Updated Affected Property
Assessment Report Addendum
Union Pacific Railroad Company
Houston Wood Preserving Works
TCEQ SWR No. 31547
Houston, Texas
Volume 1 of 2
October 2010

PBW

Updated Affected Property Assessment Report Addendum Union Pacific Railroad Company Houston Wood Preserving Works TCEQ SWR No. 31547 Houston, Texas

Volume 1 of 2

October 2010

Prepared for:
Union Pacific Railroad Company

24125 Aldine Westfield Road
Spring, Texas 77373

Pastor, Behling & Wheeler, LLC
consulting engineers and scientists

Texas Commission on Environmental Quality

Remediation Division Correspondence Identification Form

SITE & PROGRAM AREA IDENTIFICATION

SITE LOCATION

Site Name: **Union Pacific Railroad Houston Wood Preserving Works**

Address 1: **4910 Liberty Road**

Address 2:

City: **Houston** State: **Texas**

Zip Code: **77007** County: **Harris**

TCEQ Region: **Region 12 - Houston**

REMEDIATION DIVISION PROGRAM AND FACILITY IDENTIFICATION

Is This Site Being Managed Under A State Lead Contract?

☐ Yes ☑ No

Program Area: **IHW CORRECTIVE ACTION**

Mail Code: **MC-127**

Is This A New Site To This Program Area?

☐ Yes ☑ No

TCEQ Facility ID No.: **31547**

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DOCUMENT(S) IDENTIFICATION

	PHASE OF REMEDIATION	DOCUMENT NAME
1.	ASSESSMENT	AFFECTED PROPERTY ASSESSMENT REPORT (APAR) REVISION
2.	ASSESSMENT	RESPONSE TO COMMENTS
3.		
4.		
5.		

CONTACT INFORMATION

RESPONSIBLE PARTY/APPLICANT/CUSTOMER

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ENVIRONMENTAL CONSULTANT/REPORT PREPARER/AGENT

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TCEQ INTERNAL USE ONLY

Document No.	TCEQ Database Term	Document No.	TCEQ Database Term
1.	**APAR REV**	4.	
2.	**RESPONSE TO COMMENTS**	5.	
3.			

PBW

Consulting Engineers and Scientists

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October 22, 2010
PBW Project No. 1358

Mr. Mark Arthur
MC-127
Environmental Cleanup Section I, Team 3, Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Response to Texas Commission on Environmental Quality (TCEQ) Comment Letter Dated November 18, 2009 on the APAR Addendum, dated July 2009
Union Pacific Railroad Company, Houston Wood Preserving Works
4910 Liberty Road, Houston, Texas
TCEQ SWR No. 31547; Hazardous Waste Permit and Compliance Plan No. 50343; EPA ID TXD000820266; CN No. CN600131098; RN No. RN100674613

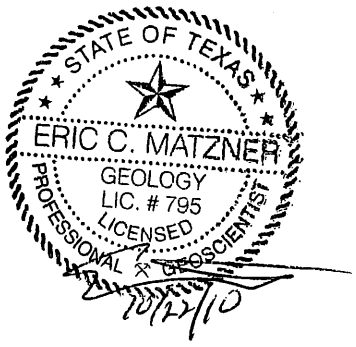
Dear Mr. Arthur:

Pastor, Behling & Wheeler, LLC (PBW), on behalf of Union Pacific Railroad Company (UPRR), is pleased to provide the attached response to Texas Commission on Environmental Quality (TCEQ) comment letter dated November 18, 2009 on the Affected Property Assessment Report (APAR) Addendum for the UPRR Houston Wood Preserving Works Facility (the Site). The responses are structured in Comment-Response manner for your review, and an extra copy is provided as requested. Also enclosed with this response letter is the Updated APAR Addendum prepared by PBW on behalf of UPRR that includes responses to TCEQ comments on the 2009 APAR Addendum.

If you have any questions or need additional information, please feel free to call me at (512) 671-3434 or Mr. Geoffrey Reeder of UPRR at (281) 350-7197.

Sincerely,

PASTOR, BEHLING & WHEELER, LLC



Eric C. Matzner, P.G.
Senior Hydrogeologist

cc: Waste Program Manager, TCEQ Region 12, Houston
Mr. Geoffrey Reeder, P.G., UPRR – Spring, TX

Response to TCEQ Comments on the APAR Addendum dated June 2009
UPRR Houston Wood Preserving Works
4910 Liberty Road, Houston, Texas

1. ***Executive Summary, p. vi:*** *The Exposure table provides two responses to the following question pertaining to groundwater, "Have notifications for actual or probable exposures been completed?" Please correct the table discrepancy and explain your response.*

Response to Comment No. 1:
The Exposure table in the Executive Summary in the Updated AAR Addendum was revised by removing the "X" under "Yes" for "*have notifications for actual or probable exposures been completed? (§350.55(e))*". There have been no actual or probable exposures to groundwater identified for off-site properties since no groundwater supply wells were located in the area as in Section 2.1 of the APAR Addendum; therefore, this requirement is not applicable to the Site.

2. ***Executive Summary, p. vii:*** *The Remedy Decision table provides two responses to the following question pertaining to groundwater, "Critical PCL exceeded offsite?" Please correct the table discrepancy and explain your response.*

Response to Comment No. 2:
The Remedial Decision table was revised in the Updated APAR Addendum by removing the "X" under "No" for the column "Critical PCL exceeded off-site?". Groundwater data from off-site monitoring wells north of the Site (i.e., MW-32A, MW-33B) indicate that COC concentrations exceed critical PCLs, as detailed in Section 5 of the APAR Addendum.

3. ***Executive Summary, p. xii:*** *Please delete the reference to Tier 1 or 2 associated with the* $^{Air}Soil_{Inh\_v}$ *pathway because only Tier 1 protective concentration levels (PCLs) were used in the report.*

Response to Comment No. 3:
The reference to a Tier 2 $^{Air}Soil_{Inh\_v}$ pathway has been removed from the Updated APAR Addendum.

4. ***Executive Summary, pp. xii to xiv:*** *Please revise the text to discuss the conclusion that the chemicals of concern (COCs) extents in groundwater are stable and the Non-Aqueous Phase Liquid (NAPL) zones are not expanding.*

Response to Comment No. 4:
Discussions on the stability of COCs in the groundwater bearing units (GWBUs) and potential migration of the NAPL zone based on the historical groundwater and NAPL monitoring data are provided in the Executive Summary and Section 5 of the Updated APAR Addendum.

5. ***Executive Summary, p. xii:*** *Please revise the last paragraph to explain how the number of target COCs in groundwater exceeding their Residential Assessment Level (RAL) decreased from 40 to 17.*

Response to Comment No. 5:
Details and clarification on the COC screening for groundwater COCs are provided in the Executive Summary and in Section 10.0 of the Updated APAR Addendum.

6. Executive Summary, p. xiv: *Please complete the assessment to define the nature and extent of affected surface soil (0-15 feet) and NAPL north of the Site.*

Response to Comment No. 6:
Additional investigation activities were conducted in June 2010 to evaluate the nature and extent of the affected surface soils and NAPL on the northeast portion of the Site and off-site. Details on the investigation activities are provided in Section 3 of the Updated APAR Addendum, and investigation results are discussed in Section 4 of the Updated APAR Addendum for the soil investigation and NAPL evaluation of the vadose zone.

7. Section 3.2 Assessment Strategy, pp. 3-2 to *3-4: Please determine whether the 60-inch sanitary sewer is affected. Also, please determine the impact of the 60-inch sanitary sewer and Quest fiber optic line as migration pathways for contaminants. Finally, please determine whether the historic discharges to the storm sewer (RFA, October 1993) potentially affected an offsite area, and if so, please assess the offsite area.*

Response to Comment No. 7:
City of Houston 60-inch Sanitary Sewer Line
In response to the TCEQ comment, UPRR installed a small diameter piezometer (MW-69A) in the City of Houston ROW along the west side of the sanitary sewer line south of MW-49A to evaluate the potential for site-specific COCs to be affecting the sanitary sewer. The location of the piezometer was chosen to evaluate if COCs in groundwater are travelling along the west side of the sanitary sewer line. UPRR also collected fluid samples from the sanitary sewer line upgradient, within the Site, and downgradient of the Site to evaluate potential discharge from the A-TZ of site-specific COCs into the utility line. Details on the sanitary sewer line investigation are provided in Section 3 of the Updated APAR Addendum.

Responses addressing comments on the fiber optic line and historic discharges to the storm sewer were provided in the February 16, 2010 response letter prepared by PBW that was submitted to the TCEQ. To aid in the review of the overall response to TCEQ comments, those responses are provided below:

Fiber Optic Lines
Based on conversations with Level 3 representatives, the exact location (horizontally or vertically) of their fiber optic lines can not be determined. The fiber optic lines at the Site are encased in high-density polyethylene (HDPE) pipe, and with the depth of the Level 3 fiber optic line estimated to be as deep as 45 feet, which is greater than what their sensing equipment can detect, it can not be accurately located. Level 3 representatives require at least a 20-foot buffer zone around the approximate location of the Level 3 fiber line. If the Level 3 fiber optic line extends into the B-cohesive zone (B-CZ), the line may have the potential to serve as a conduit for groundwater movement from the A-TZ into the B-CZ. However, where the fiber optic lines potentially extend to this depth, the underlying C-TZ unit has site-specific COCs present at concentrations greater than TCEQ TRRP Tier 1 Protective Concentration Levels (PCLs). Therefore, any additional investigation of the fiber optic lines (if could be safely conducted without

potentially severing the lines) will not aid in the investigation of the C-TZ, nor provide beneficial information for potential response actions to address the PCL exceedance (PCLE) zones at the Site. Therefore, UPRR proposes not to perform further investigations of the fiber optic lines.

Historic Discharges to Storm Water Sewer
As discussed in the 1993 RFA as Area of Concern (AOC) No. 5 – City Storm Sewer, two discharges to the City of Houston storm sewer were reported (one in 1980 and one in 1982). According to Southern Pacific Transportation Company (SPTCo.) files, both incidents were a result of blow-down water from the process boilers being discharged to the storm sewer. It is our understanding that discharge to the storm water sewer was not part of an on-going waste water process, but occurred as two isolated, short-term incidents. As discussed in Section 3. 2 of the APAR Addendum (2009), PBW conducted an investigation of the storm water drains along Liberty Road (which would have been the receiving storm drains from discharges from the facility) to evaluate if there were any long-term impacts as a result of these discharges to the storm water system. The investigation conducted in 2008 consisted of using a OVM and lower explosive limit (LEL) meter to sample the ambient air within the storm drains along Liberty Road. No OVM or LEL readings were detected above background levels in the storm drains. Therefore, given the results of that storm drain evaluation, the fact that the discharges to the storm sewer occurred as two isolated incidents over 30 years ago, and the fact that the facility ceased operations in the mid-1980s, the storm water sewers in the area currently are not likely impacted or off-site areas impacted as a result of the isolated incidents. Therefore, further evaluation of the storm sewer is not proposed.

8. Section 4.0 Soil Assessment: *Please describe (in text, figures, and geologic cross sections) the nature and extent of waste, associated with the former wood treatment site, that was encountered in soil at the site, including but not limited to wood pieces/fragments, hard tar and tar-like substance, brick, scrap metal, etc.*

Response to Comment No. 8:
Per our meeting between the TCEQ and PBW on December 18, 2009, most of the Site property has been used for railroad operations since the late 1890s. The railroad has conducted operations across most of the Site either as constructed facilities (i.e., Original and Recent Process Areas) or as storage areas (i.e., Railroad Tie Storage Area). With nearly 100 years of operations, the top few feet of soil at the Site has been disturbed from either process facility construction (i.e. foundations, tank areas) or from grading and maintaining storage areas and rail lines throughout the property.

As detailed in the APAR Addendum in Section 1.3 (PBW, 2009), the top few feet of disturbed soils across the Site has been described as Fill Material, which consists of native soils as well as remnants of railroad operations, including rails, ties, ballast, former foundations, infrastructure, and residuals from spills at the Site from normal operations. The groundwater cross sections (Figures 4C-1 through 4C-4) and soil cross sections (Figure 11C-1) were revised in the Updated APAR Addendum to include the Fill Material as a specific lithologic unit.

9. Section 4.0 Soil Assessment: *Please complete soil assessment at properties along Kirk Street considering creosote odor was detected in soil boring MW-24AR from 0-14.3 feet and historical information in the RCRA Facility Assessment (RFA, October 1993) indicates the potential for soil in this area to be affected.*

Response to Comment No. 9:
A soil investigation was conducted near monitoring well MW-24AR to evaluate the surface soils for creosote impacts. Details on the investigation are provided in Section 4.2 of the Updated APAR Addendum.

10. Section 4.0 Soil Assessment: *The onsite chemical data was evaluated to define the nature and extent of affected soil to residential assessment levels using surface and subsurface soil intervals of 0-5 feet and >5 feet. Please revise the text to discuss the regulatory basis for modifying the surface and subsurface soil intervals for residential land use from 0-15 feet and >15 feet to 0-5 feet and >5 feet, respectively.*

Response to Comment No. 10:
Section 4.0 of the Updated APAR Addendum details the revised evaluation of the Affected Property using the residential land use criteria for surface soil and subsurface soils. To clarify the assessment of the Affected Property both on-site and off-site, surface soils were evaluated using data from samples collected within 0 to 15 feet bgs and subsurface soils were evaluated using data from samples collected from below 15 feet bgs to the top of the uppermost groundwater bearing unit (GWBU), A-TZ Unit. Since the residential properties surround the Site, RALs were used to evaluate COCs and establish the Affected Property for both on-site and off-site areas.

11. Section 4.2 NAPL Evaluation, pp. 4-9 to 4-10: *Please further evaluate the soil borings and CPT/ROST borings to describe (in text, figures, and geologic cross sections) the nature and extent of NAPL (e.g., product, brown to dark brown fluid, oily sheen, shiny, stains, etc.) in the vadose zone.*

Response to Comment No. 11:
An evaluation of existing CPT/ROST borings and soil borings was conducted to evaluate the potential presence of NAPL based on fluorescence response from the ROST borings and field observations noted in the soil borings of the vadose zone. Results of this evaluation are discussed in Section 4.2 of the updated APAR Addendum.

12. Table 4C Subsurface Soil RALs: *Please correct the second explanation to reference "Class 2" instead of "Class 3" because the first groundwater bearing unit at the site (A-TZ) has been determined to be Class 2. Please make sure the Tier 1 and 2 $^{GW}Soil_{Ing}$ PCLs in the table are protective of Class 2 groundwater.*

Response to Comment No. 12:
A revised Table 4C is included in the Updated APAR Addendum.

13. Tables 4D-1 to 4D-5 Summary of Soil Sampling Results: *Regarding the tables, please: a) replace column header "cPCL" with "C/I Assessment Level" and delete the "CI" in the column header "CI Tier"; b) provide a note to better define "critical PCL" (cPCL) as used in the table notes because both the C/I and residential PCLs in the table represent cPCLs in defining the nature and extent of chemical concentrations in onsite and offsite soil, respectively; c)*

*correct Note 4 to read "Non-detected concentrations > RAL or C/I Assessment Level are **bold** type"; and d) provide a table note defining "--".*

Response to Comment No. 13:
Explanations in Tables 4D-1 through 4D-5 were revised to clarify the assessment levels, critical PCLs, and samples that were not analyzed for specific COCs. The revised tables are included in the Updated APAR Addendum.

14. Figures 4C-1 to 4C-4 Cross Sections: *Please revise the figures to delete the table column of PCLs labeled as "cPCLs" and "^{GW}Class 3" because the figures only show the results of COC concentration comparisons to RALs and the TCEQ has concluded the B-CZ groundwater bearing unit represents a Class 2 instead of Class 3 groundwater resource. Please revise the cross sections to only highlight COC concentrations exceeding the RALs.*

Response to Comment No. 14:
Figures 4C-1 through 4C-4 were revised to reflect Class 2 groundwater PCLs as appropriate RALs. The revised figures are provided in the Updated APAR Addendum.

15. Section 5.2 Nature and Extent of COCs and NAPL in Groundwater, p. 5-7: *Please delete the reference to CPT-50R-08 and CPT-51R-08 because they are located too far away to support the conclusion that benzene concentrations are delineated onsite to the RAL in the B-TZ groundwater bearing unit.*

Response to Comment No. 15:
The text in Section 5.2 will be revised to state "With benzene concentrations less than the PCL in on-site monitoring wells MW-14, MW-39B, P-11, and off-site well MW-38B, benzene concentrations are delineated on-site to the RAL in the B-TZ." The revised text is included in Section 5.2.1 of the Updated APAR Addendum.

16. Section 5.2 Nature and Extent of COCs and NAPL in Groundwater, pp. 5-5 to 5-8: *Please complete additional groundwater assessment to define the nature and extent of the affected B-CZ groundwater bearing unit.*

Response to Comment No. 16:
A groundwater investigation of the B-CZ was conducted in June 2010, where three additional groundwater monitoring wells in the B-CZ (MW-36B located east of MW-33B, MW59B downgradient of MW-49B, and MW-67B located north of MW-63B) were installed to evaluate the horizontal extent of COCs and NAPL in the cohesive unit. Details on the investigation activities are provided in Section 3, and results of the groundwater evaluation of the B-CZ are discussed in Section 5.2.1 of the Updated APAR Addendum.

17. Section 5.2 Nature and Extent of COCs and NAPL in Groundwater, pp. 5-9 to 5-10: *Please complete additional groundwater assessment to determine whether the D-TZ groundwater bearing unit is affected, and if so, define the nature and extent of the affected groundwater.*

Response to Comment No. 17:
Per discussions with the TCEQ, one D-TZ groundwater monitoring well (MW-36D) was installed in June 2010 to further evaluate potential impacts above TRRP PCLs in the D-TZ downgradient of where DNAPL has been observed in the overlying C-TZ GWBU. Details on the investigation activities are provided in Section 3, and results of the groundwater evaluation of the B-CZ are discussed in Section 5.2.1 of the Updated APAR Addendum.

None of the site-specific COCs, except for an unverified detection of bis(2-ethylhexyl)phthalate in MW-66D during the February 2009 that was not detected during the 2010 sampling events, were detected at concentrations greater than RALs in the D-TZ wells sampled in 2009 or 2010. Based on these results, COCs at the Site are vertically delineated to the applicable RALs in groundwater.

18. Table 5A Groundwater RALs: *Please revise the table to highlight the maximum concentration for pentachlorophenol (0.026 mg/1) because it exceeds the RAL (0.001 mg/1).*

Response to Comment No. 18:
Table 5A was revised to highlight the maximum concentration for pentachlorophenol and is included in the Updated APAR Addendum.

