CORRECTIVE ACTION MONITORING REPORT
2008 FIRST SEMIANNUAL EVENT

FORMER HOUSTON WOOD PRESERVING WORKS
4910 LIBERTY ROAD
HOUSTON, TEXAS

July 15, 2008

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1.0 EXECUTIVE SUMMARY

This semi-annual report presents a summary and evaluation of the Corrective Action Groundwater Monitoring for the Closed Surface Impoundment (Solid Waste Management Unit No. 1) at the former Wood Preserving Works facility (the Site) located in Houston, Texas. The groundwater monitoring activities for this period were performed by Delta Environmental Consultants, Inc. (Delta) in January 2008.

The two uppermost groundwater bearing units, the A-Transmissive Zone (A-TZ) and the B-Transmissive Zone (B-TZ), were monitored during this period. Groundwater elevation data collected during the January 2008 sampling event show groundwater flow in the A-TZ to the west-southwest with a hydraulic gradient of approximately 0.003 ft/ft. A-TZ groundwater flow direction is similar to the groundwater flow direction observed during the July 2007 second semi-annual monitoring event, when flow was observed to be to the west.

Groundwater elevation data collected in the B-TZ show groundwater flow to the west-southwest with a hydraulic gradient of approximately 0.003 ft/ft. Groundwater flow in the B-TZ zone is similar to the flow direction observed during previous monitoring events.

Analytical results from the January 2008 sampling event were compared to Texas Commission on Environmental Quality Texas Risk Reduction Program Protective Concentration Limits, as designated in Section IV.D of the Compliance Plan, dated June 10, 2005. Constituent concentrations were below their respective PCLs for the fifth consecutive semi-annual monitoring event. Monitoring wells in both the A-TZ and B-TZ are considered to be compliant for this monitoring period.

2.0 INTRODUCTION

This semi-annual report presents a summary and evaluation of groundwater monitoring data collected during the 2008 first semi-annual monitoring period (January through June) at the former Houston Wood Preserving Works facility (the Site) located at 4910 Liberty Road in Houston, Texas (Figure 1). Semi-annual groundwater monitoring is required for the Site as a condition of the Texas Commission on Environmental Quality (TCEQ) Hazardous Waste Permit No. 50343 and associated Compliance Plan (CP) No. 50343, both renewed and issued on June 10, 2005. Groundwater monitoring at the Site is performed to monitor groundwater quality beneath the Closed Surface Impoundment Unit No. 001 (Solid Waste Management Unit (SWMU) No. 1).

Delta Environmental Consultants, Inc. (Delta) conducted groundwater monitoring activities at the Site on January 28-29, 2008. Groundwater monitoring activities included sampling and gauging the background and point of compliance (POC) wells and piezometers associated with SWMU No. 1. The sampling event, analytical data, and data evaluation provided in this report fulfill the semi-annual corrective action reporting requirements for the first half of 2008 as described in the CP, Section VII.C.2. This section requires the following reporting elements:

Semi-Annual Corrective Action Report Requirements	**Report Section, Table(s) and/or Figure(s)**
A narrative summary of the evaluations made in accordance with CP Sections V, VI, and VII for the preceding six-month period. These periods shall be January 1 through June 30 and July 1 through December 31 (VII.C.2.a.)	3.0
Summary of Methods utilized for management of recovered/purged water (VII.C.2.b.)	3.2
An updated table and map of the monitoring and corrective action system wells (VII.C.2.c.)	Section 3.1.1 and Figure 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 Groundwater Protection Standard (GWPS). Copies of the original laboratory report for chemical analyses showing detection limits and quality control and quality assurance data shall be provided if requested by the Executive Director (VII.C.2.d.)	Tables 1 & 2 Appendix C
Tabulation of the water level elevations (relative to mean sea level), depth to water measurements, and total depth of well measurements collected since the data that was submitted in the previous semiannual report (VII.C.2.e.)	Table 4
Potentiometric surface maps showing the elevation of the water table at the time of sampling and direction of groundwater flow gradients (VII.C.2.f.)	Figures 3 & 4
A notation of the presence or absence of non-aqueous phase liquids (NAPLs), both light and dense phases, in each well during each sampling event since the last event covered in the previous semiannual report and tabulation of depth and thickness of NAPLs, if detected (VII.C.2.g.)	Table 4

Semi-Annual Corrective Action Report Requirements (cont'd)	Report Section, Table(s) and/or Figure(s)
Quarterly tabulations of quantities of recovered groundwater and NAPLs, and graphs of monthly recorded flow rates versus time for the recovery wells during each period. A narrative summary describing and evaluating the NAPL recovery program shall also be included (VII.C.2.h.)	Not Applicable
Tabulation of the total contaminant mass recovered from each recovery system for each reporting period, if such a system is installed (VII.C.2.i.)	Not Applicable
Tabulation of the data evaluation results pursuant to Section VI.D and status of each well listed on CP Table V with regard to compliance with the corrective action objectives and compliance with the GWPSs (VII.C.2.j.)	Table 5
Maps of the contaminated area depicting concentrations of constituents listed in Table IV and any newly detected Table III constituents as isopleths contours or discrete concentrations if isopleths contours cannot be inferred (VII.C.2.k.)	Not Applicable
Maps indicating the extent and thickness of the LNAPLs and DNAPLs, if detected (VII.C.2.l.)	Not Detected
An updated schedule summary as required by Section X (VII.C.2.m.)	Appendix D
Summary of any changes made to the monitoring/corrective action program and a summary of recovery well inspections, repairs, and any operational difficulties (VII.C.2.n.)	None
A table of the modifications and amendments made to this Compliance Plan with their corresponding approval dates by the executive director or the Commission and a brief description of each action (VII.C.2.o.)	None
Corrective Measures Implementation (CMI) Report to be submitted in accordance with Section VIII.F, if necessary (VII.C.2.p.)	Not Applicable
Tabulation of well casing elevations in accordance with Attachment B No. 16 (VII.C.2.q.)	Table 4
Recommendation for any changes (VII.C.2.r.)	None
Certification and well installation diagram for any new well installation or replacement and certification for any well plugging and abandonment (VII.C.2.s.)	Not Applicable
A summary of any activity within an area subject to institutional control (VII.C.2.t.)	None
Any other items requested by the Executive Director (VII.C.2.u.)	None

As of June 2008, a recovery system had not been installed at this facility. Therefore, Provisions 8, 9, and 10 that relate to recovery wells or recovery system, are not applicable to this reporting period.

Responses to each of the semi-annual report provisions required by CP Section VII.C.2 are provided in Section 3.0. Conclusions and recommendations are provided in Section 4.0.

3.0 2008 FIRST SEMI-ANNUAL GROUNDWATER MONITORING EVENT

A discussion of each of the semi-annual report provisions required by CP Section VII.C.2, are presented below by reference number to the list of provisions in Section 2.0.

3.1 Narrative Summary of Second Semi-annual Monitoring Activities

The CP requires an evaluation of the Corrective Action Program (Section V) and Groundwater Monitoring Program summarizing the overall effectiveness of the Corrective Action Program (Section VI). This narrative summary includes provisions for response and reporting requirements as detailed in the CP Section VII, as discussed below.

3.1.1 Corrective Action Program

Groundwater samples were collected from the Background and POC wells (as detailed in CP Table V, which is provided in Appendix A) to assess potentially affected groundwater quality in the A-Transmissive Zone (A-TZ) and the B-Transmissive Zone (B-TZ). These water-bearing zones are defined as:

- A-TZ refers to the first sand unit encountered at approximately 13 feet below ground surface (bgs) and averages 7 feet in thickness; and
- B-TZ refers to the second sand unit encountered at approximately 30 feet bgs and averages 9 feet in thickness.

The definitions of the A-TZ and B-TZ are consistent with the Uppermost Transmissive Zone (UTZ) and Second Transmissive Zone (STZ), respectively, as defined in CP Provision I.A.

The following monitoring wells were sampled during this event (Figure 2):

- A-TZ POC wells: MW-01A, MW-02, MW-07, MW-10A, and MW-11A;
- A-TZ Background well: MW-08;
- B-TZ POC wells: MW-10B, MW-11B, and P-10; and
- B-TZ background well: P-12.

3.1.2 Groundwater Monitoring

Delta performed quarterly well inspections and semi-annual groundwater sampling activities on January 28-29, 2008. Groundwater sampling was performed using procedures outlined in a U.S. Environmental Protection Agency (EPA) document titled *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA/540/S-95/504) published in April 1996 and approved in the CP application. Groundwater samples were analyzed for the Detected Hazardous and Solid Waste Constituents listed in the CP, Table III (Appendix A).

Monitoring wells are equipped with dedicated polytetrafluoroethylene (PTFE) tubing for groundwater sampling. A Master-Flex® peristaltic pump was used to collect the groundwater samples. An approximate one-foot section of disposable silicon tubing was placed around the pump head and attached to the PTFE tubing for proper operation of the pump. Groundwater was pumped from the screened interval of each well at a flow rate of less than 0.5 L/min. Using a flow-through cell, field parameters including temperature, pH, specific conductivity, dissolved oxygen, and turbidity were measured during purging and sampling activities. When field parameters had stabilized to the EPA-specified criteria, a sample was then collected for analysis. Recorded field parameters are summarized in Appendix B.

For each well, sample bottles were filled directly from the pumping apparatus described above, and were sealed and packed in coolers with sufficient ice to maintain a sample temperature of approximately 4°C. The sample coolers were delivered to TestAmerica Laboratory, in Houston, Texas for analysis. Chain-of-Custody (COC) forms were completed and kept with their respective samples. Copies of the analytical data and COCs are included in Appendix C. Groundwater samples were then analyzed for the Detected Hazardous and Solid Waste Constituents listed in the CP, Table III (Appendix A).

3.2 Purge Water Management

Approximately eight gallons of purge water were generated during the January 2008 groundwater sampling event. The purge water was containerized in a Department of Transportation (DOT) certified, 55-gallon steel drum and temporarily stored on site in a fenced and locked container storage area (NOR 006). Purge water and associated personal protective equipment (PPE) were disposed of at the US Ecology Texas Landfill in Robstown, Texas on February 28, 2008.

3.3 Monitoring and Corrective Action System Wells

A summary of the current monitoring and corrective action groundwater wells is discussed in Section 3.1.1. Configuration of the current monitoring and corrective action well network is presented on Figure 2.

3.4 Analytical Results

The 2008 first semi-annual groundwater analytical results from the A-TZ and B-TZ are summarized in Tables 1 and 2, respectively, and the laboratory analytical report is provided in Appendix C. The analytical results were compared to the Detected Hazardous and Solid Waste Constituent limits, which are taken from the TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Protective Concentration Levels (PCLs). TRRP PCLs serve as the Groundwater Protection Standard (GWPS), as detailed in Section IV.D and Table III of the CP. If any concentrations exceeded the concentration limits of this report, the concentration is bolded within the table.

Quality assurance/quality control (QA/QC) samples (field blank, matrix spike and matrix spike duplicate results) are summarized in Table 3.

3.5 Well Measurements

During the sampling event, the following information was recorded at each monitoring well:

Before Sampling

- The presence of light NAPLs was evaluated; and
- Depth to groundwater below the top of casing was measured to the nearest 0.01 foot.

After Sampling

- The presence of dense non-aqueous phase liquids (DNAPLs) were evaluated using visual observations and an oil-water interface probe; and
- Total well depths of the wells were measured.

Table 4 provides a summary of these measurements. None of the compliance wells had measurable amounts or any indication of LNAPL or DNAPL.

3.6 Potentiometric Surface Maps

Groundwater elevation data recorded during the 2008 first semi-annual monitoring event were used to create potentiometric surface maps of the A-TZ and B-TZ, presented on Figures 3 and 4, respectively.

Groundwater elevation data collected during the January 2008 sampling event show groundwater flow in the A-TZ to the west-southwest with a hydraulic gradient of approximately 0.003 ft/ft. A-TZ groundwater flow direction similar to the groundwater flow direction observed during the July 2007 second semi-annual monitoring event, when flow was observed to be to the west.

Groundwater elevation data collected in the B-TZ show groundwater flow to the west-southwest with a hydraulic gradient of approximately 0.003 ft/ft. Groundwater flow in the B-TZ zone is similar to the flow direction observed during previous monitoring events.

3.7 Non-Aqueous Phase Liquids

Measurable amounts of LNAPL and/or DNAPL were not observed in any of the compliance wells.

3.8 Recovered Groundwater and NAPL

To date, a recovery system has not been installed at the SWMU No. 1; therefore, this provision is not applicable.

3.9 Contaminant Mass Recovered

To date, a recovery system has no been installed at the SWMU No. 1; therefore, this provision is not applicable.

3.10 Analytical Data Evaluation

Section VI.D of the CP describes two methods which may be used to determine the compliance status of a given well:

1) Analytical results may be either directly compared with PCLs (CP Table III; included in Appendix A), or
2) Analytical results can be statistically compared to PCLs using the Confidence Interval Procedure for the mean concentration based on normal, log-normal, or non-parametric distribution, which the 95% confidence coefficient of the t-distribution will be used in construction of the confidence interval.

Direct comparison to PCLs was used to evaluate the analytical data. Tables 1 and 2 show the results of a direct comparison of data for this sampling event to the respective PCLs. Wells and piezometers are in compliance if each of the constituents listed in the CP Table III was reported at a concentration less than or equal to the PCL. Based on the analytical results from the January 2008 monitoring event the compliance wells completed in both transmissive zones are compliant with groundwater results below their respective PCLs; therefore the monitoring wells are considered to be complaint for this monitoring period. Compliance status for each of the monitoring wells is provided in Table 5.

Monitoring wells in A-TZ and B-TZ have not exceeded the established CP PCLs since July 2005, at which time dibenzofuran exceeded its respective PCL of 0.098 mg/L in MW-01A (0.11 mg/L). Including the 2008 first semi-annual analytical data, the SMWU No. 1 monitoring wells have been compliant for five consecutive semi-annual monitoring events (2.5 years).

A QA/QC review and Data Usability Summary (DUS) were prepared for the January 2008 analytical data. Analytical results were flagged based on the data validation review of the QA/QC samples.

The following samples were qualified as *Biased Low (JL or UJL)*:

- MW-01A, MW-02, MW-07, MW-08, MW-10A, MW-11A and FD-01 for 2-Methylnaphthalene
- MW-01A, MW-07, MW-08, MW-10A, MW-10B, P-12 and FD-02 for bis(2-ethylhexyl)phthalate
- MW-01A, MW-02, MW-07, MW-08, MW-10A, MW-10B, MW-11B, P-10, P-12, FD-01 and FD-02 for Naphthalene
- MW-10B, MW-11B, P-10, P-12, and FD-01 for Phenol

The following samples were qualified as *Estimated (J)*:

- P-10 and FD-02 for Acenaphthene
- MW-08 and FD-02 for Anthracene
- P-10 and FD-02 for Fluorene
- FD-02 for Fluoranthene
- MW-02, MW-11A, MW-11B, P-10, and FD-01 for 2-Methylnaphthalene
- MW-11A and FD-01 for Phenanthrene
- MW-01A, MW-02, MW-10B, MW-11A, MW-11B, P-10, P-12 and FD-01for Pyrene

A DUS for the laboratory analyses is included in Appendix C, and validated qualifiers were added to the data tables (Tables 1 and 2). Based on the QA/QC data review, the analytical data are usable for the intended use.

3.11 Reported Concentration Maps

Reported concentrations of each constituent analyzed for the 2008 First Semi-Annual Groundwater Monitoring Event are presented on Figures 5 and 6 for the A-TZ and B-TZ compliance wells, respectively. In the event a constituent exceeded its respective PCL, the value would be highlighted on the figures. There were no exceedances of PCLs for any of the required constituents.

3.12 Extent of NAPL

Measurable amounts of LNAPL or DNAPL were not detected in any of the compliance wells.

3.13 Updated Compliance Schedule

Section X of the CP requires that the Permittee submit a schedule summarizing the activities required by the Compliance Plan issued on June 10, 2005, which was originally submitted to the TCEQ on August 4, 2004. An updated compliance schedule is included as Appendix D of this report.

3.14 Summary of Changes Made to Corrective Action Program

No changes have been made to the corrective action program.

3.15 Modifications and Amendments to Compliance Plan

A compliance plan renewal application was submitted to TCEQ on December 23, 2003 consistent with the renewal requirements for the RCRA permit at the site. The RCRA permit and CP were issued June 10, 2005. There have been no modifications or amendments to the Compliance Plan since the last permit issued.

3.16 Corrective Measures Implementation (CMI) Report

A Response Action Plan (RAP) has not been submitted; therefore, this provision does not apply.

