Methylnaphthalene < 200 ug/L 4,6-Dinitro-o-cresol < 1000 ug/L 4-Nitrophenol < 1000 ug/L Acenaphthene < 200 ug/L Acenaphthylene < 200 ug/L Anthracene < 200 ug/L Benzo(a)anthracene < 200 ug/L Benzo(a)pyrene < 200 ug/L Chrysene < 200 ug/L Di-n-butylphthalate < 200 ug/L Dibenzofuran < 200 ug/L Fluoranthene < 200 ug/L Fluorene < 200 ug/L N-Nitrosodiphenylamine < 200 ug/L Naphthalene 1,700 ug/L Nitrobenzene < 200 ug/L Pentachlorophenol < 1000 ug/L Phenanthrene < 200 ug/L Phenol < 200 ug/L Pyrene < 200 ug/L

REPORT OF LABORATORY ANALYSIS

bis(2-Chloroethoxy)methane

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> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 2

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-1A SAMPLE NO: H459494

TEST

LN

5 1590

CODE DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate Solids, Dissolved at 180C < 200 ug/L 839 mg/L

REPORT OF LABORATORY ANALYSIS

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Phenol

Pyrene

bis(2-Chloroethoxy)methane

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 3

< 10

< 10

< 10 ug/L

ug/L

ug/L

AMENDED LABORATORY ANALYSIS REPORT

 CLIENT NAME:
 ERM SOUTHWEST INC.
 LIMS CLIENT:
 0119 0025

 ADDRESS:
 16300 KATY FREEWAY, SUITE 300
 PACE PROJECT:
 H47151

 HOUSTON, TX 77094 PACE CLIENT:
 621284

 ATTENTION:
 TOM PACIONI
 P.O. NO:
 HWPW 422-09

SAMPLE ID: HWPW-MW-2
SAMPLE NO: H459495

SAMPLE MATRIX: WATER

DATE SAMPLED: 25-SEP-97 0944
DATE RECEIVED: 26-SEP-97
PROJECT MANAGER: Elessa Sommers

TEST LN CODE DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) < 5 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene < 10 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene < 10 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran < 10 ug/L Fluoranthene < 10 ug/L Fluorene < 10 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene 33 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene < 10 ug/L

REPORT OF LABORATORY ANALYSIS

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November 05, 1997 Report No.: 00064878 Section A Page 4

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-2 SAMPLE NO: H459495

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate < 10 ug/L
5 I590 Solids, Dissolved at 180C 392 mg/L

REPORT OF LABORATORY ANALYSIS

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Tel: 713-488-1810 Fax: 713-488-4661

ug/L

ug/L

ug/L

ug/L

< 10 ug/L

< 10

< 10

< 50

< 10

< 10 ug/L

< 10 ug/L

< 10 ug/L

November 05, 1997 Report No.: 00064878 Section A Page 5

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-3 SAMPLE NO: H459496

SAMPLE MATRIX: WATER

N-Nitrosodiphenylamine

bis(2-Chloroethoxy)methane

Naphthalene

Nitrobenzene

Phenanthrene

Phenol

Pyrene

Pentachlorophenol

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1020

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| | TEST | | | |
|----|--------|--|--------|--------|
| LN | CODE | DETERMINATION | RESULT | IINITS |
| | | | | |
| | | | | |
| 1 | OVTCW2 | The state of the s | | |
| | | 1,2-Dichloroethane | < 5 | ug/L |
| | | Benzene | < 5 | ug/L |
| | | Chlorobenzene | < 5 | ug/L |
| | | Ethylbenzene | < 5 | ug/L |
| | | Methylene chloride | < 5 | ug/L |
| | | Toluene | < 5 | ug/L |
| | | Xylenes (total) | < 5 | ug/L |
| 3 | OSVTCW | The same of the sa | | |
| | | 1,2-Diphenylhydrazine | < 10 | ug/L |
| | | 2,4-Dimethylphenol | < 10 | ug/L |
| | | 2,4-Dinitrotoluene | < 10 | ug/L |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | ug/L |
| | | 2-Methylnaphthalene | < 10 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 50 | ug/L |
| | | 4-Nitrophenol | . < 50 | ug/L |
| | | Acenaphthene | 20 | ug/L |
| | | Acenaphthylene | < 10 | ug/L |
| | | Anthracene | < 10 | ug/L |
| | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | < 10 | ug/L |
| | | Chrysene | < 10 | ug/L |
| | | Di-n-butylphthalate | < 10 | ug/L |
| | | Dibenzofuran | 15 | ug/L |
| | | Fluoranthene | < 10 | ug/L |
| | | Fluorene | 15 | ug/L |

REPORT OF LABORATORY ANALYSIS

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November 05, 1997 Report No.: 00064878 Section A Page 6

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-3

SAMPLE NO: H459496

TEST

LN CODE DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 180C

< 10 ug/L 723 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 7

< 5

< 5

< 5

< 5 ug/L

< 5 ug/L

< 5 ug/L

< 10 ug/L

< 10 ug/L

< 10 ug/L

< 10

< 10

< 10

< 50

< 50

< 10

< 10

< 10

< 10

< 10

< 10 ug/L

< 10 ug/L

ug/L

ug/L

ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

Chlorobenzene

Dibenzofuran

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-4

SAMPLE NO: H459497

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 0817

DATE RECEIVED: 26-SEP-97 PROJECT MANAGER: Elessa Sommers

TEST CODE DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene

Ethylbenzene Methylene chloride Toluene Xylenes (total) 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine 2,4-Dimethylphenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2-Chloronaphthalene

2-Methylnaphthalene 4,6-Dinitro-o-cresol 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Chrysene Di-n-butylphthalate

< 10 ug/L Fluoranthene < 10 ug/L Fluorene < 10 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene < 10 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene < 10 ug/L

Phenol < 10 ug/L Pyrene < 10 ug/L bis(2-Chloroethoxy)methane < 10 ug/L

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services. Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 8

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-4 SAMPLE NO: H459497

TEST LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate

< 10 ug/L 5 1590 Solids, Dissolved at 1800 616 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 9

< 10 ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-5

SAMPLE NO: H459498

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1525

DATE RECEIVED: 26-SEP-97 PROJECT MANAGER: Elessa Sommers

TEST CODE LN DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) < 5 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene < 10 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene 10 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran < 10 ug/L Fluoranthene < 10 ug/L Fluorene < 10 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene < 10 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene < 10 ug/L Phenol < 10 ug/L Pyrene < 10 ug/L bis(2-Chloroethoxy)methane

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878

Section A Page 10

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-5

SAMPLE NO: H459498

TEST

LN CODE DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 1800

< 10 ug/L 453 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 11

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-7 SAMPLE NO: H459499

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1418

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

TEST LN DETERMINATION RESULT UNITS ------1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) < 5 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene < 10 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene < 10 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran < 10 ug/L Fluoranthene < 10 ug/L Fluorene < 10 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene < 10 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene < 10 ug/L Phenol < 10 ug/L Pyrene < 10 ug/L bis(2-Chloroethoxy)methane < 10 ug/L

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 12

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-7 SAMPLE NO: H459499

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate < 10 ug/L
5 I590 Solids, Dissolved at 180C 664 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 13

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-8

SAMPLE NO: H459500

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1555 DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| | TEST | | | |
|----|---------|---|--------|-------|
| LN | CODE | DETERMINATION | RESULT | UNITS |
| | | | | |
| 1 | OVECUS | 93/04 TOL W.L | | |
| 1 | UVICWZ | 8260A TCL Volatiles in Water | | |
| | | 1,2-Dichloroethane | < 5 | ug/L |
| | | Benzene | < 5 | ug/L |
| | | Chlorobenzene | < 5 | ug/L |
| | | Ethylbenzene | < 5 | ug/L |
| | | Methylene chloride | < 5 | ug/L |
| | | Toluene | < 5 | ug/L |
| 3 | OCVECIA | Xylenes (total) | < 5 | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | | |
| | | 1,2-Diphenylhydrazine | < 10 | ug/L |
| | | 2,4-Dimethylphenol | < 10 | ug/L |
| | | 2,4-Dinitrotoluene | < 10 | ug/L |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | ug/L |
| | | 2-Methylnaphthalene | < 10 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 50 | ug/L |
| | | 4-Nitrophenol | < 50 | ug/L |
| | | Acenaphthene | < 10 | ug/L |
| | | Acenaphthylene | < 10 | ug/L |
| | | Anthracene | < 10 | ug/L |
| 7 | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | < 10 | ug/L |
| | | Chrysene | < 10 | ug/L |
| | | Di-n-butylphthalate | < 10 | ug/L |
| | | Dibenzofuran | < 10 | ug/L |
| | | Fluoranthene | < 10 | ug/L |
| | | Fluorene | < 10 | ug/L |
| | | N-Nitrosodiphenylamine | < 10 | ug/L |
| | | Naphthalene | < 10 | ug/L |
| | | Nitrobenzene | < 10 | ug/L |
| | | Pentachlorophenol | < 50 | ug/L |
| | | Phenanthrene | | ug/L |
| | | Phenol | < 10 | ug/L |
| | | Pyrene | < 10 | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | ug/L |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

> > 553 mg/L

November 05, 1997 Report No.: 00064878 Section A Page 14

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-8 SAMPLE NO: H459500

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

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 15

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-9

SAMPLE NO: H459501

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1647

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| LN | TEST | DETERMINATION | | |
|----|--------|---|--------|------------|
| | | DETERMINATION | RESULT | UNITS |
| | | | | |
| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | |
| | | 1,2-Dichloroethane | < 5 | ug/L |
| | | Benzene | < 5 | 0. |
| | | Chlorobenzene | < 5 | 0. |
| | | Ethylbenzene | | ug/L |
| | | Methylene chloride | | ug/L |
| | | Toluene | | ug/L |
| | | Xylenes (total) | | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | | . . |
| | | 1,2-Diphenylhydrazine | < 10 | ug/L |
| | | 2,4-Dimethylphenol | < 10 | ug/L |
| | | 2,4-Dinitrotoluene | < 10 | _ |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | |
| | | 2-Methylnaphthalene | < 10 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 50 | ug/L |
| | | 4-Nitrophenol | < 50 | ug/L |
| | | Acenaphthene | < 10 | ug/L |
| | | Acenaphthylene | < 10 | ug/L |
| | | Anthracene | < 10 | ug/L |
| | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | < 10 | ug/L |
| | | Chrysene | < 10 | ug/L |
| | | Di-n-butylphthalate | < 10 | ug/L |
| | | Dibenzofuran | < 10 | ug/L |
| | | Fluoranthene | < 10 | ug/L |
| | | Fluorene | < 10 | ug/L |
| | | N-Nitrosodiphenylamine | < 10 | ug/L |
| | | Naphthal ene | < 10 | ug/L |
| | | Nitrobenzene | < 10 | ug/L |
| | | Pentachlorophenol | | ug/L |
| | | Phenanthrene | | ug/L |
| | | Phenol | < 10 | ug/L |
| | | Pyrene | | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | ug/L |
| | | | | |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 16

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-9 SAMPLE NO: H459501

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 180C < 10 ug/L 498 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 17

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-10A

SAMPLE NO: H459502

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1055

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| | TEST | | | |
|----|--------|---|---------|-------|
| LN | CODE | DETERMINATION | DESIIIT | UNITS |
| | | | | |
| | | | | |
| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | |
| | | 1,2-Dichloroethane | < 5 | ug/L |
| | | Benzene | < 5 | ug/L |
| | | Chlorobenzene | < 5 | ug/L |
| | | Ethylbenzene | < 5 | ug/L |
| | | Methylene chloride | < 5 | ug/L |
| | | Toluene | < 5 | ug/L |
| _ | | Xylenes (total) | < 5 | |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | | |
| | | 1,2-Diphenylhydrazine | < 10 | ug/L |
| | | 2,4-Dimethylphenol | < 10 | ug/L |
| | | 2,4-Dinitrotoluene | < 10 | ug/L |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | ug/L |
| | | 2-Methylnaphthalene | < 10 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 50 | ug/L |
| | | 4-Nitrophenol | < 50 | ug/L |
| | | Acenaphthene | < 10 | ug/L |
| | | Acenaphthylene | < 10 | ug/L |
| | | Anthracene | < 10 | ug/L |
| | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | < 10 | ug/L |
| | | Chrysene Sign based at the last | < 10 | ug/L |
| | | Di-n-butylphthalate | < 10 | ug/L |
| | | Dibenzofuran Fluoranthene | < 10 | ug/L |
| | | | < 10 | ug/L |
| | | Fluorene | < 10 | ug/L |
| | | N-Nitrosodiphenylamine | < 10 | ug/L |
| | | Naphthalene Nitrobenzene | 16 | ug/L |
| | | Pentachlorophenol | < 10 | ug/L |
| | | Phenanthrene | < 50 | ug/L |
| | | Phenol | < 10 | ug/L |
| | | Pyrene | < 10 | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | ug/L |
| | | STOCE STATES OF CHONY/IIIECTIONE | < 10 | ug/L |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 18

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-10A

SAMPLE NO: H459502

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate < 10 ug/L
5 1590 Solids, Dissolved at 180C 1,036 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 19

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-10B SAMPLE NO: H459503

OAM EL NO: 1143730.