19. Table 5B-1 to 5B-4 Summary of Groundwater Sampling Results: *Please revise the tables to: a) provide a note to better define cPCL as used in the table because the PCLs provided under the column headers "C/I Assessment Level" and "Residential Assessment Level" are cPCLs in defining the nature and extent of chemical concentrations in onsite and offsite groundwater, respectively; and b) provide a table note defining "--".*

Response to Comment No. 19:
Since most of the site-specific COCs where concentrations in groundwater exceed Residential Assessment Levels (RALs) have Commercial/Industrial PCLs equal to RALs (i.e. benzene), Tables 5B-1 through 5B-4 were revised to evaluate groundwater data relative to Residential Assessment Levels (RALs) only. In addition, the entry "—" was defined in explanation on the tables. The revised tables are provided in the Updated APAR Addendum.

20. Table 5B-2 Summary of Groundwater Sampling Results – Temporary Wells: *Please revise the table title to identify the groundwater bearing unit the temporary wells are completed in.*

Response to Comment No. 20:
The title for Table 5B-2 was revised to identify the temporary wells as being completed in the A-TZ unit. The revised table is provided in the Updated APAR Addendum.

21. Figures 5A-1 to 5A-4 Groundwater Gradient Maps: *Please revise the figures to provide arrows to show the groundwater flow directions.*

Response to Comment No. 21:
Inferred groundwater flow direction arrows were added to groundwater gradient maps for the four GWBUs based on the potentiometric surface elevations measured in January and June/July 2010 (Figures 5A-1 through 5A-8). The updated figures are provided in the Updated APAR Addendum.

22. Figure 5A-5 NAPL Distribution Map: *To provide a more complete understanding of NAPL occurrence with the groundwater bearing units please revise the figure to also identify where NAPL is: a) present in a soil boring completed as a monitoring well (e.g., monitoring well MW-35B, MW-52A, etc.) but has not been historically measured in the monitoring well; b) indicated in a CPT/ROST boring; and c) historically measured in a monitoring well. Finally, please indicate whether the screened interval at monitoring well MW-52A is appropriately set to measure LNAPL in the A-TZ groundwater bearing unit.*

Response to Comment No. 22:
Instead of one NAPL distribution map as was submitted in the APAR Addendum (July 2009), separate NAPL distribution maps for the A-TZ, B-TZ/B-CZ, and C-TZ were prepared using in-well NAPL thickness data collected from the Site groundwater monitoring wells in January and July 2010, as well as historical CPT/ROST data and observations of NAPL in the soil borings collected at the Site. To evaluate areas of elevated ROST readings (units of fluorescence percent response (%RE)), ROST readings in the CPT borings greater than 25% RE were contoured, as shown on Figures 5A-9 through 5A-14. ROST readings greater than 25% RE do not necessarily indicate presence of NAPL; however, some soil borings located near CPT/ROST borings with ROST readings greater than 25% RE generally had some NAPL or staining observed in that soil boring. In addition to the ROST %RE contours, monitoring well soil borings where NAPL was observed on the soil boring logs are highlighted on the NAPL distribution maps.

The intent of the well construction for MW-52A was to evaluate for potential DNAPL in the A-TZ, not to evaluate LNAPL; therefore the construction of the well was designed to have the screened interval across the base of the A-TZ.

23. Figures 5B-1 to 5B-4 Groundwater COC Concentration Maps: *Please revise the maps to delete the table column of cPCLs because the figures only show the results of COC concentrations exceeding the RALs. Also, please revise Figure 5B-2 to delete the column of PCLs for "^{GW}Class 3" because the TCEQ has concluded the B-CZ groundwater bearing unit represents a Class 2 instead of Class 3 groundwater resource.*

Response to Comment No. 23:
Groundwater COC Concentrations Maps (Figures 5B-1 though 5B-8) were revised to highlight COCs that exceed RALs in groundwater. RALs were used to evaluate groundwater COCs for both on-site and off-

site monitoring wells. In regards to the Class 3 determination, an additional groundwater classification assessment was prepared and is discussed in Section 2.0 and Appendix 7; however, groundwater COCs in the B-CZ were conservatively evaluated relative to Class 2 groundwater PCLs. The revised figures are provided in the Updated APAR Addendum.

24. Figure 5B-3 Groundwater COC Concentration Map C-TZ: *Please install a monitor well within the Original Process Area (SWMU No. 5) or revise Figure 5B-3 to extend the PCLE Zone to include the area.*

Response to Comment No. 24:
Groundwater COC Concentration Maps for the C-TZ (Figures 5B-5 and 5B-6) were updated to extend the C-TZ PCLE Zone to include the Original Process Area (SWMU No. 5). The updated figures are included in the updated APAR Addendum.

25. Section 10.0 COC Screening, p. 10.1: *Please complete the additional groundwater sampling of monitor wells near TW-02 to determine whether the 14 COCs are present in the A-TZ groundwater at concentrations exceeding the RALs.*

Response to Comment No. 25:
The three wells around TW-02 consisting of TW-56A, MW-57A, and MW-58A were sampled and analyzed for the standard target analyte list (TAL) under EPA Method 8260 for volatile organic compounds (VOCs). Details on the COC screening of these data are discussed in Section 10.0 (Table 10A) of the Updated APAR Addendum. The revised Section 10.0 also clarifies the surface and subsurface soil COC evaluation (i.e., 0-15 feet and >15 feet for surface and subsurface soils, respectfully) (in Response to Comment No. 26).

26. Section 10.0 COC Screening: *Please revise the text and table to provide a clear explanation identifying the COCs screened from further PCL development. Also, please be aware the applicable surface and subsurface soil intervals for the RAL comparison is 0-15 feet and >15 feet, or to the top of the upper most groundwater bearing unit, which ever is less in depth.*

Response to Comment No. 26:
Please see Response to Comment No. 25.

27. Section 11.1 Tier 2 or 3 PCL Development and Non-Default Parameters and Appendix 9 Development of Non-Default RBELs and PCLs: *Please revise the text in Section 11.1 to explain how the site-specific soil data for one soil sample from soil boring SB-14 is representative of the range of soils encountered in the vadose zone at the site such that additional geotechnical samples are not necessary. Also, please describe and provide in Appendix 9 the calculations of the Tier 2 $^{GW}Soil_{Ing}$ PCLs used in the report based on protection of the Tier 1 $^{GW}GW_{Ing}$ PCLs for Class 2 groundwater and C/I land use.*

Response to Comment No. 27:

As discussed in Section 11.1 of the Updated APAR Addendum, the soil sample analyzed for geochemical parameters from MW-14 (5) (not SB-14 (5) that was incorrectly referenced in the APAR Addendum), sampled from 5 to 7 feet bgs, was collected from the clay interval described as the A-Cohesive Zone (A-CZ). The A-CZ was encountered in every boring that was advanced through to the A-TZ across the Site. The boring log describes the soil as a silty clay, consistent with the description for the A-CZ across the Site (see Section 1.3 of the APAR Addendum) below the fill material. Therefore, the sample is representative of the clay unit overlying the A-TZ. Also, Appendix 9 was updated to include additional details on the equations used for developing the Tier 2 $^{GW}Soil_{Ing}$ PCLs.

28. Section 11.3 Soil Critical PCLs: *Please delete the reference to Tier 1 or 2 associated with the $^{Air}Soil_{Inh\_v}$ pathway because only Tier 1 PCLs were used in the report.*

Response to Comment No. 28:
The reference to the Tier 2 $^{Air}Soil_{Inh\_v}$ PCL was removed from Section 11.3 of the Updated APAR Addendum.

29. Tables 11A-1 and 11A-2 Surface Soil Critical PCLs: *Please revise the table to increase the size of the table and font of the table text and data so it is more readable.*

Response to Comment No. 29:
Tables 11A-1 and 11-A-2 have been revised to make the tables more readable. The revised tables are included in the Updated APAR Addendum.

30. Table 11B-2 Subsurface Soil Critical PCLs – Offsite: *Please revise Note 4 to replace ">5 ft" with ">15 ft".*

Response to Comment No. 30:
The note on Table 11B-2 was revised and included in the Updated APAR Addendum.

31. Figures 11C-1 and 11C-2 Soil Cross Sections: *Please the revise the figures to: a) explain the green-dashed line as the depth to the top of the subsurface soil (onsite > 5 ft and offsite >15 ft); b) clearly mark the UPRR property boundary where it is crossed on the cross sections; c) show the green-dashed line at 15 feet for the offsite properties on the cross sections; d) replace the "Surface PCLs" and "Subsurface PCLs" table titles with "Surface cPCLs" and "Subsurface cPCLs" and also replace the "RAL" and "cPCL" column titles in both tables with "Residential Offsite" and "C/I Onsite", respectively; e) provide a better explanation of the highlighting of COC concentrations in Note 4 because the onsite and offsite cPCLs for most of the COCs are different due to the change in land use (C/I onsite and residential offsite), and then verify that the COC concentrations are correctly highlighted on the cross-sections; and f) identify the NAPL and waste on the cross sections which was encountered in soil and CPT/ROST borings in the vadose zone.*

Response to Comment No. 31:

Per the above comments and Comment No. 32, soil cross sections and explanations on Figure 11C-1 (soil cross sections were shortened and combined onto one figure) were revised and are included in the Updated APAR Addendum.

32. Figure 11C-2 Soil Cross Sections: *Please revise: a) Cross Section D-D' to tie in the soil PCLE zone shown on Figure 11A at the southern end of the cross section; and b) Cross Section G-G' to tie in the soil PCLE zone shown on Figures 11A and 11B in the area of soil borings WPW-S-007P and SSO-F09, and monitoring well MW-23C.*

Response to Comment No. 32:
See response to Comment No. 31.

33. Section 13 Notifications and Appendix 1: *The APAR Addendum provides new soil and groundwater data requiring notice in accordance with 30 TAC §§350.55(a), (b), and (e). Please complete the notification to affected landowner(s) and other entities requiring notification and provide the notice documentation as described in the APAR form.*

Response to Comment No. 33:
Notification letters were prepared for the off-site affected property owners (private properties and City of Houston easements) and copies of the letters were provided to the TCEQ in the February 16, 2010 response letter. With the submittal of additional soil and groundwater data, notification in accordance with 30 TAC §§350.55(a), (b), and (e) will be conducted within the required timeframes following submittal of the Updated APAR Addendum. Details on notification of available information are provided in Section 13.

34. Appendix 2 Boring Logs and Monitoring Well Completion Details: *Please verify all boring logs and monitoring well completion details, not included in previous assessment reports, are included in Appendix 2. Also, please explain why two different boring logs were provided for soil boring SB-90C. Finally, please provide a complete copy of the drilling log for monitoring well MW-42B.*

Response to Comment No. 34:
Boring and well logs for logs not previously submitted are provided in Appendix 2 of the Updated APAR Addendum, specifically the soil borings SB-118 through SB-137 drilled in 2009. In regards to the multiple boring logs for SB-90B, the previous consultant, ERM, hand augered three locations. At the first two locations for SB-90B, water entered the hole and soil samples could not be collected. Soil samples then were collected from the third location. ERM prepared boring logs for each of the locations.

35. Appendix 11 Miscellaneous Assessment: *Please provide page 7 of the RFA.*

Response to Comment No. 35:
Page 7 from the RFA was provided in the February 16, 2010 response.

36. *Please insure your revisions to one part of the APAR Addendum are reflected in all other*

related parts of the document.

Response to Comment No. 36:
No response necessary.

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Cover Page

Program ID No. (primary): SWR 31547 Report date: October 15, 2010
TCEQ Region No.: 12 MSD Certificate No.: NA
Additional Program ID Numbers.: SWR/Facility ID No.: SWR 31547 PST Facility ID No.: NA
DCRP ID No.: NA VCP ID No.: NA LPST ID No.: NA
MSW Tracking No.: NA HW Permit/CP No.: 50343 Enforcement ID No.: NA
Other ID Nos.: EPA ID No. TXD000820266

Reason for submittal (check all that apply):
☐ Initial submittal
☐ Revision
☒ Notice of Deficiency Letter
☐ Permit/Compliance Plan
☐ Voluntary response
☐ Enforcement/Agreed order
☐ Directive/NOV letter
☒ Other: Updated Addendum

On-Site Property Information

On-Site Property (Facility) Name: Union Pacific Railroad Houston Wood Preserving Works Site
Street no. 4910 Pre dir: ____ Street name: Liberty Street type: Rd Post dir: ____
City: Houston County: Harris County Code ____ Zip 77007
Nearest street intersection and location description: Site is located south of Liberty Rd. between Kashmere St. and Lockwood St., north of Lee St.

Latitude: Decimal Degrees (indicate one) North 29.787413 N
Longitude: Decimal Degrees (indicate one) West 95.321062 W

Contact Person for On-Site Property Information and Acknowledgment

Company Name or Person: Union Pacific Railroad
Contact Name: Mr. Geoffrey Reeder Title: Site Remediation Manager
Mailing Address: 24125 Aldine Westfield Road
City: Spring State: TX Zip: 77373 Phone: 281-350-7197
Email: GBREEDER@UP.COM Fax: (402) 233-2351
Person is: ☒ property owner ☐ property manager ☐ potential purchaser ☐ tenant ☐ operator ☐
other ____

By my signature below, I acknowledge the requirement of §350.2(a) that no person shall submit information to the executive director or to parties who are required to be provided information under this chapter which they know or reasonably should have known to be false or intentionally misleading, or fail to submit available information which is critical to the understanding of the matter at hand or to the basis of critical decisions which reasonably would have been influenced by that information. Violation of this rule may subject a person to the imposition of administrative, civil, or criminal penalties.

Signature of Person Geoffrey Reeder Name(print): Geoffrey Reeder Date: 10/14/10

Consultant Contact Person

Consultant Company Name: Pastor, Behling & Wheeler, LLC
Contact Person: Eric C. Matzner, P.G. Title: Senior Hydrogeologist
Mailing Address: 2201 Double Creek Drive, Suite 4004
City: Round Rock State: TX Zip: 78664
Phone: 512-671-3434 Fax: 512-671-3446 E-mail address eric.matzner@pbwllc.com

Professional Signatures and Seals

Professional Geoscientist

Eric C. Matzner, P.G.	0795	08/31/11
Professional Geoscientist	Geoscientist License number	Expiration date
Signature	10/15/10 Date	
512-671-3434	512-671-3446	eric.matzner@pbwllc.com
Telephone number	FAX number	E-mail

Professional Engineer

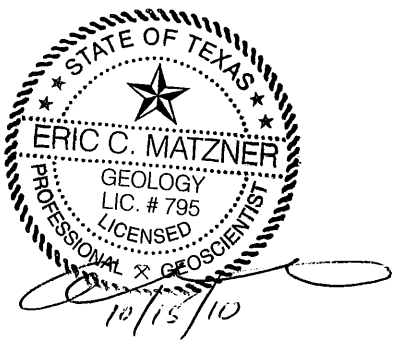
Professional Engineer	P.E. License number	Expiration date
Signature	Date	
Telephone number	FAX number	E-mail

Registered Corrective Action Specialists (RCASs) and Corrective Action Project Managers (CAPMs)

For LPST sites only.

Registered Corrective Action Specialist	RCAS Registration number	Expiration date
Signature	Date	
Corrective Action Project Manager	CAPM Registration number	Expiration date
Signature	Date	
Telephone number	FAX number	E-mail

Seals, as applicable:



Executive Summary

Environmental Media	Actual or Probable Exposures On-Site?		Actual or Probable Exposures Off-Site?		Have notifications for actual or probable exposures been completed? (§350.55(e))		
	Yes	No	Yes	No	Yes	No	N/A
Soil	☒	☐	☒	☐	☒	☐	☐
Groundwater	☐	☒	☐	☒	☐	☐	☒
Sediment	☐	☒	☐	☒	☐	☐	☒
Surface Water	☐	☒	☐	☒	☐	☐	☒

Is there, or has there been, an affected or potentially affected water well? ☐ Yes ☒ No

If yes, what is the well used for? _____

Actual land use: On-site: ☐ Res ☒ C/I Off-site affected property: ☒ Res ☐ C/I ☐ N/A

Land use for critical PCL determination: On-site: ☐ Res ☒ C/I Off-site affected property: ☒ Res ☐ C/I ☐ N/A

Did the affected property pass the Tier 1 ecological exclusion criteria checklist? ☒ Yes ☐ No

Affected groundwater-bearing unit(s) (in order from depth below ground surface), or uppermost groundwater-bearing unit if none affected

Unit No.	Name	Depth below ground surface (ft)	Resource Classification (1, 2, or 3)
1	ATZ	~4 ft to ~15 ft	Class 2
2	BTZ	~30ft to 40 ft	Class 2
3	CTZ	~60ft to 85 ft	Class 2
4	DTZ	~100ft to 125ft	Class 2

Assessment

Environmental Media		Assessment Levels Exceeded?						Affected property defined to RAL?			Is COC extent stable or expanding?	General classes of COCs (VOCs SVOCs, metals, etc.)
		On-Site?			Off-Site?							
		Yes	No	Not sampled	Yes	No	Not sampled	Yes	No	N/A		
Soil	Surface	☒	☐	☐	☒	☐	☐	☒	☐	☐	stable	SVOCs
	Subsurface	☒	☐	☐	☐	☒	☐	☒	☐	☐	stable	SVOCs
Groundwater		☒	☐	☐	☒	☐	☐	☒	☐	☐	stable	BTEX/SVOCs
Sediment		☐	☐	☒	☐	☐	☒	☐	☐	☒	Not Applicable	
Surface Water		☐	☐	☒	☐	☐	☒	☐	☐	☒	Not Applicable	

NAPL Occurrence Matrix

		NAPL Occurrence	***Description***
NAPL in vadose zone	☐	No NAPL in vadose zone	There is no direct or indirect evidence of NAPL in the vadose zone
	☒	NAPL in/on soil	NAPL detected in or on unsaturated, unconsolidated clay-, silt-, sand-, and/or gravel-dominated soils
	☒	NAPL in fractured clay	NAPL detected in fractures of unsaturated fine-grained soils
	☐	NAPL in fractured or porous rock	NAPL detected in unsaturated lithologic material
	☐	NAPL in karst	NAPL detected in karst environment
NAPL at capillary fringe	☐	No NAPL at capillary fringe	There is no direct or indirect evidence of NAPL at the capillary fringe
	☒	NAPL at capillary fringe	NAPL detected at vadose-saturated zone transition, capillary fringe (in contact with water table)
NAPL in saturated zone	☐	No NAPL in saturated zone	There is no direct or indirect evidence of NAPL in the saturated zone
	☒	NAPL in soil	NAPL detected in saturated unconsolidated clay-, silt-, sand-, and/or gravel-dominated soils
	☒	NAPL in fractured clay	NAPL detected in fractures of saturated fine-grained soil or other double-porosity sediments
	☐	NAPL in saturated fractured or porous rock	NAPL detected in saturated lithologic material
	☐	NAPL in saturated karst	NAPL detected in karst environment within the saturated zone
NAPL in surface water or sediment	☒	No NAPL in surface water or sediment	There is no direct or indirect evidence of NAPL in surface water or sediments
	☐	NAPL in surface water	NAPL detected in surface water at exceedance concentration levels or visual observation
	☐	NAPL in sediments	NAPL detected in sediments at exceedance concentration levels or visual observation via migration pathway or a direct release

Remedy Decision

Environmental Media		Critical PCL exceeded on-site?			Critical PCL exceeded off-site?			PCLE zones defined?			General class (VOCs, SVOCs, metals, etc.) of COCs requiring remedy
		Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	
Soil	Surface	☒	☐	☐	☒	☐	☐	☒	☐	☐	SVOCs
	Subsurface	☒	☐	☐	☐	☒	☐	☒	☐	☐	SVOCs
Groundwater		☒	☐	☐	☒	☐	☐	☒	☐	☐	BTEX/SVOCs
Sediment		☐	☐	☒	☐	☐	☒	☐	☐	☒	
Surface Water		☐	☐	☒	☐	☐	☒	☐	☐	☒	

NAPL Triggers[1]

NAPL Response Action Triggers		Description of Triggers
☐	No NAPL response action triggers	No NAPL triggers have been observed in any assessment zones (vadose, capillary fringe and saturated), nor in surface water or sediments
☐	NAPL vapor accumulation is explosive	NAPL vapors accumulate in buildings, utility and other conduits, other existing structures, or within anticipated construction areas at levels that are potentially explosive (≥ 25% LEL)
☐	NAPL zone expanding	NAPL zone is observed to be expanding using time-series data
☒	Mobile NAPL in vadose zone	NAPL zone is observably mobile, or is theoretically mobile based on COC concentrations and residual saturation
☐	NAPL creating an aesthetic impact or causing nuisance condition	NAPL is responsible for objectionable characteristics (e.g., taste, odor, color, etc.) resulting in making a natural resource or soil unfit for intended use
☐	NAPL in contact with Class 1 groundwater	NAPL has come in actual contact with saturated zone or capillary fringe of a Class 1 GWBU
☒	NAPL in contact with Class 2 or 3 groundwater	NAPL has come in actual contact with saturated zone or capillary fringe of a Class 2 or Class 3 GWBU
☐	NAPL in contact with surface water	Liquid containing COC concentrations that exceed the aqueous solubility in contact with surface water via various migration pathways or direct release to surface water
☐	NAPL in or on sediments	Liquid containing COC concentrations that exceed the aqueous solubility impact surface water sediments via migration pathway or a direct release

[1] NAPL Risk-Based Management evaluation provided in Appendix 11.