3.17 Well Casing Elevations

Top-of-casing elevations referenced to feet above Mean Sea Level (MSL) for each compliance monitoring well are summarized in Table 4.

3.18 Recommendation for Changes

There are no recommendations for changes to the monitoring program or to the Corrective Action Program.

3.19 Well Installation and/or Abandonment

No monitoring wells were installed or abandoned as part of the monitoring program or the Corrective Action Program during the reporting period.

3.20 Activity Within Area Subject to Institutional Control

No areas are under institutional control; therefore, this provision does not apply.

3.21 Other Requested Items

No other items have been requested by the executive director.

TABLES

Table 1
Summary of Analytical Results for the A-Transmissive Zone (A-TZ)
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Houston Wood Preserving Works
Houston, Texas

Analyte	PCL (mg/L)	Monitoring Well IDs (Concentrations mg/L)																			
		MW-01A			DUP-01			MW-02			MW-07			MW-08			MW-10A			MW-11A		
		1/28/2008	LQ	VQ	1/28/2008	LQ	VQ	1/28/2008	LQ	VQ	1/28/2008	LQ	VQ	1/29/2008	LQ	VQ	1/28/2008	LQ	VQ	1/28/2008	LQ	VQ
Acenaphthene	1.5	0.0415			0.0409			0.017			<0.00028	U		<0.00033	U		<0.0003	U		0.0346		
Acenaphthylene	1.5	0.00099			0.000933			<0.00028	U		<0.00028	U		<0.00033	U		<0.0003	U		<0.00029	U	
Anthracene	7.3	0.00129			0.00137			0.000922			0.000516			0.00031	J	J	<0.0002	U		0.000798		
bis(2-ethylhexyl)phthalate	0.006	0.00022	U	UJL	0.0008	J	J	0.00049	J	J	<0.00019	U	UJL	<0.00022	U	UJL	<0.0002	U	UJL	0.00028	J	J
Dibenzofuran	0.098	0.00129			0.00211			0.0106			<0.00028	U		<0.00033	U		<0.0003	U		0.00276		
Fluoranthene	0.98	0.00234			0.00233			0.0015			<0.00019	U		<0.00022	U		<0.0002	U		0.00338		
Fluorene	0.98	0.0162			0.0167			0.0119			<0.00019	U		<0.00022	U		<0.0002	U		0.0069		
2-Methylnaphthalene	0.098	0.00044	U	UJL	0.000563		JL	<0.00038	U	UJL	<0.00038	U	UJL	<0.00044	U	UJL	<0.0004	U	UJL	<0.00038	U	UJL
Naphthalene	0.49	0.00044	U	UJL	<0.00038	U	UJL	0.000827		JL	<0.00038	U	UJL	<0.00044	U	UJL	<0.0004	U	UJL	<0.00038	U	UJL
Phenanthrene	0.73	0.00022	U		0.00035	J	J	0.000532			<0.00019	U		<0.00022	U		<0.0002	U		0.00036	J	J
Pyrene	0.73	0.00107		J	0.00108		J	0.000816		J	<0.00019	U		<0.00022	U		<0.0002	U		0.00191		J

Notes:
PCL = Protective Concentration Level
The Compliance Plan Section IV.D defines the Groundwater Protection Standard (GWPS) as the PCL
DUP-01= Duplicate sample collected at MW-01A

LQ - Lab Qualifier
J = Estimated value between the SQL and the MDL
U = Value not detected greater than the MDL

VQ - Validation Qualifier
J = Estimated data; The reported sample concentration is approximate due to the exceedance of one or more QC requirements
UJ = Estimated data; The analyte was not detected above the reported sample detecteion limit (SDL) however, the SDL is approximate due to exceedance of one or more QC requirements
L = Bias in sample result is likely to be low

Table 2
Summary of Analytical Results for the B-Transmissive Zone (B-TZ)
Semiannual Monitoring Report: 2008 First Semiannual Event

Houston Wood Preserving Works
Houston, Texas

Analyte	PCL (mg/L)	Monitoring Well IDs (Concentrations mg/L)													
		MW-10B			MW-11B			P-10			DUP-02			P-12		
		1/28/2008	LQ	VQ	1/28/2008	LQ	VQ	1/28/2008	LQ	VQ	1/29/2008	LQ	VQ	1/29/2008	LQ	VQ
Acenaphthene	1.5	0.0743			0.0649			0.00373		J	0.00854		J	<0.00029	U	
Acenaphthylene	1.5	0.00122			<0.00028	U		<0.00028	U		<0.00028	U		<0.00029	U	
Anthracene	7.3	0.00432			0.00236			0.000703			0.00036	J	J	0.000645		
bis(2-ethylhexyl)phthalate	0.006	<0.00019	U	UJL	0.00021	J	J	0.00023	J	J	<0.00019	U	UJL	<0.00019	U	UJL
Dibenzofuran	0.098	0.0255			0.0273			0.000713			0.00175			<0.00029	U	
Di-n-butyl phthalate	2.4	<0.00019	U		<0.00019	U		<0.00019	U		<0.00019	U		<0.00019	U	
Fluoranthene	0.98	0.00371			0.00175			0.000506			0.00025	J	J	<0.00019	U	
Fluorene	0.98	0.0374			0.0297			0.000668		J	0.00251		J	<0.00019	U	
Naphthalene	0.49	0.0185		JL	0.0354		JL	<0.00038	U	UJL	<0.00037	U	UJL	<0.00038	U	UJL
Phenol	7.3	<0.00019	U	UJL	<0.00019	U	UJL	<0.00019	U	UJL	<0.00019	U	UJL	<0.00019	U	UJL
Pyrene	0.73	0.00146		J	0.000848		J	0.00039	J	J	<0.00019	U		0.00932		J

Notes:
PCL = Protective Concentration Level
The Compliance Plan Section IV.D defines the Groundwater Protection Standard (GWPS) as the PCL
DUP-02 = Duplicate sample collected at P-12

LQ - Lab Qualifier
J = Estimated value between the SQL and the MDL
U = Value not detected greater than the MDL

VQ - Validation Qualifier
J = Estimated data; The reported sample concentration is approximate due to the exceedance of one or more QC requirements
UJ = Estimated data; The analyte was not detected above the reported sample detecteion limit (SDL) however, the SDL is approximate due to exceedance of one or more QC requirements
L = Bias in sample result is likely to be low

Table 3
Summary of Analytical Results for Quality Assurance/Quality Control Samples
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Houston Wood Preserving Works
Houston, Texas

Analyte	PCL (mg/L)	Sample IDs (Concentrations mg/L)							
		FB-01		FB-02		P-12(MS)[1]		P-12(MSD)[1]	
		Field Blank		Field Blank		Matrix Spike		Matrix Spike Duplicate	
		1/28/2008		1/29/2008		1/29/2008		1/29/2008	
Acenaphthene	1.5	<0.0003	U	<0.00033	U	0.00668		0.00519	
Acenaphthylene	1.5	<0.0003	U	<0.00033	U	0.00691		0.00535	
Anthracene	7.3	<0.0002	U	<0.00022	U	0.0078		0.00633	
bis(2-ethylhexyl)phthalate	0.006	<0.0002	U	<0.00022	U	0.00454		0.00504	
Dibenzofuran	0.098	<0.0003	U	<0.00033	U	0.00719		0.00557	
Di-n-butyl phthalate	2.4	<0.0002	U	<0.00022	U	0.00897		0.00752	
Fluoranthene	0.98	<0.0002	U	<0.00022	U	0.00891		0.00753	
Fluorene	0.98	<0.0002	U	<0.00022	U	0.00729		0.00591	
2-Methylnaphthalene	0.098	<0.0004	U	<0.0004	U	NA		NA	
Naphthalene	0.49	<0.0004	U	<0.00044	U	0.00557		0.00476	
Phenanthrene	0.73	<0.0002	U	<0.0002	U	NA		NA	
Phenol	7.3	<0.0002	U	<0.00022	U	0.00251		0.00218	
Pyrene	0.73	<0.0002	U	<0.00022	U	0.0185		0.0117	

Notes:
PCL = Protective Concentration Level
(1) = P-12(MS) and P-12(MSD) are matrix spike and matrix spike duplicate samples collected at P-12, respectively.
U = Not detected above the Method Detection Limit
JH = concentration estimated high due to MS/MSD recovery outside of acceptance limits
NA = not analyzed

Table 4
Water Level Measurements
Semiannual Monitoring Report: 2008 First Semiannual Event

Houston Wood Preserving Works
Houston, Texas

Well ID	Top of Casing Elevation (TOC) (ft MSL)	Date Measured	Water Depth (ft. BTOC)	Depth to NAPL (ft. BTOC)	Total Well Depth as Completed (ft. BTOC)	Total Well Depth (ft. BTOC)	Potentiometric Elevation (ft. MSL)
A-TZ Monitoring Locations							
MW-01A	47.92	1/28/2008	2.51	ND	20.2	19.91	45.41
MW-02	47.97	1/28/2008	2.42	ND	20.3	20.21	45.55
MW-07	48.86	1/29/2008	3.39	ND	NA	24.83	45.47
MW-08	49.33	1/29/2008	3.71	ND	26.8	25.72	45.62
MW-10A	49.86	1/28/2008	4.22	ND	25.9	25.55	45.64
MW-11A	50.05	1/28/2008	4.46	ND	24.4	24.06	45.59
B-TZ Monitoring Locations							
MW-10B	49.94	1/28/2008	4.44	ND	48.8	47.88	45.50
MW-11B	50.18	1/28/2008	4.69	ND	46.8	47.10	45.49
P-10	47.69	1/29/2008	2.30	ND	40.0	43.89	45.39
P-12	48.78	1/29/2008	3.03	ND	40.0	43.36	45.75

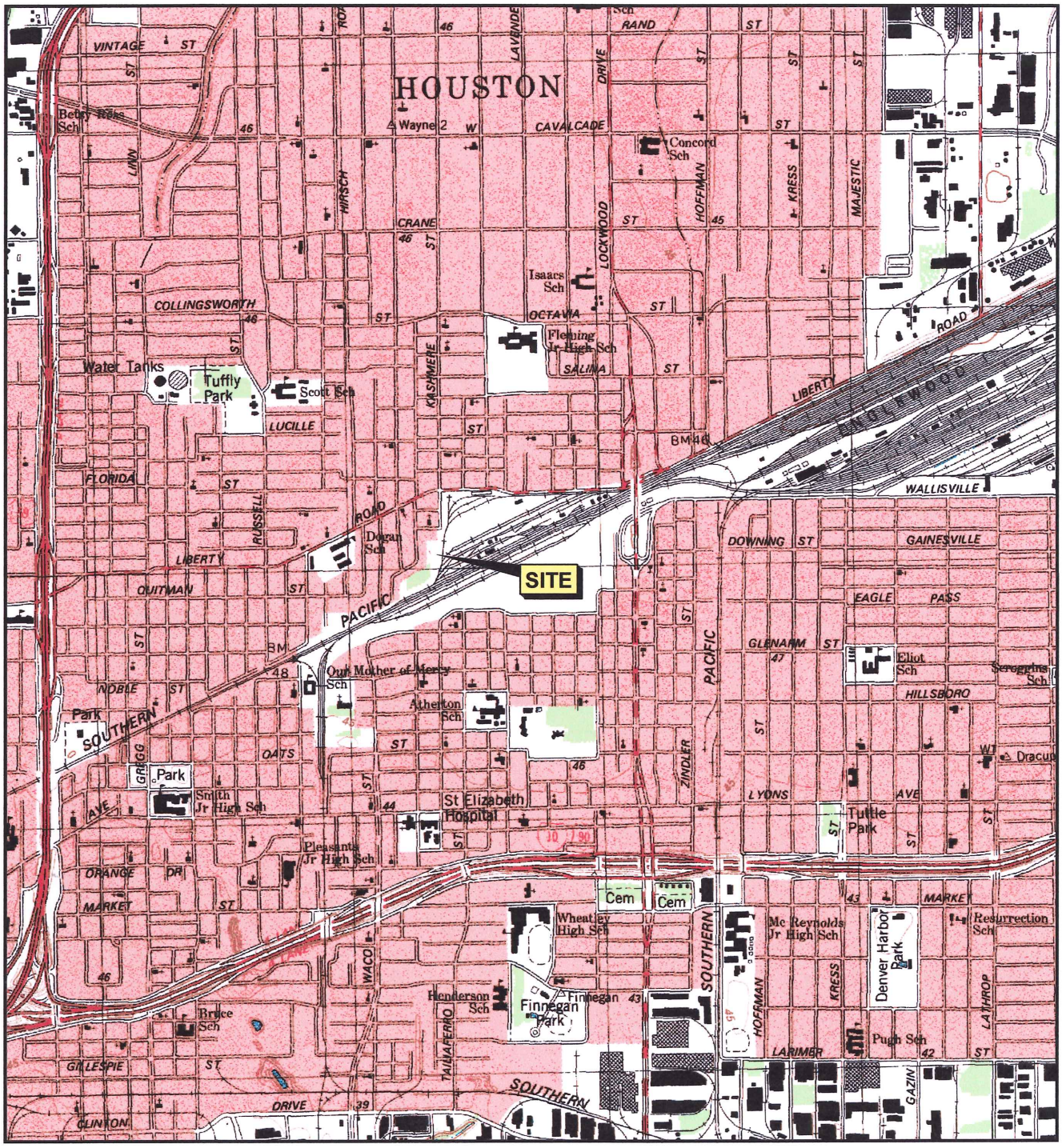
Notes
BTOC = feet below the top of the well casing
ft. MSL = feet above Mean Sea Level
NA = Information not available
ND = Not Detected

Table 5
Compliance Status of Wells and Piezometers
Semiannual Monitoring Report: 2008 First Semiannual Event

Houston Wood Preserving Works
Houston, Texas

Zone	Monitoring Well Location	Well Designation	Compliance Status
A-TZ Monitoring Location	MW-01A	Point of Compliance	Compliant
	MW-02	Point of Compliance	Compliant
	MW-07	Point of Compliance	Compliant
	MW-08	Background Well	Compliant
	MW-10A	Point of Compliance	Compliant
	MW-11A	Point of Compliance	Compliant
B-TZ Monitoring Location	MW-10B	Point of Compliance	Compliant
	MW-11B	Point of Compliance	Compliant
	P-10	Point of Compliance	Compliant
	P-12	Background Well	Compliant

FIGURES



QUADRANGLE LOCATION

N

Scale in Feet

0 1000 2000

Source:
U.S.G.S. 7.5 minute quadrangle, Settegast, Texas, 1982.

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Figure 1

SITE LOCATION MAP

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DATE: JUNE, 2008	CHECKED: ECM	

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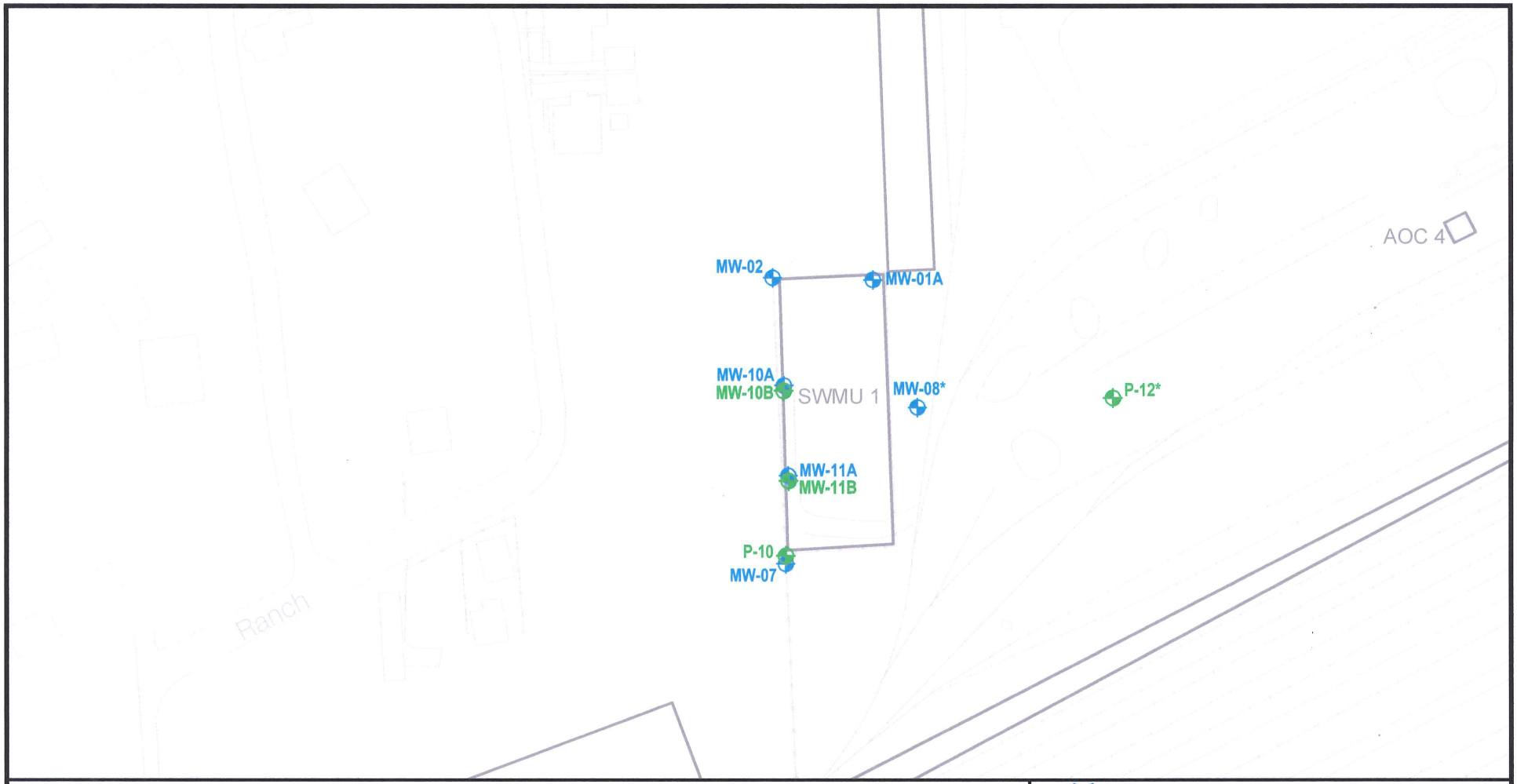

EXPLANATION

- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Zone A Monitoring Well Location
- Zone B Monitoring Well Location

Note:
* Background well.