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1121

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane 1,2-Dichloroethane 5 ug/L | LN | TEST CODE | DETERMINATION | DECUL T | LINITO |
|--|----|--------------|----------------------------|---------|--------|
| 1,2-Dichloroethane | | | | | UNI12 |
| 1,2-Dichloroethane | | | | | |
| Benzene | 1 | OVTCW2 | | | |
| Chlorobenzene | | | | < 5 | ug/L |
| Ethylbenzene | | | | < 5 | ug/L |
| Methylene chloride < 5 ug/L | | | | < 5 | ug/L |
| Toluene | | | • | 15 | ug/L |
| Xylenes (total) | | | | < 5 | ug/L |
| 1 | | | | < 5 | ug/L |
| 1,2-Diphenylhydrazine < 10 ug/L | _ | | | 16 | ug/L |
| 2,4-Dimethylphenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 3,10,12/L 2,6-Dinitrotoluene 3,10,12/L 2-Methylnaphthalene 4,6-Dinitro-o-cresol 4,6-Dinitro-o-cresol 5,0,12/L 4-Nitrophenol 5,0,12/L 4-Nitrophenol 6,0,12/L 6-Nitrophenol 6,0,12 | 3 | OSVTCW | | | |
| 2,4-Dinitrotoluene < 10 ug/L | | | | < 10 | ug/L |
| 2,6-Dinitrotoluene < 10 ug/L | | | | < 10 | ug/L |
| 2-Chloronaphthalene | | | | < 10 | ug/L |
| 2-Methylnaphthalene | | | | < 10 | ug/L |
| 4,6-Dinitro-o-cresol | | | | < 10 | ug/L |
| 4-Nitrophenol | | | | 10 | ug/L |
| Acenaphthene 66 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran | | | | < 50 | ug/L |
| Acenaphthylene | | | | < 50 | ug/L |
| Anthracene | | | | 66 | ug/L |
| Benzo(a)anthracene | | | | < 10 | ug/L |
| Benzo(a)pyrene < 10 ug/L | | | | < 10 | ug/L |
| Chrysene | | | | < 10 | ug/L |
| Di-n-butylphthalate < 10 ug/L | | | | < 10 | ug/L |
| Dibenzofuran 41 ug/L Fluoranthene < 10 ug/L | | | 1000000 A 700000 | < 10 | ug/L |
| Fluoranthene | | | | < 10 | ug/L |
| Fluorene 43 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene 230 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene 34 ug/L Phenol | | | | 41 | ug/L |
| N-Nitrosodiphenylamine | | | | < 10 | ug/L |
| Naphthalene 230 ug/L Nitrobenzene < 10 ug/L | | | | 43 | ug/L |
| Nitrobenzene 250 ug/L Pentachlorophenol < 50 ug/L | | | | < 10 | ug/L |
| Pentachlorophenol < 50 ug/L Phenanthrene 34 ug/L Phenol < 10 ug/L Pyrene < 10 ug/L | | | • | 230 | ug/L |
| Phenanthrene 34 ug/L Phenol < 10 ug/L | | | | < 10 | ug/L |
| Phenol | | | | < 50 | ug/L |
| Pyrene < 10 ug/L | | | | 34 | ug/L |
| hig/2-Chlanachhaus)mathaus | | | | < 10 | ug/L |
| bis(2-Chloroethoxy)methane < 10 ug/L | | | • | < 10 | ug/L |
| | | | bis(2-Chloroethoxy)methane | < 10 | ug/L |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 20

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-10B

SAMPLE NO: H459503

LN CODE

DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 1590

Solids, Dissolved at 180C

< 10 ug/L

880 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 21

< 10 ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-11A SAMPLE NO: H459504

SAMPLE MATRIX: WATER

ADDRESS: 16300 KATY FREEWAY, SUITE 300

PACE PROJECT: H47151 PACE CLIENT: 621284

P.O. NO: HWPW 422-09

LIMS CLIENT: 0119 0025

DATE SAMPLED: 25-SEP-97 1155

DATE RECEIVED: 26-SEP-97 PROJECT MANAGER: Elessa Sommers

TEST CODE DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) 7 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene 11 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene 83 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran 37 ug/L Fluoranthene < 10 ug/L Fluorene 47 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene 340 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene 18 ug/L Phenol < 10 ug/L Pyrene < 10 ug/L bis(2-Chloroethoxy)methane

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 22

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-MW-11A

SAMPLE NO: H459504

TEST

LN CODE DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 180C

< 10 ug/L 812 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 23

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-MW-11B SAMPLE NO: H459505

SAMPLE MATRIX: WATER

HOUSTON, TX 77094-

DATE SAMPLED: 25-SEP-97 1221 DATE RECEIVED: 26-SEP-97

P.O. NO: HWPW 422-09

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

PROJECT MANAGER: Elessa Sommers

TEST LN CODE

DETERMINATION

RESULT UNITS

| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | | |
|---|--------|---|------|-----|------|
| 1 | OVTCW2 | | | | |
| | | | | | |
| | | 1,2-Dichloroethane | | _ | |
| | | Benzene | | 5 | 0. |
| | | Chlorobenzene | | 5 | ug/L |
| | | Ethylbenzene | < | : 5 | |
| | | Methylene chloride | | 9 | ug/L |
| | | Toluene | | | ug/L |
| | | Xylenes (total) | < | | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | | 8 | ug/L |
| | | 1,2-Diphenylhydrazine | | | |
| | | 2,4-Dimethylphenol | | | ug/L |
| | | 2,4-Dinitrotoluene | < | | ug/L |
| | | 2,6-Dinitrotoluene | | | ug/L |
| | | 2-Chloronaphthalene | | | ug/L |
| | | 2-Methylnaphthalene | | | ug/L |
| | | 4,6-Dinitro-o-cresol | | | ug/L |
| | | 4-Nitrophenol | | | ug/L |
| | | Acenaphthene | < 5 | | ug/L |
| | | Acenaphthylene | | | ug/L |
| | | Anthracene | | | ug/L |
| | | Benzo(a)anthracene | < 1 | | ug/L |
| | | Benzo(a)pyrene | < 1 | | ug/L |
| | | Chrysene | < 1 | | ug/L |
| | | Di-n-butylphthalate | < 1 | | ug/L |
| | | Dibenzofuran | < 1 | | ug/L |
| | | Fluoranthene | | | ug/L |
| | | Fluorene | < 1 | | ug/L |
| | | N-Nitrosodiphenylamine | | | ug/L |
| | | Naphthalene | < 1 | | ug/L |
| | | Nitrobenzene | 32 | | ug/L |
| | | Pentachlorophenol | < 1 | | ug/L |
| | | Phenanthrene | < 5 | | ug/L |
| | | Phenol | 4 | | ug/L |
| | | Pyrene | < 1 | | ug/L |
| | | bis(2-Chloroethoxy)methane | < 1 | | ug/L |
| | , | STOLE SHOOL OF CHONY / MECHALIE | < 10 | 0 (| ug/L |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 24

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

LN

5 1590

SAMPLE ID: HWPW-MW-11B

SAMPLE NO: H459505

CODE DETERMINATION

RESULT UNITS

bis(2-Ethylhexyl)phthalate

Solids, Dissolved at 1800

< 10 ug/L

735 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 25

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE NO: H459506

SAMPLE MATRIX: WATER

SAMPLE ID: HWPW-MW-11B-DUP

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1221

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| LN | TEST | DETERMINATION | | |
|----|--------|---|--------|--------------|
| | | DETERMINATION | RESULT | UNITS |
| | | | | |
| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | |
| | | 1,2-Dichloroethane | < 5 | ug/L |
| | | Benzene | < 5 | ug/L |
| | | Chlorobenzene | < 5 | ug/L |
| | | Ethylbenzene | 8 | ug/L |
| | | Methylene chloride | < 5 | ug/L |
| | | Toluene | < 5 | ug/L |
| _ | | Xylenes (total) | 8 | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | | |
| | | 1,2-Diphenylhydrazine | < 10 | ug/L |
| | | 2,4-Dimethylphenol | < 10 | ug/L |
| | | 2,4-Dinitrotoluene | < 10 | ug/L |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | ug/L |
| | | 2-Methylnaphthalene | 31 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 50 | ug/L |
| | | 4-Nitrophenol Acenaphthene | < 50 | |
| | | Acenaphthylene | 84 | -0, - |
| | | Anthracene | < 10 | 0, |
| | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | | ug/L |
| | | Chrysene | < 10 | ug/L |
| | | Di-n-butylphthalate | | ug/L |
| | | Dibenzofuran | | ug/L |
| | | Fluoranthene | | ug/L |
| | | Fluorene | | ug/L |
| | | N-Nitrosodiphenylamine | | ug/L ug/L |
| | | Naphthalene | | ug/L |
| | | Nitrobenzene | | ug/L |
| | | Pentachlorophenol | | ug/L |
| | | Phenanthrene | | ug/L |
| | | Phenol | | ug/L |
| | | Pyrene | | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | • |
| | | | . 10 | -3/ - |

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

> Tel: 713-488-1810 Fax: 713-488-4661

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC. SAMPLE ID: HWPW-MW-11B-DUP

SAMPLE NO: H459506

TEST

LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 180C

< 10 ug/L 744 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

November 05, 1997 Report No.: 00064878 Section A Page 27

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-P-10

SAMPLE NO: H459507

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1450

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| | TEST | | | |
|----|--------|---|--------|--------------|
| LN | CODE | DETERMINATION | | |
| | CODE | DETERMINATION | RESULT | UNITS |
| | | | | |
| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | |
| | _ | 1,2-Dichloroethane | - | |
| | | Benzene | < 5 | ug/L |
| | | Chlorobenzene | < 5 | ug/L |
| | | Ethylbenzene | < 5 | ug/L |
| | | Methylene chloride | < 5 | ug/L |
| | | Toluene | < 5 | ug/L |
| | | Xylenes (total) | < 5 | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | < 5 | ug/L |
| | | 1,2-Diphenylhydrazine | . 10 | |
| | | 2,4-Dimethylphenol | | ug/L |
| | | 2,4-Dinitrotoluene | | ug/L |
| | | 2,6-Dinitrotoluene | | ug/L |
| | | 2-Chloronaphthalene | | ug/L |
| | | 2-Methylnaphthalene | | ug/L |
| | | 4,6-Dinitro-o-cresol | | ug/L |
| | | 4-Nitrophenol | < 50 | |
| | | Acenaphthene | < 50 | |
| | | Acenaphthylene | | ug/L |
| | | Anthracene | | ug/L |
| | | Benzo(a)anthracene | | ug/L |
| | | Benzo(a)pyrene | | ug/L |
| | | Chrysene | | ug/L |
| | | Di-n-butylphthalate | | ug/L |
| | | Dibenzofuran | | ug/L ug/L |
| | | Fluoranthene | | ug/L ug/L |
| | | Fluorene | 22 | - |
| | | N-Nitrosodiphenylamine | | ug/L |
| 7 | | Naphthalene | | ug/L |
| | | Nitrobenzene | | ug/L |
| | | Pentachlorophenol | < 50 | - |
| | | Phenanthrene | | ug/L |
| | | Phenol | | ug/L |
| | | Pyrene | | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | |
| | | | . 10 | 49/ L |

REPORT OF LABORATORY ANALYSIS

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-P-10 SAMPLE NO: H459507

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate 5 I590 Solids, Dissolved at 180C