CONCLUSIONS AND RECOMMENDATIONS

Assessment Results

The following media have been evaluated for potential chemical of concern (COC) releases as part of investigations conducted at the Union Pacific Railroad (UPRR) Houston Wood Preserving Works Facility at 4910 Liberty Road, Houston, Texas, (the Site): surface soils, subsurface soils, and groundwater. Both the soil and groundwater exposure pathways were evaluated as part of the Site assessment and considered to be complete and/or anticipated to be complete.

The Site is located within unoccupied industrial land, and it is anticipated that the Site will remain commercial/industrial for the foreseeable future. The surrounding properties within a 500-foot radius of the Site, including the intermodal yard to the south of the former wood preserving works facilities, consist of residential to the northwest, north, southeast, and south. The UPRR Englewood Yard, commercial/industrial property, is located to the east of the Site. An area of undeveloped land and abandoned houses are located west of the Site. The 500-foot radius field survey demonstrated no current potential groundwater receptors within the residential neighborhood. No water wells, water tanks, cisterns, or windmills, or surface water bodies were encountered. The nearest surface water body is Buffalo Bayou, located approximately 1.6 miles southwest of the Site. The potential for lateral migration of groundwater from the Site to the southwest approximately 8,500 feet to Buffalo Bayou is not likely.

Geological logs from soil/monitoring well borings and cone penetrometer testing (CPT) borings were reviewed to evaluate the subsurface geology at the Site. The lithology at the Site is consistent with the published descriptions of the Beaumont Formation. Site stratigraphy from the ground surface to a depth of approximately 135 feet is separated into the following units: Fill Material (0-5 ft bgs), A-Cohesive Zone (A-CZ) (8 to 15 feet thick); A-Transmissive Zone (A-TZ) (4 to 21 feet thick); B-Cohesive Zone (B-CZ) (6 to 19 feet thick); B-Transmissive Zone (B-TZ) (discontinuous, where present, 3 to 10 feet thick); C-Cohesive Zone (C-CZ) (8 to 20 feet thick); C-Transmissive Zone (C-TZ) (10 to 13 feet thick); D-Cohesive Zone (D-CZ) (17 to 36 feet thick); and D-Transmissive Zone (D-TZ).

A total of 94 groundwater monitoring wells and three temporary wells have been installed on and off-site in the various transmissive zones. Groundwater in A-TZ and B-TZ generally flows across the Site to the east; groundwater flow in the C-TZ flows from northeast to southwest, and groundwater flow in the D-TZ appears to flow to the northwest.

Target COCs in soil and groundwater media were evaluated using the March 2010 TCEQ TRRP Residential PCLs, or Residential Assessment Levels (RALs) to establish the Affected Property. Surface and subsurface soil data collected from 1997 through June 2010 were evaluated to assess COC exceedances in soil. Groundwater data from the most recent sampling events (January and June/July 2010) were evaluated to assess COC exceedances in groundwater.

Comparing the surface and subsurface soil analytical data to the RALs (lowest PCL between $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ (Tier 1 and 2)), concentrations of the following COCs exceeded their respective RALs in the surface and subsurface soils:

Surface Soils
- 1,2-Diphenylhydrazine
- 2,4-Dinitrotoluene
- 2-Methylnaphthalene
- Benzene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Dibenzofuran
- Fluoranthene
- Naphthalene
- Pentachlorophenol
- Phenanthrene

Subsurface Soils
- 2,4-Dimethylphenol
- 2-Methylnaphthalene
- Benzene
- Dibenzofuran
- Naphthalene
- Pentachlorophenol

Comparing the maximum groundwater analytical data from the 2010 groundwater sampling events to RALs, concentrations of 24 target COCs exceeded their respective RALs or had a SDL greater than the RAL (>SDL):

VOCs
- 1,2-Dichloroethane (A-TZ only)
- 1,2-Diphenylhydrazine (B-CZ, and >SDL in one C-TZ well)
- Benzene (A-TZ, B-TZ, C-TZ)
- Dichloromethane (A-TZ and C-TZ, possible lab contaminant)
- Toluene (A-TZ only)
- Vinyl Chloride (A-TZ, only one well)

SVOCs
- 2,4-Dimethylphenol (A-TZ and B-CZ)
- 2-Methylnaphthalene (A-TZ, B-TZ, C-TZ)
- 2,4-Dinitrotoluene (>SDL, only one C-TZ well)
- 2,6-Dinitrotoluene (>SDL, only one C-TZ well)
- 4,6-Dinitro-2-methylphenol (>SDL, only one C-TZ well)
- Acenaphthene (A-TZ and C-TZ only)
- Benzo(a)pyrene (A-TZ, B-TZ, C-TZ)
- Bis(2-chloroethoxy)methane (>SDL, only one C-TZ well)
- Bis(2-ethylhexyl)phthalate (B-CZ, possible lab

VOCs

SVOCs

contaminant)

- Chrysene (A-TZ and C-TZ)
- Dibenzofuran (A-TZ, B-TZ, C-TZ)
- Fluoranthene (A-TZ and C-TZ)
- Fluorene (A-TZ and C-TZ)
- Naphthalene (A-TZ, B-TZ, C-TZ)
- Pentachlorophenol (A-TZ and C-TZ)
- Phenanthrene (A-TZ and C-TZ)
- Phenol (A-TZ only)
- Pyrene (A-TZ and C-TZ)

For the purposes of screening COCs, the 34 site-specific COCs were retained for PCL development. An additional 28 VOCs (a total of 64 COCs) were evaluated in groundwater samples collected in January 2010 from wells MW-18A, MW-57A, MW-58A, and TW-56A near SWMU No. 8. Twenty-seven of the twenty-eight additional VOCs were screened from further PCL development because the COCs were not detected or were detected in at least one sample and the detected concentrations and reporting limits or sample detection limits (SDLs) were less than the RALs for that COC in the medium and all other sampled media. The only VOC that is not on the site-specific list that was detected in groundwater above the applicable RAL was vinyl chloride in MW-18A. Since this is the first, unverified detection of vinyl chloride in groundwater at the Site, vinyl chloride will be resampled from these four A-TZ wells during the next scheduled groundwater monitoring event to verify the PCL exceedance.

Critical soil PCLs were established for the Site by using the lowest of commercial/industrial PCLs for on-site soils and residential PCLs for off-site soils for the following pathways: $^{Tot}Soil_{Comb}$; $^{Air}Soil_{Inh\text{-}V}$ (Tier 1 or 2); and $^{GW}Soil_{Ing}$ (Tier 1 or 2). Comparing the maximum surface and subsurface soil analytical data to the critical commercial/industrial PCLs for on-site and residential PCLs for off-site, concentrations of the following COCs exceeded their respective critical PCLs:

On-Site

Surface Soils

- 1,2-Diphenylhydrazine
- 2,4-Dinitrotoluene
- 2-Methylnaphthalene
- Benzene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Dibenzofuran
- Naphthalene
- Pentachlorophenol

Subsurface Soils

- 2-Methylnaphthalene
- Benzene
- Naphthalene

Off-Site

Surface Soils
- Benzo(a)anthracene
- Benzo(a)pyrene

Subsurface Soils
- None

Groundwater analytical data were compared to the TCEQ TRRP Residential Groundwater PCLs, dated March 2010, assuming the source area greater than 0.5 acre in size (30-acre source area). Critical PCLs were established as the lesser value between residential $^{GW}GW_{Ing}$ and $^{Air}GW_{Inh\text{-}V}$ PCLs for both on-site and off-site. The January 2010 and June/July 2010 groundwater analytical data were evaluated for establishing the groundwater PCLE zone. Of the site-specific COCs analyzed in groundwater, concentrations of 21 target COCs exceeded their respective critical PCLs (cPCLs):

VOCs
- 1,2-Dichloroethane
- Benzene
- Dichloromethane
- Toluene
- Vinyl Chloride*

SVOCs
- 1,2-Diphenylhydrazine*
- 2,4-Dimethylphenol
- 2-Methylnaphthalene
- Acenaphthene
- Benz(a)anthracene
- Benzo(a)pyrene
- Bis(2-ethylhexyl)phthalate
- Chrysene
- Dibenzofuran
- Fluoranthene
- Fluorene
- Naphthalene
- Pentachlorophenol
- Phenanthrene
- Phenol
- Pyrene

* - first time PCL exceedance, will be resampled and verified.

Groundwater data collected from the Site monitoring wells in the four transmissive zones (A-TZ, B-TZ, C-TZ, and D-TZ) from 2008 through 2010 show that the overall groundwater PCLE plumes in each zone are relatively stable with no indication of plume expansion or migration. Additional groundwater data will need to be collected from the B-CZ monitoring wells to evaluate changes over time in the PCLE zone.

NAPL Discussion

NAPL in the Vadose Zone

The vadose zone (ground surface to 15 feet bgs, or top of the A-TZ if encountered shallower than 15 feet bgs) was evaluated using Cone Penetrometer Testing/Rapid Optical Screening Tool (CPT/ROST) data and soil boring logs at the Site to identify potential areas where NAPL may be present. To evaluate areas of elevated ROST readings (units of percent response (%RE)) in the vadose zone, ROST readings in the CPT borings greater than 25% RE were contoured. ROST readings greater than 25% RE do not necessarily indicate presence of NAPL; however, some soil borings located near CPT/ROST borings with ROST readings greater than 25% RE generally had some NAPL or staining observed in that soil boring. Most of the areas with elevated ROST/LIF readings in the vadose zone have been in around the Recent and Original Process Areas (SWMU Nos. 4 and 5), and around the AST Area (SWMU No. 8). The highest ROST readings were located near SWMU No. 8, where creosote and drying agents were stored. Soil borings where NAPL was observed were generally located in an around the Original Process Area (SMWU No. 5) and along the Southern Drainage Ditch (SWMU No. 2) (Figure 4D).

NAPL in the GWBUs

DNAPL and LNAPL are evaluated for each of the monitoring wells at the Site. During previous sampling events, light NAPL (LNAPL) was observed at A-TZ in temporary well TW-02 within the AST Area (SWMU No. 8); however, no LNAPL was observed in January or July 2010 at this location. DNAPL was encountered in wells completed in the A-TZ, B-TZ, B-CZ, and C-TZ. However, the thicknesses of DNAPL in the wells in these units do not represent actual thicknesses in the GWBU. The monitoring wells generally extend below the lower confining unit and typically have at least a 0.5-foot to 2.5-foot sump at the bottom of the well, which allows DNAPL to collect in the bottom of the well. With the well screen extending below the base of the confining unit in many cases, in-well DNAPL thicknesses are exaggerated as the bore hole and well materials below the confining layer act as a collection sump for DNAPL in the transmissive zone. Monitoring wells may also intersect DNAPL-containing fractures that have fluid pressures that indicate DNAPL at a given elevation rather than a saturated thickness in the formation.

DNAPL is present in A-TZ monitoring wells on the northern edge (MW-17) and off site to the north (MW-32A). DNAPL was measured in MW-32A at 7.14 feet and 2.95 feet thick (in-well thickness) in January and July 2010, respectively. The decrease in DNAPL thickness from January to July 2010 is a result of the monthly DNAPL recovery pilot test that began in May 2010. The DNAPL near MW-32A

appears to be delineated to the north based on the ROST response for CPT-36R-08. DNAPL was measured in well MW-57A for the first time in July 2010 with an in-well thickness of 2.55 feet (Figure 5A-10).

DNAPL has been detected in the B-TZ along the western boundary of the Site at MW-12B and MW-41B. During the 2010 monitoring events, DNAPL present in the B-TZ on the west side of the Site had a maximum in-well thickness of 21.15 feet observed at MW-41B, with MW-12B having a measured thickness of 8.34 feet in January 2010. With the DNAPL recovery pilot test beginning in May 2010, the in-well DNAPL thicknesses measured in July 2010 in these two wells ranged from 4.3 feet in MW-41B to 3.85 feet in MW-12B. DNAPL has not been detected in monitoring wells MW-38B, MW-39B, MW-40B, TW-41B (located approximately 50 feet from MW-41B), and P-11, which indicates sufficient horizontal delineation of the DNAPL in the B-TZ.

DNAPL was detected in one of the wells completed in the aquitard B-CZ located off site to the north of the Recent Process Area. Approximately 7.24 feet of DNAPL (in-well thickness) was observed at MW-33B in January 2010. During the July 2010 monitoring event, an obstruction was encountered in the well that prevented access to the bottom of the well to gauge the DNAPL.

DNAPL is present in the C-TZ extending from the northeast side of the Site at MW-23C to approximately 900 feet off site to the northeast near MW-46C. During the 2010 monitoring events, DNAPL was observed in on-site monitoring well MW-23C, and off-site monitoring wells MW-25C (no DNAPL detected in July 2010), MW-34C (only gauged in January 2010), MW-44C, MW-45C, and MW-46C. Maximum DNAPL in-well thicknesses observed in the C-TZ during the 2010 sampling events was 9.29 feet at MW-45C, with the thickest DNAPL measured in on-site well MW-23C at 1.70 feet (January 2010). DNAPL thicknesses measured in the wells in July 2010 were less than the measurements in January 2010 as a result of the DNAPL recovery pilot test.

Response Actions

Based on the additional investigation activities discussed in this APAR Addendum, COCs in the affected media are delineated both on-site and off-site.

The future land use for the Site is assumed to be classified as commercial/industrial. The Site is covered with crushed gravel and concrete, but has the potential for human health exposure to COCs in the surface

soils. UPRR will evaluate developing a response action to address the surface and subsurface soil PCLE zones at the Site in the Response Action Plan (RAP). To address the groundwater PCLE zone, a Plume Management Zone (PMZ) will likely be established with a demonstration of recoverability for the DNAPL that will be provided in the RAP.

UPRR is currently evaluating semi-annual groundwater monitoring for selected wells (i.e., off-site and downgradient perimeter wells) and annual groundwater monitoring to monitor geochemical trends and evaluate monitored natural attenuation of COCs in groundwater for establishing the PMZ. Details of the groundwater monitoring plan will be included in the RAP.

CHRONOLOGY

Below is a summary of the site investigation and regulatory chronology at the UPRR Former Houston Wood Preserving Works facility (the Site).

Date	Description
June/July 2010	Pastor, Behling & Wheeler, LLC (PBW) conducts additional soil (along northeast portion of Site) and groundwater investigation (A-TZ, B-CZ, C-TZ and D-TZ wells); including site-wide groundwater monitoring event.
February 16, 2010	UPRR Response to Texas Commission on Environmental Quality (TCEQ) Comment Letter dated November 18, 2009.
January 2010	PBW conducts site-wide groundwater sampling event; selected wells are analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8620.
November 18, 2009	TCEQ Comment Letter on Revised APAR.
July 2009	PBW submits APAR Addendum to TCEQ.
January 2009	PBW conducts additional soil and groundwater investigation.
July 2008	PBW conducts additional CPT-ROST and groundwater investigation
January 2007	PBW conducts additional soil and groundwater investigation
August 2006	ERM-Southwest, Inc. (ERM) conducted additional soil and groundwater investigation
April 2006	ERM conducted additional soil and groundwater investigation
September 6, 2005	UPRR Response to TCEQ Response Letter dated August 1, 2005
August 2005	TCEQ Response to UPRR Response Letter dated June 9, 2005
June 9, 2005	UPRR Response to TCEQ Letter dated April 15, 2005
April 15, 2005	TCEQ Response to UPRR Response Letter dated November 19, 2004
November 19, 2004	UPRR Response to October 8, 2004 TCEQ Letter
October 8, 2004	TCEQ Comment Letter on Revised APAR
June 10, 2004	Revised APAR submitted to the TCEQ by ERM, Inc. on behalf of UPRR
November 7, 2001	Texas Natural Resources Conservation Commission (TNRCC) provides comments to July 5, 2001 response letter.
July 5, 2001	Follow-up response to November 6, 2000 TNRCC comment letter on the On-Site APAR submitted to TNRCC on behalf of UPRR.