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N

Approx. Scale in Feet

0 60 120

Source:
Base map from ERM-Southwest, Inc
0014419a310.dwg, 6/19/2006.

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Figure 2

CORRECTIVE ACTION MONITORING WELL NETWORK TCEQ PERMIT UNIT NO. 1

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: JUNE, 2008	CHECKED: ECM	

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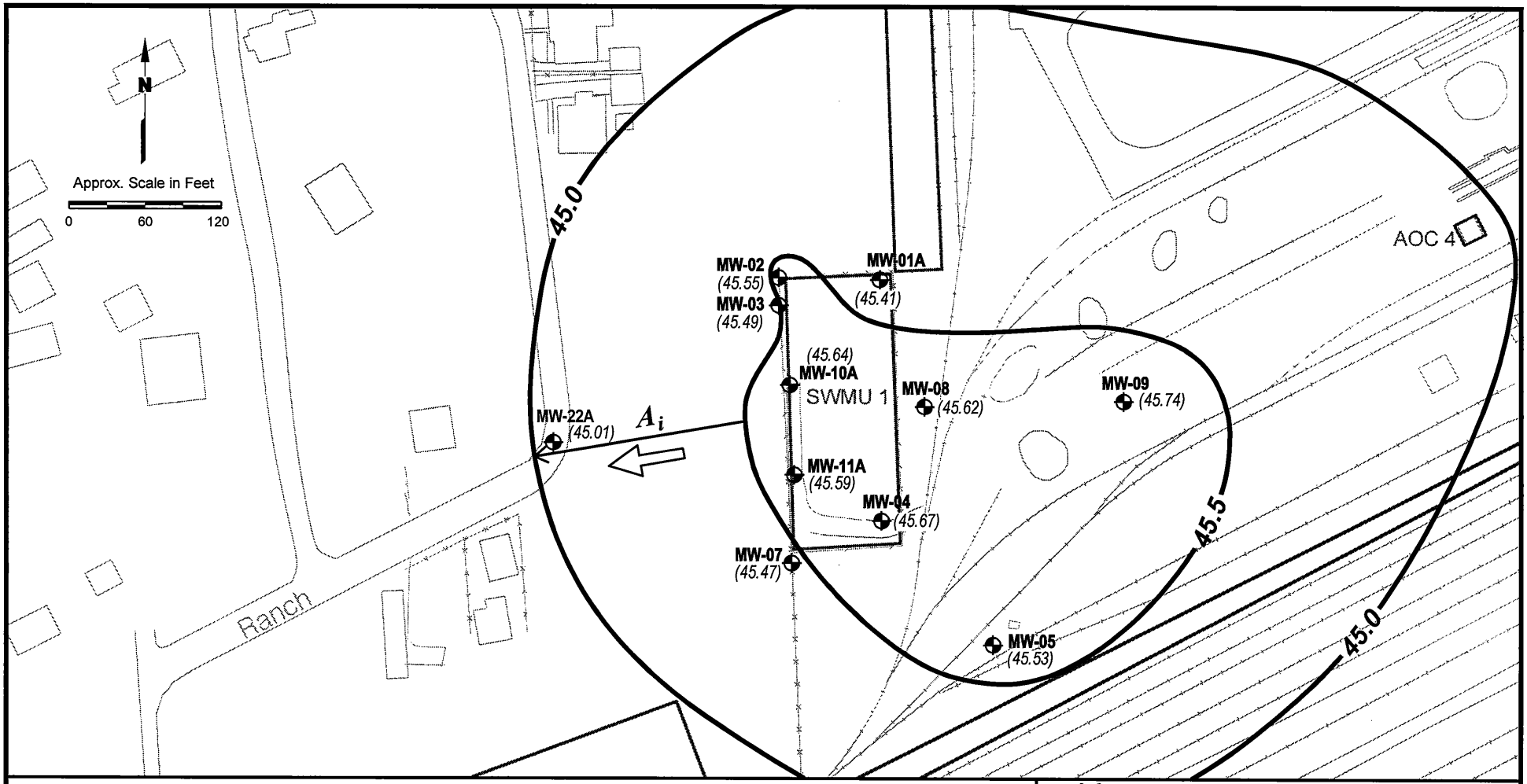

EXPLANATION

- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Zone A Monitoring Well Location
- (45.53) Groundwater Elevation (Ft, MSL)
- 45.5 Groundwater Elevation Contour (Ft, MSL) C.I.= 0.5 Ft
- General Groundwater Flow Direction

ESTIMATED GRADIENT

$A_i \rightarrow A_i = \frac{0.5ft}{170ft} = 0.003\ ft/ft$

Source:
Base map from ERM-Southwest, Inc
0014419a310.dwg, 6/19/2006.

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Figure 3

A-TZ POTENTIOMETRIC SURFACE CONTOUR MAP JANUARY 28-29, 2008

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: JUNE, 2008	CHECKED: ECM	

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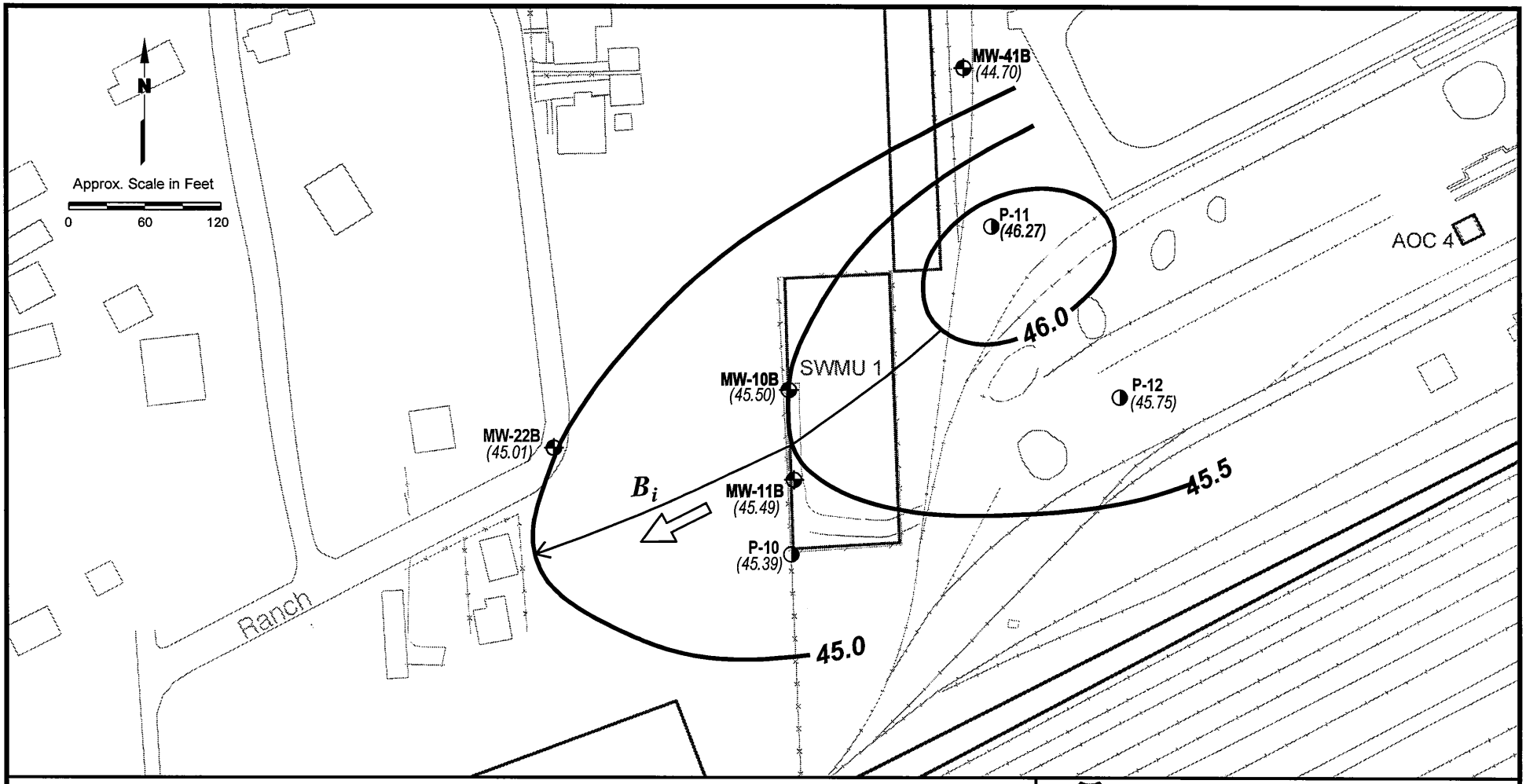

EXPLANATION

- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Zone B Monitoring Well Location
- Zone B Piezometer Location

(45.01) Groundwater Elevation (Ft, MSL) (NM = Not Measured) * Well Gauged July 17-18, 2007

−45.5− Groundwater Elevation Contour (Ft, MSL) C.I.= 0.5 Ft

General Groundwater Flow Direction

ESTIMATED GRADIENT

B_i → $B_i = \frac{1ft}{372ft} = 0.003\ ft/ft$

Source:
Base map from ERM-Southwest, Inc
0014419a310.dwg, 6/19/2006.

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Figure 4

B-TZ POTENTIOMETRIC SURFACE CONTOUR MAP JANUARY 28-29, 2008

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: JUNE, 2008	CHECKED: ECM	

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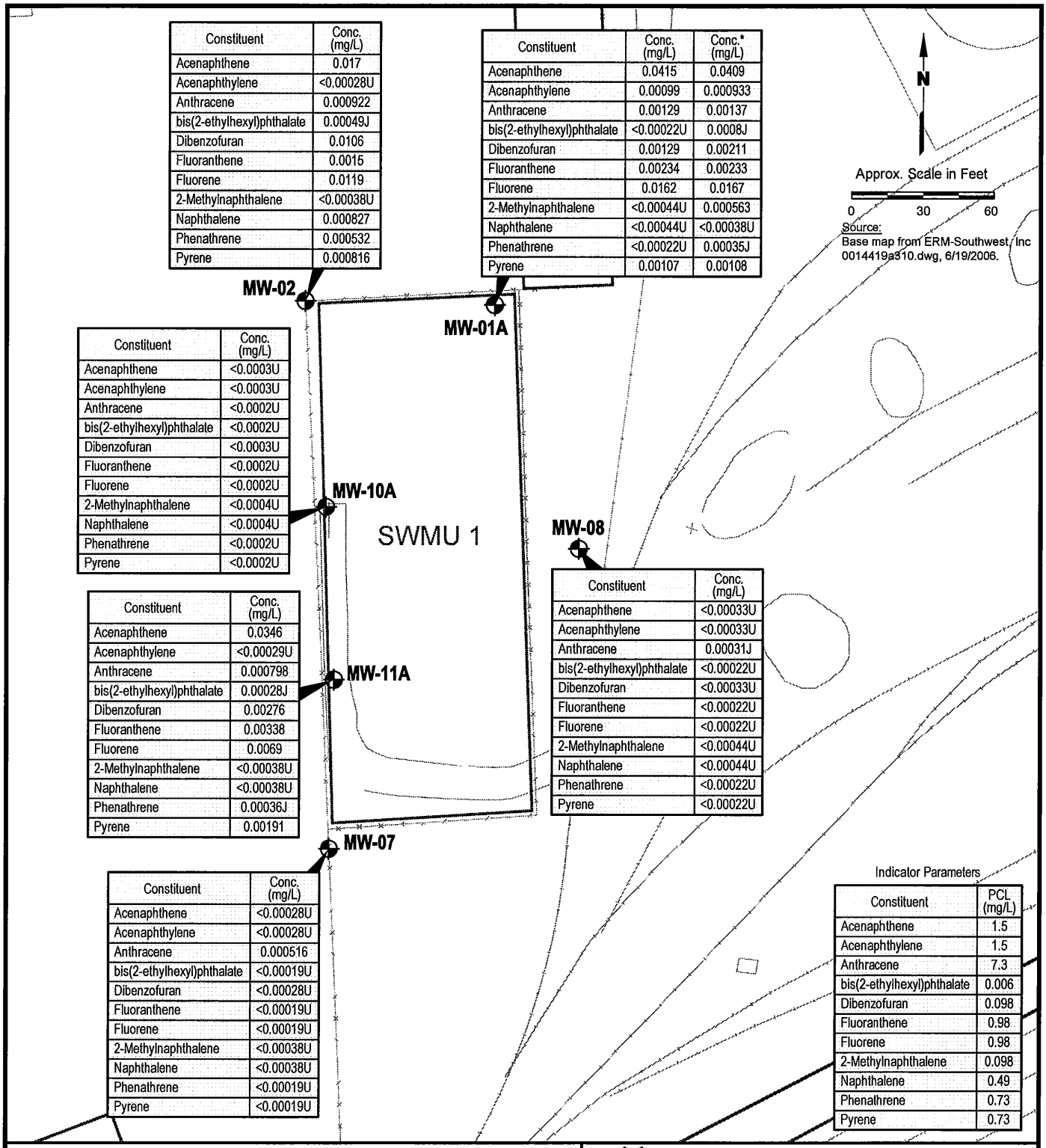

Constituent	Conc. (mg/L)
Acenaphthene	0.017
Acenaphthylene	<0.00028U
Anthracene	0.000922
bis(2-ethylhexyl)phthalate	0.00049J
Dibenzofuran	0.0106
Fluoranthene	0.0015
Fluorene	0.0119
2-Methylnaphthalene	<0.00038U
Naphthalene	0.000827
Phenathrene	0.000532
Pyrene	0.000816

Constituent	Conc. (mg/L)	Conc.* (mg/L)
Acenaphthene	0.0415	0.0409
Acenaphthylene	0.00099	0.000933
Anthracene	0.00129	0.00137
bis(2-ethylhexyl)phthalate	<0.00022U	0.0008J
Dibenzofuran	0.00129	0.00211
Fluoranthene	0.00234	0.00233
Fluorene	0.0162	0.0167
2-Methylnaphthalene	<0.00044U	0.000563
Naphthalene	<0.00044U	<0.00038U
Phenathrene	<0.00022U	0.00035J
Pyrene	0.00107	0.00108

Constituent	Conc. (mg/L)
Acenaphthene	<0.0003U
Acenaphthylene	<0.0003U
Anthracene	<0.0002U
bis(2-ethylhexyl)phthalate	<0.0002U
Dibenzofuran	<0.0003U
Fluoranthene	<0.0002U
Fluorene	<0.0002U
2-Methylnaphthalene	<0.0004U
Naphthalene	<0.0004U
Phenathrene	<0.0002U
Pyrene	<0.0002U

Constituent	Conc. (mg/L)
Acenaphthene	0.0346
Acenaphthylene	<0.00029U
Anthracene	0.000798
bis(2-ethylhexyl)phthalate	0.00028J
Dibenzofuran	0.00276
Fluoranthene	0.00338
Fluorene	0.0069
2-Methylnaphthalene	<0.00038U
Naphthalene	<0.00038U
Phenathrene	0.00036J
Pyrene	0.00191

Constituent	Conc. (mg/L)
Acenaphthene	<0.00033U
Acenaphthylene	<0.00033U
Anthracene	0.00031J
bis(2-ethylhexyl)phthalate	<0.00022U
Dibenzofuran	<0.00033U
Fluoranthene	<0.00022U
Fluorene	<0.00022U
2-Methylnaphthalene	<0.00044U
Naphthalene	<0.00044U
Phenathrene	<0.00022U
Pyrene	<0.00022U

Constituent	Conc. (mg/L)
Acenaphthene	<0.00028U
Acenaphthylene	<0.00028U
Anthracene	0.000516
bis(2-ethylhexyl)phthalate	<0.00019U
Dibenzofuran	<0.00028U
Fluoranthene	<0.00019U
Fluorene	<0.00019U
2-Methylnaphthalene	<0.00038U
Naphthalene	<0.00038U
Phenathrene	<0.00019U
Pyrene	<0.00019U

Indicator Parameters

Constituent	PCL (mg/L)
Acenaphthene	1.5
Acenaphthylene	1.5
Anthracene	7.3
bis(2-ethylhexyl)phthalate	0.006
Dibenzofuran	0.098
Fluoranthene	0.98
Fluorene	0.98
2-Methylnaphthalene	0.098
Naphthalene	0.49
Phenathrene	0.73
Pyrene	0.73

EXPLANATION

- Fence
- Railroad
- A-TZ Monitoring Well Location

Notes:
1. * Duplicates sample taken at MW-1A.
2. Sample collected on January 28-29, 2008.
3. J= Estimated value between SQL and MDL.
4. U= Value not detected greater than the MDL.