< 10 ug/L 703 mg/L

REPORT OF LABORATORY ANALYSIS

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< 10 ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-P-11

SAMPLE NO: H459508

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284 P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1618

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

TEST LN CODE DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) < 5 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene < 10 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene < 10 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran < 10 ug/L Fluoranthene < 10 ug/L Fluorene 16 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene 15 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene < 10 ug/L Phenol < 10 ug/L Pyrene < 10 ug/L bis(2-Chloroethoxy)methane

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-P-11 SAMPLE NO: H459508

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate 5 I590 Solids, Dissolved at 180C

< 10 ug/L 835 mg/L

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Tel: 713-488-1810 Fax: 713-488-4661

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-P-12

SAMPLE NO: H459509

SAMPLE MATRIX: WATER

TEST

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151
PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1715

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

| | 1531 | | | |
|----|---------|---|--------------|--------------|
| LN | CODE | DETERMINATION | RESULT | UNITS |
| | | | | |
| 1 | OVTCW2 | 8260A TCL Volatiles in Water | | |
| | OVICWE | 1,2-Dichloroethane | | |
| | | Benzene | < 5 | |
| | | Chlorobenzene | < 5 | |
| | | Ethylbenzene | < 5 | -3, - |
| | | Methylene chloride | < 5 | · - |
| | | Toluene | < 5 | ug/L |
| | | Xylenes (total) | < 5 | ug/L |
| 3 | OSVTCW | TCL - Semi-volatile Extractables in Water | < 5 | ug/L |
| | 0011011 | 1,2-Diphenylhydrazine | | |
| | | 2,4-Dimethylphenol | < 10 | - |
| | | 2,4-Dinitrotoluene | < 10 | ug/L |
| | | 2,6-Dinitrotoluene | < 10 | ug/L |
| | | 2-Chloronaphthalene | < 10 | ug/L |
| | | 2-Methylnaphthalene | < 10 | ug/L |
| | | 4,6-Dinitro-o-cresol | < 10 | ug/L |
| | | 4-Nitrophenol | < 50 | ug/L |
| | | Acenaphthene | < 50 | ug/L |
| | | Acenaphthylene | < 10 | ug/L |
| | | Anthracene | < 10 | ug/L |
| | | Benzo(a)anthracene | < 10 | ug/L |
| | | Benzo(a)pyrene | < 10 | ug/L |
| | | Chrysene | < 10 < 10 | ug/L |
| | | Di-n-butylphthalate | < 10 | ug/L |
| | | Dibenzofuran | < 10 | ug/L |
| | | Fluoranthene | < 10 | ug/L ug/L |
| | | Fluorene | < 10 | ug/L |
| | | N-Nitrosodiphenylamine | < 10 | ug/L ug/L |
| | | Naphthalene | < 10 | ug/L ug/L |
| | | Nitrobenzene | < 10 | ug/L |
| | | Pentachlorophenol | < 50 | ug/L |
| | | Phenanthrene | < 10 | ug/L ug/L |
| | | Phenol | < 10 | ug/L |
| | | Pyrene | < 10 | ug/L |
| | | bis(2-Chloroethoxy)methane | < 10 | ug/L |
| | | | | |

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-P-12 SAMPLE NO: H459509

TEST LN CODE DETERMINATION RESULT UNITS bis(2-Ethylhexyl)phthalate

5 I590 Solids, Dissolved at 180C

< 10 ug/L 875 mg/L

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

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< 10

< 10

< 10

< 10

ug/L

ug/L

ug/L

ug/L

AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

ADDRESS: 16300 KATY FREEWAY, SUITE 300

HOUSTON, TX 77094-

ATTENTION: TOM PACIONI

SAMPLE ID: HWPW-EB

Phenol

Pyrene

bis(2-Chloroethoxy)methane

SAMPLE NO: H459510

SAMPLE MATRIX: WATER

LIMS CLIENT: 0119 0025

PACE PROJECT: H47151

PACE CLIENT: 621284

P.O. NO: HWPW 422-09

DATE SAMPLED: 25-SEP-97 1750

DATE RECEIVED: 26-SEP-97

PROJECT MANAGER: Elessa Sommers

TEST LN CODE DETERMINATION RESULT UNITS 1 OVTCW2 8260A TCL Volatiles in Water 1,2-Dichloroethane < 5 ug/L Benzene < 5 ug/L Chlorobenzene < 5 ug/L Ethylbenzene < 5 ug/L Methylene chloride < 5 ug/L Toluene < 5 ug/L Xylenes (total) < 5 ug/L 3 OSVTCW TCL - Semi-volatile Extractables in Water 1,2-Diphenylhydrazine < 10 ug/L 2,4-Dimethylphenol < 10 ug/L 2,4-Dinitrotoluene < 10 ug/L 2,6-Dinitrotoluene < 10 ug/L 2-Chloronaphthalene < 10 ug/L 2-Methylnaphthalene < 10 ug/L 4,6-Dinitro-o-cresol < 50 ug/L 4-Nitrophenol < 50 ug/L Acenaphthene < 10 ug/L Acenaphthylene < 10 ug/L Anthracene < 10 ug/L Benzo(a)anthracene < 10 ug/L Benzo(a)pyrene < 10 ug/L Chrysene < 10 ug/L Di-n-butylphthalate < 10 ug/L Dibenzofuran < 10 ug/L Fluoranthene < 10 ug/L Fluorene < 10 ug/L N-Nitrosodiphenylamine < 10 ug/L Naphthalene < 10 ug/L Nitrobenzene < 10 ug/L Pentachlorophenol < 50 ug/L Phenanthrene

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AMENDED LABORATORY ANALYSIS REPORT

CLIENT NAME: ERM SOUTHWEST INC.

SAMPLE ID: HWPW-EB SAMPLE NO: H459510

TEST
LN CODE DETERMINATION RESULT UNITS

bis(2-Ethylhexyl)phthalate < 10 ug/L
5 I590 Solids, Dissolved at 180C < 5 mg/L

REPORT OF LABORATORY ANALYSIS

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AMENDED SUPPLEMENTAL INFORMATION

| | TEST | | DUP/MS MS/MS | S D | SAMPLE PREPA | RATION | | SAMPLE ANALYS | IS |
|------|----------------|----------------|-----------------|-----------|------------------|---------|----------|---------------------------|-------------------|
| LN | CODE | BATCH | BATCH | LR-METHOD | DATE/TIME | ANALYST | | DATE/TIME / | ANALYST INSTRUMEN |
| SAM | PLE ID: | HWPW-MW- | 1A | | | | | SAMPLE NO: | : H459494 |
| | OVTCW | 78366 | 78281 | l NA | | | 19-8260A | | |
| | 1590 | 78319 | , | | | | 02-160.1 | 01-0CT-97 1809 M | |
| 3 | OSVTC | 78367 | 78367 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 77 1030 0 | - 110 to 1 |
| AMP | LE ID: | HWPW-MW-2 | | | | | 17 02708 | 08-ОСТ-97 0 <i>7</i> 36 н | GV GCMSZ |
| | | | | | | | | SAMPLE NO: | H459495 |
| | OVTCW2 | | 78281 | | | | 19-8260A | 01-0CT-97 1835 M | |
| | 1590 | 78319 | 78319 | | | | 02-160.1 | 30-SEP-97 1630 C | |
| 3 | OSVTCW | 78367 | 78367 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | | |
| \MP | LE ID: | HWPW-MW-3 | | | | | | 1 | dv GCMSZ |
| | | | | | | | | SAMPLE NO: | H459496 |
| | OVTCW2 | | 78281 | | | | 19-8260A | 01-0CT-97 1902 MH | |
| | 1590 | 78319 | 78319 | | | | 02-160.1 | 30-SEP-97 1630 C | |
| 3 | OSVTCW | 78367 | 78367 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 04-0CT-97 0449 HG | |
| AMPL | E ID: H | WPW-MW-4 | | | | | | SAMPLE NO: | |
| 4 | 0) (70) (0 | 707 | | | | | | SAMPLE NO: | M439497 |
| | OVTCW2 | | 78281 | | | | 19-8260A | 01-0CT-97 1928 MH | GCMSB |
| | 1590 | 78319 | 78319 | | | | 02-160.1 | 30-SEP-97 1630 C | |
| 3 | OSVTCW | 78367 | 78367 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270В | | |
| MPL | E ID: H | WPW-MW-5 | | | | | | SAMPLE NO: | 11/50/00 |
| 1 | OVERUS | 707// | 7000 | | | | | SAMPLE NO: | N439490 |
| | OVTCW2 1590 | 78366 | 78281 | | | | 19-8260A | 01-OCT-97 1954 MH | GCMSB |
| | OSVTCW | 78319 78347 | 78319 | | | | 02-160.1 | 30-SEP-97 1630 C F | |
| , | DOVICW | 78367 | (836/ | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 04-0CT-97 0631 HGV | |
| MPL | E ID: H | WPW-MW-7 | | | | | | SAMPLE NO: | H459499 |
| 1 | OVTCW2 | 78366 | 78281 | NA | | | | | |
| | 1590 | 78319 | 78319 | | | | 19-8260A | 01-OCT-97 2021 MH | |
| | OSVTCW | 78367 | | | 20-CED-07 0000 | | 02-160.1 | 30-SEP-97 1630 C P | 008WAT |
| | | | 10301 | 17-33106 | 29-SEP-97 0900 F | RR | 19-8270B | 04-OCT-97 0722 HGV | GCMSZ |
| 1PLE | ID: HW | VPW-MW-8 | | | | | | SAMPLE NO: | н459500 |
| 1 | OVTCW2 | 78366 | 78281 | NA | | | 40.0040- | | |
| 5 | 1590 | | 78288 | | | | 19-8260A | 01-OCT-97 2047 MH | GCMSB |
| | OSVTCW | | | | 29-SEP-97 0900 R | D | 02-160.1 | 29-SEP-97 1600 C P | |
| | | | | | JE: // U/UU K | K | 19-8270B | 04-0CT-97 0813 HGV | GCMSZ |

REPORT OF LABORATORY ANALYSIS

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AMENDED SUPPLEMENTAL INFORMATION