Date	Description
January 9, 2001	Initial response to November 6, 2000 TNRCC comments.
November 6, 2000	TNRCC provides comments to On-Site APAR.
July 10, 2000	Affected Property Assessment Report for On-Site Property (On-Site APAR) submitted to TNRCC on behalf of UPRR by ERM.
February 20, 2000	Letter submitted to the TNRCC regarding proposed Phase 2-C investigation for further delineation of off-site areas
September 10, 1999	Phase 2-B RFI/EOC Investigation Report submitted to TNRCC on behalf of UPRR by ERM
April 27, 1998	Interim Stabilization Measures Report – Southern Drainage Ditch, submitted to TNRCC on behalf of UPRR by ERM.
February 13, 1998	Phase 2-A RFI/EOC Investigation Report submitted to TNRCC on behalf of UPRR by ERM.
January 13, 1997	RFI portion of the Phase 1 RFI/EOC Investigation Report approved by TNRCC
November 26, 1996	EOC portion of the Phase 1 RFI/EOC Investigation Report approved by TNRCC
May 23, 1996	Phase 1 RFI/EOC Report submitted on behalf of Southern Pacific Transportation Company (SPTCo) by Terranext
October 16, 1995	RFI Work Plan approved by TNRCC
September 29, 1995	EOC Work Plan approved by TNRCC
January 10, 1995	Operation and Maintenance Plan approved by TNRCC
November 3, 1994	Revised Compliance Schedule approved by TNRCC
October 14, 1994	RCRA Facility Investigation (RFI) Work Plan submitted on behalf of SPTCo
September 16, 1994	Extent of Contamination (EOC) Work Plan submitted on behalf of SPTCo
September 7, 1994	Revised Compliance Schedule submitted on behalf of SPTCo
August 19, 1994	Operation and Maintenance Plan and Compliance Schedule submitted on behalf of SPTCo
June 20, 1994	Permit No. HW-50343-000 and Compliance Plan CP-50343-000 issued by TNRCC.
October 1993	RCRA Facility Assessment completed on behalf of U.S. EPA by PRC Environmental Management, Inc.

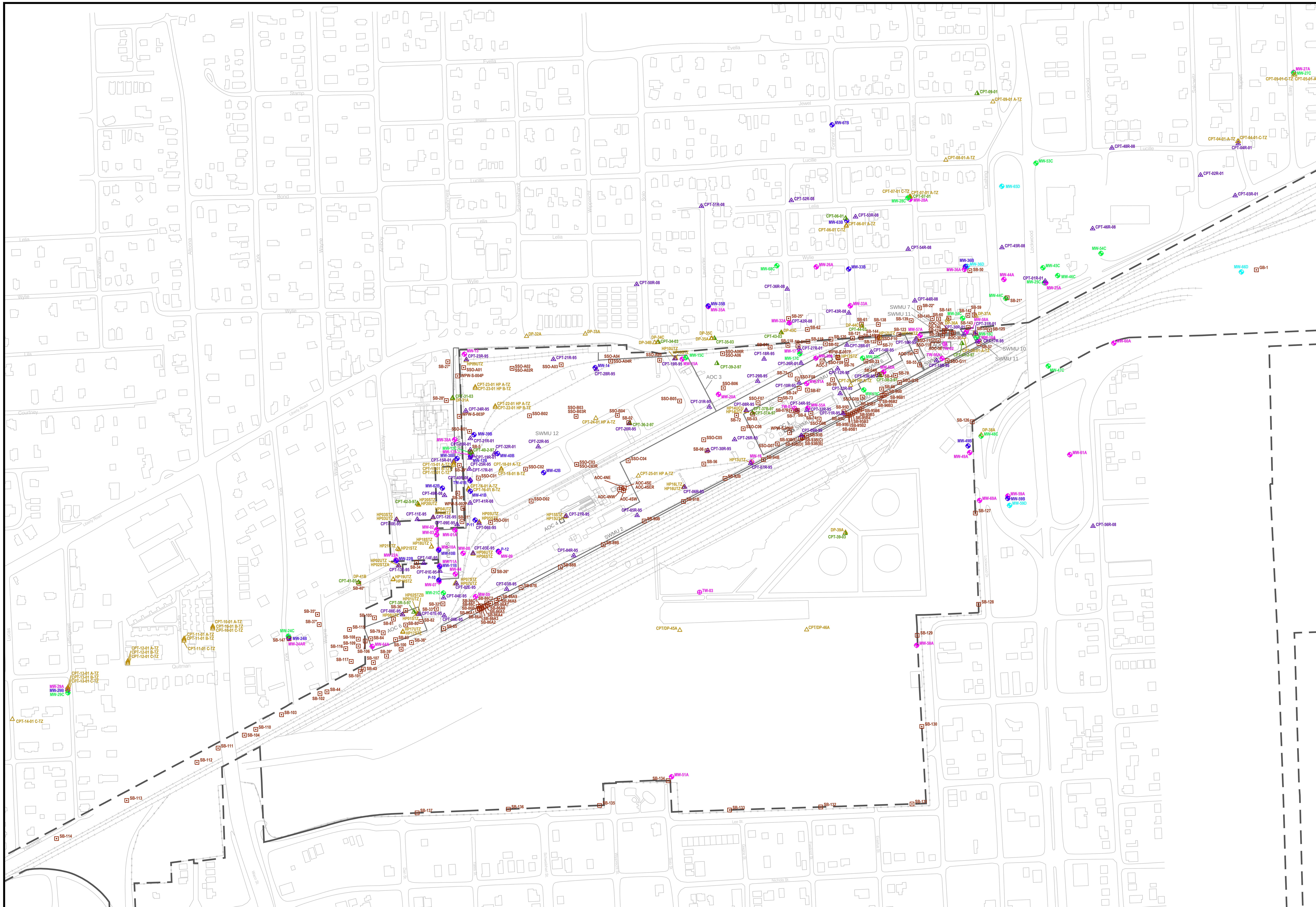
Date	Description
May 13, 1991	RCRA Permit Application submitted by SPTCo

NOTE: The above summary does not include routine activities such as Semiannual Ground Water Monitoring events and reporting.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

1.0 Figures



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- B-TZ Monitoring Well Location
- C-TZ Monitoring Well Location
- D-TZ Monitoring Well Location
- A-TZ Temporary Monitoring Well Location
- CPT with Rost Location
- CPT Location
- Hydropunch Sample Location
- Soil Boring Location

Note:
* Soil analytical data rejected by validator.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

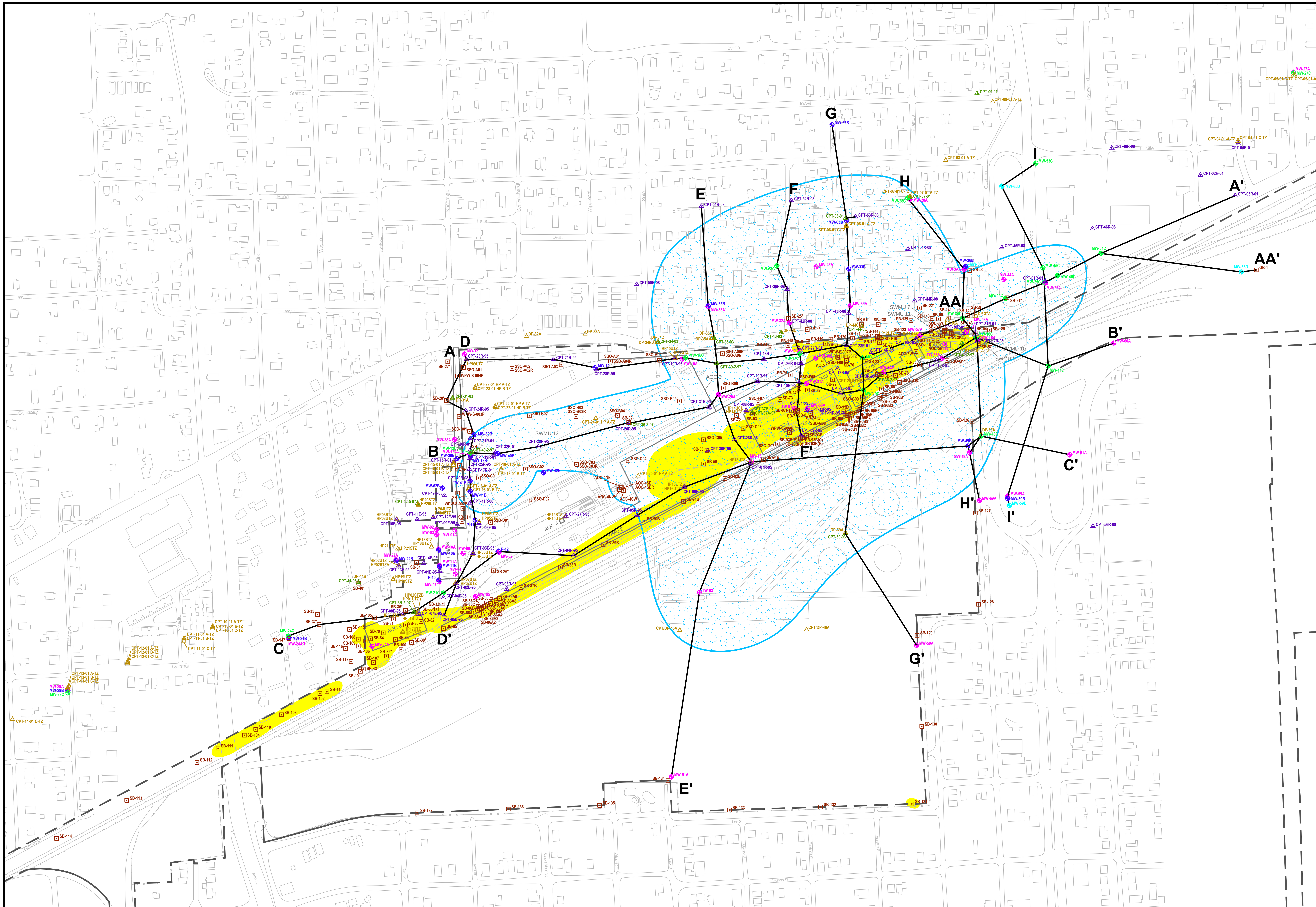
HOUSTON WOOD PRESERVING WORKS

Figure 1A

ON-SITE PROPERTY MAP

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
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- B-TZ Monitoring Well Location
- C-TZ Monitoring Well Location
- D-TZ Monitoring Well Location
- A-TZ Temporary Monitoring Well Location
- CPT with Rost Location
- CPT Location
- Hydropunch Sample Location
- Soil Boring Location
- A — A' Cross Section Location
- Soil Affected Property
- Groundwater Affected Property

Note:
* Soil analytical data rejected by validator.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
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SWMU 12	Railroad Tie Storage Area
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AOC 3	Contaminated Portion of City Water Line
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AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

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N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 1B

AFFECTED PROPERTY MAP

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

SECTION 2.0 EXPOSURE PATHWAYS AND GROUNDWATER RESOURCE CLASSIFICATION

Section 2.1 Groundwater Resource Classification

Groundwater classification of the A-TZ and B-TZ wells has been evaluated both in the Revised APAR (ERM, 2004) and the APAR Addendum (PBW, 2009). In the APAR Addendum, aquifer test data from three wells completed in the B-CZ indicated that the groundwater classification for the B-CZ would be considered Class 3 in accordance with the procedures outlined in the TCEQ TRRP Groundwater Classification Guidance Document TRRP-8 (TCEQ, 2003). According to the guidance, a groundwater-bearing unit is defined as a saturated geologic formation, group of formations, or part of a formation that has a hydraulic conductivity equal to or greater than 1×10^{-5} centimeters per second (cm/sec). Saturated zones with hydraulic conductivities values less than 1×10^{-5} cm/sec are considered to be non-groundwater bearing zones (or "saturated soils"). The difference between a Class 2 and Class 3 groundwater-bearing zone is that a Class 3 zone is incapable of yielding 150 gallons per day (gdp) from a properly completed well.

The TCEQ issued a Technical Review of the Class 3 groundwater classification that was issued in the Interoffice Memorandum dated October 15, 2009 that accompanied the TCEQ comment letter on the APAR Addendum (TCEQ, 2009). In the review, the TCEQ did not approve the Class 3 groundwater classification based on the following two issues:

1. Hydraulic interconnectivity of GWBU – concerns regarding hydrostratigraphic interconnection between the B-CZ and underlying C-TZ that is allowing the C-TZ unit to be impacted; and
2. Well Yield Testing – TCEQ requested supplemental information and data including raw data and field notes of the well testing, specifics on the bailer used to conduct the tests, details on the different screen intervals for the wells tested, well inspection forms, and properly sealed evaluation by a registered professional geologist or engineer.

One of the considerations in the conceptual site model for groundwater and contaminant flow is the degree of connectivity between the A-TZ, B-TZ, and to a lesser extent, the C-TZ as demonstrated by similar groundwater potentiometric elevations in the A-TZ and B-TZ/B-CZ, and lower elevations in the C-TZ. North of the Site, groundwater potentiometric elevations in wells completed in the B-CZ are generally equal to or greater that the potentiometric elevation measured in the A-TZ wells in the same area. As an example, the groundwater potentiometric elevation measured in July 2010 in B-CZ well

MW-33B was 37.03 feet HVD (Figure 5A-4) compared to the elevation measured in MW-26A at 36.50 feet HVD (Figure 5A-2), indicating an upward gradient. A nearby C-TZ well MW-68C had a groundwater potentiometric elevation of 28.28 feet HVD (Figure 5A-6) during the same gauging event, about an eight-foot elevation difference downward, suggesting a lack of connectivity to the C-TZ.

The groundwater chemistry data and the presence of DNAPL in the A-TZ, B-TZ/B-CZ, and C-TZ units suggest some interconnectivity between the transmissive zones, either through micro/macro fractures in the cohesive zones or from potential historical geotechnical borings drilled either at the Site (possibly for construction of the facility) or near the Site (i.e., geotechnical borings for the construction of the Lockwood Bridge). However, as detailed in Section 5.0 of the Updated APAR Addendum, groundwater PCLE zones at the Site are stable and do not indicate increasing COC concentrations or DNAPL volumes in the C-TZ from 2008 through 2010. The data suggest that taking in account interconnectivity of the transmissive zones via the cohesive zones, the hydrologic balance between the transmissive zones has reached a state of equilibrium in terms of COC mass loading from the shallower zones into the C-TZ and natural degradation of the COCs in the C-TZ limiting the migration of the PCLE Zone in groundwater.

As stated in the TCEQ Guidance (TRRP-8)," the applicable groundwater resource classification for a given hydraulically-interconnected GWBU will be determined based on consideration of the current use, water quality, and well yield of that GWBU only" (TCEQ, 2003). Therefore, the objective of evaluating the hydraulic properties of the B-CZ is to assess the hydraulic conductivity of the cohesive zone for determining the appropriate potential pathway for that individual hydrostratigraphic unit. The pathway of concern for exposure to the COCs in groundwater is human health groundwater ingestion ($^{GW}GW_{Ing}$). The question to be addressed through the hydraulic testing is whether or not the B-CZ yields sufficient groundwater to be considered a groundwater-bearing unit.

Hydraulic testing of the underlying C-TZ has shown that this GWBU is classified as a Class 2 groundwater resource (PBW, 2009). Therefore, potential response actions for the C-TZ groundwater PCLE zone will address potential groundwater ingestion pathway for that GWBU. Since the C-TZ groundwater PCLE zone has shown to be stable over time, potential response actions for the C-TZ will also take into account potential interconnectivity with the shallower zones (i.e., B-CZ) and risk of NAPL or additional dissolved mass loading from the shallower zones that could cause plume growth or migration. Therefore, potential response actions are not necessary for the B-CZ, if shown to be saturated soils, since appropriate response actions will address the underlying GWBU.
Additional aquifer testing was conducted in 2010 to better characterize the B-CZ and address comments

and concerns raised in the TCEQ Technical Memorandum. Details of the additional testing are discussed below.

Aquifer Testing

In July 2010, PBW conducted aquifer tests on the three groundwater monitoring wells MW-36B, MW-59B, and MW-67B that are completed in the clay unit B-CZ to evaluate and determine the groundwater classification for that unit. Slug testing was conducted in D-TZ well MW-36D. The objective of the testing was to evaluate the hydraulic conductivity of the cohesive unit and effects of the carbonate seams on the hydraulic conductivity of the B-CZ, as well as evaluating the hydraulic conductivity of the D-TZ.

Each of the B-CZ wells that were tested fully penetrates the targeted carbonate seams in the B-CZ and is constructed with 2-inch PVC casing and screen. Monitoring well boring logs for the wells tested are provided in Appendix 2. The TCEQ technical review of the 2009 groundwater classification demonstration included a comment on different screen intervals for the B-CZ wells. Specifically, the comment (5d) stated "*the APAR should provide an explanation or rational for use of 5 foot screen lengths in newly installed wells as supposed to 10 foot screen lengths, since this could have an affect on hydraulic properties of the monitoring wells.*" Below is a summary of the screened intervals for the B-CZ wells tested in 2009 and 2010:

WELL NO.	Top Screen Interval (FT BGS)	Bottom Screen Interval (FT BGS)	Screen length (FT)	Intervals of Carbonaceous Gravels Seams (FT BGS)
MW-33B	32	42	10	33.0, 35.0, 40.0
MW-35B	32	42	10	33 – 36
MW-36B	38	43	5	39.5 – 39.8
MW-49B	30	35	5	27.5, 30.6-31, 32.3-32.4
MW-59B	28	33	5	29.4, 30.9, 31.7, 32.2, 32.7
MW-63B	31	36	5	26-31, 31.6-35
MW-67B	35	40	5	34.3-34.5, 37.2-37.4, 38-38.1, 38.7-38.8

The wells listed above were designed so that the screened interval for the wells penetrated each of the carbonate gravel seams noted in the B-CZ soil boring logs. Except for one interval at MW-49B (27.5 ft bgs) and MW-63B (26-31 ft bgs), the wells were screened across each carbonate intervals observed and

are considered fully penetrating for evaluating the hydraulic properties of the carbonate seams within the cohesive zone.

Evaluating the effects of a 5-foot screen interval compared to a 10-foot screen interval, the main component of flow into a well is the amount of open area of the screened interval to receive groundwater flow. An estimated open area for a 2-in polyvinyl chloride (PVC) well screen with 0.010-in slot size is approximately 2.4 in^2/foot of screen (http://www.certainteed.com/resources/slottedpvcwellcasing403733f.pdf). A 5-ft well screen has about 12 in^2 of open area compared to 24 in^2 for a 10-ft screen. To calculate an estimated flow rating (gallons per minute (GPM)/ft), the following equation was provided by a well screen vendor (http://www.certainteed.com/resources/slottedpvcwellcasing403733f.pdf):

> *Flow Rating (GPM/ft) = Open Area (in2/ft) * (0.5 blockage factor) * (0.31 conversion factor) at an entrance velocity of 0.1 feet/second*

Therefore, with a 2-in well with 0.010-in slot and a 5-ft screen interval, the flow rating into the well is: 12 in^2 * 0.5 * 0.31 = 1.9 GPM, or 2,678 gallons per day (GPD) compared with 3.8 GPM (5,356 GPD). Based on these flow ratings into a 2-in well constructed at the Site, the shorter screen interval will not significantly affect the flow into well.

The tests were conducted by bailing down the wells until each well became dry. Then, using a water level probe, the water level recovery was recorded until the well recovered to approximately 90 percent of the initial water level, or if recovery took longer than 24 hours, the test was stopped. Test data were graphed and analyzed using the TCEQ Well Yield by Cyclic Discharge (Method 2a) in accordance with the TCEQ Groundwater Classification Guidance Document TRRP-8 (TCEQ, 2003). Well yield tests were not conducted three times in the wells since it took over 24 hours for the wells to recover to 90 percent. Aquifer test data were also analyzed using AQTESOLV v3.0 software (HydroSOLVE, Inc.). Hydraulic conductivity (K) was calculated using the Bouwer – Rice solution for confined aquifers. Details of the well yield tests and graphs showing the recovery over time for the wells are provided in Appendix 7.