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Figure 5

A-TZ REPORTED CONCENTRATIONS 2008 1st SEMI ANNUAL MONITORING EVENT

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: JUNE, 2008	CHECKED: ECM	

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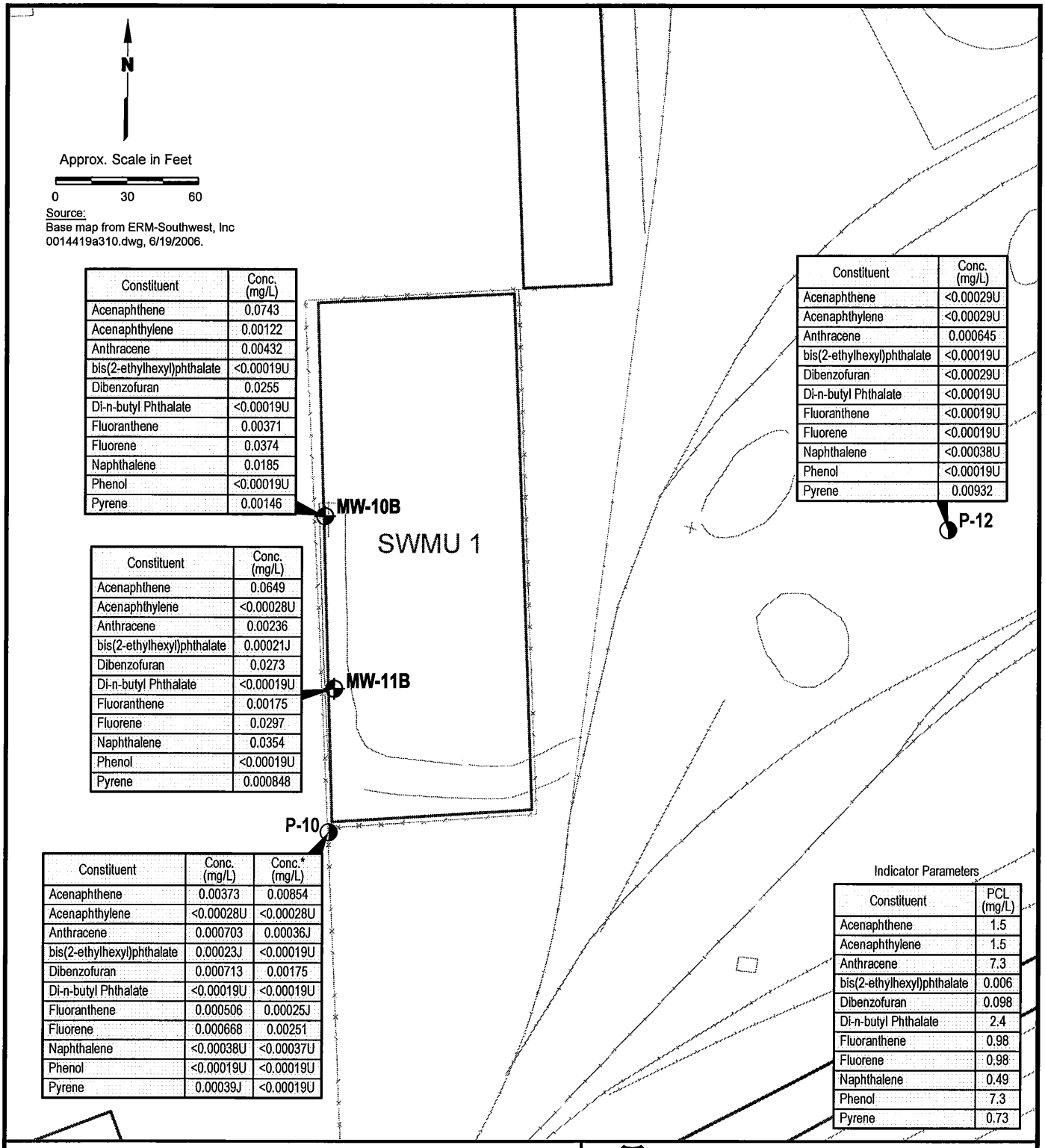

Constituent	Conc. (mg/L)
Acenaphthene	0.0743
Acenaphthylene	0.00122
Anthracene	0.00432
bis(2-ethylhexyl)phthalate	<0.00019U
Dibenzofuran	0.0255
Di-n-butyl Phthalate	<0.00019U
Fluoranthene	0.00371
Fluorene	0.0374
Naphthalene	0.0185
Phenol	<0.00019U
Pyrene	0.00146

Constituent	Conc. (mg/L)
Acenaphthene	0.0649
Acenaphthylene	<0.00028U
Anthracene	0.00236
bis(2-ethylhexyl)phthalate	0.00021J
Dibenzofuran	0.0273
Di-n-butyl Phthalate	<0.00019U
Fluoranthene	0.00175
Fluorene	0.0297
Naphthalene	0.0354
Phenol	<0.00019U
Pyrene	0.000848

Constituent	Conc. (mg/L)	Conc.* (mg/L)
Acenaphthene	0.00373	0.00854
Acenaphthylene	<0.00028U	<0.00028U
Anthracene	0.000703	0.00036J
bis(2-ethylhexyl)phthalate	0.00023J	<0.00019U
Dibenzofuran	0.000713	0.00175
Di-n-butyl Phthalate	<0.00019U	<0.00019U
Fluoranthene	0.000506	0.00025J
Fluorene	0.000668	0.00251
Naphthalene	<0.00038U	<0.00037U
Phenol	<0.00019U	<0.00019U
Pyrene	0.00039J	<0.00019U

Constituent	Conc. (mg/L)
Acenaphthene	<0.00029U
Acenaphthylene	<0.00029U
Anthracene	0.000645
bis(2-ethylhexyl)phthalate	<0.00019U
Dibenzofuran	<0.00029U
Di-n-butyl Phthalate	<0.00019U
Fluoranthene	<0.00019U
Fluorene	<0.00019U
Naphthalene	<0.00038U
Phenol	<0.00019U
Pyrene	0.00932

Indicator Parameters

Constituent	PCL (mg/L)
Acenaphthene	1.5
Acenaphthylene	1.5
Anthracene	7.3
bis(2-ethylhexyl)phthalate	0.006
Dibenzofuran	0.098
Di-n-butyl Phthalate	2.4
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Phenol	7.3
Pyrene	0.73

EXPLANATION

- Fence
- Railroad
- B-TZ Monitoring Well Location
- Piezometer Location

Notes:
1. * Duplicates sample taken at P-10.
2. Sample collected on January 28-29, 2008.
3. J= Estimated value between SQL and MDL.
4. U= Value not detected greater than the MDL.

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Figure 6

B-TZ REPORTED CONCENTRATIONS 2008 1st SEMI ANNUAL MONITORING EVENT

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: JUNE, 2008	CHECKED: ECM	

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APPENDIX A
COMPLIANCE PLAN TABLES

TABLE III - CORRECTIVE ACTION PROGRAM
Table of Detected Hazardous and Solid Waste Constituents and Concentration Limits for the Ground-Water Protection Standard

Closed Surface Impoundment (NOR Unit No. 001, SWMU No. 01)

A-Transmissive Zone		B-Transmissive Zone	
COLUMN A Hazardous Constituents	COLUMN B Concentration Limits (mg/l)	COLUMN A Hazardous Constituents	COLUMN B Concentration Limits (mg/l)
Acenaphthene	1.5[PCL]	Acenaphthene	1.5[PCL]
Acenaphthylene	1.5[PCL]	Acenaphthylene	1.5[PCL]
Anthracene	7.3[PCL]	Anthracene	7.3[PCL]
Dibenzofuran	0.098[PCL]	Dibenzofuran	0.098[PCL]
Bis(2-ethylhexyl)phthalate	0.006[PCL]	Bis(2-ethylhexyl)phthalate	0.006[PCL]
Fluoranthene	0.98[PCL]	Fluoranthene	0.98[PCL]
Fluorene	0.98[PCL]	Fluorene	0.98[PCL]
2-Methylnaphthalene	0.098[PCL]	Di-n-butyl phthalate	2.4[PCL]
Naphthalene	0.49[PCL]	Naphthalene	0.49[PCL]
Phenanthrene	0.73[PCL]	Phenol	7.3[PCL]
Pyrene	0.73[PCL]	Pyrene	0.73[PCL]

PCL Alternate Concentration Limit pursuant to 30 TAC §335.160(b) based upon the Protective Concentration Level determined under 30 TAC Chapter 350 for Residential Land Use. The PCL value, Column B, will change as updates to the rule are promulgated. Changes to the rule automatically change the concentration value established in Column B in this table.

APPENDIX B
FIELD PARAMETERS

TABLE B-1
Groundwater Sampling Field Parameters
Semiannual Monitoring Report: 2008 First Semiannual Event

Houston Wood Preserving Works
Houston, Texas

Field Parameter	Monitoring Well IDs									
	A-Transmissive Zone						B-Transmissive Zone			
	MW-01A	MW-02	MW-07	MW-08	MW-10A	MW-11A	MW-10B	MW-11B	P-10	P-12
	1/28/2008	1/28/2008	1/29/2008	1/29/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/29/2008	1/29/2008
Time Sampled (hrs CST)	16:40	16:01	9:50	13:25	15:30	14:22	14:54	13:43	10:55	12:51
Temperature (ºC)	19.45	18.83	18.68	20.93	19.64	20.04	20.34	20.76	19.59	22.67
pH (Standard Units)	6.99	6.48	7.06	7.00	7.1	6.99	6.80	6.86	7.19	6.6
Specific Conductivity (µS)	1,358	636	843	618	899	1,071	1,324	1,247	1,176	1,408
Dissolved Oxygen (mg/L)	1.11	0.40	3.50	6.14	2.16	0.35	0.44	0.28	0.95	0.50
Turbidity (NTU)	9.16	21.00	0.86	7.61	-5.36	8.33	2.60	0.00	6.70	2.00

APPENDIX C
LABORATORY ANALYTICAL REPORTS and DATA USABILITY SUMMARIES

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

02/13/2008

Eric Matzner
Pastor, Behling & Wheeler, LLC
2201 Double Creek Drive
Suite 4004
Round Rock, TX 78664

Reference:
Project : UPRR-HWPW
Project No. : 349022
Date Received : 01/29/2008
TestAmerica Job : 349022

Dear Eric Matzner:

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

1. WG-1620-MW10A-280108
2. WG-1620-MW11A-280108
3. WG-1620-MW01A-280108
4. WG-1620-MWFD01-280108
5. WG-1620-MWFB01-280108
6. WG-1620-MWFB02-290108
7. WG-1620-MW08-290108
8. WG-1620-MW11B-280108
9. WG-1620-MW10B-280108
10. WG-1620-MW02-280108
11. WG-1620-MW07-290108
12. WG-1620-P10-290108
13. WG-1620-P12-290108
14. WG-1620-P12-290108 MS
15. WG-1620-P12-290108 MSD
16. WG-1620-MWFD02-290108

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

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

The test results in this report meet all QC requirements for TestAmerica Houston's QC limits. Any exceptions to these QC requirements will be noted and included in a case narrative as a part of this report.

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

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

We look forward to working with you on future projects.

Sincerely,

Sachin G. Kudchadkar
Project Manager

6310 Rothway Street Houston, TX 77040 **tel** 713.690.4444 **fax** 713.690.5646 www.testamericainc.com

Table 1
Cross Reference Lab Identifications, Field Identifications, and Methods

Lab Identification	Field Identification	SW-846 8270C
349022-001	WG-1620-MW10A-280108	1
349022-002	WG-1620-MW11A-280108	1
349022-003	WG-1620-MW01A-280108	1
349022-004	WG-1620-MWFD01-280108	1
349022-005	WG-1620-MWFB01-280108	1
349022-006	WG-1620-MWFB02-290108	1
349022-007	WG-1620-MW08-290108	1
349022-008	WG-1620-MW11B-280108	1
349022-009	WG-1620-MW10B-280108	1
349022-010	WG-1620-MW02-280108	1
349022-011	WG-1620-MW07-290108	1
349022-012	WG-1620-P10-290108	1
349022-013	WG-1620-P12-290108	1
349022-014	WG-1620-P12-290108 MS	1
349022-015	WG-1620-P12-290108 MSD	1
349022-016	WG-1620-MWFD02-290108	1

Appendix A Laboratory Data Package Cover Page

This data package consists of:

- ☒ This signature page, the laboratory review checklist, and the following reportable data:
- ☒ R1 Field chain-of-custody documentation;
- ☒ R2 Sample identification cross-reference;
- ☒ R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test reports/summary forms for blank samples;
- ☒ R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- ☒ R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies.
- ☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By me signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [ ] This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Craig Bromley	Karen Olson for	Laboratory Director	02-14-08
Name (Printed)	Signature	Official Title (printed)	Date

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: STL-Houston	LRC Date: 02/12/08
Project Name: UPRR-HWPW	Laboratory Job Number: 349022
Reviewer Name: YX	Prep Batch Number(s): 193206-SV

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample quantitation limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL to minimize the matrix interference affects on the sample results?	X				4

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: STL-Houston	LRC Date: 02/12/08
Project Name: UPRR-HWPW	Laboratory Job Number: 349022
Reviewer Name: YX	Prep Batch Number(s): 193206-SV

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods** (NELAC Chap 5 or ISO/IEC 17025 Section					
		Are all the methods used to generate the data documented, verified, and validated, where	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: STL-Houston	LRC Date: 02/12/08
Project Name: UPRR-HWPW	Laboratory Job Number: 349022
Reviewer Name: YX	Prep Batch Number(s): 193206-SV

ER #[1]	DESCRIPTION
1	The 2,4,6-tribromophenol and terphenyl-d14 surrogate recoveries in sample 349022-15 MSD were above acceptance limits due to matrix interference.
2	The 2-methylnaphthalene recovery in sample 349022-15 MSD and the bis(2-ethylhexyl)phthalate recoveries in samples 349022-14 MS and 15 MSD were below default acceptance limits due to matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
3	The pyrene RPD between samples 349022-14 MS and 15 MSD was above acceptance limits due to matrix interference.
4	The acenaphthene SDLs for samples 349022-2, 3, 4, 8, and 9 were elevated. The dibenzofuran, fluorene, and naphthalene SDLs for samples 349022-8 and 9 were elevated. All elevated SDLs were due to the dilutions necessary for analyses.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

349022

CHAIN OF CUSTODY RECORD

Customer Information	
PO	
WO	
COMPANY	Pastor, Behling & Wheeler, LLC
SEND REPORT TO	Eric Matzner
ADDRESS	2201 Double Creek Drive
	Suite 4004
CITY/STATE/ZIP	Round Rock, TX 78664
PHONE	512-671-3434
FAX	512-671-3446