| | TEST | LCSR BLNK | DUP/MS MS/MSD | s | SAMPLE PREPA | ARATION | | SAMPLE ANAL | YSIS | |
|--------|----------------|------------------|------------------|-----------|-------------------|---------|----------------------|----------------------------------|-----------|-----------------|
| LN | CODE | BATCH | BATCH | LR-METHOD | DATE/TIME | ANALYST | LR-METHOD | | | INSTRUMENT |
| SAMP | LE ID: | HWPW-MW- | 9 | | | | | | | |
| | | | | | | | | SAMPLE | NO: H4595 | 01 |
| | OVTCW | 2 78366 78288 | | | | | 19-8260A | 01-OCT-97 2113 | мн | GCMSB |
| | OSVTC | | | | 29-SEP-97 0900 | D D | 02-160.1 | -,, ,, ,, | | TAW800 |
| | | | | ., 55105 | Ly 3LP-97 0900 | кк | 19-8270B | 04-0CT-97 0904 | HGV | GCMSZ |
| SAMP | LE ID: | HWPW-MW-1 | 10A | | | | | SAMPLE | NO: H4595 | 02 |
| | OVTCW2 | | 78344 | | | | 19-8260A | 01-001-07 21/0 | | •••• |
| | 1590 | 78288 | 78288 | | | | 02-160.1 | 01-0CT-97 2140 29-SEP-97 1600 | | GCMSB |
| 3 | OSVTCW | 78367 | 78367 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 03-OCT-97 1258 | | 008WAT GCMSA |
| SAMPL | E ID: | HWPW-MW-1 | 0B | | | | | SAMPLE A | IO: H4595 | าร |
| 1 | OVTCW2 | 78366 | 78344 | MA | | | | | | ,, |
| | 1590 | 78288 | 78288 | | | | 19-8260A | 01-OCT-97 2206 | | GCMSB |
| 3 | OSVTCW | 78367 | | | 29-SEP-97 0900 | R R | 02-160.1 19-8270B | 29-SEP-97 1600 03-OCT-97 1347 | | TAW800 |
| SAMPL | E ID: | HWPW-MW-1 | | | | | 17 02708 | 03-001-97 1347 | HGV | GCMSA |
| | | | | | | | | SAMPLE N | О: Н45950 | 4 |
| | OVTCW2 | | 78344 | | | | 19-8260A | 02-OCT-97 1523 | мн | GCMSB |
| | 1590 OSVTCW | 78288 | 78288 | | | | 02-160.1 | | | 008WAT |
| , | OSVICW | 78367 | /836/ | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 03-OCT-97 1436 | | GCMSA |
| SAMPLE | E ID: H | IWPW-MW-11 | IB | | | | | SAMPLE NO | D: H45950 | 5 |
| 1 | OVTCW2 | 78366 | 78366 | MA | | | | | 1143730 | • |
| | 1590 | 78288 | 78288 | | | | 19-8260A | 01-OCT-97 2259 | | GCMSB |
| 3 | OSVTCW | 78367 | | | 29-SEP-97 0900 | D D | 02-160.1 | 29-SEP-97 1600 | | TAW800 |
| | | | | | 27 02. 77 0700 | N N | 19-8270В | 03-OCT-97 1525 | HGV | GCMSA |
| SAMPLE | ID: H | WPW-MW-11 | B-DUP | | | | | SAMPLE NO | : H45950 | 5 |
| 1 | OVTCW2 | 78366 | 78344 | NA | | | 10-92404 | 04 | | |
| 5 | 1590 | 78288 | 78288 | NA | | | 19-8260A 02-160.1 | 01-0CT-97 2259 | | CMSB |
| 3 | OSVTCW | 78368 | 78368 | 19-3510B | 29-SEP-97 0900 | R R | 19-8270B | 29-SEP-97 1600 03-OCT-97 1615 | | 108WAT ICMSA |
| SAMPLE | ID: H | WPW-P-10 | | | | | | | | |
| _ | a | | | | | | | SAMPLE NO | : H459507 | |
| | OVTCW2 | 78419 | 78169 | | | | 19-8260A | 02-0CT-97 1338 | MH o | CMSB |
| | 1590 OSVTCW | 78288 | 78288 | | 100,000 0000 0000 | | 02-160.1 | 29-SEP-97 1600 | 100 ACM | O8WAT |
| 3 | OSVICW | 78368 | 78368 | 19-3510B | 29-SEP-97 0900 I | RR | 19-8270B | 03-OCT-97 1704 | | CMSA |

REPORT OF LABORATORY ANALYSIS

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AMENDED SUPPLEMENTAL INFORMATION

| | TEST | LCSR BLNK | DUP/MS MS/MSD | | SAMPLE PREPA | RATION | | SAMPLE ANAI | YSIS | |
|-------|----------|--------------|------------------|-----------|----------------|---------|-----------|----------------|------------|------------|
| LN | CODE | BATCH | BATCH | LR-METHOD | DATE/TIME | ANALYST | LR-METHOD | DATE/TIME | ANALYST | INSTRUMENT |
| SAMPL | E ID: H | WPW-P-11 | | | | | | | | |
| | | | | | | | | SAMPLE | NO: H4595 | 808 |
| 1 | OVTCW2 | 78419 | 78163 | NA | | | 19-8260A | 02 007 07 4407 | | |
| 5 | 1590 | 78288 | 78288 | NA | | | | 02-0CT-97 1405 | | GCMSB |
| 3 | OSVTCW | 78368 | 78368 | 19-3510B | 29-SEP-97 0900 | D D | | 27 021 77 1000 | | TAW800 |
| | | | | | L) 0L1 // 0/00 | K K | 19-8270в | 03-OCT-97 1753 | HGV | GCMSA |
| AMPL | E ID: H | WPW-P-12 | | | | | | | | |
| | | | | | | | | SAMPLE | NO: H4595 | 09 |
| 1 | OVTCW2 | 78419 | 78344 | NA | | | 19-8260A | 00 000 00 1101 | | |
| 5 | 1590 | 78288 | 78288 | NA | | | | 02-OCT-97 1431 | | GCMSB |
| 3 | OSVTCW | 78368 | | 19-3510B | 29-SEP-97 0900 | D D | 02-160.1 | 29-SEP-97 1600 | | TAW800 |
| | | | | ., 55,65 | L) 3LP 9/ 0900 | кк | 19-8270в | 03-OCT-97 1842 | HGV | GCMSA |
| AMPLI | E ID: HW | IPW-EB | | | | | | | | |
| | | | | | | | | SAMPLE N | 10: H45951 | 10 |
| 1 | OVTCW2 | 78419 | 78344 | NA | | | 40.00/0 | | | |
| 5 | 1590 | 78288 | | NA | | | 19-8260A | 02-OCT-97 1457 | | GCMSB |
| 3 | OSVTCW | 78368 | | 19-3510B | 20-650 07 0000 | | 02-160.1 | 29-SEP-97 1600 | CP | TAW800 |
| | | | . 0500 | 17 33 108 | 29-SEP-97 0900 | кк | 19-8270в | 03-OCT-97 1931 | HGV | GCMSA |
| 2 | Method L | iteratur | e Pefer | 200 | | | | | | |
| • | | reciatui | c kelele | ince | | | | | | |

⁰² EPA-Methods for Chemical Analysis of Water & Wastes, 1984.

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¹⁹ EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986 and updates

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AMENDED SURROGATE STANDARD RECOVERY

| | TEST | | DEDCEUT | 100555 | · |
|-------|---------|---|---------------------|----------------------|------------|
| LN | CODE | SURROGATE COMPOUND | PERCENT RECOVERY | ACCEPTANCE LIMITS | : REF L |
| | | | | | |
| SAMPL | LE ID: | HWPW-MW-1A | | | |
| | | | | SAMPLE NO: | H459494 |
| 2 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | 05 | | 1 |
| | | Dibromofluoromethane | 95 111 | - | |
| | | Toluene-d8 | 97 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | 91 | - | |
| | | 2,4,6-Tribromophenol | 24 | | 3 |
| | | 2-Fluorobiphenyl | 2* | - | |
| | | 2-Fluorophenol | 2* | - | |
| | | Nitrobenzene-d5 | 1* | - | |
| | | Phenol-d5 | | - | |
| | | p-Terphenyl-d14 | 1* | - | |
| | | * The surrogates were not recovered due to the dilution required by matrix | 2* | - | |
| | | interferences or high analyte concentration. | | | |
| AMPLE | ID: H | WPW-MW-2 | s | AMPLE NO: | U/F0/05 |
| 2 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | | AMPLE NO: | 1439495 |
| | | 4-Bromofluorobenzene | | | 1 |
| | | Dibromofluoromethane | 97 | - | |
| | | Toluene-d8 | 107 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | 95 | - | |
| | | 2,4,6-Tribromophenol | | | 3 |
| | | 2-Fluorobiphenyl | 60 | - | |
| | | 2-Fluorophenol | 49 | - | |
| | | Nitrobenzene-d5 | 44 | - | |
| | | Phenol-d5 | 42 | - | |
| | | p-Terphenyl-d14 | 38 | - | |
| | * | The surrogate recovery was outside the acceptance limits; however, 1 base/ | 17* | - | |
| | | eutral and 1 acid surrogate are allowed to be outside limits, per lab QC olicy. | | | |
| 1PLE | ID: HWF | PW-MW-3 | | | |
| | | | SA | MPLE NO: H4 | 459496 |
| 2 \$ | VOA2W | GC/MS Volatiles Surrogates (8260) | | | |
| | 4 | -Bromofluorobenzene | | | 1 |
| | D | ibromofluoromethane | , , | - | |
| | | oluene-d8 | 106 | - | |
| 4 \$ | BNAW G | C/MS BNA Surrogates | 97 | - | |
| | | ,4,6-Tribromophenol | | | 3 |
| | | -Fluorobiphenyl | 44 | - | |
| | | -Fluorophenol | 43 | - | |
| | | itrobenzene-d5 | 20* | - | |
| | | | 18* | | |

REPORT OF LABORATORY ANALYSIS

18*

Pace Analytical Services, Inc. 900 Gemini Avenue Houston, TX 77058

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AMENDED SURROGATE STANDARD RECOVERY

| | TEST CODE | | PERCENT | ACCEPTANO | E |
|---------|--------------|---|-----------|------------|---------|
| | | | RECOVERY | LIMITS | REF L |
| AMPLE I | ID: | HWPW-MW-3 | | | |
| | | | | SAMPLE NO: | H459496 |
| | | Phenol-d5 | 22 | | |
| | | p-Terphenyl-d14 | 45 | - | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | 45 | - | |
| | | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| MPLE II | D: | HWPW-MW-4 | | | |
| | | | | SAMPLE NO: | H459497 |
| 2 \$v | OA2W | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | 07 | | 1 |
| | | Dibromofluoromethane | 97 | - | |
| | | Toluene-d8 | 100 | - | |
| 4 \$BN | WAW | GC/MS BNA Surrogates | 96 | - | |
| | | 2,4,6-Tribromophenol | 50 | | 3 |
| | | 2-Fluorobiphenyl | 50 | - | |
| | | 2-Fluorophenol | 42* | - | |
| | | Nitrobenzene-d5 | 35 | - | |
| | | Phenol-d5 | 38 | • | |
| | | p-Terphenyl-d14 | 40 | - | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | 50 | - | |
| | | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| PLE ID: | : н | ⊌PW-MW-5 | | | |
| | | | S | AMPLE NO: | H459498 |
| 2 \$VO | A2W | GC/MS Volatiles Surrogates (8260) | | | _ |
| | | 4-Bromofluorobenzene | 99 | | 1 |
| | | Dibromofluoromethane | 106 | - | |
| | | Toluene-d8 | 97 | - | |
| \$BNA | | GC/MS BNA Surrogates | 97 | - | |
| | | 2,4,6-Tribromophenol | 50 | | 3 |
| | | 2-Fluorobiphenyl | | - | |
| | | 2-Fluorophenol | 45 26 | - | |
| | | Nitrobenzene-d5 | 26 22* | - | |
| | | Phenol-d5 | | - | |
| | | p-Terphenyl-d14 | 30 | • | |
| | * | The surrogate recovery was outside the acceptance limits; however, 1 base/ | 44 | - | |
| | | eutral and 1 acid surrogate are allowed to be outside limits, per lab QC olicy. | | | |

REPORT OF LABORATORY ANALYSIS

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AMENDED SURROGATE STANDARD RECOVERY

| LN | TEST | SURROGATE COMPOUND | PERCENT | ACCEPTANCE | : |
|------|---------|---|-----------|-------------|---------|
| | | COMMODATE COMPOUND | RECOVERY | LIMITS | REF |
| AMPL | E ID: | HWPW-MW-7 | | | |
| | | | | SAMPLE NO: | H459499 |
| 2 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | | | 1 |
| | | 4-Bromofluorobenzene | 97 | | 1 |
| | | Dibromofluoromethane | 100 | - | |
| | | Toluene-d8 | 95 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | ,, | | 3 |
| | | 2,4,6-Tribromophenol | 50 | _ | 3 |
| | | 2-Fluorobiphenyl | 74 | _ | |
| | | 2-Fluorophenol | 24 | _ | |
| | | Nitrobenzene-d5 | 26* | _ | |
| | | Phenol-d5 | 32 | - | |
| | | p-Terphenyl-d14 | 47 | _ | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | 71 | | |
| | | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| PLE | E ID: H | IWPW-MW-8 | : | SAMPLE NO: | Н459500 |
| 2 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | 98 | _ | 1 |
| | | Dibromofluoromethane | 104 | - | |
| | | Toluene-d8 | 98 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | 70 | | 7 |
| | | 2,4,6-Tribromophenol | 48 | _ | 3 |
| | | 2-Fluorobiphenyl | 57 | _ | |
| | | 2-Fluorophenol | 32 | - | |
| | | Nitrobenzene-d5 | 33* | - | |
| | | Phenol-d5 | 40 | _ | |
| | | p-Terphenyl-d14 | 47 | _ | |
| | 1 | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | | | |
| | 1 | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| PLE | ID: H | NPW-MW-9 | s | AMPLE NO: H | 1459501 |
| 2 : | SVOA2W | GC/MS Volatiles Surrogates (8260) | | | _ |
| | | 4-Bromofluorobenzene | 00 | | 1 |
| | | Dibromofluoromethane | 98 107 | - | |
| | | Toluene-d8 | 103 | - | |
| 4 9 | BNAW | GC/MS BNA Surrogates | 98 | - | 1000 |
| | | 2,4,6-Tribromophenol | | | 3 |
| | | | | | |
| | | 2-Fluorobiphenyl | 55 52 | - | |