Based on the aquifer testing results conducted in 2010, as well as evaluating the aquifer testing conducted in 2009 (wells MW-33B, MW-35B, MW-49B, and MW-63B), the hydraulic conductivity estimated using the Bouwer-Rice analysis ranged from 6 x 10^{-8} cm/sec to 1 x 10^{-7} cm/sec for six of the seven wells

completed in the B-CZ. Well MW-35B had a hydraulic conductivity estimate at 1 x 10^{-4} cm/sec. As discussed in the APAR Addendum (PBW, 2009), MW-35B is located near the lateral transitional boundary where the B-TZ pinches out and becomes the B-CZ. Details of the aquifer testing and results are provided in Appendix 7.

Aquifer testing in MW-36D resulted in an average hydraulic conductivity of 3x10^{-5} cm/sec (Table 2D). However, yield is likely greater at the other D-TZ where the sand unit is thicker relative to MW-36D.

Aquifer testing conducted on the B-CZ indicated that the B-CZ, with the exception of the area near MW-35B, would be classified as saturated soils as defined by the TCEQ east and northeast of MW-35B. However, groundwater COC data from samples collected from B-CZ wells were conservatively evaluated in this APAR Addendum relative to Class 2 groundwater PCLs (as discussed in Section 5.0) pending TCEQ review of the updated groundwater classification evaluation provided in Appendix 7.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

2.0 Tables

Table 2D Summary of Aquifer Test Results and Sustainable Well Yield Calculations

TABLE 2D
SUMMARY OF AQUIFER TEST RESULTS AND SUSTAINABLE WELL YIELD CALCULATIONS - 2009-2010

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

Well Number	Type of Test	Analysis Method	Hydraulic Conductivity, K (cm/sec)	Average K (cm/sec)	Representative K (cm/sec)	Saturated Thickness, b (ft)	Confining Head, h_c (ft)	Average Yield, Q (GPD)
B-CZ Wells								
MW-33B	Bail Down	Bouwer - Rice	7.E-07	7.E-07	5.E-07	0.5	23	0.3
MW-35B	Bail Down	Bouwer - Rice	1.E-04	1.E-04		0.5	29	31
			1.E-04					31
			9.E-05					25
	Slug	Bouwer - Rice	1.E-04					31
			2.E-04					45
MW-36B	Bail Down	Bouwer - Rice	6.E-08	6.E-08		0.5	35	0.04
MW-49B	Bail Down	Bouwer - Rice	1.E-07	1.E-07		2	19	0.15
MW-59B	Bail Down	Bouwer - Rice	5.E-07	5.E-07		4	21	1.01
MW-63B	Bail Down	Bouwer - Rice	1.E-07	1.E-07		4	6	0.09
MW-67B	Bail Down	Bouwer - Rice	2.E-07	2.E-07		5	32	0.78
D-TZ Wells								
MW-36D	Slug	Bouwer - Rice	3.E-05	3.E-05	3.E-05	1	18	10.44
			4.E-05					13.53
			3.E-05					10.92
			3.E-05					11.04
			3.E-05					11.15
			3.E-05					11.45

SECTION 3.0 ASSESSMENT STRATEGY

Utilities

As discussed in Section 3.0 of the 2009 APAR Addendum (PBW, 2009), a 60-inch wastewater line was identified within the Site based on a review of the utility drawing files obtained from the City of Houston Public Works Survey Department. A copy of the City of Houston utility drawing is provided in Attachment 11. Using the construction details on the drawing, the 60-in wastewater line appears to be at depths that potentially intersect the uppermost GWBU A-TZ. The estimated depths of the sanitary sewer line based on the city drawings are shown on the Geologic Cross Sections A-A', B-B', and C-C' (Figure 4C-1). The estimated base depth of the 60-in sanitary wastewater line where Cross Section B-B' crosses the utility line is approximately 23 feet bgs (approximate elevation of 26 feet HVD). In response to the TCEQ comment letter dated November 18, 2009, an investigation was conducted to evaluate potential discharge of COCs into the wastewater line, as discussed below.

City of Houston 60-inch Sanitary Sewer Line

The City of Houston 60-inch sanitary sewer line cuts across the east end of the Site (Figure 3A) that flows north to south. Based on a review of the City of Houston drawing files for the sanitary sewer line, the sewer line potentially intersects the saturated A-TZ unit, and may be affecting the groundwater potentiometric surface elevation of the A-TZ (See Section 5.2.1 for discussion on groundwater flow).

PBW installed a small diameter piezometer (MW-69A) in the City of Houston ROW along the west side of the sanitary sewer line south of MW-49A (Figure 3A) to evaluate the potential for site-specific COCs affecting the sanitary sewer. The location of the piezometer was chosen to evaluate if COCs in groundwater are travelling along the west side of the sanitary sewer line. Groundwater data from monitoring well MW-59A indicates that the COCs were not detected above PCLs east of the sanitary sewer line. Well MW-69A was purged and sampled relatively soon after installation, and analyzed for the site-specific COCs listed on Table 3B.

In addition, PBW collected grab samples of fluid from the sanitary sewer line upgradient (Sample ID: SSW1), within the Site (Sample ID: SSW2), and downgradient of the Site (Sample ID: SSW3) to evaluate potential discharge of site-specific COCs detected in the A-TZ into the wastewater line. Samples from the sanitary sewer were collected using a peristaltic pump and tubing inserted through the manhole covers. The manhole locations are shown on Figure 3A. A summary of the groundwater and sanitary sewer fluid data is provided on Table 3A.

Based on the analytical results, none of the site-specific COCs were detected above TRRP PCLs in the groundwater sample collected from MW-69A. Sanitary sewer water analytical results from the three sanitary sewer samples were also compared to TRRP Tier 1 PCLs for groundwater (Table 3A), even though the fluid in the line is not considered groundwater. Of the three samples collected, the only sample with concentrations greater than PCLs was the upgradient sample SSW1 that had a detection of bis(2-ethylhexl)phthalate (0.0092 mg/L) above the $^{GW}GW_{ing}$ PCL of 0.006 mg/L; however, bis(2-ethylhexyl)phthalate is a common laboratory contaminant (as cited in 30 TAC§350.71(k)(2)(B)). These concentrations suggest that there is not a significant loading of COCs from groundwater into the sanitary sewer.

Assessment Methods

This APAR Addendum addresses additional site investigations conducted since the Revised APAR was submitted to the TCEQ in 2009. The assessment methods used in the investigations are discussed below.

2010 Additional Soil and Groundwater Investigation. In June 2010, PBW conducted a supplemental soil and groundwater investigation at the Site to further evaluate the lateral and vertical extent of COCs above TRRP PCLs in groundwater, and to evaluate the lateral extent of COCs above TRRP PCLs in soils. The following locations were sampled or monitoring wells were installed (locations shown on Figure 1A):

- *Soil Sampling* – Soil samples were collected from soil borings SB-138 through SB-146 along the northern perimeter of the Site and across Liberty Road in the City of Houston right-of-way (ROW), and SB-147 adjacent to monitoring well MW-24AR to evaluate potential creosote impacts along Kirk Street. Soil borings along the northern perimeter of the Site and across Liberty Road were drilled to evaluate potential off-site impacts from the historical operations at the Site. Soil samples were selected from each boring based on field screening OVM readings and/or visual observations. After each soil boring was drilled to the target depth, the boring was backfilled with granular bentonite or bentonite pellets. Each soil boring was surveyed in the field with the differential global positioning satellite (GPS) meter.

- *Monitoring Well Installation/Development* – During the June 2010 investigation, the following monitoring wells were installed:
    - One A-TZ well, MW-69A, was installed to evaluate the potential migration of COCs to the City of Houston sanitary sewer (discussed above);

- Three BCZ wells MW-36B, MW-59B, and MW-67B, were installed by sonic drilling techniques to evaluate dissolved COC concentrations in the BCZ unit north of MW-63B (MW-67B) and east of MW-33B (MW-36B); and COC concentrations in the BCZ unit downgradient of MW-49B (MW-59B).
- One CTZ well, MW-68C, was installed north of the Site using sonic drilling techniques to evaluate the northwest perimeter of the CTZ PCLE zone; and
- One DTZ monitoring well, MW-38D, was installed using sonic drilling techniques north of the Site to evaluate the DTZ for potential impacts from site-specific COCs.

After each monitoring well was installed, the wells were developed to remove sediment from the wells. Permanent monitoring wells were surveyed by a licensed, professional surveyor to Texas State Plane coordinates (NAD 27, Texas South Central, U.S. Feet).

Soil samples were analyzed for site-specific COCs to evaluate the Affected Property. Each soil sample was placed in a laboratory-supplied container, preserved as appropriate, immediately placed on ice and delivered to ALS Labortories in Houston, Texas for analysis. The samples were analyzed in accordance with EPA protocol for the analytical methods requested. Chain-of-custody procedures were maintained from the field through the reporting of laboratory results. Field quality assurance/quality control (QA/QC) samples (i.e., field duplicates, equipment blanks) were also collected.

DNAPL Recovery Testing – May 2010. PBW initiated a 12-month pilot study in May 2010 to evaluate DNAPL recovery by conducting tests on selected wells (MW-32A, MW-57A (added in August 2010) MW-12B, MW-33B, MW-41B, MW-23C, MW-25C, MW-44C, MW-45C, MW-46C). At each well tested for DNAPL recovery, the initial product thickness was measured and tubing was placed in the well to near the total depth. The well was then pumped with either a peristaltic or diaphragm pump until DNAPL was no longer measured in the well or the fluids removed were mostly water. The pump was then turned off and DNAPL thickness measurements were collected. Results to date from the pilot test are discussed in Section 5.3, and after completion of the 12-month pilot test, results will be provided in the Response Action Plan (RAP).

Groundwater Monitoring Events – January 2010 and June-July 2010. Site-wide groundwater monitoring events were conducted to evaluate COC trends in groundwater at the Site. Site-wide events were conducted in the following months (number of wells sampled):

- January 2010 (71 wells);

- June-July 2010 (72 wells).

Groundwater samples were collected using low-flow sampling techniques described in the EPA guidance document Low-Flow (Minimal Drawdown) Ground Water Sampling Procedures (EPA, 1995). Each sample was analyzed for the site-specific COC list (VOCs by EPA Method 8260 and SVOCs by EPA Method 8270C).

Prior to sampling, the depth to water and the thickness or presence of NAPL was measured using an oil-water interface probe. For wells with DNAPL, water samples were collected at least 5 to 10 feet above the top of the measured DNAPL. Purging was accomplished in such a way as to minimize disturbance of sediments at the bottom of the well, and therefore minimize turbidity of the water samples. This was accomplished by purging at a low flow rate with the pump intake near the base of the screened interval, unless DNAPL was present and then the pump intake was placed no closer than five feet to the DNAPL surface. A peristaltic pump with dedicated tubing was used during the purging and sampling of each well. Since dedicated tubing was used in each well, no equipment rinse sample was collected.

Well purging was accomplished by purging at low-flow rates while monitoring the following field parameters: specific conductance, pH, temperature, dissolved oxygen, oxidation/reduction potential (redox), and turbidity. Meters were calibrated before sampling each day, using the manufacturer's procedure. Odor and color of the purge water were also noted on the groundwater sampling record. Each monitoring well was purged until the following parameters had stabilized, or until the well purged dry.

After purging, groundwater samples were collected from the discharge of the pump following low-flow sampling techniques. Sampling information (i.e., sample time, bottle sets, sampler name, use of filter, etc.) was recorded on the groundwater sampling forms (Appendix 3). Groundwater samples were placed in coolers and delivered to ALS Laboratory Group in Houston, Texas for analysis. The samples were analyzed in accordance with EPA protocol for the analytical methods requested.

Data Quality

Samples collected from the Site in the recent investigations were analyzed in accordance with the guidelines of *EPA SW-846, Test Methods for Evaluating Solid Waste-Physical/Chemical Methods*. The procedures for laboratory analysis, with any modifications, are further documented in the laboratory standard operating procedures, which are maintained at the laboratory, and are listed in the laboratory's quality assurance plan. Data obtained from field and laboratory measurements were reviewed for

conformance to project requirements, ensuring the lowest method quantitation limit (MQL) was used in the evaluation.

Analytical data from the critical soil and groundwater samples collected during the soil and groundwater investigations from 2009 and 2010 were reviewed for adherence to established QA/QC criteria, and Data Usability Summaries (DUSs) were prepared to demonstrate the quality of the laboratory analytical data and present any deviations from the established QA/QC criteria. Details of the DUSs are provided in Appendix 10. For the data included in this report, the soil and groundwater data are considered usable for the purpose of evaluating COCs in the environmental media to assess the affected property based on the COCs and establish PCLE zones.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

3.0 Tables

Table 3A
Summary of Sanitary Sewer Investigation Sampling Results
UPRR Houston Wood Preserving Works

			Residential Assessment Level	C/I Assessment Level	MW-69A 7/15/2010	SSW1 7/15/2010	SSW2 7/15/2010	SSW3 7/15/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds								
1,2-Dichloroethane	107-06-2	8260	5.00E-03	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	1.00E-01	<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	7.00E-01	<0.0005	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	1.00E+00	<0.0005	<0.00087	<0.0005	<0.00077
Xylenes (total)	1330-20-7	8260	1.00E+01	1.00E+01	<0.001	<0.001	<0.001	<0.001
Semivolatile Organic Compounds								
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	2.56E-03	<0.0001	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	1.46E+00	0.0036	0.00008	0.0019	0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	3.01E-03	<0.00009	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	3.01E-03	<0.00007	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	5.84E+00	<0.0001	<0.0001	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	7.30E-03	<0.00008	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	2.92E-01	0.0038	0.00048	0.0019	0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	1.46E-01	<0.00007	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	4.38E+00	<0.0037	<0.00038	<0.0013	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	4.38E+00	<0.00007	<0.00007	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	2.19E+01	0.00039	0.00007	0.00023	0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	2.80E-03	0.00049	0.00007	0.00007	0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	2.00E-04	0.00013 J	0.00008 J	0.00008 J	0.00008 J
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	1.86E-03	<0.00009	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	6.00E-03	0.0059	0.0092	0.0044	0.0011
Chrysene	218-01-9	8270	1.25E-01	2.80E-01	0.00032	0.00007	0.00007	0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	2.92E-01	0.003	0.00029	0.00095	0.00008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	7.30E+00	<0.00007	<0.0007	<0.00058	<0.00018
Fluoranthene	206-44-0	8270	9.78E-01	2.92E+00	0.0025	0.00007	0.00029	0.00007
Fluorene	86-73-7	8270	9.78E-01	2.92E+00	0.0033	0.00028	0.00087	0.00007
Naphthalene	91-20-3	8270	4.9E-01	1.46E+00	0.026	0.0032	0.014	0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	1.46E-01	<0.00009	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	4.17E-01	<0.00009	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	1.00E-03	<0.00008	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	2.19E+00	0.0083	0.00041	0.0013	0.00007
Phenol	108-95-2	8270	7.33E+00	2.19E+01	0.0069	0.0064	0.0063	0.00007
Pyrene	129-00-0	8270	7.33E-01	2.19E+00	0.0022	0.00007	0.00024	0.00007

Notes:

1. Sampling locations shown on Figure 3A
2. Concentrations > RAL are **bold** type.
3. Concentrations > cPCL are highlighted.
4. Non-detected concentrations > RAL or cPCL are **bold** type.
5. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
6. RAL = Residential Assessment Level, C/I = Commercial/Industrial
7. J = Estimated value, < = Compound not detected at the specified detection limit.

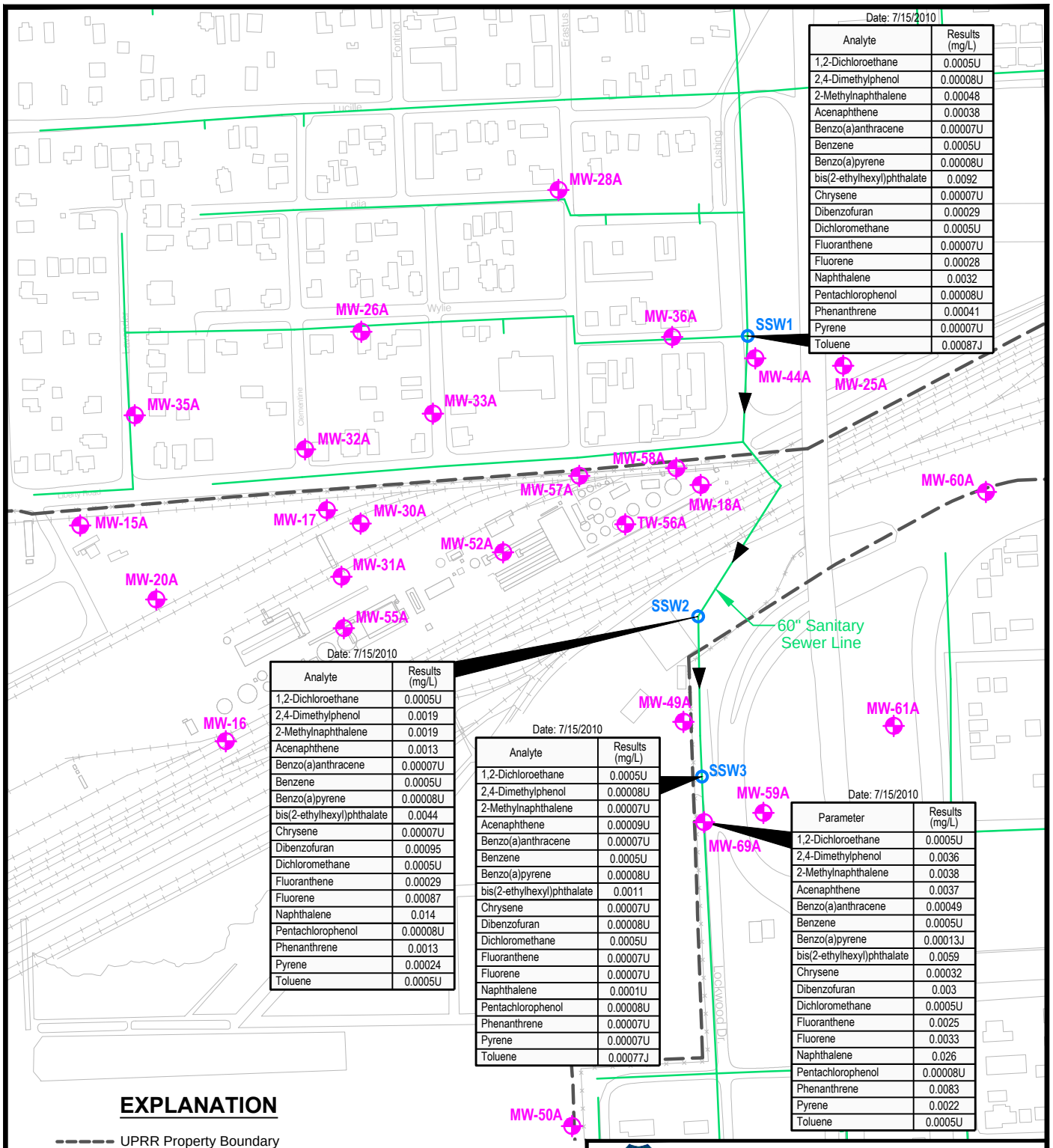
TABLE 3B
SITE-SPECIFIC COCS
UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON, TEXAS