Project Information			
PROJECT NAME	99000484/HWPW		
LAB NUMBER		BOTTLE ORDER	
BILL TO	Union Pacific Railroad		
INVOICE ATTN	Geoff Reeder		
ADDRESS	24125 Aldine Westfield Road		
CITY/STATE/ZIP	Spring, TX 77373-9015		
PHONE	281-350-7197		
FAX	281-350-7362		

A B C D E F G H I J K L M N O P Q R S

Analysis/Method	No. 57216-1
A) 8270C-ATZ B) 8270C-BTZ C) 8270 C TRRP data package	

SAMP NO.	SAMPLE DESCRIPTION	PRESERV.	F	SAMPLE MATRIX	SAMPLE DATE	SAMPLE TIME	#CONTAINR	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	WG-1620- MW10A-280108	none		Water	1/28/08	1530	2	X																		
2	WG-1620- MW11A-28D108	none		Water	1/28/08	1422	2	X																		
3	WG-1620- MW01A-280108	none		Water	1/28/08	1640	2	X																		
4	WG-1620- MWFD01-280108	none		Water	1/28/08	—	2	X																		
5	WG-1620- MWFB01-280108	none		Water	1/28/08	1620	2			X																
6	WG-1620- MWFB02-290108	none		Water	1/29/08	1300	2			X																
7	WG-1620- MW08-290108	none		Water	1/29/08	1325	2	X																		
8	WG-1620-			Water			~~2~~																			

Sampler: Allison Johanson | Shipment Method: | Airbill No.: | Required TurnAround: 14 Days/28

1. Relinquished By: Johanson	Date 1/28/08	2. Relinquished By:	Date 1-29-8	3. Relinquished By:	Date
Company Name: Delta Consultants	Time 1402	Company Name:	Time 700	Company Name:	Time
1. Received By:	Date 1-29-8	2. Received By:	Date 1249	3. Received By:	Date
Company Name:	Time 1612	Company Name:	Time 1700	Company Name:	Time

TestAmerica Laboratories, Inc. 6310 Rothway Drive Houston, TX 77040 713-690-4444 FAX 713-690-5646

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

34902L

CHAIN OF CUSTODY RECORD

Customer Information	
PO	
WO	
COMPANY	Pastor, Behling & Wheeler, LLC
SEND REPORT TO	Eric Matzner
ADDRESS	2201 Double Creek Drive
	Suite 4004
CITY/STATE/ZIP	Round Rock, TX 78664
PHONE	512-671-3434
FAX	512-671-3446

Project Information			
PROJECT NAME	99000484/HWPW		
LAB NUMBER		BOTTLE ORDER	
BILL TO	Union Pacific Railroad		
INVOICE ATTN	Geoff Reeder		
ADDRESS	24125 Aldine Westfield Road		
CITY/STATE/ZIP	Spring, TX 77373-9015		
PHONE	281-350-7197		
FAX	281-350-7362		

A B C D E F G H I J K L M N O P Q R S

Analysis/Method	No. 57216-1
A) 8270C-ATZ B) 8270C-BTZ C) 8270C TRRP data package	

SAMP NO.	SAMPLE DESCRIPTION	PRESERV.	F	SAMPLE MATRIX	SAMPLE DATE	SAMPLE TIME	#CONTAINR	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	WG-1620- MW11B - 280108	NONE		Water	1/28/08	1343	2		X																	
2	WG-1620- MW10B - 280108	NONE		Water	1/28/08	1454	2		X																	
3	WG-1620- MW02 - 280108	NONE		Water	1/28/08	1601	2	X																		
4	WG-1620- MW07 - 290108	NONE		Water	1/29/08	9:50	2	X																		
5	WG-1620- P10 - 290108	NONE		Water	1/29/08	10:55	2		X																	
6	WG-1620- ~~P12 - 290108~~ (AW) P12-290108	NONE		Water	1/29/08	1251	6		X		(MS/MSD)															
7	WG-1620- ~~MW-B02 - 290108~~ (FD) (AW)	NONE		Water	1/29/08	—	2		X																	
8	WG-1620-			Water																						

Sampler: ANDREW LUERA | Shipment Method: | Airbill No.: | Required TurnAround: 14 Days/28

1. Relinquished By: ANDREW LUERA	Date 1/29/08	2. Relinquished By:	Date 1.29.08	3. Relinquished By:	Date
Company Name: DELTA CONSULTANTS	Time 1358	Company Name:	Time 1706	Company Name:	Time
1. Received By:	Date 1.29.08	2. Received By:	Date 1.29.08	3. Received By:	Date
Company Name:	Time 1358	Company Name:	Time 1706	Company Name:	Time

TestAmerica Laboratories, Inc. 6310 Rothway Drive Houston, TX 77040 713-690-4444 FAX 713-690-5646

rpjsckl	Job Sample Receipt Checklist Report	V2

Job Number.: 349022 Location.: 57216 Check List Number.: 1 Description.:
Customer Job ID.....: Job Check List Date.: 01/29/2008 Date of the Report..: 01/29/2008
Project Number.: 99000484 Project Description.: UPRR-HWPW Project Manager.....: sgk
Customer.....: Pastor, Behling & Wheeler, LLC Contact.: Eric Matzner

Questions ?	(Y/N)	Comments
Chain of Custody Received?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	Y	
...If "yes", custody seal intact?	Y	
Custody seals on sample containers?	N	
...If "yes", custody seal intact?		
Samples chilled?	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	3.9 2.7 2.7
...If "no", is sample an air matrix?(no temp req.)		
Thermometer ID	Y	488
Samples received intact (good condition)?	Y	
Volatile samples acceptable? (no headspace)	Y	
Correct containers used?	Y	
Adequate sample volume provided?	Y	
Samples preserved correctly?	Y	
Samples received within holding-time?	Y	
Agreement between COC and sample labels?	Y	
Radioactivity at or below background levels?	Y	
Additional		
Comments		
Sample Custodian Signature/Date	Y	MT

1-24-08

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW10A-280108
Laboratory Sample ID: 349022-001
Date/Time Sampled .....: 1/28/2008 15:30
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 14:22	193736	1.00	ddr
Acenaphthene	83-32-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 14:22	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 14:22	193736	1.00	ddr
Anthracene	120-12-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000200	U		0.000200	0.00250	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 14:22	193736	1.00	ddr
Fluoranthene	206-44-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr
Fluorene	86-73-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr
Naphthalene	91-20-3	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 14:22	193736	1.00	ddr
Phenanthrene	85-01-8	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr
Pyrene	129-00-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 14:22	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW11A-280108
Laboratory Sample ID: 349022-002
Date/Time Sampled .....: 1/28/2008 14:22
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/5/2008 14:49	193736	1.00	ddr
Acenaphthene	83-32-9	0.0346			0.000300	0.000500	0.00140	mg/L	2/7/2008 07:47	193736	5.00	ddr
Acenaphthylene	208-96-8	0.000290	U		0.000300	0.000500	0.000290	mg/L	2/5/2008 14:49	193736	1.00	ddr
Anthracene	120-12-7	0.000798			0.000200	0.000500	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000280	J		0.000200	0.00250	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00276			0.000300	0.000500	0.000290	mg/L	2/5/2008 14:49	193736	1.00	ddr
Fluoranthene	206-44-0	0.00338			0.000200	0.000500	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr
Fluorene	86-73-7	0.00690			0.000200	0.000500	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr
Naphthalene	91-20-3	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/5/2008 14:49	193736	1.00	ddr
Phenanthrene	85-01-8	0.000360	J		0.000200	0.000500	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr
Pyrene	129-00-0	0.00191			0.000200	0.000500	0.000190	mg/L	2/5/2008 14:49	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW01A-280108

Laboratory Sample ID: 349022-003

Date/Time Sampled .....: 1/28/2008 16:40

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 15:16	193736	1.00	ddr
Acenaphthene	83-32-9	0.0415			0.000300	0.000500	0.00170	mg/L	2/7/2008 09:39	193736	5.00	ddr
Acenaphthylene	208-96-8	0.000990			0.000300	0.000500	0.000330	mg/L	2/5/2008 15:16	193736	1.00	ddr
Anthracene	120-12-7	0.00129			0.000200	0.000500	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00129			0.000300	0.000500	0.000330	mg/L	2/5/2008 15:16	193736	1.00	ddr
Fluoranthene	206-44-0	0.00234			0.000200	0.000500	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr
Fluorene	86-73-7	0.0162			0.000200	0.000500	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr
Naphthalene	91-20-3	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 15:16	193736	1.00	ddr
Phenanthrene	85-01-8	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr
Pyrene	129-00-0	0.00107			0.000200	0.000500	0.000220	mg/L	2/5/2008 15:16	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFD01-280108

Laboratory Sample ID: 349022-004

Date/Time Sampled .....: 1/28/2008 00:00

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000563			0.000400	0.000500	0.000380	mg/L	2/5/2008 15:42	193736	1.00	ddr
Acenaphthene	83-32-9	0.0409			0.000300	0.000500	0.00140	mg/L	2/7/2008 18:58	193736	5.00	ddr
Acenaphthylene	208-96-8	0.000933			0.000300	0.000500	0.000290	mg/L	2/5/2008 15:42	193736	1.00	ddr
Anthracene	120-12-7	0.00137			0.000200	0.000500	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000800	J		0.000200	0.00250	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00211			0.000300	0.000500	0.000290	mg/L	2/5/2008 15:42	193736	1.00	ddr
Fluoranthene	206-44-0	0.00233			0.000200	0.000500	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr
Fluorene	86-73-7	0.0167			0.000200	0.000500	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr
Naphthalene	91-20-3	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/5/2008 15:42	193736	1.00	ddr
Phenanthrene	85-01-8	0.000350	J		0.000200	0.000500	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr
Pyrene	129-00-0	0.00108			0.000200	0.000500	0.000190	mg/L	2/5/2008 15:42	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB01-280108
Laboratory Sample ID: 349022-005
Date/Time Sampled .....: 1/28/2008 16:20
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra

TRRP Laboratory Test Results

Job Number: 349022

Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB01-280108

Laboratory Sample ID: 349022-005

Date/Time Sampled .....: 1/28/2008 16:20

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 16:09	193736	1.00	ddr
Acenaphthene	83-32-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Anthracene	120-12-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000200	U		0.000200	0.00250	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000200	U		0.000200	0.00250	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Fluoranthene	206-44-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Fluorene	86-73-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Naphthalene	91-20-3	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 16:09	193736	1.00	ddr
Phenanthrene	85-01-8	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Phenol	108-95-2	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Pyrene	129-00-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB02-290108

Laboratory Sample ID: 349022-006

Date/Time Sampled .....: 1/29/2008 13:00

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra

TRRP Laboratory Test Results

Job Number: 349022

Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB02-290108

Laboratory Sample ID: 349022-006

Date/Time Sampled .....: 1/29/2008 13:00

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 16:36	193736	1.00	ddr
Acenaphthene	83-32-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Anthracene	120-12-7	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Fluoranthene	206-44-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Fluorene	86-73-7	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Naphthalene	91-20-3	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 16:36	193736	1.00	ddr
Phenanthrene	85-01-8	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Phenol	108-95-2	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Pyrene	129-00-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW08-290108

Date/Time Sampled .....: 1/29/2008 13:25

Date/Time Received .....: 1/29/2008 17:06

Laboratory Sample ID: 349022-007

Sample Matrix .....: Water

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	DF	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 17:03	193736	1.00	ddr
Acenaphthene	83-32-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 17:03	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 17:03	193736	1.00	ddr
Anthracene	120-12-7	0.000310	J		0.000200	0.000500	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 17:03	193736	1.00	ddr
Fluoranthene	206-44-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr
Fluorene	86-73-7	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr
Naphthalene	91-20-3	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 17:03	193736	1.00	ddr
Phenanthrene	85-01-8	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr
Pyrene	129-00-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 17:03	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW11B-280108 Laboratory Sample ID: 349022-008

Date/Time Sampled .....: 1/28/2008 13:43 Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.0649			0.000300	0.000500	0.00280	mg/L	2/7/2008 19:25	193736	10.0	ddr
Acenaphthylene	208-96-8	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/5/2008 17:30	193736	1.00	ddr
Anthracene	120-12-7	0.00236			0.000200	0.000500	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000210	J		0.000200	0.00250	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr
Dibenzofuran	132-64-9	0.0273			0.000300	0.000500	0.00280	mg/L	2/7/2008 19:25	193736	10.0	ddr
Di-n-butyl Phthalate	84-74-2	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr
Fluoranthene	206-44-0	0.00175			0.000200	0.000500	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr
Fluorene	86-73-7	0.0297			0.000200	0.000500	0.00190	mg/L	2/7/2008 19:25	193736	10.0	ddr
Naphthalene	91-20-3	0.0354			0.000400	0.000500	0.00380	mg/L	2/7/2008 19:25	193736	10.0	ddr
Phenol	108-95-2	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr
Pyrene	129-00-0	0.000848			0.000200	0.000500	0.000190	mg/L	2/5/2008 17:30	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW10B-280108

Laboratory Sample ID: 349022-009

Date/Time Sampled .....: 1/28/2008 14:54

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.0743			0.000300	0.000500	0.00280	mg/L	2/8/2008 18:31	193736	10.0	ddr
Acenaphthylene	208-96-8	0.00122			0.000300	0.000500	0.000280	mg/L	2/7/2008 08:15	193736	1.00	ddr
Anthracene	120-12-7	0.00432			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr
Dibenzofuran	132-64-9	0.0255			0.000300	0.000500	0.00280	mg/L	2/8/2008 18:31	193736	10.0	ddr
Di-n-butyl Phthalate	84-74-2	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr
Fluoranthene	206-44-0	0.00371			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr
Fluorene	86-73-7	0.0374			0.000200	0.000500	0.00190	mg/L	2/8/2008 18:31	193736	10.0	ddr
Naphthalene	91-20-3	0.0185			0.000400	0.000500	0.00380	mg/L	2/8/2008 18:31	193736	10.0	ddr
Phenol	108-95-2	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr
Pyrene	129-00-0	0.00146			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:15	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW02-280108
Laboratory Sample ID: 349022-010
Date/Time Sampled .....: 1/28/2008 16:01
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/7/2008 18:03	193736	1.00	ddr
Acenaphthene	83-32-9	0.0170			0.000300	0.000500	0.000280	mg/L	2/7/2008 18:03	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/7/2008 18:03	193736	1.00	ddr
Anthracene	120-12-7	0.000922			0.000200	0.000500	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000490	J		0.000200	0.00250	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr
Dibenzofuran	132-64-9	0.0106			0.000300	0.000500	0.000280	mg/L	2/7/2008 18:03	193736	1.00	ddr
Fluoranthene	206-44-0	0.00150			0.000200	0.000500	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr
Fluorene	86-73-7	0.0119			0.000200	0.000500	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr
Naphthalene	91-20-3	0.000827			0.000400	0.000500	0.000380	mg/L	2/7/2008 18:03	193736	1.00	ddr
Phenanthrene	85-01-8	0.000532			0.000200	0.000500	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr
Pyrene	129-00-0	0.000816			0.000200	0.000500	0.000190	mg/L	2/7/2008 18:03	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MW07-290108
Laboratory Sample ID: 349022-011
Date/Time Sampled .....: 1/29/2008 09:50
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/5/2008 18:30	193736	1.00	ddr
Acenaphthene	83-32-9	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/5/2008 18:30	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/5/2008 18:30	193736	1.00	ddr
Anthracene	120-12-7	0.000516			0.000200	0.000500	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/5/2008 18:30	193736	1.00	ddr
Fluoranthene	206-44-0	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr
Fluorene	86-73-7	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr
Naphthalene	91-20-3	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/5/2008 18:30	193736	1.00	ddr
Phenanthrene	85-01-8	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr
Pyrene	129-00-0	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 18:30	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-P10-290108
Laboratory Sample ID: 349022-012
Date/Time Sampled .....: 1/29/2008 10:55
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.00373			0.000300	0.000500	0.000280	mg/L	2/7/2008 08:43	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/7/2008 08:43	193736	1.00	ddr
Anthracene	120-12-7	0.000703			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000230	J		0.000200	0.00250	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000713			0.000300	0.000500	0.000280	mg/L	2/7/2008 08:43	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
Fluoranthene	206-44-0	0.000506			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
Fluorene	86-73-7	0.000668			0.000200	0.000500	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
Naphthalene	91-20-3	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/7/2008 08:43	193736	1.00	ddr
Phenol	108-95-2	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr
Pyrene	129-00-0	0.000390	J		0.000200	0.000500	0.000190	mg/L	2/7/2008 08:43	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-P12-290108
Laboratory Sample ID: 349022-013
Date/Time Sampled .....: 1/29/2008 12:51
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.000290	U		0.000300	0.000500	0.000290	mg/L	2/7/2008 09:11	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000290	U		0.000300	0.000500	0.000290	mg/L	2/7/2008 09:11	193736	1.00	ddr
Anthracene	120-12-7	0.000645			0.000200	0.000500	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000290	U		0.000300	0.000500	0.000290	mg/L	2/7/2008 09:11	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
Fluoranthene	206-44-0	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
Fluorene	86-73-7	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
Naphthalene	91-20-3	0.000380	U		0.000400	0.000500	0.000380	mg/L	2/7/2008 09:11	193736	1.00	ddr
Phenol	108-95-2	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr
Pyrene	129-00-0	0.00932			0.000200	0.000500	0.000190	mg/L	2/7/2008 09:11	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-P12-290108 MS
Laboratory Sample ID: 349022-014
Date/Time Sampled .....: 1/29/2008 12:51
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.00668			0.000300	0.000500	0.000280	mg/L	2/5/2008 19:51	193736	1.00	ddr
Acenaphthylene	208-96-8	0.00691			0.000300	0.000500	0.000280	mg/L	2/5/2008 19:51	193736	1.00	ddr
Anthracene	120-12-7	0.00780			0.000200	0.000500	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.00454			0.000200	0.00250	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00719			0.000300	0.000500	0.000280	mg/L	2/5/2008 19:51	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.00897			0.000200	0.00250	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
Fluoranthene	206-44-0	0.00891			0.000200	0.000500	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
Fluorene	86-73-7	0.00729			0.000200	0.000500	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
Naphthalene	91-20-3	0.00557			0.000400	0.000500	0.000380	mg/L	2/5/2008 19:51	193736	1.00	ddr
Phenol	108-95-2	0.00251			0.000200	0.000500	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr
Pyrene	129-00-0	0.0185			0.000200	0.000500	0.000190	mg/L	2/5/2008 19:51	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022

Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC | PROJECT: UPRR-HWPW | ATTN: Eric Matzner

Customer Sample ID: WG-1620-P12-290108 MSD

Laboratory Sample ID: 349022-015

Date/Time Sampled .....: 1/29/2008 12:51

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.00519			0.000300	0.000500	0.000280	mg/L	2/5/2008 20:18	193736	1.00	ddr
Acenaphthylene	208-96-8	0.00535			0.000300	0.000500	0.000280	mg/L	2/5/2008 20:18	193736	1.00	ddr
Anthracene	120-12-7	0.00633			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.00504			0.000200	0.00250	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00557			0.000300	0.000500	0.000280	mg/L	2/5/2008 20:18	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.00752			0.000200	0.00250	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
Fluoranthene	206-44-0	0.00753			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
Fluorene	86-73-7	0.00591			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
Naphthalene	91-20-3	0.00476			0.000400	0.000500	0.000380	mg/L	2/5/2008 20:18	193736	1.00	ddr
Phenol	108-95-2	0.00218			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr
Pyrene	129-00-0	0.0117			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:18	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 2/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFD02-290108
Laboratory Sample ID: 349022-016
Date/Time Sampled .....: 1/29/2008 00:00
Sample Matrix .....: Water
Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra
Method: SW-846 8270C, Water												
Acenaphthene	83-32-9	0.00854			0.000300	0.000500	0.000280	mg/L	2/5/2008 20:45	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000280	U		0.000300	0.000500	0.000280	mg/L	2/5/2008 20:45	193736	1.00	ddr
Anthracene	120-12-7	0.000360	J		0.000200	0.000500	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
Dibenzofuran	132-64-9	0.00175			0.000300	0.000500	0.000280	mg/L	2/5/2008 20:45	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000190	U		0.000200	0.00250	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
Fluoranthene	206-44-0	0.000250	J		0.000200	0.000500	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
Fluorene	86-73-7	0.00251			0.000200	0.000500	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
Naphthalene	91-20-3	0.000370	U		0.000400	0.000500	0.000370	mg/L	2/5/2008 20:45	193736	1.00	ddr
Phenol	108-95-2	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr
Pyrene	129-00-0	0.000190	U		0.000200	0.000500	0.000190	mg/L	2/5/2008 20:45	193736	1.00	ddr

QUALITY CONTROL RESULTS

Job Number.: 349022 Report Date.: 02/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

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

Test Method.....: SW-846 8270C Units.....: ug/L Analyst...: ddr
Method Description.: Semivolatile Organics, Low Level Batch(s)...: 193736

LCS	Laboratory Control Sample	SVS120307B	193206		02/05/2008	1140

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	8.04652		10.0	0	80.5		32-165	
Acenaphthylene, Water	8.48956		10.0	0	84.9		10-150	
Anthracene, Water	8.66726		10.0	0	86.7		23-178	
bis(2-ethylhexyl)phthalate, Water	9.59527		10.0	0	96.0		25-173	
Dibenzofuran, Water	8.41354		10.0	0	84.1		35-153	
Di-n-butyl Phthalate, Water	9.80441		10.0	0	98.0		28-185	
Fluoranthene, Water	9.63387		10.0	0	96.3		28-180	
Fluorene, Water	8.15672		10.0	0	81.6		30-189	
2-Methylnaphthalene, Water	7.93542		10.0	0	79.4		26-168	
Naphthalene, Water	7.59639		10.0	0	76.0		36-139	
Phenanthrene, Water	8.72212		10.0	0	87.2		26-166	
Pyrene, Water	9.27433		10.0	0	92.7		28-173	
Phenol, Water	3.80885		10.0	0	38.1		20-83	

MB	Method Blank	SVS012208A	193206		02/05/2008	1113

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	0							
Acenaphthylene, Water	0							
Anthracene, Water	0							
bis(2-ethylhexyl)phthalate, Water	0							
Dibenzofuran, Water	0							
Di-n-butyl Phthalate, Water	0							
Fluoranthene, Water	0							
Fluorene, Water	0							
2-Methylnaphthalene, Water	0							
Naphthalene, Water	0							
Phenanthrene, Water	0							
Pyrene, Water	0							
Phenol, Water	0							

MS	Matrix Spike	SVS120307B	349022-14		02/05/2008	1951

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	7.08396		10.0	0.02837	71		46-118	
Acenaphthylene, Water	7.33193		10.0	0	73		30-130	
Anthracene, Water	8.27107		10.0	0.67719	76		30-130	
bis(2-ethylhexyl)phthalate, Water	4.81497		10.0	0.16219	47		60-140	a
Dibenzofuran, Water	7.61966		10.0	0	76		30-130	
Di-n-butyl Phthalate, Water	9.51454		10.0	0.05738	95		30-130	
Fluoranthene, Water	9.45100		10.0	0	95		30-130	
Fluorene, Water	7.73095		10.0	0	77		30-130	
2-Methylnaphthalene, Water	6.27556		10.0	0	63		60-140	
Naphthalene, Water	5.90955		10.0	0	59		30-130	
Phenanthrene, Water	8.53322		10.0	0.38525	81		30-130	
Pyrene, Water	19.6179		10.0	9.79078	98		26-115	

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

QUALITY CONTROL RESULTS

Job Number.: 349022 Report Date.: 02/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	SVS120307B	349022-14		02/05/2008	1951

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Phenol, Water	2.66264		10.0	0	27		10-112	

MSD	Matrix Spike Duplicate	SVS120307B	349022-15		02/05/2008	2018

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Acenaphthene, Water	5.50405	7.08396	10.0	0.02837	55		46-118	
					25.1		31.0	
Acenaphthylene, Water	5.67374	7.33193	10.0	0	57		30-130	
					25.5		50.0	
Anthracene, Water	6.71592	8.27107	10.0	0.67719	60		30-130	
					20.8		50.0	
bis(2-ethylhexyl)phthalate, Water	5.34991	4.81497	10.0	0.16219	52		60-140	a
					10.5		30.0	
Dibenzofuran, Water	5.91130	7.61966	10.0	0	59		30-130	
					25.3		50.0	
Di-n-butyl Phthalate, Water	7.97736	9.51454	10.0	0.05738	79		30-130	
					17.6		50.0	
Fluoranthene, Water	7.98271	9.45100	10.0	0	80		30-130	
					16.8		50.0	
Fluorene, Water	6.26956	7.73095	10.0	0	63		30-130	
					20.9		50.0	
2-Methylnaphthalene, Water	5.28637	6.27556	10.0	0	53		60-140	a
					17.1		30.0	
Naphthalene, Water	5.04745	5.90955	10.0	0	50		30-130	
					15.7		50.0	
Phenanthrene, Water	7.04356	8.53322	10.0	0.38525	67		30-130	
					19.1		50.0	
Pyrene, Water	12.4561	19.6179	10.0	9.79078	27		26-115	
					44.7		31.0	r
Phenol, Water	2.31251	2.66264	10.0	0	23		10-112	
					14.1		23.0	

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

SURROGATE RECOVERIES REPORT

Job Number.: 349022 Report Date.: 02/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Method.....: Semivolatile Organics, Low Level Method Code...: 8270LL Prep Batch....: 193206
Batch(s).....: 193736 Test Matrix...: Water Equipment Code: EGCMS06

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND6	TERD14
349022- 1		WG-1620-MW10A-280108	02/05/2008	86.8	66.2	40.2	70.5	24.2	84.3
349022- 2		WG-1620-MW11A-280108	02/05/2008	90.7	68.0	43.8	69.8	28.1	82.9
349022- 2		WG-1620-MW11A-280108	02/07/2008	73.9	69.8	31.0	58.4	21.5	91.3
349022- 3		WG-1620-MW01A-280108	02/05/2008	101.0	73.4	46.0	78.9	27.4	87.7
349022- 3		WG-1620-MW01A-280108	02/07/2008	96.9	76.6	38.4	74.0	21.6	98.5
349022- 4		WG-1620-MWFD01-280108	02/05/2008	98.0	65.7	43.1	72.4	26.5	83.8
349022- 4		WG-1620-MWFD01-280108	02/07/2008	87.6	71.6	33.7	65.3	21.3	94.8
349022- 5		WG-1620-MWFB01-280108	02/05/2008	65.8	63.7	41.6	66.6	25.9	82.4
349022- 6		WG-1620-MWFB02-290108	02/05/2008	67.4	65.4	39.2	66.8	27.9	85.0
349022- 7		WG-1620-MW08-290108	02/05/2008	88.0	69.5	44.1	67.5	28.7	83.1
349022- 8		WG-1620-MW11B-280108	02/05/2008	89.0	63.8	39.1	61.1	26.1	78.7
349022- 8		WG-1620-MW11B-280108	02/07/2008	77.4	69.5	33.8	50.5	21.1	83.6
349022- 9		WG-1620-MW10B-280108	02/07/2008	94.3	79.3	36.4	67.7	21.9	91.0
349022- 9		WG-1620-MW10B-280108	02/08/2008	110.0	74.9	39.4	66.8	21.7	82.1
349022- 10		WG-1620-MW02-280108	02/07/2008	91.7	72.1	30.8	58.9	22.6	93.5
349022- 11		WG-1620-MW07-290108	02/05/2008	84.7	70.5	36.4	66.8	25.0	85.8
349022- 12		WG-1620-P10-290108	02/07/2008	91.4	72.1	36.1	66.3	22.8	97.6
349022- 13		WG-1620-P12-290108	02/07/2008	82.0	57.0	26.4	45.3	16.4	93.0
349022- 14	MS	WG-1620-P12-290108 MS	02/05/2008	93.9	60.1	35.1	59.6	22.2	87.9
349022- 15	MSD	WG-1620-P12-290108 MSD	02/05/2008	155.6d	100.7	62.7	104.0	39.7	156.1d
349022- 16		WG-1620-MWFD02-290108	02/05/2008	93.5	67.6	36.6	63.8	25.3	87.5
193206--21	LCS		02/05/2008	87.7	77.8	51.3	83.3	32.1	84.4
193206--21	MB		02/05/2008	76.7	79.3	54.0	83.1	33.2	84.8

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

REPORT COMMENTS

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

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reportesd as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethysilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, mutltiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only corection required for water analysis is for method 1006 where the reported concentraiton must be multiplied by 0.1.
- Due to limitiation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reveiwed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

Explanation of Qualifiers:

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

Explanation of General QC Outliers:

A - Matrix interference present in sample.
a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
b - Target analyte was found in the method blank.
M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were

observed above the RL in the associated samples.
G - Marginal outlier within 1% of acceptance criteria.
r - RPD value is outside method acceptance criteria.
C - Poor RPD values observed due to the non-homogenous nature of the sample.
O - Sample required dilution due to matrix interference.
D - Sample reported from a dilution.
d - Spike and/or surrogate diluted.
E - The reported concentration exceeds the instrument calibration.
F - The analyte is outside QC limits and was not detected in any associated samples in the analytical batch.
H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
q - See the subcontract final report for qualifier explanation.
W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
K - High recovery will not affect the quality of reported results.
Z - See case narrative.

Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. Phthlates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
T - Sample analysis yielded poor surrogate recovery.
R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
X - Gaseous compound. In-house QC limits are advisory.
Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
e - Serial dilution failed due to matrix interference.
g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficent for the MSA is greater than or equal to 0.995.
s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
N - Spiked sample recovery is not within control limits.
n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.
* - Duplicate analysis is not within control limits.

Abbreviations:

Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV - Continuing Calibration Verification
CRA - Low level standard check - GFAA, Mercury
CRI - Low level standard check - ICP
Dil Fac - Dilution Factor - Secondary dilution analysis

DLFac - Detection Limit Factor
DU - Duplicate
EB - Extraction Blank (TCLP, SPLP, etc.)
ICAL - Initial Calibration
ICB - Initial Calibration Blank
ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
LCD - Laboratory Control Duplicate
LCS - Laboratory Control Sample
MB - Method Blank
MD - Method Duplicate
MDL - Method Detection Limit
MQL - Method Quantitation Limit (TRRP)
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected
PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time
SQL - Sample Quantitation Limit (TRRP)
TIC - Tentatively Identified Compound

Method References:

(1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-94-111 Methods for the Determination of MEtals in Environmental Samples, Supplement I, May 1994.
(3) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1993; Update IIB, January 1995; Update III, December 1996, Update IVA January 1998, Update IVB November 2000.
(4) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
(5) HACH Water Analysis Handbook 3rd Edition (1997).
(6) Federal Register, July 1, 1990 (40 CFR Part 136 Appendix A).
(7) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.