REPORT OF LABORATORY ANALYSIS

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AMENDED SURROGATE STANDARD RECOVERY

| MPLE ID: HWPW-MW-9 Nitrobenzene-d5 | .N CODE | SURROGATE COMPOUND | PERCENT RECOVERY | ACCEPTANCE LIMITS | REF L |
|--|-----------|---|---------------------|----------------------|------------------|
| Nitrobenzene-d5 | MPLE ID: | HWPW-MW-9 | | SAMPLE NO. | U/E0E01 |
| P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC POWAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 CC/MS BNAW GC/MS Navrogates 2,4,6-Tripromophenol 2-Fluorobjphenyl 3-Fluorobjphenyl 4-The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-HW-10B SAMPLE NO: H459503 SAMPLE | | Nitrobenzene-d5 | | OANTEL NO. | 1429301 |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab ac policy. MPLE ID: HWPW-MW-10A SAMPLE NO: H459502 2 \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 4 \$SBNAW GC/MS SBNA Surrogates C2 \$\frac{1}{2}\$ \text{ fuorobiphenyl} \text{ fuorobenzene} fuorob | | Phenol-d5 | | - | |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. MPLE ID: HWPW-MW-10A \$AMPLE NO: H459502 \$ \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane | | p-Terphenyl-d14 | | - | |
| ### Part | | * The surrogate recovery was outside the acceptance limits: however, 1 hear | 55 | - | |
| \$ \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene 98 - 0 10 10 10 10 10 10 1 | | mediat and racid surrogate are allowed to be outside limits non-lab on | | | |
| SVOAZW GC/MS Volatiles Surrogates (8260) | MPLE ID: | HWPW-MW-10A | | SAMPLE NO. | W/F0500 |
| 4-Bromofluoromethane Dibromofluoromethane Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorophenol 33 - 31 - 2-Fluorophenol 33 - Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOAZM GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 CC/MS BNA Surrogates 2,4,6-Tribromophenol 3-2-Fluorophenol 4-Fluorophenol 5-2-Fluorophenol 8-3-3-4-6-Tribromophenol 8-3-4-6-Tribromophenol 8-3-4-6-Tribromophen | 2 \$V0A2U | GC/MS Volatiles Suprember (03/0) | | OAMFLE NU: | n+3 y 3UZ |
| Dibromofluoromethane | - TONER | 4-Rromofluorobenzone | | | 1 |
| Toluene-d8 | | | 98 | - | |
| SBNAW GC/MS BNA Surrogates 99 | | | 106 | - | |
| 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 33 - 31* - | 4 \$BNAW | | 99 | - | |
| 2-Fluorobiphenyl 2-Fluorophenol 33 - Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 SBNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ to be supported to be outside limits, per lab QC SAMPLE NO: H459503 SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane 106 - 107 - 108 - 109 - 10 | | | | | 3 |
| 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 SBNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits have a facility and a significant limits a | | | 52 | - | |
| Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 S | | | 45 | - | |
| p-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 SAMPLE NO: H4595 | | | | - | |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 3-Fluorobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate/ sample NO: H459503 SAMPLE NO: H459503 3 - | | Phenol-d5 | | - | |
| neutral and 1 acid surrogate are allowed to be outside limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 96 - SBNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d5 p-Terphenyl-d14 * The surrogate recovery was outside the acceptance Limital however, 1 base/ neutral and 1 acid surrogate limits; however, 1 base/ neutral and 1 acid surrogate Adversarial pack SAMPLE NO: H459503 SAMPLE NO: H459503 106 - 107 - 108 - | | p-Terphenyl-d14 | | - | |
| policy. PLE ID: HWPW-MW-10B SAMPLE NO: H459503 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 3-Fluorobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limitar between 44 by a company and acceptance limitar between 44 company and acceptance limitar between 44 company and acceptance limitar between 44 company and acceptance 45 company and acceptance limitar between 44 company and acceptance 45 comp | | * The surrogate recovery was outside the acceptance limits: however, 1 have | 46 | - | |
| \$\text{SAMPLE NO: H459503}\$ \$\text{\$VOA2W}\$ \text{ GC/MS Volatiles Surrogates (8260)} \\ 4-\text{Bromofluorobenzene} \\ \text{Dibromofluoromethane} \\ \text{Toluene-d8} \\ \text{GC/MS BNA Surrogates} \\ \text{\$2,4,6-Tribromophenol} \\ \text{\$2-Fluorobiphenyl} \\ \text{\$2-Fluorophenol} \\ \text{Nitrobenzene-d5} \\ \text{Phenol-d5} \\ \text{p-Terphenyl-d14} \\ \text{\$1-Excreptance Limital house 44} \\ \text{\$1-Excreptance A1} \\ \$1-Excreptan | | reactive and racid surrogate are allowed to be outside limits, per lab or | | | |
| \$VOA2W GC/MS Volatiles Surrogates (8260) | LE ID: H | WPW-MW-10B | e | AMDIE NO. II | / F0F07 |
| 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 49 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance Limitar house 44 * The surrogate recovery was outside the acceptance Limitar house 44 * The surrogate recovery was outside the acceptance Limitar house 44 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | 3. | AUTE NO: H | 429303 |
| Toluene-d8 | | 4-Bromofluorobenzene | | | 1 |
| ## SBNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14 * The surrogate recovery was outside the acceptance Limitar bound 149 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside the acceptance Limitar bound 144 **The surrogate recovery was outside 144 **The surrogate recovery | | Dibromofluoromethane | | - | |
| 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 49 - Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance Limitar bound 44 - | | | | - | |
| 2-Fluorobiphenyl 2-Fluorophenol 49 - Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits because 44 - | \$BNAW | | 96 | - | |
| 2-Fluorophenol 49 - 2-Fluorophenol 28 - Nitrobenzene-d5 26* - Phenol-d5 26* - p-Terphenyl-d14 34 - * The surrogate recovery was outside the acceptance Limitar bound 44 - | | 2,4,6-Tribromophenol | F2 | | 3 |
| Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14 * The surrogate recovery was outside the acceptance Limitar bound 44 * The surrogate recovery was outside the acceptance Limitar bound 44 | | | | - | |
| Phenol-d5 P-Terphenyl-d14 The surrogate recovery was outside the acceptance limits because 44 * The surrogate recovery was outside the acceptance limits because 44 | | • | | - | |
| p-Terphenyl-d14 * The surrogate recovery was outside the acceptance limites because 44 - | | | | - | |
| * The surrogate recovery was outside the acceptance limites because 44 - | | | | - | |
| The surrogate recovery was outside the acceptance limites become 4. | | | | - | |
| | * | The surrogate recovery was outside the acceptance limits: however, 1 base/ | 44 | - | |

REPORT OF LABORATORY ANALYSIS

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AMENDED SURROGATE STANDARD RECOVERY

| N CODE SURRGATE COMPOUND PERCENT ACCEPTANCE RECOVERY LINITS | | EST | | DEDCEUT | 400000 | |
|--|-------------|-------|--|---------|-------------|---------|
| SAMPLE ID: HWPW-MW-11A 2 \$VOAZM GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene | LN CC | ODE | SURROGATE COMPOUND | | | |
| SAMPLE NO: M4591 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromof Lucromethane 94 | | | | | LIMI12 | REF LI |
| SAMPLE NO: M4591 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromof Lucromethane 94 | SAMPLE ID |): н | WPW-MW-11A | | | |
| 4-Bromofluorobenzene | | | | | SAMPLE NO: | H459504 |
| 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2-Fluorobiphenyl 2-Fluorophenol 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* - 30* - 30* - 4-Bromofluorobenzene 30* - 30* | 2 \$V0 | DA2W | GC/MS Volatiles Surrogates (8260) | | | |
| Toluene-d8 99 - Toluene-d8 95 - Toluene-d8 95 - Toluene-d8 95 - Toluene-d8 96 - Toluene-d8 97 | | | 4-Bromofluorobenzene | ٥, | | 1 |
| 4 SBNAW GC/MS WAN Surrogates | | | | | - | |
| 2,4,6-Tribromophenol 2,-Fluoropiphenyl 2-Fluoropiphenyl 2-Fluoropiphenyl 2-Fluoropiphenyl 2-Fluoropiphenyl 30* - 30* - 30* - 4 | | | | | - | |
| 2-Fluorobiphenyl | 4 \$BN | | | 95 | - | |
| 2-Fluorophenol | | | 2,4,6-Tribromophenol | | | 3 |
| Nitrobargene-d5 30% - | | | | | - | |
| Phenol-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC Policy. MPLE ID: HWPW-MW-11B SAMPLE NO: H4599 SVOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 SAMPLE NO: H4599 2-Fluorophenol P-Terphenyl-d14 The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 | | | | | - | |
| Pricephenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. MPLE ID: HWPW-MW-11B 2 \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 3-Fluorophenol 4-Bromofluoromethane 105 - 27 - 19* | | | Nitrobenzene-d5 | | - | |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. MPLE ID: HWPW-MW-11B 2 \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane | | | Phenol-d5 | 30* | - | |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC MPLE ID: HWPW-MW-11B 2 \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 3-Fluorophenol 4-Bromofluoromethane 5-Fluorophenol 4-Bromofluoromethane 5-Fluorophenol 6-Fluorobiphenyl 7-Fluorophenol 8-Fluorophenol 8-Fluorophenol 9-Fluorophenol | | | p-Terphenyl-d14 | 26 | - | |
| policy. MPLE ID: HWPW-MW-11B SAMPLE NO: H4599 2 \$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene | | * | The surrogate recovery was outside the acceptance limits | 44 | - | |
| MPLE ID: HWPW-MW-11B SAMPLE NO: H4599 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene | | n | eutral and 1 acid surrogate are allowed to be evenily it; however, 1 base/ | | | |
| SAMPLE NO: H45950 SAMP | | p | olicy. | | | |
| SAMPLE NO: H45950 SAMP | MPIE ID. | ши | DILMIL-11D | | | |
| 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/neutral and 1 acid surrogate are allowed to be outside limits, per lab QC 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | 11997 | - M-IJM-IID | S | AMPLE NO: H | 1459505 |
| 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 \$\$VOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | 2 \$VOA | 2W (| GC/MS Volatiles Surrogates (8240) | | | |
| Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 **SWOAZW GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane Dibromofluoromethane Dibromofluoromethane Toluene-d8 GC/MS BNA Surrogates 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | 4 | r-Bromofluorobenzeno | | | 1 |
| Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol | | | | 96 | - | • |
| 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | 105 | | |
| 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 48 - 2-Fluorophenol 48 - 37 - 48 - 37 - 48 - 48 - 48 - 48 - 48 - 48 - 48 - 48 | 4 SRNAL | | | 96 | - | |
| 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 4-Bromophenol 4-Fluorophenol 4-Flu | | | 4 6-Tribnomenhand | | | 3 |
| 2-Fluorophenol 48 - Nitrobenzene-d5 27 - Nitrobenzene-d5 19* - Phenol-d5 19 - p-Terphenyl-d14 38 - * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluoromethane 97 - Dibromofluoromethane 97 - Toluene-d8 108 - \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | 2 | a Fillippe him beauti | 45 | - | 3 |
| Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 SBNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | | - | |
| Phenol-d5 p-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | | - | |
| p-Terphenyl-d14 * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | | _ | |
| * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | | - | |
| neutral and 1 acid surrogate are allowed to be outside limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | | | - | |
| PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | ^ | The surrogate recovery was outside the acceptance limits; however, 1 base/ | 50 | - | |
| PLE ID: HWPW-MW-11B-DUP SAMPLE NO: H45950 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | | and racid surrogate are allowed to be outside limits per lab or | | | |
| SAMPLE NO: H45950 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | | PO | ,. | | | |
| 2 \$VOA2W GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | PLE ID: | HWPV | √-MW-11B-DUP | 04 | MDI E NO | |
| 4-Bromofluorobenzene Dibromofluoromethane Toluene-d8 4 \$BNAW GC/MS BNA Surrogates 2,4,6-Tribromophenol | 2 \$\/\0\2\ | u cr | NAC Valanti | SA | MPLE NO: H4 | 59506 |
| Dibromofluoromethane 97 - Toluene-d8 108 - 4 \$BNAW GC/MS BNA Surrogates 92 - 2,4,6-Tribromophenol | L PVUNZI | | 7/ms volatiles Surrogates (8260) | | | 4 |
| Toluene-d8 108 - 4 \$BNAW GC/MS BNA Surrogates 92 - 2,4,6-Tribromophenol | | | | 97 | _ | 1 |
| \$BNAW GC/MS BNA Surrogates 92 - 2,4,6-Tribromophenol | | | | | - | |
| 2,4,6-Tribromophenol | AB | | | | - | |
| | + ⊅RNAM | | | 76 | - | _ |
| 2-Fluorobiphenyl 23 - | | | | E7 | | 3 |
| | | | | | - | |
| 2-Fluorophenol 50 - 20* - | | 2- | Fluorophenol | | - | |