Analytical Parameters	Analytical Method	Analyte	CAS
Site-Specific VOCs	**EPA SW-846 8260**	1,2-Dichloroethane	107-06-2
		Benzene	71-43-2
		Chlorobenzene	108-90-7
		Ethylbenzene	100-41-4
		Methylene Chloride	75-09-2
		Toluene	108-88-3
		Xylenes (total)	1330-20-7
Site-Specific SVOCs	**EPA SW-846 8270C**	1,2-Diphenylhydrazine	122-66-7
		2,4-Dimethylphenol	105-67-9
		2,4-Dinitrotoluene	121-14-2
		2,6-Dinitrotoluene	606-20-2
		2-Chloronaphthalene	91-58-7
		2-Methyl-4,6-dinitrophenol	534-52-1
		2-Methylnaphthalene	91-57-6
		4-Nitrophenol	100-02-7
		Acenaphthene	83-32-9
		Acenaphthylene	208-96-8
		Anthracene	120-12-7
		Benzo(a)anthracene	56-55-3
		Benzo(a)pyrene	50-32-8
		bis(2-chloroethoxy)methane	111-91-1
		bis(2-ethylhexyl)phthalate	117-81-7
		Chrysene	218-01-9
		Dibenzofuran	132-64-9
		Di-n-butyl Phthalate	84-74-2
		Fluoranthene	206-44-0
		Fluorene	86-73-7
		Naphthalene	91-20-3
		Nitrobenzene	98-95-3
		n-Nitrosodiphenylamine	86-30-6
		Pentachlorophenol	87-86-5
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Pyrene	129-00-0

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

3.0 Figures



Date: 7/15/2010

Analyte	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00048
Acenaphthene	0.00038
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0092
Chrysene	0.00007U
Dibenzofuran	0.00029
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00028
Naphthalene	0.0032
Pentachlorophenol	0.00008U
Phenanthrene	0.00041
Pyrene	0.00007U
Toluene	0.00087J

Date: 7/15/2010

Analyte	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0019
2-Methylnaphthalene	0.0019
Acenaphthene	0.0013
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0044
Chrysene	0.00007U
Dibenzofuran	0.00095
Dichloromethane	0.0005U
Fluoranthene	0.00029
Fluorene	0.00087
Naphthalene	0.014
Pentachlorophenol	0.00008U
Phenanthrene	0.0013
Pyrene	0.00024
Toluene	0.0005U

Date: 7/15/2010

Analyte	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0011
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.00077J

Date: 7/15/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0036
2-Methylnaphthalene	0.0038
Acenaphthene	0.0037
Benzo(a)anthracene	0.00049
Benzene	0.0005U
Benzo(a)pyrene	0.00013J
bis(2-ethylhexyl)phthalate	0.0059
Chrysene	0.00032
Dibenzofuran	0.003
Dichloromethane	0.0005U
Fluoranthene	0.0025
Fluorene	0.0033
Naphthalene	0.026
Pentachlorophenol	0.00008U
Phenanthrene	0.0083
Pyrene	0.0022
Toluene	0.0005U

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Wastewater Line (City of Houston GIMS System) (Assumed Flow Direction)
- SSW1 Manhole Sample Location (Approx. Location)
- MW-69A A-TZ Monitoring Well Location

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 3A

CITY OF HOUSTON SANITARY SEWER LINE SAMPLING RESULTS

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

SECTION 4.0 SOIL ASSESSMENT

Section 4.1 Derivation of Assessment Levels

The surface soil and subsurface soil assessment levels were selected based on the current and future land use and potential receptors at the Site. To clarify the assessment of the Affected Property both on-site and off-site, surface soils were evaluated using data from samples collected within 0 to 15 feet bgs and subsurface soils were evaluated using data from samples collected from below 15 feet bgs to the top of the uppermost groundwater bearing unit (GWBU), A-TZ Unit. Since the residential properties surround the Site, RALs were used to evaluate COCs and establish the Affected Property for both on-site and off-site areas.

Based on the evaluation of potentially complete exposure pathways, the following soil-related residential pathways were assessed at the Site:

- $^{Tot}Soil_{Comb}$ (surface soils);
- $^{Air}Soil_{Inh\text{-}V}$ (subsurface soils); and
- $^{GW}Soil_{Ing}$ (Tier 1 and Tier 2) (surface and subsurface soils).

The $^{Tot}Soil_{Comb}$ pathway was evaluated as potentially complete since although the Site is partially covered with crushed gravel and soil, potential future construction activities could occur at the Site. Based on the expedited stream evaluation (ESE) discussed in the APAR Addendum and approved by the TCEQ, the ecological pathway was considered incomplete (PBW, 2009).

RALs for potential COCs in the surface and subsurface soils were developed using TCEQ TRRP Tier 1 Residential Soil PCLs dated March 2010, assuming a source area of 30 acres in size, and Tier 2 PCLs were calculated using site-specific data. Details of the Tier 2 PCLs are discussed in Section 11, with calculations, equations, and supporting documentation for Tier 2 ^{GW}Soil PCLs in Appendix 9. For establishing the Affected Property, RALs were selected as the lesser value between the $^{Tot}Soil_{Comb}$ PCL and the $^{GW}Soil_{Ing}$ PCL (Tier 1 or 2) for surface soils (0 to 15 feet bgs on-site and off-site), and the lesser value between the $^{Air}Soil_{Inh\text{-}V}$ PCL and the $^{GW}Soil_{Ing}$ PCL (Tiers 1 or 2) for subsurface soils (>15 feet bgs on-site and off-site). For the subsurface soil PCL evaluation, only soil samples collected below 15 feet bgs and above the saturated uppermost GWBU (A-TZ) were used in accordance with the TRRP definition

for subsurface soils (30 TAC §350.4(a)(86)). Soil samples collected from the saturated GWBUs or aquitards below those units were not used for evaluating the subsurface soil Affected Property or PCLE Zone. Details of the nature and extent of the COCs in soil are discussed in the following sections.

Section 4.2 Nature and Extent of COCs and NAPL in Soil

This APAR Addendum incorporates the soil data collected during the 2010 investigation activities with data collected as part of the original APAR (ERM, 2000), Revised APAR (ERM, 2004), and APAR Addendum (PBW, 2009) into the assessment of the Affected Property. Additional surface and subsurface soils collected at the Site in 2010 were sampled and analyzed for the list of 34 site-specific COCs (Table 4A). A summary of soil analytical data from 2010 as well as previously submitted soil analytical data are presented on the following tables:

Table	Description
4D-1	Summary of Surface Soil Sampling Results
4D-2	Summary of Subsurface Soil Sampling Results

Comparing the maximum concentrations detected in surface and subsurface soils to Commercial/Industrial PCLs (on-site focused assessment) and RALs (lowest PCL between $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ (Tier 1 and 2)), concentrations of the following COCs that were not screened out (see Section 10.0 for details) exceeded their respective assessment levels in the surface and subsurface:

Surface Soils
- 1,2-Diphenylhydrazine (Figure 4A-1)
- 2,4-Dinitrotoluene (Figure 4A-2)
- 2-Methylnaphthalene (Figure 4A-3)
- Benzene (Figure 4A-4)
- Benzo(a)anthracene (Figure 4A-5)
- Benzo(a)pyrene (Figure 4A-6)
- Dibenzofuran (Figure 4A-7)
- Fluoranthene (Figure 4A-8)
- Naphthalene (Figure 4A-9)
- Pentachlorophenol (Figure 4A-10)
- Phenanthrene (Figure 4A-11)

Subsurface Soils
- 2,4-Dimethylphenol (Figure 4B-1)
- 2-Methylnaphthalene (Figure 4B-2)
- Benzene (Figure 4B-3)
- Dibenzofuran (Figure 4B-5)
- Naphthalene (Figure 4B-6)
- Pentachlorophenol (Figure 4B-7)

The figures listed above were updated for the assessment of the Affected Property to include surface soils from 0 to 15 feet and subsurface soils from 15 feet to the uppermost GWBU. Concentrations shown on these figures are based on the highest concentration detected in the media (i.e., if multiple sample collected in the surface soils (0 to 15 feet bgs), the highest concentration was used for the Affected

Property evaluation). Soil cross sections present both the lithology for the Site and the distribution of COCs in the surface and subsurface soils (Figure 11C-1 through 11C-3). Based on the additional samples collected in 2010, COCs in surface and subsurface soils were delineated on Site to the appropriate critical PCLs or RALs.

With the focus of the additional soil sampling conducted in 2010 along the northeast perimeter of the Site, extents of the COCs detected in surface and subsurface soils in that area are discussed below.

Surface Soils

The updated summary of surface soil data using data collected in June 2010 is provided on Table 4D-1. Figure 4A-12 presents COCs that exceed RALs within and along the northeast corner of the Site. As shown on Figure 4A-12, COCs were delineated to RALs along the north side of Liberty Street across from SWMU Nos. 6, 7, 8, 10 and 11. One surface soil sample, SB-60(0-0.5ft) had a benzo(a)pyrene detection at 0.733 mg/Kg above the RAL of 0.54 mg/Kg; however, the detection is likely from historical asphalting of Liberty Road and not from activities at the Site. This conclusion is further supported by the seven surface soil samples collected along the north side of Liberty Road (SB-138 through SB-142, SB-59, and SB-61) where the detections of COCs were less than RALs.

Along the Site property boundary to the north, surface soil samples from SB-123, MW-57A, SB-143, and SB-145 had benzo(a)pyrene concentrations greater than the RAL (0.56 mg/Kg), ranging from 2.6 mg/Kg (SB-123(0.5-2.5)) to 4.3 mg/Kg (SB-145(1.5-2.5)). However, based on the conceptual site model that the on-site surface soils were impacted from spills and releases from operations at the Site (PBW, 2009), surface soil impacts would not be likely have migrated across Liberty Road. Therefore, the surface soil Affected Property in this area is defined by the southern edge of Liberty Road (Figure 4A-12).

In response to the TCEQ comments (Comment No. 9, TCEQ, 2009) on the APAR Addendum (PBW, 2009), soil boring SB-147 was drilled adjacent to monitoring well MW-24AR to evaluate potential creosote impacts along Kirk Street southwest of the Site. The soil boring log describing the lithology is provided in Appendix 2. Two soil samples were collected (2 to 2.9 feet and 13 to 14.3 feet) from boring SB-147 and analyzed for the site-specific COC list. Analytical results are summarized on Table 4D-1. No COCs were detected above MQLs in these samples (except methylene chloride, which is a common laboratory contaminant (as cited in 30 TAC§350.71(k)(2)(B)).

Subsurface Soils

Subsurface soil samples from soil borings drilled in June 2010 along the northeast portion of the Site were collected and analyzed for site-specific COCs to evaluate lateral delineation of the COCs in subsurface soils off site. Analytical data of the subsurface soils are summarized on Table 4D-2, and presented on (Figures 4B-1 through 4B-7). Of the six subsurface soil samples collected in the northeast portion of the Site (SB-138(16-16.9), SB-141(16-17.1), SB-142(16-16.9), SB-143(18-18.7), SB-144(16-16.9), and SB-145(16-17.4)), none of the site-specific COCs were detected in the samples at concentrations greater than subsurface soil RALs.

NAPL Evaluation

Since 1995, site investigations have included activities to evaluate surface and subsurface soils for the presence of NAPL. Specifically, Cone Penetrometer Testing/Rapid Optical Screen Tool (CPT/ROST) investigations were conducted in 1995, 2001, and 2008 at the Site using laser-induced fluorescence (LIF) as a tool to evaluate the presence of NAPL. A total of 75 CPT/ROST locations have been drilled at and around the Site (Figure 1A). CPT/ROST borings that intersect the geologic cross section lines are posted on Figures 4C-1 through 4C-4.

ROST/LIF method is used as qualitative screening data to estimate the approximate *in situ* distribution of petroleum hydrocarbon NAPL based on the fluorescence response induced in the PAH compounds, which are commonly found in creosote. ROST/LIF results do not conclusively indicate NAPL is present at a location given the qualitative nature of the screening tool. However, NAPL has been detected in soil borings drilled at the Site in areas where elevated ROST responses were observed, and also NAPL has been detected in monitoring wells completed in the A-TZ, B-TZ, B-CZ, and C-TZ zones where elevated ROST responses were also observed.

The vadose zone (ground surface to the top of the A-TZ (generally between 15 and 20 feet bgs)) was evaluated using ROST data and soil boring logs at the Site to identify potential areas where NAPL may be present. To evaluate areas of elevated ROST readings (units of fluorescence percent response (%RE)) in the vadose zone, ROST readings in the CPT borings greater than 25% RE were contoured, as shown on Figure 4D. ROST readings greater than 25% RE do not necessarily indicate presence of NAPL; however, some soil borings located near CPT/ROST borings with ROST readings greater than 25% RE generally had some NAPL or staining observed in that soil boring. In addition to the contoured ROST readings in the vadose zone, soil borings where NAPL was documented on the boring logs in the

vadose zone are highlighted on Figure 4D. The ROST readings and NAPL observations in soil borings are also presented on the surface/subsurface cross sections (Figure 11C-1).

Most of the areas with elevated ROST/LIF readings have been in around the former process areas (SWMU Nos. 4 and 5), and around the AST Area (SWMU No. 8) (Figure 4D). The highest ROST readings were located near SWMU No. 8, where creosote and drying agents were stored. A more detailed discussion of NAPL occurrence in the groundwater-bearing zones is provided in Section 5.2. Soil borings where NAPL was observed were generally located in an around the Original Process Area (SMWU No. 5) and along the Southern Drainage Ditch (SWMU No. 2) (Figure 4D-1).

Steps 2 (Identify NAPL Response Triggers) and 3 (Determine NAPL Response Objectives and Endpoints) as part of the Risk-Based NAPL Management in accordance with TCEQ TRRP-32 Risk-Based Management guidance document are detailed in Appendix 11A.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

4.0 Tables

TABLE 4A

SURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
UPRR HOUSTON WOOD PRESERVING WORKS

COC	Source area size (acres)	$^{Tot}Soil_{comb}$ PCL[1] (mg/kg)	$^{GW}Soil_{Ing}$ PCL[2] (mg/kg)	Tier	Residential Assesment Level (mg/l)	exposure pathway	MQL (mg/kg)	Maximum Surface Soil Concentration Sample ID	(feet bgs)	Sample Date	Concentration (mg/kg)	Notes
Site-Specific COCs												
1,2-Dichloroethane	30	6.4E+00	3.1E-02	2	3.1E-02	$^{GW}Soil_{Ing}$	0.62	HWPW-MW18-S00	1	2/26/1997	<0.62U	SQL is greater than RAL
Benzene	30	4.8E+01	1.0E-01	2	1.0E-01	$^{GW}Soil_{Ing}$	0.005	SB-93B (3.5-4')	4-4	8/25/2006	0.206	
Chlorbenzene	30	3.2E+02	6.5E+00	2	6.5E+00	$^{GW}Soil_{Ing}$	0.62	HWPW-MW18-S00	1	2/26/1997	0.62	
Ethylbenzene	30	4.0E+03	4.4E+01	2	4.4E+01	$^{GW}Soil_{Ing}$		HWPW-SB07-S2.5	2.5	3/6/1997	6.3	
Methylene chloride	30	2.6E+02	2.2E-02	2	2.2E-02	$^{GW}Soil_{Ing}$	0.62	HWPW-MW18-S00	1	2/26/1997	<0.625U	SQL is greater than RAL
Toluene	30	5.6E+03	4.3E+01	2	4.3E+01	$^{GW}Soil_{Ing}$		HWPW-MW18-S00	1	2/26/1997	1.4	
Xylenes (tot)	30	7.5E+02	7.3E+02	2	7.3E+02	$^{GW}Soil_{Ing}$		HWPW-MW18-S00	1	2/26/1997	42	
1,2-Diphenylhydrazine	30	5.4E+00	2.3E-01	2	2.3E-01	$^{GW}Soil_{Ing}$	0.00067	SB-104(1-2)	1-2	3/15/2007	1.84	
2,4-Dimethylphenol	30	8.8E+02	1.8E+01	2	1.8E+01	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
2,4-Dinitrotoluene	30	6.9E+00	2.2E-02	2	2.2E-02	$^{GW}Soil_{Ing}$	0.00333	SB-82(0-0.5')	0-0.5	5/2/2006	0.162	
2,6-Dinitrotoluene	30	6.9E+00	1.8E-02	2	1.8E-02	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
2-Chloronaphthalene	30	5.0E+03	5.0E+03	2	5.0E+03	$^{GW}Soil_{Ing}$		HWPW-SB08-S14	14	3/6/1997	<330U	
2-Methyl-4,6-dinitrophenol	30	5.2E+00	2.3E-03	1	2.3E-03	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<820U	SQL is greater than RAL
2-Methylnaphthalene	30	2.5E+02	1.3E+02	2	1.3E+02	$^{GW}Soil_{Ing}$		HWPW-SB07-S2.5	2.5	3/6/1997	1,300	
4-Nitrophenol	30	5.1E+01	8.9E-02	2	8.9E-02	$^{GW}Soil_{Ing}$		HWPW-SB08-S14	14	3/6/1997	<1600U	SQL is greater than RAL
Acenaphthene	30	3.0E+03	1.8E+03	2	1.8E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S2.5	2.5	3/6/1997	1700	
Acenaphthylene	30	3.8E+03	3.0E+03	2	3.0E+03	$^{GW}Soil_{Ing}$		HWPW-SB08-S14	14	3/6/1997	<330U	
Anthracene	30	1.8E+04	3.4E+03	1	3.4E+03	$^{GW}Soil_{Ing}$	0.00667	SB-104(1-2)	1-2	3/15/2007	669	
Benzo(a)anthracene	30	5.6E+00	1.3E+02	2	5.6E+00	$^{Tot}Soil_{Comb}$	0.00667	SB-104(1-2)	1-2	3/15/2007	401	
Benzo(a)pyrene	30	5.6E-01	5.7E+01	2	5.6E-01	$^{Tot}Soil_{Comb}$		MW 31A (0-2')	2	12/8/2003	70.62	
bis(2-Chloroethoxy)methane	30	2.5E+00	7.7E-02	2	7.7E-02	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
bis(2-Ethylhexyl)phthalate	30	4.3E+01	1.2E+03	2	4.3E+01	$^{Tot}Soil_{Comb}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
Chrysene	30	5.6E+02	1.2E+04	2	5.6E+02	$^{Tot}Soil_{Comb}$	0.00667	SB-104(1-2)	1-2	3/15/2007	392	
Dibenzofuran	30	2.7E+02	2.5E+02	2	2.5E+02	$^{GW}Soil_{Ing}$		HWPW-SB07-S2.5	2.5	3/6/1997	1,100	
Di-n-butyl phthalate	30	4.4E+03	2.5E+04	2	4.4E+03	$^{Tot}Soil_{Comb}$		HWPW-SB08-S14	14	3/6/1997	<330U	
Fluoranthene	30	2.3E+03	1.4E+04	2	2.3E+03	$^{Tot}Soil_{Comb}$	0.00667	SB-104(1-2)	1-2	3/15/2007	2,990	
Fluorene	30	2.3E+03	2.2E+03	2	2.2E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S2.5	2.5	3/6/1997	1600	
Naphthalene	30	1.2E+02	2.3E+02	2	1.2E+02	$^{Tot}Soil_{Comb}$		HWPW-SB07-S2.5	2.5	3/6/1997	3,900	
Nitrobenzene	30	3.0E+01	4.9E-01	2	4.9E-01	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
N-Nitrosodiphenylamine	30	5.7E+02	1.9E+01	2	1.9E+01	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
Pentachlorophenol	30	2.4E+00	1.2E-01	2	1.2E-01	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<820U	SQL is greater than RAL
Phenanthrene	30	1.7E+03	3.1E+03	2	1.7E+03	$^{Tot}Soil_{Comb}$		HWPW-SB07-S2.5	2.5	3/6/1997	4,100	
Phenol	30	1.6E+03	4.5E+01	2	4.5E+01	$^{GW}Soil_{Ing}$		HWPW-AOC7-S00	5	3/3/1997	<165U	SQL is greater than RAL
Pyrene	30	1.7E+03	8.4E+03	2	1.7E+03	$^{Tot}Soil_{Comb}$	0.00667	SB-104(1-2)	1-2	3/15/2007	1610	