(9) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

LABORATORY CHRONICLE

Job Number: 349022 Date: 02/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Lab ID: 349022-1 Client ID: WG-1620-MW10A-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1422	1.00000

Lab ID: 349022-2 Client ID: WG-1620-MW11A-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1449	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 0747	5.00000

Lab ID: 349022-3 Client ID: WG-1620-MW01A-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1516	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 0939	5.00000

Lab ID: 349022-4 Client ID: WG-1620-MWFD01-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1542	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 1858	5.00000

Lab ID: 349022-5 Client ID: WG-1620-MWFB01-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1609	1.00000

Lab ID: 349022-6 Client ID: WG-1620-MWFB02-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1636	1.00000

Lab ID: 349022-7 Client ID: WG-1620-MW08-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1703	1.00000

Lab ID: 349022-8 Client ID: WG-1620-MW11B-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1730	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 1925	10.0000

Lab ID: 349022-9 Client ID: WG-1620-MW10B-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 0815	1.00000
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/08/2008 1831	10.0000

Lab ID: 349022-10 Client ID: WG-1620-MW02-280108 Date Recvd: 01/29/2008 Sample Date: 01/28/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 1803	1.00000

Lab ID: 349022-11 Client ID: WG-1620-MW07-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	

LABORATORY CHRONICLE

Job Number: 349022 Date: 02/13/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Lab ID: 349022-11 Client ID: WG-1620-MW07-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1830	1.00000

Lab ID: 349022-12 Client ID: WG-1620-P10-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 0843	1.00000

Lab ID: 349022-13 Client ID: WG-1620-P12-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/07/2008 0911	1.00000

Lab ID: 349022-14 Client ID: WG-1620-P12-290108 MS Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 1951	1.00000

Lab ID: 349022-15 Client ID: WG-1620-P12-290108 MSD Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 2018	1.00000

Lab ID: 349022-16 Client ID: WG-1620-MWFD02-290108 Date Recvd: 01/29/2008 Sample Date: 01/29/2008

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3510C	Extraction (Sep. Funnel) SVOC Low Level	1	193206		02/01/2008 1520	
SW-846 8270C	Semivolatile Organics, Low Level	1	193736	193206	02/05/2008 2045	1.00000

TRRP Laboratory Test Results

Job Number: 349022

Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB01-280108

Laboratory Sample ID: 349022-005

Date/Time Sampled .....: 1/28/2008 16:20

Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra

TRRP Laboratory Test Results

Job Number: 349022 Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB01-280108 Laboratory Sample ID: 349022-005

Date/Time Sampled .....: 1/28/2008 16:20 Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 16:09	193736	1.00	ddr
Acenaphthene	83-32-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Anthracene	120-12-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000200	U		0.000200	0.00250	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000300	U		0.000300	0.000500	0.000300	mg/L	2/5/2008 16:09	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000200	U		0.000200	0.00250	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Fluoranthene	206-44-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Fluorene	86-73-7	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Naphthalene	91-20-3	0.000400	U		0.000400	0.000500	0.000400	mg/L	2/5/2008 16:09	193736	1.00	ddr
Phenanthrene	85-01-8	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Phenol	108-95-2	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr
Pyrene	129-00-0	0.000200	U		0.000200	0.000500	0.000200	mg/L	2/5/2008 16:09	193736	1.00	ddr

TRRP Laboratory Test Results

Job Number: 349022 Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB02-290108 Laboratory Sample ID: 349022-006

Date/Time Sampled .....: 1/29/2008 13:00 Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 3510C, Water												
Separatory Funnel Liq/Liq Extraction	NA	Complete						N/A	2/1/2008 15:20	193206	1.00	mra

TRRP Laboratory Test Results

Job Number: 349022 Date: 6/23/2008

CUSTOMER: Pastor, Behling & Wheeler, LLC PROJECT: UPRR-HWPW ATTN: Eric Matzner

Customer Sample ID: WG-1620-MWFB02-290108 Laboratory Sample ID: 349022-006

Date/Time Sampled .....: 1/29/2008 13:00 Sample Matrix .....: Water

Date/Time Received .....: 1/29/2008 17:06

TEST METHOD	CAS #	RESULT	Q	FLAG	MDL	MQL	SDL	UNITS	Analysis Date/Time	Batch	D.F.	Analyst
Method: SW-846 8270C, Water												
2-Methylnaphthalene	91-57-6	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 16:36	193736	1.00	ddr
Acenaphthene	83-32-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Acenaphthylene	208-96-8	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Anthracene	120-12-7	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
bis(2-ethylhexyl)phthalate	117-81-7	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Dibenzofuran	132-64-9	0.000330	U		0.000300	0.000500	0.000330	mg/L	2/5/2008 16:36	193736	1.00	ddr
Di-n-butyl Phthalate	84-74-2	0.000220	U		0.000200	0.00250	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Fluoranthene	206-44-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Fluorene	86-73-7	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Naphthalene	91-20-3	0.000440	U		0.000400	0.000500	0.000440	mg/L	2/5/2008 16:36	193736	1.00	ddr
Phenanthrene	85-01-8	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Phenol	108-95-2	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr
Pyrene	129-00-0	0.000220	U		0.000200	0.000500	0.000220	mg/L	2/5/2008 16:36	193736	1.00	ddr

SITE:	Union Pacific Railroad Company (UPRR) Houston Wood Preserving Works Houston, Texas (PBW Project No. 99000484)
UPRR SITE ID:	Houston, TX – Wood Preserving Works
CLIENT:	Pastor, Behling & Wheeler, LLC (PBW)
EVENT:	Semi-Annual Compliance Monitoring – January 2008 (1H08)
INTENDED USE:	Ten groundwater samples from background and compliance wells were collected during a semi-annual monitoring event from the closed surface impoundment SWMU No. 1. The analytical data will be used to monitor chemicals of concern (COCs) in the groundwater that have been identified during past investigations and to evaluate whether migration of COCs could result in a risk to human or ecological health.
LABORATORY:	TestAmerica Analytical Testing Corporation (Houston, TX) Work Order: 349022
TESTS/ METHODS:	Semivolatile Organics (SVOC) SW-846 3510C/ 8270C
SAMPLES:	Ten groundwater samples Two field duplicates One matrix spike/matrix spike duplicate (MS/MSD) pair Two field blanks (See Table 1 for a complete listing of samples and target analytes.)

QAA completed a third-party review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, *Review and Reporting of COC Concentration Data* (RGG-366/TRRP-13) and adherence to project objectives. The results of the review are discussed in this Data Usability Summary (DUS).

All samples collected during the event were included in the review. QAA completed the review using the following laboratory submittals and project data:

- the laboratory reportable data as defined in TRRP-13;
- the Laboratory Review Checklists (LRCs) and associated exception reports;
- the laboratory Electronic Data Deliverable (EDD), which is a spreadsheet containing results for all investigative and field QC samples; and
- the field notes on sampling activities.

The review of the reportable data included the Quality Control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures
- Results Reporting Procedures

- Laboratory and Field Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory, Matrix, and Field Duplicate Precision

Additionally, QAA used the LRCs to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration and Performance
- Internal Standards

No project specific criteria have been specified for this site and thus the reviewer selected appropriate criteria as follows:

- Organics: 60-140% spike recovery (but not less than 10%) and 40% RPD (for laboratory duplicates) as recommended in TRRP-13
- Aqueous Samples: $\pm$ 2 x MQL difference or 30% RPD (for field duplicates)

The results of the review are summarized in Table 2, which lists all of the qualified sample results. The data usability qualifiers (DUQs) and the reason for qualification were added to the EDD (349022 QAA.xls), which was checked for correctness and agreement with the hardcopy reports. The checklists used by the reviewer are included as Attachment 1.

USABILITY SUMMARY

1. Usability Of Unqualified Non-Detects – For all tests, non-detects are reported as less than the Sample Detection Limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each target analyte and the MDLs were checked for reasonableness. The Levels of Required Performance (LORPs) for the site have been defined by PBW as the Tier 1 Protective Concentration Levels (PCLs), $^{GW}GW_{Ing}$, for residential land use. As needed per TRRP, the Unadjusted MQL stated by the laboratory is at or below the LORP for each target analyte and thus the results can be used to demonstrate conformance with critical PCLs.
2. Usability Of Qualified Data – There are no major QC deficiencies and thus all data is usable for the intended use. Data for various analytes is qualified as biased low (JL or UJL) or estimated (J) due to minor QC deficiencies (see Table 2). Results that are biased low can be used for determining the presence of the analyte and as an indication that the concentration of the analyte exceeds a given criterion. However, the concentration reported for detects or the SDL for non-detects may be low. Results that are biased high can be used for determining the presence of the analyte and as an indication that the concentration of the analyte is less than a given criterion. However, the concentration reported for detects may be high. Similarly, results that are estimated may be either low or high.

QAA Reviewer: Taryn G. Scholz (Name) 7/7/2008 (Date)

QC PARAMETER	QC OUTCOME
Chain-of-Custody	Proper sample custody procedures were followed. This confirms that the integrity of the samples was maintained.
Sample Condition	Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation.
Field Procedures	Wells were inspected and gauged and then purged and sampled using a low-flow technique (less than 0.5 liters per minute) and dedicated tubing. Field instruments were calibrated daily. All samples were immediately put on ice and kept on ice until delivered to the laboratory. Two field duplicates (one for each transmissive zone), one MS/MSD pair, and two field blanks (one for each day of sampling) were collected with the ten investigative samples. Readings for pH, temperature, turbidity, dissolved oxygen, and specific conductivity were recorded and wells were purged until the well conditions stabilized (i.e., no parameter measurement varied by more than 10% between two consecutive readings).
Results Reporting	The analytical results include a Result, MDL, MQL, and SDL. The MQL is unadjusted, i.e., does not include correction for sample-specific actions such as dilution or use of a smaller sample aliquot. Results are reported in mg/L. As required per TRRP, results for non-detects are reported as less than the SDL. The laboratory qualified results for detects between the SDL and the unadjusted MQL with a J-flag to indicate that the concentration is estimated. The DUQ includes a flag for the concentration being below the MQL (with adjustment for sample-specific actions) plus any other QC deficiencies. Results for some detects are reported from a dilution due to a high concentration, but there are no elevated reporting limits for a non-detect in any sample.
MQLs	The LORPs for the site are defined as the Tier 1 Protective Concentration Levels (PCLs) for residential land use and a Class 2 groundwater resource (i.e., the $^{GW}GW_{Ing}$ in TCEQ Table 3 dated April 23, 2008). For each target analyte, the unadjusted MQLs are at or below the LORPs.
MDLs	According to the LRC, an MDL study was performed for each target analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of Detectability Check Standards (DCSs) as required per TRRP-13.
Laboratory Blanks	The laboratory blanks do not contain any target analytes above the detection limit, which confirms that no contamination was introduced in the laboratory.
Field Blanks	The field blanks do not contain any target analytes above the detection limit, which confirms that no contamination was introduced in the field.

QC PARAMETER	QC OUTCOME

Laboratory Control Spike Recovery

The laboratory prepared one Laboratory Control Spike (LCS) with the analytical batch and reported recoveries for all target analytes. All recoveries are within the TRRP recommended limits, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Analyte	LCS %Recovery
193206	Phenol	38

The recovery is below the lower limit (but greater than 10%), and thus the reviewer qualified the detects and non-detects in the associated samples (all samples collected this event since all extracted in the same batch) as estimated with a low bias (JL/ UJL).

Matrix Spike Recovery

The laboratory prepared one Matrix Spike (MS) and Matrix Spike Duplicate (MSD) with the analytical batch using a sample from the site (P12) and reported recoveries for all target analytes. All of the average recoveries are within the TRRP recommended limits, which indicates good accuracy for the preparation/ analysis technique on this particular sample matrix, except as follows:

Batch	Parent Sample ID	Analyte	MS/MSD %R
193206	WG-1620-P12-290108	bis(2-Ethylhexyl)phthalate	50
193206	WG-1620-P12-290108	2-Methylnaphthalene	58
193206	WG-1620-P12-290108	Naphthalene	55
193206	WG-1620-P12-290108	Phenol	31

The recoveries are below the limit, and thus the reviewer qualified the detects and non-detects in the associated samples (all samples collected this event since all extracted in the same batch and of similar matrix) as estimated with a low bias (JL/ UJL).

Surrogate Recovery

The laboratory added three acid and three base-neutral surrogates to each sample. All recoveries are within the laboratory limits, which indicates that the accuracy of the preparation and analysis technique is acceptable for each particular sample.

Laboratory Duplicate Precision

The laboratory did not prepare Laboratory Control Spike Duplicates (LCSD) as they are not required per the analytical methods or TRRP. The reviewer used the matrix and field duplicates to assess precision.

Matrix Duplicate Precision

For the MSD, all of the RPDs are within the TRRP recommended limits, which indicates good precision for the preparation/ analysis technique on this particular sample matrix, except as follows:

Batch	Parent Sample ID	Analyte	MS/MSD RPD
193206	WG-1620-P12-290108	Pyrene	45

QC PARAMETER	QC OUTCOME
Matrix Duplicate Precision	The reviewer qualified the detects in the associated samples (all samples collected this event since all extracted in the same batch and of similar matrix) as estimated with an unknown bias (J).
Field Duplicate Precision	Two field duplicate pairs were collected with the ten investigative samples. RPDs (or the difference between results for concentrations <5xMQL and non-detects) are within the TRRP criteria, except as follows:

Sample Date	Parent Sample ID	Analyte	FD RPD
1/29/08	WG-1620-P10-290108	Acenaphthene	78
1/29/08	WG-1620-P10-290108	Fluorene	116

Thus, the criteria are met for all target analytes for one pair and for all but two target analytes, including four analytes detected at low levels, for the second pair. Thus, there is no indication of a widespread field precision problem and the reviewer only qualified the parent sample and field duplicate (FD02). Results were qualified as estimated (J) and, for a conservative approach, the higher results from the field duplicate (FD02) should be used.

GCMS Tuning	According to the LRCs, tuning data met the criteria for ion abundance in the analytical method.
Instrument Calibration	According to the LRC, initial and continuing calibration data met method requirements. This indicates the instruments were properly calibrated to measure target analyte concentrations.
Internal Standards	According to the LRCs, the internal standard (IS) area counts and retention times were within method requirements.

TABLE 1
HOUSTON, TX – WOOD PRESERVING WORKS
SEMI-ANNUAL COMPLIANCE MONITORING – JANUARY 2008

SAMPLES COLLECTED

LABORATORY ID	SAMPLE ID	SAMPLE MATRIX	SAMPLE DATE	ANALYTE LIST	QC BATCH
349022-1	WG-1620-MW10A-280108	water	1/28/2008	A	193206
349022-2	WG-1620-MW11A-280108	water	1/28/2008	A	193206
349022-3	WG-1620-MW01A-280108	water	1/28/2008	A	193206
349022-4	WG-1620-MWFD01-280108(1)	water	1/28/2008	A	193206
349022-5	WG-1620-MWFB01-280108(2)	water	1/28/2008	A & B	193206
349022-6	WG-1620-MWFB02-290108(2)	water	1/29/2008	A & B	193206
349022-7	WG-1620-MW08-290108	water	1/29/2008	A	193206
349022-8	WG-1620-MW11B-280108	water	1/28/2008	B	193206
349022-9	WG-1620-MW10B-280108	water	1/28/2008	B	193206
349022-10	WG-1620-MW02-280108	water	1/28/2008	A	193206
349022-11	WG-1620-MW07-290108	water	1/29/2008	A	193206
349022-12	WG-1620-MWP10-290108	water	1/29/2008	B	193206
349022-13	WG-1620-MWP12-290108	water	1/29/2008	B	193206
349022-14	WG-1620-MWP12-290108 MS	water	1/29/2008	A & B	193206
349022-15	WG-1620-MWP12-290108 MSD	water	1/29/2008	A & B	193206
349022-16	WG-1620-MWFD02-290108(3)	water	1/29/2008	B	193206

(1) Field duplicate of WG-1620-MW01A-280108
(2) Field Blank
(3) Field duplicate of WG-1620-MWP10-290108

TARGET ANALYTES

A-Transmissive Zone (A list)	B-Transmissive Zone (B list)
2-Methylnaphthalene	Acenaphthene
Acenaphthene	Acenaphthylene
Acenaphthylene	Anthracene
Anthracene	bis(2-ethylhexyl)phthalate
bis(2-ethylhexyl)phthalate	Dibenzofuran
Dibenzofuran	Di-n-butyl Phthalate
Fluoranthene	Fluoranthene
Fluorene	Fluorene
Naphthalene	Naphthalene
Phenanthrene	Phenol
Pyrene	Pyrene

TABLE 2
HOUSTON, TX – WOOD PRESERVING WORKS
SEMI-ANNUAL COMPLIANCE MONITORING – JANUARY 2008

QUALIFIED SAMPLE RESULTS

LAB ID	SAMPLE ID	ANALYTE	DUQ	REASON
349022-001	WG-1620-MW10A-280108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-001	WG-1620-MW10A-280108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-001	WG-1620-MW10A-280108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-002	WG-1620-MW11A-280108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-002	WG-1620-MW11A-280108	bis(2-ethylhexyl)phthalate	J	low ave recovery (50%) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-002	WG-1620-MW11A-280108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-002	WG-1620-MW11A-280108	Phenanthrene	J	result between SDL and MQL
349022-002	WG-1620-MW11A-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-003	WG-1620-MW01A-280108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-003	WG-1620-MW01A-280108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-003	WG-1620-MW01A-280108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-003	WG-1620-MW01A-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-004	WG-1620-MWFD01-280108	2-Methylnaphthalene	JL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-004	WG-1620-MWFD01-280108	bis(2-ethylhexyl)phthalate	J	low ave recovery (50%) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-004	WG-1620-MWFD01-280108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-004	WG-1620-MWFD01-280108	Phenanthrene	J	result between SDL and MQL
349022-004	WG-1620-MWFD01-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-007	WG-1620-MW08-290108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-007	WG-1620-MW08-290108	Anthracene	J	result between SDL and MQL
349022-007	WG-1620-MW08-290108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-007	WG-1620-MW08-290108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-008	WG-1620-MW11B-280108	bis(2-ethylhexyl)phthalate	J	low ave recovery (50%) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-008	WG-1620-MW11B-280108	Naphthalene	JL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-008	WG-1620-MW11B-280108	Phenol	UJL	low LCS recovery (38%); low ave recovery (31%) for MS/MSD prepared using sample from P12