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AMENDED SURROGATE STANDARD RECOVERY

| | EST ODE | SURROGATE COMPOUND | PERCENT RECOVERY | ACCEPTANO LIMITS | CE REF L |
|----------|------------|--|---------------------|---------------------|-------------|
| AMPLE II |): | HWPW-MW-11B-DUP | | CAMPLE | |
| | | Nitrobenzene-d5 | | SAMPLE NO: | H459506 |
| | | Phenol-d5 | 24* | - | |
| | | p-Terphenyl-d14 | 28 | - | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | 44 | - | |
| | | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| MPLE ID | : 1 | HWPW-P-10 | | | |
| 3 61/0 | | | , | SAMPLE NO: | H459507 |
| 2 \$VO | A∠W | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | 95 | _ | 1 |
| | | Dibromofluoromethane | 110 | - | |
| 4 \$BNA | MJ | Toluene-d8 | 99 | _ | |
| 4 VON | \W | GC/MS BNA Surrogates | ,, | | 7 |
| | | 2,4,6-Tribromophenol 2-Fluorobiphenyl | 48 | - | 3 |
| | | 2-Fluorophenol | 49 | - | |
| | | Nitrobenzene-d5 | 20* | - | |
| | | Phenol-d5 | 17* | - | |
| | | p-Terphenyl-d14 | 20 | - | |
| | , | | 46 | - | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| PLE ID: | ни | VPW-P-11 | | MDI E NO | |
| 2 \$VOA2 | DL.I | CC (NC Valanti | SA | MPLE NO: | H459508 |
| L TYONE | | GC/MS Volatiles Surrogates (8260) 4-Bromofluorobenzene | | | 1 |
| | | Dibromofluoromethane | 97 | | ' |
| | | Toluene-d8 | 104 | - | |
| \$BNAW | | GC/MS BNA Surrogates | 96 | - | |
| | | 2,4,6-Tribromophenol | | | 3 |
| | | 2-Fluorobiphenyl | 46 | - | 3 |
| | | 2-Fluorophenol | 51 | - | |
| | | Nitrobenzene-d5 | 20* | - | |
| | | Phenol-d5 | 14* | - | |
| | | o-Terphenyl-d14 | 24 | - | |
| | * | The surrogate recovery was outside the | 68 | - | |
| | | The surrogate recovery was outside the acceptance limits; however, 1 base/eutral and 1 acid surrogate are allowed to be outside limits, per lab QC plicy. | | | |

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AMENDED SURROGATE STANDARD RECOVERY

| LN | TEST CODE | | PERCENT RECOVERY | ACCEPTANCE LIMITS | REF LN |
|--------|--------------|--|---------------------|----------------------|---------|
| SAMP | LE ID: | HWPW-P-12 | | | |
| | | | | SAMPLE NO: | H459509 |
| 2 | \$VOA2 | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | | | 1 |
| | | Dibromofluoromethane | 97 | - | |
| | | Toluene-d8 | 95 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | 96 | - | |
| | | 2,4,6-Tribromophenol | | | 3 |
| | | 2-Fluorobiphenyl | 41 | - | |
| | | 2-Fluorophenol | 44 | - | |
| | | Nitrobenzene-d5 | 19* | - | |
| | | Phenol-d5 | 14* | - | |
| | | p-Terphenyl-d14 | 17 | - | |
| | | * The surrogate recovery was outside the acceptance limits; however, 1 base/ | 47 | - | |
| | | neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |
| SAMPLE | ID: | IWPW-EB | | | |
| | | | 9 | SAMPLE NO: 1 | 4459510 |
| 2 | \$VOA2W | GC/MS Volatiles Surrogates (8260) | | | |
| | | 4-Bromofluorobenzene | | | 1 |
| | | Dibromofluoromethane | 99 | - | • |
| | | Toluene-d8 | 102 | - | |
| 4 | \$BNAW | GC/MS BNA Surrogates | 98 | _ | |
| | | 2,4,6-Tribromophenol | | | 3 |
| | | 2-Fluorobiphenyl | 39 | - | 3 |
| | | 2-Fluorophenot | 47 | - | |
| | | Nitrobenzene-d5 | 44 | - | |
| | | Phenol-d5 | 35* | - | |
| | | | 26 | - | |
| | , | p-Terphenyl-d14 | 47 | _ | |
| | | The surrogate recovery was outside the acceptance limits; however, 1 base/ neutral and 1 acid surrogate are allowed to be outside limits, per lab QC policy. | | | |

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AMENDED LABORATORY CONTROL SAMPLE RECOVERY

| TEST | | LCS % | LCSD % | ACCEPTANCE | |
|------------|--|----------|----------|--------------|---------|
| CODE | DETERMINATION | RECOVERY | RECOVERY | | RP |
| BATCH NO: | 78288 | | | | |
| 1590 | Solids, Dissolved at 180C | | | SAMPLE NO: | H392655 |
| | | 98.1 | | - | |
| BATCH NO: | 78319 | | | SAMPLE NO: | Н392710 |
| 1590 | Solids, Dissolved at 180C | 96.8 | | _ | |
| BATCH NO: | 78366 | | | SAMPLE NO. | U702740 |
| OVTCW2 | 2 8260A TCL Volatiles in Water | | | SAMPLE NO: | H392768 |
| | 1,1-Dichloroethene | | | | |
| | Benzene | 86 | | - | |
| | Chlorobenzene | 103 | | - | |
| | Toluene | 103 | | - | |
| | Trichloroethene | 98 | | - | |
| | | 100 | | - | |
| ATCH NO: | 78367 | | | SAMPLE NO: 1 | 1392770 |
| OSVTCW | TCL - Semi-volatile Extractables in Water | | | | |
| | 1,2,4-Trichlorobenzene | | | | |
| | 1,4-Dichlorobenzene | 35* | | - | |
| | 2,4-Dinitrotoluene | 30* | | - | |
| | 2-Chlorophenol | 60 | | - | |
| | 4-Chloro-3-methylphenol | 38 | | - | |
| | 4-Nitrophenol | 43 | | - | |
| | Acenaphthene | 60 | | - | |
| | | 43* | | _ | |
| | N-Nitrosodi-n-propylamine | 39* | | - | |
| | Pentachlorophenol | 55 | | _ | |
| | Phenol | 38 | | _ | |
| | Pyrene | 63 | | _ | |
| | * The laboratory control sample spike recoveries are unacceptable. | | | | |
| | method performance for these analytes has been demonstrated in the spike recovery. | matrix | • | | |
| TCH NO: 78 | 8368 | | | | |
| | | | SA | MPLE NO: H3 | 92772 |
| OSVTCW | TCL - Semi-volatile Extractables in Water | | | | |
| | 1,2,4-Trichlorobenzene | | | | |
| | 1,4-Dichlorobenzene | 40 | | - | |
| | 2,4-Dinitrotoluene | 39 | | - | |
| | 2-Chlorophenol | 58 | | - ,, | |
| | 4-Chloro-3-methylphenol | 36 | | - | |
| | 4-Nitrophenol | 44 | | - | |
| | in a spirator | 70 | | | |

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AMENDED LABORATORY CONTROL SAMPLE RECOVERY

| TEST CODE | DETERMINATION | LCS % RECOVERY | LCSD % ACCEPTAN RECOVERY LIMITS | |
|--------------|---|--------------------------------|---------------------------------|---------|
| | Acenaphthene N-Nitroso-di-n-propylamine Pentachlorophenol Phenol Pyrene | 48 42 70 36 57 | - - - - - | |
| BATCH NO: 7 | 8419 | | SAMPLE NO: | н392835 |
| OVTCW2 | 8260A TCL Volatiles in Water 1,1-Dichloroethene Benzene Chlorobenzene Toluene Trichloroethene | 98 114 114 106 114 | - - - - | |

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AMENDED METHOD BLANK DATA

| TEST | | | | |
|----------|---|--------------|--------------|---------|
| CODE | | RESULT | UNIT | |
| ATCH NO: | 78288 | | SAMPLE NO: | H392656 |
| 1590 | Solids, Dissolved at 180C | < 5 | | |
| ATCH NO: | 78319 | | 0 , = | |
| 1590 | Solids, Dissolved at 180C | | | Н392711 |
| | | < 5 | mg/L | |
| ATCH NO: | 78366 | | SAMPLE NO: | н392769 |
| OVTCW | 2 8260A TCL Volatiles in Water | | | |
| | 1,2-Dichloroethane | < 5 | ug/L | |
| | Benzene | < 5 | ug/L | |
| | Chlorobenzene | < 5 | ug/L | |
| | Ethylbenzene | < 5 | ug/L | |
| | Methylene chloride | < 5 | ug/L | |
| | Toluene | < 5 | ug/L | |
| | Xylenes (total) | < 5 | ug/L | |
| ATCH NO: | 78367 | | SAMPLE NO: | H392771 |
| OSVTCW | TCL - Semi-volatile Extractables in Water | | | |
| | 1,2-Diphenylhydrazine | < 10 | ua/I | |
| | 2,4-Dimethylphenol | < 10 | ug/L | |
| | 2,4-Dinitrotoluene | < 10 | ug/L | |
| | 2,6-Dinitrotoluene | < 10 | ug/L | |
| | 2-Chloronaphthalene | | ug/L | |
| | 2-Methylnaphthalene | < 10 | ug/L | |
| | 4,6-Dinitro-o-cresol | < 10 < 50 | ug/L | |
| | 4-Nitrophenol | | ug/L | |
| | Acenaphthene | < 10 | ug/L | |
| | Acenaphthylene | < 10 | ug/L | |
| | Anthracene | < 10 | ug/L | |
| | Benzo(a)anthracene | < 10 | ug/L | |
| | Benzo(a)pyrene | < 10 | ug/L | |
| | Chrysene | < 10 | ug/L | |
| | Di-n-butylphthalate | < 10 | ug/L | |
| | Dibenzofuran | < 10 | ug/L | |
| | Fluoranthene | < 10 | ug/L | |
| | Fluorene | < 10 | ug/L | |
| | N-Nitrosodiphenylamine | < 10 | ug/L | |
| | | < 10 | ug/L | |
| | Naphthalene Nitrobenzene | < 10 | ug/L | |
| | | < 10 | ug/L | |
| | Pentachlorophenol | < 50 | ug/L | |