TABLE 4A

SURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
UPRR HOUSTON WOOD PRESERVING WORKS

COC	Source area size (acres)	$^{Tot}Soil_{comb}$ PCL[1] (mg/kg)	$^{GW}Soil_{Ing}$ PCL[2] (mg/kg)	Tier	Residential Assesment Level (mg/l)	exposure pathway	MQL (mg/kg)	Maximum Surface Soil Concentration Sample ID	(feet bgs)	Sample Date	Concentration (mg/kg)	Notes
Other COCs												
2,4-Dinitrophenol	30	1.3E+02	4.3E-02	2	4.3E-02	$^{GW}Soil_{Ing}$	0.0333	TW-03(11-15)	11-15	3/14/2007	<0.0666U	SQL is greater than RAL
2-Methylphenol (o-Cresol)	30	1.5E+03	3.6E+00	1	3.6E+00	$^{GW}Soil_{Ing}$	0.00667	TW-02(10-12.5)	10-12.5	3/12/2007	0.153	
4-Methylphenol (p-Cresol)	30	3.0E+02	3.2E-01	1	3.2E-01	$^{GW}Soil_{Ing}$	0.00667	TW-02(10-12.5)	10-12.5	3/12/2007	0.161	
Acetone	30	5.4E+03	2.1E+01	1	2.1E+01	$^{GW}Soil_{Ing}$	0.625	TW-02(10-12.5)	10-12.5	3/12/2007	0.711	
Acetophenone	30	1.8E+03	4.1E+00	1	4.1E+00	$^{GW}Soil_{Ing}$		SB38-00	0	10/8/1998	0.053	
Aluminum	30	6.4E+04	8.6E+04	1	6.4E+04	$^{Tot}Soil_{Comb}$		WPW-M-001-P	0	12/13/1995	10	
Benzo(b)fluoranthene	30	5.7E+00	3.0E+01	1	5.7E+00	$^{Tot}Soil_{Comb}$	0.00667	TW-03(11-15)	11-15	3/14/2007	3.18	
Benzo(ghi)perylene	30	1.8E+03	2.3E+04	1	1.8E+03	$^{GW}Soil_{Ing}$	0.00667	TW-03(11-15)	11-15	3/14/2007	1.53	
Benzo(k)fluoranthene	30	5.7E+01	3.1E+02	1	5.7E+01	$^{Tot}Soil_{Comb}$	0.00667	TW-03(11-15)	11-15	3/14/2007	5.01	
bis(2-Chloroethyl)ether	30	1.4E+00	4.6E-03	2	4.6E-03	$^{GW}Soil_{Ing}$	0.00667	TW-03(2-5)	2-5	3/14/2007	<0.0144U	SQL is greater than RAL
Carbazole	30	2.3E+02	3.4E+01	2	3.4E+01	$^{GW}Soil_{Ing}$	0.00667	TW-02(10-12.5)	10-12.5	3/12/2007	3.14	
Dibenzo(a,h)anthracene	30	5.5E-01	7.6E+00	1	5.5E-01	$^{Tot}Soil_{Comb}$	0.00667	TW-03(11-15)	11-15	3/14/2007	0.593	
Di-n-Octylphthalate	30	1.3E+03	8.1E+05	1	1.3E+03	$^{Tot}Soil_{Comb}$		SB38-00	0	10/8/1998	0.05	
Indeno(1,2,3-cd)pyrene	30	5.7E+00	8.7E+01	1	5.7E+00	$^{GW}Soil_{Ing}$	0.00667	TW-03(11-15)	11-15	3/14/2007	1.86	
n-Nitrosodi-n-propylamine	30	4.0E-01	8.8E-04	2	8.8E-04	$^{GW}Soil_{Ing}$	0.00667	TW-03(2-5)	2-5	3/14/2007	<0.0478U	SQL is greater than RAL
Styrene	30	6.7E+03	1.6E+00	1	1.6E+00	$^{GW}Soil_{Ing}$	0.005	TW-02(10-12.5)	10-12.5	3/12/2007	0.0373	

Explanations
1) $^{Tot}Soil_{Comb}$ PCL = TRRP Tier 1 Protective Concentration Level for total soil combined pathway (30 acre source area).
2) $^{GW}Soil_{Ing}$ PCL = TRRP Tier 1 Protective Concentration Level for soil to Class 2 groundwater ingestion pathway (30 acre source area)

Notes
1) Residential land use assumed to provide most conservative TRRP PCLs.
2) Only COCs having at least one detection and/or a non-detection with a MQL greater than the RAL are included in this table.
3) U = not detected above SQL
4) bgs = below ground surface

TABLE 4C

SUBSURFACE SOIL RESIDENTIAL ASSESSMENT LEVELS WITH NO ECOLOGICAL COMPONENT
UPRR HOUSTON WOOD PRESERVING WORKS

COC	Source area size (acres)	$^{Air}Soil_{Inh-V}$ PCL[1] (mg/kg)	$^{GW}Soil_{Ing}$ PCL[2] (mg/kg)	Tier	Residential Assesment Level (mg/l)	exposure pathway	MQL (mg/kg)	Maximum Subsurface Soil Concentration Sample ID	Depth (feet bgs)	Sample Date	Concentration (mg/kg)	Notes
Site-Specific COCs												
1,2-Dichloroethane	30	7.1E+00	3.1E-02	2	3.1E-02	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	<0.62U	SQL is greater than RAL
Benzene	30	8.4E+01	1.0E-01	2	1.0E-01	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	1.1	
Chlorbenzene	30	7.7E+02	6.5E+00	2	6.5E+00	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	<0.62U	
Ethylbenzene	30	7.9E+03	4.4E+01	2	4.4E+01	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	19	
Methylene chloride	30	3.9E+02	2.2E-02	2	2.2E-02	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	<0.62U	SQL is greater than RAL
Toluene	30	3.9E+04	4.3E+01	2	4.3E+01	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	13	
Xylenes (tot)	30	7.9E+02	7.3E+02	2	7.3E+02	$^{GW}Soil_{Ing}$		HWPW-SB08-S18	18	3/6/1997	55	
1,2-Diphenylhydrazine	30	7.2E+01	2.3E-01	2	2.3E-01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
2,4-Dimethylphenol	30	2.6E+03	1.8E+01	2	1.8E+01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
2,4-Dinitrotoluene	30	1.5E+01	2.2E-02	2	2.2E-02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
2,6-Dinitrotoluene	30	2.2E+01	1.8E-02	2	1.8E-02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
2-Chloronaphthalene	30	---	5.0E+03	2	5.0E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	
4,6-Dinitro-o-cresol	30	2.4E+01	2.1E-03	2	2.1E-03	$^{GW}Soil_{Ing}$		SB-141(16-17.1)	16	6/23/2010	<0.004U	SQL is greater than RAL
2-Methylnaphthalene	30	---	1.3E+02	2	1.3E+02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	1700	
4-Nitrophenol	30	1.6E+02	8.9E-02	2	8.9E-02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<160U	SQL is greater than RAL
Acenaphthene	30	---	1.8E+03	2	1.8E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	460	
Acenaphthylene	30	---	3.0E+03	2	3.0E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33	
Anthracene	30	---	3.4E+03	1	3.4E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	280	
Benzo(a)anthracene	30	1.9E+03	1.3E+02	2	1.3E+02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	59	
Benzo(a)pyrene	30	4.4E+02	5.7E+01	2	5.7E+01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33	
bis(2-Chloroethoxy)methane	30	5.8E+00	7.7E-02	2	7.7E-02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
bis(2-Ethylhexyl)phthalate	30	---	1.2E+03	2	1.2E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33	
Chrysene	30	5.9E+05	1.2E+04	2	1.2E+04	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	56	
Dibenzofuran	30	---	2.5E+02	2	2.5E+02	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	360	
Di-n-butyl phthalate	30	3.0E+04	2.5E+04	2	2.5E+04	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33	
Fluoranthene	30	---	1.4E+04	2	1.4E+04	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	330	
Fluorene	30	---	2.2E+03	2	2.2E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	430	
Naphthalene	30	1.4E+02	2.3E+02	2	1.4E+02	$^{Air}Soil_{Inh-V}$		HWPW-SB08-S18	18	3/6/1997	17,000	
Nitrobenzene	30	2.9E+02	4.9E-01	2	4.9E-01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
N-Nitrosodiphenylamine	30	---	1.9E+01	2	1.9E+01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33U	SQL is greater than RAL
Pentachlorophenol	30	2.3E+02	1.2E-01	2	1.2E-01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<160	SQL is greater than RAL
Phenanthrene	30	---	3.1E+03	2	3.1E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	2600	
Phenol	30	1.7E+03	4.5E+01	2	4.5E+01	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	<33	
Pyrene	30	---	8.4E+03	2	8.4E+03	$^{GW}Soil_{Ing}$		HWPW-SB07-S19	19	3/6/1997	280	

Explanations

1) $^{Air}Soil_{Inh-V}$ PCL = TRRP Tier 1 Protective Concentration Level for inhalation of constituents volatilized from soil pathway (30 acre source area).

2) $^{GW}Soil_{Class\ 3}$ PCL = TRRP Tier 1 Protective Concentration Level for soil to Class 3 groundwater ingestion pathway (30 acre source area).

Notes

1) Residential land use assumed to provide most conservative TRRP PCLs.

2) Only COCs having at least one detection and/or a non-detection with a SQL greater than the RAL are included in this table.

3) U = not detected above SQL

3) J = estimated value. Concentration is between sample quanititation limit and method quantitation limit.

7) bgs = below ground surface

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	AOC-3E	AOC-3W	AOC-4NE	AOC-4NW	AOC-4SE		AOC-4SW	AOC-5E	AOC-5W	AOC-7	MW-10A	MW-11A	MW-12A
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	3/4/1997	3/4/1997	3/3/1997	3/3/1997	3/3/1997	8/28/2006	3/3/1997	4/10/1997	3/4/1997	3/3/1997	9/13/1994	9/15/1994	2/27/1997
							Sample Interval:	5'	5'	5'	5'	5'	0-2'	5'	5'	5'	5'	8-10'	6-8'	1'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	--	--	<0.005
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	0.02	0.007	<0.1	<0.1	<0.005
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.005
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	6.1	0.046	<0.1	<0.1	<0.005
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	--	--	<0.005
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	0.085	0.011	0.72	1.5	<0.005
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		<0.005	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	26	0.082	<0.1	<0.1	<0.005
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<0.33**	**<3.3**	**<0.33**	**<0.66**	**<0.66**	--	**<0.33**	**<10.3**	**<3.3**	**<165**	**<0.66**	**<0.66**	**<0.33**
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	**<165**	<0.66	<0.66	<0.33
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<0.33**	**<3.3**	**<0.33**	**<0.66**	**<0.66**	--	**<0.33**	**<10.3**	**<3.3**	**<165**	**<0.66**	**<0.66**	**<0.33**
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<0.33**	**<3.3**	**<0.33**	**<0.66**	**<0.66**	--	**<0.33**	**<10.3**	**<3.3**	**<165**	**<0.66**	**<0.66**	**<0.33**
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	<165	<0.66	<0.66	<0.33
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.33	5	<0.33	<0.66	<0.66	--	<0.33	<10.3	9.2	**<165**	<0.66	<0.66	<0.33
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<1.6**	**16**	**<1.6**	**<3.3**	**<3.3**	--	**<1.6**	**64**	**<16**	**<820**	**<3.3**	**<3.3**	**<1.6**
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<1.6**	**16**	**<1.6**	**<3.3**	**<3.3**	--	**<1.6**	**64**	**<16**	**<820**	**<3.3**	**<3.3**	**<1.6**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.33	8.8	<0.33	<0.66	<0.66	--	<0.33	<10.3	4.3	270	<0.66	<0.66	<0.33
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	<165	<0.66	<0.66	<0.33
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		<0.33	0.0086	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	460	<0.66	<0.66	<0.33
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		<0.33	3.6	<0.33	<0.66	<0.66	--	<0.33	**21.5**	<3.3	**220**	<0.66	<0.66	<0.33
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		<0.33	**<3.3**	<0.33	**<0.66**	**<0.66**	--	<0.33	**17.8**	**<3.3**	**<165**	**<0.66**	**<0.66**	<0.33
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<0.33**	**<3.3**	**<0.33**	**<0.66**	**<0.66**	--	**<0.33**	**<10.3**	**<3.3**	**<165**	**<0.66**	**<0.66**	**<0.33**
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<0.33	3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	**<165**	<0.66	<0.66	<0.33
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		<0.33	3.5	<0.33	<0.66	0.92	--	<0.33	34	<3.3	210	<0.66	<0.66	<0.33
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.33	6.7	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	190	<0.66	<0.66	<0.33
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	<165	<0.66	<0.66	<0.33
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		<0.33	20	<0.33	<0.66	2.8	--	<0.33	50.9	5.3	<101	<0.66	<0.66	<0.33
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<0.33	12	<0.33	<0.66	<0.66	--	<0.33	<10.3	4	330	<0.66	<0.66	<0.33
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	11	**220**	<0.66	<0.66	<0.33
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		<0.33	**<3.3**	<0.33	**<0.66**	**<0.66**	--	<0.33	**<10.3**	**<3.3**	**<165**	**<0.66**	**<0.66**	<0.33
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	**<165**	<0.66	<0.66	<0.33
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<1.6**	**<16**	**<1.6**	**<3.3**	**<3.3**	<0.0215	**<1.6**	**64**	**<16**	**<820**	**<3.3**	**<3.3**	**<1.6**
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		<0.33	36	<0.33	<0.66	1.1	--	<0.33	<10.3	12	950	<0.66	<0.66	<0.33
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.33	<3.3	<0.33	<0.66	<0.66	--	<0.33	<10.3	<3.3	**<165**	<0.66	<0.66	<0.33
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		<0.33	13	<0.33	<0.66	3.6	--	<0.33	58.3	5.9	880	<0.66	<0.66	<0.33

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	MW-13	MW-15A	MW-16	MW-18A	MW-26A	MW-30A	MW-31A	MW-32A	MW-33A	MW-52A	MW-57A	MW-58A	SB-02
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	Off-Site	On-Site	On-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	2/25/1997	2/25/1997	2/26/1997	2/26/1997	3/13/2000	12/8/2003	12/8/2003	12/29/2003	12/30/2003	2/27/2007	1/27/2009	1/27/2009	3/3/1997
							Sample Interval:	1'	15'	5'	1'	1'	9'	1-3'	0-2'	6-8'	11-13'	2-4'	2-4'	0-2.5'	7'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.005	<0.005	<0.005	<0.005	**<0.62**	<0.006	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.005
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.005	<0.005	<0.005	<0.005	**<0.62**	<0.006	<0.005	0.011	<0.004	<0.004	--	<0.005	<0.005	<0.005
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	<0.005	<0.005	<0.005	<0.005	<0.62	<0.006	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.005
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	<0.005	<0.005	<0.005	<0.005	4.2	<0.006	<0.005	0.037	<0.004	<0.004	--	<0.005	<0.005	<0.005
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.005	<0.005	0.005	<0.005	**<0.625**	0.004	<0.005	<0.005	<0.004	<0.004	--	--	--	<0.005
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	<0.005	<0.005	<0.005	<0.005	1.4	<0.006	<0.005	0.014	<0.004	<0.004	--	--	--	<0.005
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	<0.005	<0.005	<0.005	<0.005	42	<0.018	<0.01	0.086	<0.014007	<0.014007	--	--	--	<0.005
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	**<0.33**	**<0.33**	**<0.33**	**<3.3**	**<3.3**	<0.013	<0.0033	<0.0033	<0.00332	<0.00332	--	<0.0066	<0.0066	**<0.33**
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	<0.33	<0.33	<0.33	<3.3	<3.3	<0.03	0.01415 J	0.94	<0.01665	<0.01665	--	--	--	<0.33
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	**<0.33**	**<0.33**	**<0.33**	**<3.3**	**<3.3**	<0.002	<0.0033	<0.0033	<0.00332	<0.00332	--	--	--	**<0.33**
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	**<0.33**	**<0.33**	**<0.33**	**<3.3**	**<3.3**	<0.002	<0.0033	<0.0033	<0.00332	<0.00332	--	--	--	**<0.33**
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.33	<0.33	<0.33	<3.3	<3.3	<0.017	<0.016	<0.016	<0.01665	<0.01665	--	--	--	<0.33
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	--	--	--	--	**<0.05**	**<0.05**	**<0.0099**	**<0.0099**	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	<0.33	<0.33	<0.33	<3.3	6.9	<0.021	0.33	**291.7**	0.0046 J	0.00565 J	--	0.2	0.26	<0.33
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<1.6**	**<1.6**	**<1.6**	**<16**	**<3.3**	**<0.16**			--	--	--	--	--	**<1.6**
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	**<1.6**	**<1.6**	**<1.6**	**<16**	**<3.3**	**<0.24**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	--	--	--	**<1.6**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	<0.33	<0.33	<0.33	<3.3	6.3	<0.018	2.20	452.6	0.00473 J	0.00561 J	--	0.11	0.072	<0.33
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	<0.33	<0.33	<0.33	<3.3	<3.3	<0.013	0.199	16.6	<0.01665	<0.01665	--	--	--	<0.33
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	<0.33	<0.33	<0.33	<3.3	9.2	<0.01	3.51	294.2	0.01178 J	0.0113 J	--	--	--	<0.33
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	<0.33	<0.33	<0.33	<3.3	<3.3	<0.01	2.93	**156.1**	0.0289	<0.01665	**39.8**	2.4	1.3	<0.33
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	<0.33	<0.33	<0.33	**<3.3**	**<3.3**	<0.009	**1.61**	**70.6**	0.00231 J	0.00309 J	**13.1**	**2.7**	**1.2**	<0.33
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	**<0.33**	**<0.33**	**<0.33**	**<3.3**	**<3.3**	<0.03	<0.003	<0.003	<0.00332	<0.00332	--	--	--	**<0.33**
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	<0.33	<0.33	<0.33	<3.3	<3.3	0.009	0.04	<0.016	<0.01665	0.0771	--	--	--	<0.33
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	<0.33	<0.33	<0.33	<3.3	3.3	<0.01	3.11	163.7	0.02883	<0.01665	--	--	--	<0.33
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	<0.33	<0.33	<0.33	<3.3	4	<0.018	0.814	**291.5**	0.0062 J	0.00652 J	--	0.28	0.35	<0.33
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	<0.33	<0.33	<0.33	<3.3	<3.3	0.003	<0.016	<0.016	<0.01665	<0.01665	--	--	--	<0.33
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	0.4	<0.33	<0.33	<3.3	16	<0.018	21.87	1173.00	0.06617	0.01851 J	--	3.2	2.5	<0.33
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	<0.33	<0.33	<0.33	<3.3	5.6	<0.013	2.38	460.7	0.00608 J	0.00793 J	--	--	--	<0.33
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	<0.33	<0.33	<0.33	<3.3	46	<0.015	0.58	**166.8**	0.02521	0.0093	25.8	0.57	0.65	<0.33
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.33	<0.33	<0.33	**<3.3**	**<3.3**	<0.023	<0.016	<0.016	<0.01665	<0.01665	--	--	--	<0.33
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.33	<0.33	<0.33	<3.3	<3.3	<0.011	<0.016	<0.016	<0.01665	<0.01665	--	--	--	<0.33
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	**<1.6**	**<1.6**	**<1.6**	**<16**	**<3.3**	<0.011	0.0163	<0.016	<0.0099	<0.0099	**<0.486**	<0.0066	0.04	**<1.6**
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	0.49	<0.33	<0.33	<3.3	17	<0.012	12.52	1185	0.03322	0.04072	--	1	0.88	<0.33
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.33	<0.33	<0.33	<3.3	<3.3	<0.023	<0.016	<0.016	<0.01665	<0.01665	--	--	--	<0.33
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	<0.33	<0.33	<0.33	<3.3	9.9	<0.018	18.34	876.5	0.04961	0.01042 J	--	5.6	3.2	<0.33