LAB ID	SAMPLE ID	ANALYTE	DUQ	REASON
349022-008	WG-1620-MW11B-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-009	WG-1620-MW10B-280108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-009	WG-1620-MW10B-280108	Naphthalene	JL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-009	WG-1620-MW10B-280108	Phenol	UJL	low LCS recovery (38%); low ave recovery (31%) for MS/MSD prepared using sample from P12
349022-009	WG-1620-MW10B-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-010	WG-1620-MW02-280108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-010	WG-1620-MW02-280108	bis(2-ethylhexyl)phthalate	J	low ave recovery (50%) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-010	WG-1620-MW02-280108	Naphthalene	JL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-010	WG-1620-MW02-280108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-011	WG-1620-MW07-290108	2-Methylnaphthalene	UJL	low ave recovery (58%) for MS/MSD prepared using sample from P12
349022-011	WG-1620-MW07-290108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-011	WG-1620-MW07-290108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-012	WG-1620-P10-290108	Acenaphthene	J	poor precision (78 RPD) for field duplicate pair from this location - use higher value (from field duplicate)
349022-012	WG-1620-P10-290108	bis(2-ethylhexyl)phthalate	J	low ave recovery (50%) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-012	WG-1620-P10-290108	Fluorene	J	poor precision (116 RPD) for field duplicate pair from this location - use higher value (from field duplicate)
349022-012	WG-1620-P10-290108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-012	WG-1620-P10-290108	Phenol	UJL	low LCS recovery (38%); low ave recovery (31%) for MS/MSD prepared using sample from P12
349022-012	WG-1620-P10-290108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12; result between SDL and MQL
349022-013	WG-1620-P12-290108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-013	WG-1620-P12-290108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-013	WG-1620-P12-290108	Phenol	UJL	low LCS recovery (38%); low ave recovery (31%) for MS/MSD prepared using sample from P12
349022-013	WG-1620-P12-290108	Pyrene	J	poor precision (45 RPD) for MS/MSD prepared using sample from P12
349022-016	WG-1620-MWFD02-290108	Acenaphthene	J	poor precision (78 RPD) for field duplicate pair from this location - use higher value (from field duplicate)
349022-016	WG-1620-MWFD02-290108	Anthracene	J	result between SDL and MQL
349022-016	WG-1620-MWFD02-290108	bis(2-ethylhexyl)phthalate	UJL	low ave recovery (50%) for MS/MSD prepared using sample from P12
349022-016	WG-1620-MWFD02-290108	Fluoranthene	J	result between SDL and MQL

LAB ID	SAMPLE ID	ANALYTE	DUQ	REASON
349022-016	WG-1620-MWFD02-290108	Fluorene	J	poor precision (116 RPD) for field duplicate pair from this location - use higher value (from field duplicate)
349022-016	WG-1620-MWFD02-290108	Naphthalene	UJL	low ave recovery (55%) for MS/MSD prepared using sample from P12
349022-016	WG-1620-MWFD02-290108	Phenol	UJL	low LCS recovery (38%); low ave recovery (31%) for MS/MSD prepared using sample from P12

U – Blank affected; The analyte was not detected above 5x (10x for common contaminants) the level in an associated blank.
UJ – Estimated data; The analyte was not detected above the reported sample detection limit (SDL) however, the SDL is approximate due to exceedance of one or more QC requirements.
J – Estimated data; The reported sample concentration is approximate due to exceedance of one or more QC requirements.
R – Rejected data; Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

H – Bias in sample result is likely to be high
L – Bias in sample result is likely to be low

NOTE: For multiple deficiencies, the reviewer applied the most severe flag. (R>U>J>JL/JH and R>UJ>UJL)

ATTACHMENT 1
REVIEWER CHECKLISTS

Data Usability Review Checklist

Client Name: Pastor, Behling & Wheeler, LLC	Project Number: 99000484
Site Name: UPRR HWPW 1H08	Project Manager: Eric Matzner
Laboratory: TestAmerica Houston	Laboratory Job No: 349022
Reviewer: Taryn Scholz	Date Checked: 6/27/08
Parameters: SVOC	Methods: 3510C/ 8270C

ITEM	YES	NO	N/A	COMMENTS
Signed Cover Page included?	x			
R1 Date of sample collection included?	x			
R1 Sample temp (2-6 C)?	x			
R1 COCs properly executed *and seals used?*	x			
R1 *Samples rec'd within 2 days of collection?*	x			
R2 Field, Laboratory, and Batch ID included?	x			batch ID on sample results; see comment
R3 Date of analysis included?	x			
R3 Date of sample preparation included?	x			
R3 *NDs at SDL and* MQLs included?	x			MQLs are unadjusted, i.e. no dil correction; SDL under SQL in EDD
R3 Holding time to analysis not expired?	x			SVOC - 40 days
R3 Holding time to preparation not expired?	x			SVOC - 7 days
R3 No elevated reporting limits for NDs?	x			some TAs reported from dilution due to high conc (NDs at no dilution)
R3 Method references included?	x			
R3 Sample matrix included?	x			
R3 Sample results included?	x			
R3 Soils on dry weight?			x	
R9 Evaluate unadjusted MQLs? *(<LORPs)*	x			
R10 *LRC covers all necessary items?*	x			
R10 Case narrative included, where required *(QC deficiency or elev SQL for 350.51,.79)?*	x			
S10 MDLs reasonable per DCS or LCS?	x			per LRC
FN1 Field instruments calibrated daily?	x			
FN2 Well conditions constant before sampling?	x			
FN3 Containers and preservative appropriate?	x			(SVOC G, 4 C)
FN4 Samples filtered? If so, give turbid/size			x	no metals
FN5 Sampling sequence from low to high conc?			x	dedicated tubing

Definitions: AA - Atomic Absorption; %D - Percent Difference, ICP - Inductively Coupled Plasma; IDL - Instrument Detection Limit; MDL - Method Detection Limit; %R - Percent Recovery; RF - Response Factor; RPD - Relative Percent Difference; RRT - Relative Retention Time; RSD - Relative Standard Deviation.

COMMENTS

R2 - Sample WG-1620-MWFD02-29010 reported as WG-1620-FD02-29010 in EDD (hardcopy correct), correction made by reviewer; Sample WG-1620-MW07-290108 reported as WG-1620-MW07-280108 with Sample Date of 1/28/08 in EDD (hardcopy correct), correction made by reviewer; Sample WG-1620-P10-290108 reported as WG-1620-P10-280108 with Sample Date of 1/28/08 in EDD (hardcopy correct), correction made by reviewer

Data Usability Review Checklist: GC/MS

Client Name: Pastor, Behling & Wheeler, LLC	Project Number: 99000484
Site Name: UPRR HWPW 1H08	Project Manager: Eric Matzner
Laboratory: TestAmerica Houston	Laboratory Job No: 349022
Reviewer: Taryn Scholz	Date Checked: 6/27/08
Parameters: SVOC	Methods: 3510C/ 8270C

	ITEM	YES	NO	N/A	COMMENTS
R4	Surrogate data included in lab package?	x			
	Required surrogates included?	x			
	%R criteria met? (*lab limits below*) Reject <10%	x			
	Area within limits? (within -50/+100% of last calib chk)?			x	
	RRT within limits? (<30 sec diff from last calib chk?)			x	
R5	Method blank data included in Lab Package?	x			
	Criteria met? (*<MDL*)	x			
	Criteria met for field blanks? (<MDL)	x			
R6	QC check samples/LCS data included in lab package?	x			
	all project COCs or TAs included?	x			
	%R criteria met? (*TRRP 60-140%*) Reject <10%		x		see attached
	RPD criteria met? (*TRRP 40%*)			x	
R7	Matrix spike data included in lab package?	x			
	%R criteria met? (*TRRP 60-140%*) Reject <10%		x		see attached
	RPD criteria met? (*TRRP 40%*)		x		see attached
	Field dup RPD criteria met? (TRRP 50%sol, 30%aq, diff)		x		see attached
S1	Initial calibration documentation included in lab package?		x		
	all target analytes included?	x			per LRC
	RRF met SPCCs/*TAs(0.05/0.01)*? *SPCC* RRF<0.05 reject	x			per LRC
	%RSD criteria met for CCCs/*TAs*? (<30% RSD for CCC, >15% RSD must have fit)	x			per LRC
S2	Calibration verification data included in lab package?		x		
	RRF met SPCCs/*TAs(0.05/0.01)*? *SPCC* RRF<0.05 reject	x			per LRC
	%D criteria met for CCC/*TAs*? (20% Max, Qualify >25%D)	x			per LRC
S3	Instrument Tune for GC/MS included in lab package?		x		
S4	Internal standard data included in lab package?		x		
	Areas within limits (within -50/+100% of last calib check)?	x			per LRC
	RTs within limits (<30 sec diff from last calib check)?	x			per LRC

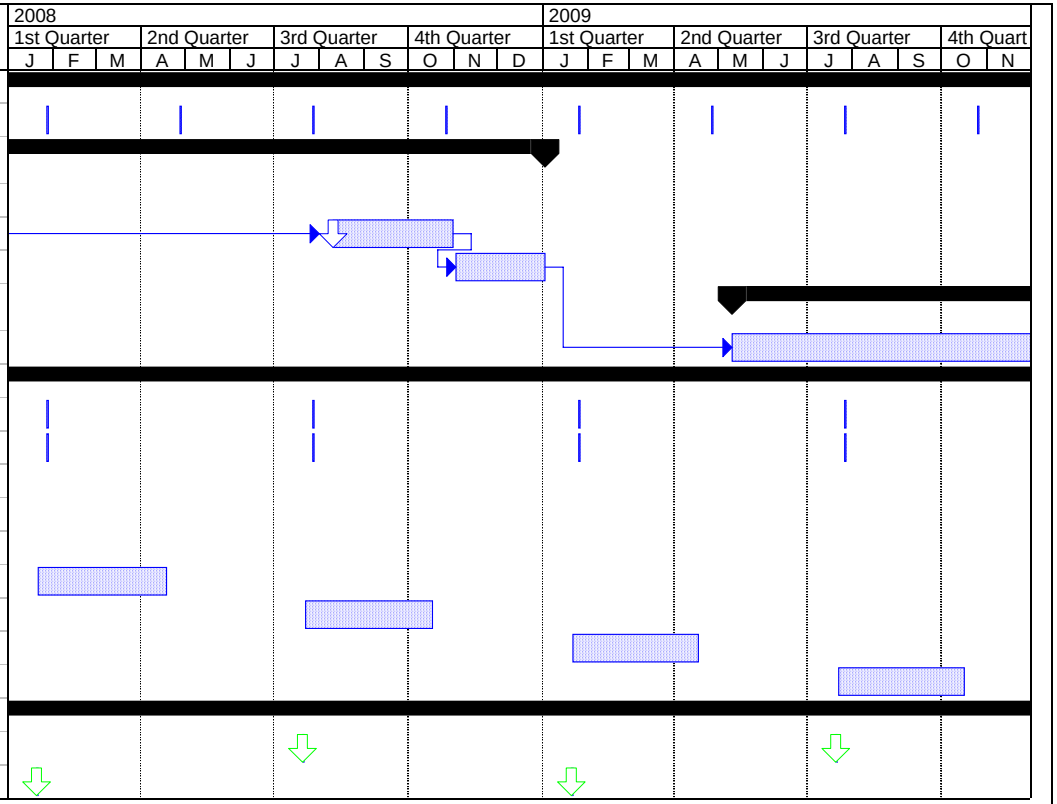
R4	Surrogate	Control Limits				
	246TBP	10-123				
	2FBP	43-116				
	2FP	21-100				
	d5NB	35-114				
	d6PH	10-94				
	d14TERP	33-141				

COMMENTS

LAB ID	Collect	ppb TA/MQL	DF	Prep Date	Prep Batch	Anlyt Date	Anlyt Batch	HT ok?	(lab) SU	LRC	MBLK (ug/L)	FBLK (ug/L)	MS/D ID	60-140 MS/D %R	40 MS/D RPD	60-140 LCS %R	30%/ +-2MQL FDUP
349022-001 WG-1620-MW10A-280108	1/28/2008	11/0.5-2.5	1	2/1	193206	2/5	193736	y	P	2 hi SUs for MSD	ND		WG-1620-P12-290108	bis(2Eh)p 50	Pyrene 45	Phenol 38.1	
349022-002 WG-1620-MW11A-280108	1/28/2008		1	2/1	193206	2/5	193736	y	P	2MeNaph %R low in MS				2MeN 58	->J to RRs	->JL/UJL to RRs/NDs	
349022-003 WG-1620-MW01A-280108	1/28/2008		1	2/1	193206	2/5	193736	y	P	bis(2EH)ph %R low in MS/D				Naph 55			
349022-004 WG-1620-MWFD01-280108	1/28/2008		1	2/1	193206	2/5	193736	y	P	Pyrene RPD hi for MS/D				Phenol 31			P
349022-005 WG-1620-MWFB01-280108	1/28/2008		1	2/1	193206	2/5	193736	y	P	SDLs elev for some TAs		ND		->JL/UJL to RRs/NDs			
349022-006 WG-1620-MWFB02-290108	1/29/2008		1	2/1	193206	2/5	193736	y	P			ND					
349022-007 WG-1620-MW08-290108	1/29/2008		1	2/1	193206	2/5	193736	y	P								
349022-008 WG-1620-MW11B-280108	1/28/2008		1	2/1	193206	2/5	193736	y	P								
349022-009 WG-1620-MW10B-280108	1/28/2008		1	2/1	193206	2/7	193736	y	P								
349022-010 WG-1620-MW02-280108	1/28/2008		1	2/1	193206	2/7	193736	y	P								
349022-011 WG-1620-MW07-290108	1/29/2008		1	2/1	193206	2/5	193736	y	P								
349022-012 WG-1620-P10-290108	1/29/2008		1	2/1	193206	2/7	193736	y	P								
349022-013 WG-1620-P12-290108	1/29/2008		1	2/1	193206	2/7	193736	y	P								
349022-014 WG-1620-P12-290108 MS	1/29/2008		1	2/1	193206	2/5	193736	y	P								
349022-015 WG-1620-P12-290108 MSD	1/29/2008		1	2/1	193206	2/5	193736	y	1 Acid 156, 1 BN 156 -> no effect								
349022-016 WG-1620-MWFD02-290108	1/29/2008		1	2/1	193206	2/5	193736	y	P								Acene 78
349022-002 WG-1620-MW11A-280108	1/28/2008	Acenaphth	5	2/1	193206	2/7	193736	y	NA								Fluorene 116
349022-003 WG-1620-MW01A-280108	1/28/2008	Acenaphth	5	2/1	193206	2/7	193736	y	NA								-> J to RRs (this pair)
349022-004 WG-1620-MWFD01-280108	1/28/2008	Acenaphth	5	2/1	193206	2/7	193736	y	NA								
349022-008 WG-1620-MW11B-280108	1/28/2008	4 RRs	10	2/1	193206	2/7	193736	y	NA								
349022-009 WG-1620-MW10B-280108	1/28/2008	4 RRs	10	2/1	193206	2/8	193736	y	NA								

APPENDIX D
UPDATED COMPLIANCE SCHEDULE

ID	Task Name/Permit or CP Section No.
1	**Facility Management**
2	General Inspection Requirements (quaterly) [Permit Section III.D; Table III.D]
26	**Addendum to the Affected Property Assessment Report (APAR) [Permit Section IX.A; CP Section VIII.D]**
27	Field Investigation Activities
28	Addition Delineation Field Investigation (Groundwater/Soil)
29	Prepare and Submit Addendum to the APAR
30	**Corrective Measures Implementation (CMI)/Response Action Plan (RAP) [CP Section VIII.F]**
31	Prepare and Submit Response Action Plan (RAP)
32	**Ground-Water Monitoring Program [Permit Section VI.A.; CP Section VI.]**
33	Water Level Measurements (Semiannually) [CP Section VI.C.4.a]1
46	Monitoring Well Inspections (Semiannually) [CP Section VI.C.4.a]1
69	Ground Water Sampling and Data Evaluation (2nd 2006 Semiannual) [CP Setion VI.C.2]
70	Ground Water Sampling and Data Evaluation (1st Semiannual) [CP Setion VI.C.2]
71	Ground Water Sampling and Data Evaluation (2nd Semiannual) [CP Setion VI.C.2]
72	Ground Water Sampling and Data Evaluation (1st Semiannual) [CP Setion VI.C.2]
73	Ground Water Sampling and Data Evaluation (2nd Semiannual) [CP Setion VI.C.2]
74	Ground Water Sampling and Data Evaluation (1st Semiannual) [CP Setion VI.C.2]
75	Ground Water Sampling and Data Evaluation (2nd Semiannual) [CP Setion VI.C.2]
76	**Response and Reporting [Permit Section II.B.7; CP Section VII.)**
77	First Semi-Annual GW Monitoring Report - July 21 [CP Section VII.C.2]
84	Second Semi-Annual GW Monitoring Report - January 21 [CP Section VII.C.2]



Compliance Schedule
UPRR Houston Wood Preserving Works Site
Houston, Texas

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