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AMENDED METHOD BLANK DATA

| TEST | | | | |
|-----------|---|--------|------------|---------|
| CODE | DETERMINATION | RESULT | UNIT | |
| | | | | |
| | Phenanthrene | < 10 | ug/L | |
| | Phenol | < 10 | ug/L | |
| | Pyrene | < 10 | ug/L | |
| | bis(2-Chloroethoxy)methane | < 10 | ug/L | |
| | bis(2-Ethylhexyl)phthalate | < 10 | ug/L | |
| TCH NO: 7 | 78368 | ; | SAMPLE NO: | н392773 |
| OSVTCW | TCL - Semi-volatile Extractables in Water | | | |
| | 1,2,4-Trichlorobenzene | < 10 | ug/L | |
| | 1,2-Dichlorobenzene | < 10 | ug/L | |
| | 1,2-Diphenylhydrazine | < 10 | ug/L | |
| | 1,3-Dichlorobenzene | < 10 | ug/L | |
| | 1,4-Dichlorobenzene | < 10 | ug/L | |
| | 1-Methylnaphthalene | < 10 | ug/L | |
| | 2,4,5-Trichlorophenol | < 10 | ug/L | |
| | 2,4,6-Trichlorophenol | < 10 | ug/L | |
| | 2,4-Dichlorophenol | < 10 | ug/L | |
| | 2,4-Dimethylphenol | < 10 | ug/L | |
| | 2,4-Dinitrophenol | < 50 | ug/L | |
| | 2,4-Dinitrotoluene | < 10 | ug/L | |
| | 2,6-Dinitrotoluene | < 10 | ug/L | |
| | 2-Chloronaphthalene | < 10 | ug/L | |
| | 2-Chlorophenol | < 10 | ug/L | |
| | 2-Methylnaphthalene | < 10 | ug/L | |
| | 2-Methylphenol | < 10 | ug/L | |
| | 2-Nitroaniline | < 50 | ug/L | |
| | 2-Nitrophenol | < 10 | ug/L | |
| | 3,3'-Dichlorobenzidine | < 20 | ug/L | |
| | 3-Nitroaniline | < 50 | ug/L | |
| | 4,6-Dinitro-o-cresol | < 50 | ug/L | |
| | 4-Bromophenylphenylether | < 10 | ug/L | |
| | 4-Chloro-3-methylphenol | < 10 | ug/L | |
| | 4-Chloroaniline | < 10 | ug/L | |
| | 4-Chlorophenylphenylether | < 10 | ug/L | |
| | 4-Methylphenol | < 10 | ug/L | |
| | 4-Nitroaniline | < 50 | ug/L | |
| | 4-Nitrophenol | < 50 | ug/L | |
| | Acenaphthene | < 10 | ug/L | |
| | Acenaphthylene | < 10 | ug/L | |
| | Anthracene | < 10 | ug/L | |
| | Benzo(a)anthracene | < 10 | ug/L | |
| | Benzo(a)pyrene | < 10 | ug/L | |
| | Benzo(b)fluoranthene | < 10 | ug/L | |

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AMENDED METHOD BLANK DATA

| TEST | | | |
|----------|--|--------------|------------------|
| CODE | DETERMINATION · | RESULT | UNIT |
| | | | |
| | Benzo(g,h,i)perylene | < 10 | ug/L |
| | Benzo(k)fluoranthene | < 10 | ug/L |
| | Benzoic acid | < 50 | ug/L |
| | Benzyl alcohol | < 10 | ug/L |
| | Butylbenzylphthalate | < 10 | ug/L |
| | Chrysene | < 10 | ug/L |
| | Di-n-butylphthalate | < 10 | ug/L |
| | Di-n-octylphthalate | < 10 | ug/L |
| | Dibenzo(a,h)anthracene | < 10 | ug/L |
| | Dibenzofuran | < 10 | ug/L |
| | Diethylphthalate | < 10 | ug/L |
| | Dimethylphthalate | < 10 | ug/L |
| | Fluoranthene | < 10 | ug/L |
| | Fluorene | < 10 | ug/L |
| | Hexachlorobenzene | < 10 | ug/L |
| | Hexachlorobutadiene | < 10 | ug/L |
| | Hexachlorocyclopentadiene | < 10 | ug/L |
| | Hexachloroethane | < 10 | ug/L |
| | Indeno(1,2,3-cd)pyrene | < 10 | ug/L |
| | Isophorone | < 10 | ug/L |
| | N-Nitroso-di-n-propylamine | < 10 | |
| | N-Nitrosodiphenylamine | < 10 | ug/L |
| | Naphthalene | < 10 | ug/L |
| | Nitrobenzene | < 10 | ug/L |
| | Pentachlorophenol | < 50 | ug/L |
| | Phenanthrene | < 10 | ug/L |
| | Phenol | | ug/L |
| | Pyrene | < 10 < 10 | ug/L |
| | bis(2-Chloroethoxy)methane | < 10 | ug/L |
| | bis(2-Chloroethyl)ether | | ug/L |
| | bis(2-Chloroisopropyl)ether | < 10 | ug/L |
| | bis(2-Ethylhexyl)phthalate | < 10 < 10 | ug/L ug/L |
| H NO: 78 | 419 | SA | MPLE NO: H392836 |
| OVECUS | 8740A TCL Valatilas in Unter | | |
| | 8260A TCL Volatiles in Water 1,2-Dichloroethane | | |
| | I, 2-Dictionoethane Benzene | < 5 | ug/L |
| | | < 5 | ug/L |
| | Chlorobenzene | < 5 | ug/L |
| | Ethylbenzene | < 5 | ug/L |
| | Methylene chloride | < 5 | ug/L |
| | Toluene | < 5 | ug/L |
| , | Kylenes (total) | < 5 | ug/L |

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AMENDED DUPLICATE AND MATRIX SPIKE DATA

| TES' CODE | | ORIGINAL RESULT | DUPLICATE RESULT | UNITS | RANGE / RPD | MS RESULT | MS % RCVRY |
|--------------|---------------------------|--------------------|---------------------|-------|----------------|--------------|---------------|
| BATCH NO: | 78288 | | | | SAMPLE | NO: H459500 |) |
| 1590 | Solids, Dissolved at 1800 | 553 | 567 | mg/L | 2.5 | | |
| BATCH NO: | 78288 | | | | SAMPLE | NO: H459555 | i |
| 1590 | Solids, Dissolved at 180C | 193 | 197 | mg/L | 2.0 | | |
| BATCH NO: | 78319 | | | | SAMPLE | NO: H459565 | |
| 1590 | Solids, Dissolved at 1800 | 1,253 | 1,239 | mg/L | 1.1 | | |

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AMENDED MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

| ### BATCH NO: 78163 SAMPLE NO: H45909 OVTCWA Volatiles by 8260 - Subtitle D 1,1-Dichloroethene | TEST | | MS | MSD | | | MS PCT | MSD PC |
|--|------------|---|-------------------|---------------|-------|------|---------------|-----------|
| OVTCWA Volatiles by 8260 - Subtitle D | | DETERMINATION | | | UNITS | RPD | | RCVRY |
| OVTCWA Volatiles by 8260 - Subtitle D 1,1-Dichloroethene | | | | | | | | |
| 1,1-Dichloroethene | CH NO: | 78163 | | | | SAI | MPLE NO: H459 | 9090 |
| Benzene | OVTCWA | | | | | | | |
| Chlorobenzene 41 39 ug/L 7 104 Toluene 39 38 ug/L 0 96 Trichloroethene 38 38 ug/L 0 95 TCH NO: 78169 OVTCW3 8260 Volatiles in Water 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 110 Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 41 41 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. TCH NO: 78281 SAMPLE NO: H459487 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 0 98 Trichloroethene 39 41 ug/L 15 98 Trichloroethene 39 41 ug/L 5 98 Trichloroethene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 CH NO: 78344 OVTCM2 8260A TCL Volatiles in Water 1,1-Dichloroethene 42 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Trichloroethene 43 SAMPLE NO: H459505 | | | 38 | 36 | ug/L | 5 | 95 | 90 |
| Toluene 39 38 ug/L 0 96 Trichloroethene 38 38 ug/L 0 96 Trichloroethene 38 38 ug/L 0 95 NTCH NO: 78169 OVTCW3 8260 Volatiles in Water 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 110 Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. TCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Toluene 39 41 ug/L 10 98 Toluene 44 ug/L 5 98 Toluene 44 ug/L 5 98 Toluene 44 ug/L 5 98 Toluene 43 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 104 Trichloroethene 43 SAMPLE NO: H459505 | | | 40 | 39 | ug/L | 3 | 100 | 97 |
| Trichloroethene 38 38 ug/L 0 95 NTCH NO: 78169 OVTCW3 8260 Volatiles in Water 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 1110 Chiorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. TCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 0 98 Toluene 39 41 ug/L 0 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Chlorobenzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 109 Trichloroethene 42 ug/L 104 Trichloroethene 43 SAMPLE NO: H459505 | | | 41 | 39 | ug/L | 7 | 104 | 97 |
| ATCH NO: 78169 OVTCW3 8260 Volatiles in Water 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 110 Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. ATCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Toluene 41 ug/L 5 108 ATCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 104 Toluene 41 ug/L 101 | | | 39 | 38 | ug/L | 0 | 96 | 96 |
| OVTCW3 8260 Volatiles in Water 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 110 Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 **The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. TCH NO: 78281 SAMPLE NO: H459487 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 8 ug/L 5 98 Enzene 43 ug/L 5 108 Benzene 43 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 43 36 ug/L 108 SAMPLE NO: H459505 | | Trichloroethene | 38 | 38 | ug/L | 0 | 95 | 95 |
| 1,1-Dichloroethene 53 56 ug/L 6 132* Benzene 44 46 ug/L 4 110 Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 **The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. ATCH NO: 78281 SAMPLE NO: H459487 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Toluene 39 41 ug/L 5 98 Toluene 39 41 ug/L 5 98 Toluene 38 38 ug/L 4 94 ATCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 ug/L 108 Enzene 43 ug/L 108 Enzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 108 Toluene 41 ug/L 101 Toluene 41 ug/L 101 Toluene 41 ug/L 101 Toluene 41 ug/L 104 Toluene 42 ug/L 104 Toluene 41 ug/L 104 Toluene 41 ug/L 104 Toluene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 Toluene 41 ug/L 101 Toluene 41 ug/L 101 Toluene 41 ug/L 104 Toluene 42 ug/L 104 Toluene 44 ug/L | CH NO: 7 | 78169 | | | | SAM | MPLE NO: H458 | 8069 |
| Benzene | OVTCW3 | 8260 Volatiles in Water | | | | | | |
| Benzene | | 1,1-Dichloroethene | 53 | 56 | ug/L | 6 | 132* | 140* |
| Chlorobenzene 39 40 ug/L 2 98 Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. ATCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Trichloroethene 38 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 43 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 109 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TOLUENO: 78366 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | Benzene | 44 | 46 | | | | 115 |
| Toluene 41 41 ug/L 0 102 Trichloroethene 40 43 ug/L 7 100 *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. ATCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 5 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 100 Toluene 41 ug/L 100 Trichloroethene 41 ug/L 100 Toluene 41 ug/L 100 Toluene 41 ug/L 100 Toluene 41 ug/L 100 Trichloroethene 42 ug/L 100 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 100 Trichloroethene 43 36 ug/L 18 108 | | Chlorobenzene | 39 | 40 | - | | | 100 |
| Trichloroethene | | Toluene | 41 | 41 | • | | | 102 |
| *The MS/MSD spike recovery was high for 1,1-Dichloroethene. Acceptable method performance for this analyte was demonstrated by the Laboratory Control Sample. ATCH NO: 78281 OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 5 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 ATCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 101 Trichloroethene 41 ug/L 101 Trichloroethene 42 ug/L 104 TOLUENE 78366 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | Trichloroethene | 40 | 43 | - | 7 | | 108 |
| ### Match No: 78281 OVSKW Skinner List Volatiles in Water | | *The MS/MSD spike recovery was hig | h for 1,1-Dichlor | oethene. Acce | | | | 100 |
| OVSKW Skinner List Volatiles in Water 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 5 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TOLUENO: 78366 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 ug/L 104 TOLUENE 41 ug/L 101 Trichloroethene 42 ug/L 104 TOLUENO: 78366 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | method performance for this analyt | | | | | | |
| 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 ATCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 | CH NO: 7 | 8281 | | | | SAM | PLE NO: H459 | 487 |
| 1,1-Dichloroethene 38 37 ug/L 2 96 Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 | ovskw | Skinner List Volatiles in Water | | | | | | |
| Benzene 40 40 ug/L 0 100 Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 101 TCH NO: 78366 SAMPLE NO: H459505 | | 1,000,000,000,000,000,000,000,000,000,0 | 38 | 37 | ug/l | 2 | 96 | 94 |
| Chlorobenzene 39 41 ug/L 0 98 Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 108 Chlorobenzene 41 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 104 TOHNO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | | | | 100 |
| Toluene 39 41 ug/L 5 98 Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 SAMPLE NO: H459462 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | | | | |
| Trichloroethene 38 38 ug/L 4 94 TCH NO: 78344 OVTCW2 8260A TCL Volatiles in Water | | | | | | - | | 102 |
| OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | - | | | 103 94 |
| 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | CH NO: 7 | 8344 | | | | SAM | PLE NO: H459 | 462 |
| 1,1-Dichloroethene 438 ug/L 108 Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | OVTCW2 | 8260A TCL Volatiles in Water | | | | | | |
| Benzene 43 ug/L 108 Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | 10 1 1 TAN | | 438 | | ua/l | | 108 | |
| Chlorobenzene 42 ug/L 104 Toluene 41 ug/L 101 Trichloroethene 42 ug/L 101 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | | | | |
| Toluene 41 ug/L 101 Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | • | | | |
| Trichloroethene 42 ug/L 104 TCH NO: 78366 SAMPLE NO: H459505 OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | | | | |
| OVTCW2 8260A TCL Volatiles in Water 1,1-Dichloroethene 43 36 ug/L 18 108 | | | | | | | | |
| 1,1-Dichloroethene 43 36 ug/L 18 108 | CH NO: 78 | 8366 | | | | SAMI | PLE NO: H4595 | 505 |
| 1,1-Dichloroethene 43 36 ug/L 18 108 | OVTCW2 | 8260A TCL Volatiles in Water | | | | | | |
| | | | 43 | 36 | ua/I | 18 | . 100 | 90 |
| Benzene 39 37 ug/L 5 95 | | Benzene | 39 | 37 | | | | 90 90 |

REPORT OF LABORATORY ANALYSIS

Tel: 713-488-1810 Fax: 713-488-4661

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AMENDED MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

| TEST | | MS | MSD | | | MS PCT | MSD P |
|----------|-------------------------------------|------------------|---------------|----------------|--------|--------------|----------|
| CODE | DETERMINATION | RESULT | RESULT | UNITS | RPD | RCVRY | RCVR |
| | Chlorobenzene | 37 | 37 | // | | | |
| | Toluene | 33 | 37 35 | ug/L | 2 | 92 | 94 |
| | Trichloroethene | 36 | 35 35 | ug/L ug/L | 5 3 | 83 91 | 87 88 |
| | 707.77 | | | 49, 5 | 7 | 71 | 00 |
| CH NO: | 78367 | | | | SAM | PLE NO: H459 | 499 |
| OSVTCW | Total total to Extractables | in Water | | | | | |
| | 1,2,4-Trichlorobenzene | 54 | 52 | ug/L | 4 | 54 | 52 |
| | 1,4-Dichlorobenzene | 48 | 38 | ug/L | 23 | 48 | 38 |
| | 2,4-Dinitrotoluene | 78 | 62 | ug/L | 23 | 78 | 62 |
| | 2-Chlorophenol | 105 | 72 | ug/L | 38 | 52 | 36 |
| | 4-Chloro-3-methylphenol | 119 | 91 | ug/L | 27 | 60 | 46 |
| | 4-Nitrophenol | 232 | 112 | ug/L | 70 | 116* | 50 |
| | Acenaphthene | 60 | 46 | ug/L | 26 | 60 | 40 |
| | N-Nitroso-di-n-propylamine | 56 | 47 | ug/L | 18 | 56 | 47 |
| | Pentachlorophenol | 155 | 125 | ug/L | 21 | 78 | 62 |
| | Phenol | 98 | 38 | ug/L | 88 | 49 | 19 |
| | Pyrene | 56 | 51 | ug/L | 9 | 56 | 51 |
| | * Elevated spike recovery was obser | ved for the comp | ound 4-Nitrop | henol in the M | AS. | | |
| CH NO: 7 | 78368 | | | | SAMP | LE NO: H4595 | 508 |
| OSVTCW | TCL - Semi-volatile Extractables i | n Water | | | | | |
| | 1,2,4-Trichlorobenzene | 23 | 14 | ug/L | 49 | 23* | 14* |
| | 1,4-Dichlorobenzene | 24 | 16 | ug/L | 40 | 24* | 16* |
| | 2,4-Dinitrotoluene | 57 | 60 | ug/L | 5 | 57 | 60 |
| | 2-Chlorophenol | 46 | 27 | ug/L | 52 | 46* | 14* |
| | 4-Chloro-3-methylphenol | 74 | 70 | ug/L | 6 | 37 | 35 |
| | 4-Nitrophenol | 130 | 150 | ug/L | 14 | 65 | 75 |
| | Acenaphthene | 34 | 28 | ug/L | 19 | 34* | 28* |
| | N-Nitroso-di-n-propylamine | 24 | 14 | ug/L | 53 | 24* | 14* |
| | | 130 | 140 | ug/L | 7 | 65 | 70 |
| | Pentachlorophenol | 130 | 170 | | | | |
| | Phenol | 47 | 27 | ug/L | 14 | 24 | 54 |

REPORT OF LABORATORY ANALYSIS

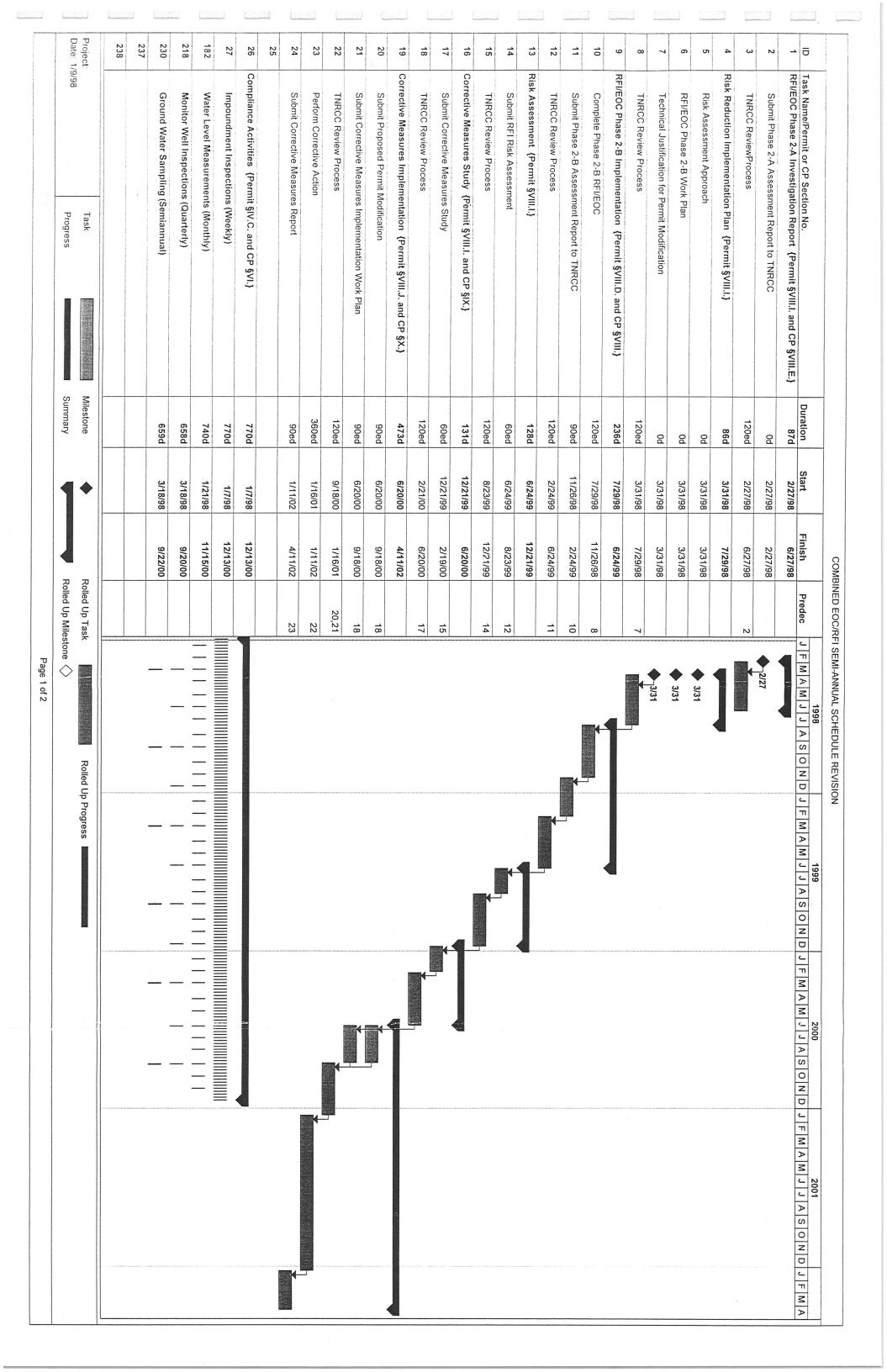
analytes has been demonstrated in the laboratory control sample.

Updated Compliance Schedule

Appendix D

January 20, 1998 W.O. #422-09

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



| Page 2 of 2 | | | | | | | |
|--|------------------------|----------|----------|-----------|----------------------------------|---|--------------|
| | - Konca Op Milicatorio | • | • | | | | |
| Rolled Up Progress | Rolled Up Task | | 1 • | Milestone | S | 9/98 Progress | Date: 1/9/98 |
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| | 258 | 7/21/00 | 5/16/00 | 66ed | | Submit Report to TNRCC | 259 |
| | | 9 | 0.1100 | | | | 3 60 |
| | 235 | 5/16/00 | 3/17/00 | 60ed | | Perform Data Evaluation | 258 |
| | 0 | 7/21/00 | 3/17/00 | 91d | {CP §VII.B.2.} | Semiannual Report - July 21, 2000 | 257 |
| • | 0 | 1/25/00 | 1/25/00 | 1d | 999 (Permit §V.F. and §III.B.1) | 1999 Annual Report - January 25, 1999 | 256 |
| | 0 254 | 1/21/00 | 11/16/99 | bbed | | Oddillic Debot to TNDCC | 1 |
| | | | | 3 | | Submit Based to TNBCC | 255 |
| | 9 234 | 11/16/99 | 9/17/99 | 60ed | | Perform Data Evaluation | 254 |
| | 0 | 1/21/00 | 9/17/99 | 91d | 21, 2000 {CP §VII.B.2.} | Semiannual Report - January 21, 2 | 253 |
| | 9 251 | 7/21/99 | 5/18/99 | 64ed | | Submit Report to INRCC | 252 |
| | 233 | 66/81/9 | 3/19/99 | poed | | | |
| | | | 34000 | 600 | | Perform Data Evaluation | 251 |
| | 9 | 7/21/99 | 3/19/99 | 88d | {CP §VII.B.2.} | Semiannual Report - July 21, 1999 {CP §VII.B.2.} | 250 |
| | 9 | 1/25/99 | 1/25/99 | 1d | 1999 {Permit §V.F. and §III.B.1} | 1998 Annual Report - January 25, 1999 {Permit §V.F. and §III.B.1} | 249 |
| | 9 247 | 1/21/99 | 11/17/98 | 65ed | | Submit Report to TNRCC | 248 |
| | 8 232 | 11/17/98 | 9/18/98 | 60ed | | Perform Data Evaluation | 247 |
| | | | 9/10/90 | 090 | See (c. Stillery) | | |
| | | | 0/40/00 | 800 | 999 (CP &VII B 21 | Semiannual Report - January 21 1999 | 246 |
| | 8 244 | 7/21/98 | 5/19/98 | 63ed | | Submit Report to TNRCC | 245 |
| | 8 231 | 5/19/98 | 3/20/98 | 60ed | ž. | Perform Data Evaluation | 244 |
| | & | 7/21/98 | 3/20/98 | 87d | {CP §VII.B.2.} | Semiannual Report - July 21, 1998 {CP §VII.B.2.} | 243 |
| | | | 1120100 | i | | | |
| | 20 | 1/25/98 | 1/25/98 | 1d | 1998 {Permit §V.F. and §III.B.1} | 1997 Annual Report - January 25, 1998 {Permit §V.F. and §III.B.1} | 242 |
| | 8 | 1/21/98 | 1/21/98 | D0 | | Submit Report to TNRCC | 241 |
| | 8 | 1/21/98 | 1/21/98 | b0 0d | 1998 {CP §VII.B.2.} | Semiannual Report - January 21, 1998 (CP §VII.B.2.) | 240 |
| | 0 | | 1/21/98 | 656d | ough 2000 | Post-closure care Reporting 1997 thr | 807 |
| JFMAMJJASONDJFMAMJJASONDJFMAMJJASONDJFMA | Predec | Finish | Start | Duration | | Task Name/Permit or CP Section No. | 3 0 |
| 1990 | | | | | | | |
| COMBINED EOC/RFI SEMI-ANNUAL SCHEDULE REVISION | MBINED EOC/RF | cor | | | | | |
| | | | | | | | |