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-03	SB-04	SB-06	SB-07	SB-08	SB-08	SB-50	SB-51	SB-52	SB-53	SB-54	SB-55	SB-56	SB-57
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	3/5/1997	3/5/1997	3/4/1997	3/6/1997	3/6/1997	3/6/1997	3/7/2000	12/4/2003	12/4/2003	12/4/2003	12/4/2003	12/4/2003	8/25/2006	4/28/2006
							Sample Interval:	5'	2.5'	4'	2.5'	4'	14'	7'	0	0	0	0	0	4'	0-1'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																					
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		<0.025	<0.025	<0.005	<0.025	<0.005	<0.005	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		<0.025	<0.025	<0.005	0.033	<0.005	0.071	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		<0.025	<0.025	<0.005	<0.025	<0.005	<0.005	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		0.031	<0.025	0.055	6.3	0.024	3.4	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		**<0.025**	**<0.025**	<0.005	**<0.025**	<0.005	<0.005	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		<0.025	<0.025	0.005	0.36	<0.005	2.6	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		0.089	0.07	0.14	22	0.046	11	<0.019	<0.015	<0.015	<0.015	<0.015	<0.015	--	--
Semivolatile Organic Compounds																					
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<3.3**	**<25**	**<8.2**	**<25**	**<33**	**<330**	<0.014	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	--	--
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<3.3	**<25**	<8.2	**<25**	**<33**	**<330**	<0.031	<0.0166	<0.0166	<0.0166	<0.0166	<0.0166	--	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<3.3**	**<25**	**<8.2**	**<25**	**<33**	**<330**	<0.002	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<3.3**	**<25**	**<8.2**	**<25**	**<33**	**<330**	<0.002	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	--	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<3.3	<25	<8.2	<25	<33	<330	<0.018	<0.0166	<0.0166	<0.0166	<0.0166	<0.0166	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	**<0.01**	**<0.01**	**<0.01**	**<0.01**	**<0.01**	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		78	**320**	72	**1300**	**420**	**360**	<0.022	0.021 J	0.0386 J	0.1692	<0.0166	0.01152 J	**139**	--
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<16**	**<120**	**<41**	**<124**	**<160**	**<1600**	**<0.18**	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<16**	**<120**	**<41**	**<124**	**<160**	**<1600**	**<0.25**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	**<0.05**	--	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		50	370	46	<701	450	<330	<0.019	0.046 J	0.204	1.315	0.011 J	0.00761 J	--	--
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<3.3	<25	<8.2	<25	<33	<330	<0.014	0.3398	1.141	6.867	0.1588	0.08347	--	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		24	250	25	400	480	<330	<0.01	0.3847	2.499	14.06	0.3398	0.2056	--	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		**7.9**	**130**	**8.2**	**130**	**160**	**<330**	<0.011	0.344	2.137	**17.09**	0.1617	0.2289	--	--
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		**<3.3**	**44**	**<8.2**	**27**	**62**	**<330**	<0.009	0.273	**1.884**	**14.31**	0.214	0.1766	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<3.3**	**<25**	**<8.2**	**<25**	**<33**	**<330**	<0.031	<0.0033	<0.0033	<0.00332	<0.00332	<0.00332	--	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<3.3	<25	<8.2	<25	<33	**<330**	0.12	<0.0166	0.2484	0.8855	0.03415 J	0.0276	--	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		8.6	130	9.9	130	180	<330	<0.01	0.417	2.885	22.32	0.2326	0.2858	--	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		40	**300**	43	<101	**600**	**<330**	<0.019	0.0234 J	0.1158	0.362	<0.0167	0.0261	--	--
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<3.3	<25	<8.2	<25	<33	<330	0.043	<0.0167	<0.0167	<0.0167	<0.0167	<0.0167	--	--
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		84	<25	52	**2500**	430	<330	0.002	0.6345	8.51	58.27	0.2602	<0.4485	--	--
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		46	370	41	1600	460	330	<0.014	0.122	0.3036	1.18	0.04914	0.02185	--	--
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		**180**	**540**	**132**	**3900**	**970**	**4600**	0.001	0.0568 J	0.1366	0.196	<0.0167	0.03988	**373**	--
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		**<3.3**	**<25**	**<8.2**	**<25**	**<33**	**<330**	<0.024	<0.0167	<0.0167	<0.0167	<0.0167	<0.0167	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<3.3	**<25**	<8.2	**<25**	**<33**	**<330**	<0.011	<0.0167	<0.0167	<0.0167	<0.0167	<0.0167	--	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<16**	**<120**	**<41**	**<124**	**<160**	**<1600**	<0.011	**0.488**	**0.409**	**0.453**	0.0253	0.0478	--	**0.382**
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		160	1600	82	**4100**	930	590	0.004	0.2558	2.857	7.537	0.03781 J	0.1721	--	--
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<3.3	<25	<8.2	<25	<33	**<330**	<0.024	0.0359 J	0.1298	0.16	<0.0167	0.0081 J	--	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		40	<25	30	1500	<33	<330	0.002 J	0.5936	7.565	50.4	0.278	0.348	--	--

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-59	SB-60		SB-61	SB-62	SB-73	SB-74	SB-79		SB-80		SB-81	
							On-Site/Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	8/21/2006	8/21/2006	8/21/2006	8/22/2006	8/21/2006	8/30/2006	8/28/2006	5/2/2006	5/2/2006	5/2/2006	5/2/2006	5/2/2006	5/2/2006
							Sample Interval:	0	0	5'	0	0	14'	14'	0	1.5-2'	0	1.5-2'	0	1.5-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	<0.00249	<0.00241	<0.0026	<0.00244	<0.00245	<0.00234
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		--	--	--	--	--	<0.0225	<0.0223	<0.0023	<0.00222	<0.0024	<0.00225	<0.00226	<0.00216
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	<0.00517	<0.00501	<0.0054	<0.00508	<0.00508	<0.00486
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		--	--	--	--	--	--	--	<0.00566	<0.00548	<0.0059	<0.00555	<0.00556	<0.00531
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	<0.00605	<0.00585	<0.00631	<0.00593	<0.00594	<0.00567
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	<0.00343	<0.00332	<0.00358	<0.00337	<0.00337	<0.00322
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	<0.016	<0.0155	<0.0167	<0.0157	<0.0157	<0.015
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		--	--	--	--	--	--	--	<0.00224	<0.0108	<0.00234	<0.00219	<0.0022	<0.0021
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		--	--	--	--	--	--	--	<0.00243	<0.0118	<0.00254	<0.00238	<0.00239	<0.00228
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		--	--	--	--	--	--	--	<0.000184	<0.00089	<0.000192	<0.00018	<0.000181	<0.000173
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		--	--	--	--	--	--	--	<0.00025	<0.00121	<0.000261	<0.000245	<0.000246	<0.000235
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		--	--	--	--	--	--	--	<0.00187	<0.00908	<0.00196	<0.00184	<0.00184	<0.00176
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	**<0.00738**	**<0.0357**	**<0.0077**	**<0.00723**	**<0.00725**	**<0.00693**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		--	--	--	--	--	42.3	**213**	<0.00185	0.0436	<0.00193	0.00785	<0.00182	<0.00174
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		--	--	--	--	--	--	--	**<0.017**	**<0.0825**	**<0.0178**	**<0.0167**	**<0.0167**	**<0.016**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		--	--	--	--	--	--	--	<0.00215	0.0419	<0.00225	0.0175	0.00713	<0.00202
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		--	--	--	--	--	--	--	0.0525	1.16	0.00611 J	0.644	0.159	0.0324
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		--	--	--	--	--	--	--	0.0927	1.29	0.0121	0.703	0.159	0.0343
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		--	--	0.00498 J	0.0217	--	--	--	0.0487	1.15	0.0139	0.215	0.0774	0.0225
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		--	**0.733**	0.0194	0.0266	--	--	--	0.151	**3.45**	0.0207	**1.5**	0.309	0.0906
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		--	--	--	--	--	--	--	<0.00242	<0.0117	<0.00252	<0.00237	<0.00238	<0.00227
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		--	--	--	--	--	--	--	0.0115	<0.0195	0.0128	0.0183	0.0185	<0.00378
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		--	--	--	--	--	--	--	0.0764	2.13	<0.0028	0.316	0.139	0.0383
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		--	--	--	--	--	--	--	<0.00199	0.0607	<0.00208	0.0132	0.00381 J	<0.00187
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		--	--	--	--	--	--	--	0.01	<0.0114	0.00514 J	0.00437 J	0.00481 J	0.00459 J
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		--	--	--	--	--	--	--	0.0267	1.4	0.0217	0.142	0.118	0.0188
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		--	--	--	--	--	--	--	0.03	0.0941	<0.00246	0.0697	0.023	<0.00221
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		--	--	--	--	--	104	**2530**	0.00879	0.119	0.00537 J	0.019	0.0052 J	0.015
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		--	--	--	--	--	--	--	<0.0031	<0.015	<0.00323	<0.00304	<0.00304	<0.00291
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		--	--	--	--	--	--	--	<0.00214	<0.0104	<0.00223	<0.0021	<0.0021	<0.00201
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		<0.01	0.0373		<0.0109	0.0299	--	--	<0.0108	<0.0523	<0.0113	<0.0106	<0.0106	<0.0101
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		--	--	--	--	--	--	--	0.00525 J	0.22	0.0119	0.0914	0.0265	0.00789
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		--	--	--	--	--	--	--	<0.00362	0.0872	<0.00377	0.0452	0.0237	<0.0034
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		--	--	--	--	--	--	--	0.0697	3.34	0.0205	0.216	0.159	0.0303

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-82		SB-83		SB-84		SB-86A	SB-86A2	SB-86A9		SB-86B	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	5/2/2006	5/2/2006	5/2/2006	5/2/2006	5/2/2006	5/2/2006	8/8/2006	8/8/2006	8/10/2006	8/10/2006	8/8/2006	8/8/2006
							Sample Interval:	0	1.5-2'	0	1.5-2'	0	1.5-2'	2-2.5'	2-2.5'	1.5-2.5'	2.5-3'	0	1.5-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		<0.00264	<0.00253	<0.00271	<0.00246	<0.00281	<0.00256	<0.00257	<0.00253	<0.00258	<0.00251	<0.00249	<0.00248
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		<0.00244	<0.00234	<0.0025	<0.00227	<0.00259	<0.00236	<0.00237	<0.00233	<0.00238	<0.00232	<0.00229	<0.00229
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		<0.00549	<0.00526	<0.00563	<0.00512	<0.00583	<0.00532	<0.00535	<0.00526	<0.00535	<0.00522	<0.00516	<0.00516
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		<0.006	<0.00575	<0.00616	<0.0056	<0.00638	<0.00582	0.00637	0.0263	<0.00585	<0.00571	<0.00565	<0.00564
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		<0.00641	<0.00615	<0.00658	<0.00598	0.01	<0.00622	<0.00624	<0.00614	<0.00625	<0.0061	<0.00603	<0.00603
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		<0.00364	<0.00349	<0.00374	<0.0034	<0.00387	<0.00353	<0.00355	<0.00349	<0.00355	<0.00346	<0.00343	<0.00343
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		<0.017	<0.0163	<0.0174	<0.0158	<0.0181	<0.0165	0.0215	0.107	<0.0166	<0.0162	<0.016	<0.016
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		<0.0119	<0.00455	<0.00243	<0.00221	<0.0126	<0.0046	<0.00462	<0.0114	<0.00463	<0.00225	<0.00223	<0.00223
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.0129	<0.00495	<0.00264	<0.0024	<0.0137	<0.005	0.0383	<0.0124	<0.00503	<0.00245	<0.00242	0.0126
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**0.162**	<0.000374	<0.0002	<0.000182	<0.00104	<0.000378	<0.00038	<0.000934	<0.00038	<0.000185	<0.000183	<0.000183
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		<0.00133	<0.00051	<0.000272	<0.000248	<0.00141	<0.000515	<0.000517	<0.00127	<0.000518	<0.000252	<0.00025	<0.00025
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.00994	<0.00382	<0.00204	<0.00185	<0.0106	<0.00386	<0.00387	<0.00952	<0.00388	<0.00189	<0.00187	<0.00187
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<0.0391**	**<0.015**	**<0.00802**	**<0.0073**	**<0.0416**	**<0.0152**	**<0.0152**	**<0.0375**	**<0.0153**	**<0.00743**	**<0.00736**	**<0.00736**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.00982	<0.00377	<0.00201	<0.00183	<0.0104	<0.00381	6.68	20.8	0.0288	<0.00186	<0.00185	0.0674
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<0.0903**	**<0.0347**	**<0.0185**	**<0.0168**	**<0.096**	**<0.035**	**<0.0352**	**<0.0865**	**<0.0352**	**<0.0172**	**<0.017**	**<0.017**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.0114	0.0317	<0.00234	0.00745	0.223	0.0277	31.7	97.7	0.106	0.0169	0.0133	0.538
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		1.16	1.02	0.0384	0.295	13.4	0.958	1.39	4.36	0.181	0.0215	0.123	0.172
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		0.804	0.577	0.0443	0.252	18.1	1.26	12.7	44.5	0.984	0.0921	0.271	2.11
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		0.286	0.357	0.0379	0.389	**21.6**	2.31	**17.6**	**40.8**	0.942	0.134	0.22	2.61
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		**1.38**	**2.63**	0.0878	**0.823**	**31.8**	**3.19**	**4.96**	**14.6**	**0.886**	0.07	0.258	**1.61**
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		<0.0128	<0.00492	<0.00263	<0.00239	<0.0136	<0.00498	<0.005	<0.0123	<0.005	<0.00244	<0.00241	<0.00241
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<0.0214	0.0433	0.0103	0.00912	0.746	0.0862	<0.00832	<0.0205	<0.00833	0.0148	0.03	<0.00402
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		0.465	0.878	0.0509	0.524	35.1	3.69	15.8	36.3	1.27	0.154	0.32	2.9
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.0106	<0.00406	<0.00217	<0.00197	0.131	0.0131	7.43	29.7	0.0902	0.00659 J	0.00945	0.223
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<0.0125	<0.0048	0.00506 J	0.00818	<0.0133	0.014	0.0335	0.0512	<0.00488	<0.00237	<0.00235	0.00521 J
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		0.395	0.158	0.0388	0.459	23.6	1.77	109	<21.67	1.98	0.674	0.627	16.5
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		0.118	0.13	0.0112	0.0301	1.16	0.131	16.9	64.2	0.17	0.0201	0.031	0.72
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		0.0796	0.0216	<0.00157	0.01	0.138	0.0291	12	35.4	0.0795	<0.00145	0.0046 J	0.149
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		<0.0164	<0.0063	<0.00337	<0.00306	<0.0175	<0.00637	<0.0064	<0.0157	<0.0064	<0.00312	<0.00309	<0.00309
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.0114	<0.00436	<0.00233	<0.00212	<0.0121	<0.00441	<0.00442	<0.0109	<0.00443	<0.00216	<0.00214	<0.00213
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		0.0826	0.0492	<0.0117	<0.0107	0.122	<0.0222	0.0279	0.0671	0.0267	<0.0109	**0.13**	0.0451
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		0.132	0.012	0.00854	0.0291	0.879	0.0706	39.7	176	1.46	0.154	0.177	3.29
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.0192	<0.00736	<0.00393	0.0179	2.54	0.0759	0.0367	<0.0184	<0.00748	<0.00364	<0.00361	<0.00361
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		0.518	0.372	0.0584	0.672	85.2	5.28	74.6	156	1.42	0.488	0.534	11.9

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-86C1		SB-87B		SB-88B		SB-89B		SB-90B		SB-91B	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	8/10/2006	8/10/2006	8/9/2006	8/9/2006	8/11/2006	8/11/2006	8/11/2006	8/11/2006	8/29/2006	8/29/2006	8/7/2006	8/7/2006
							Sample Interval:	1.5-2'	2-2.5'	0	1.5-2'	0	2.5-3'	0	2-2.5'	0	3-3.5'	0	1.5-3'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.00249	<0.00247	<0.00241	<0.00272	<0.00232	<0.00246	<0.00244	<0.00239	<0.00238	<0.00248	<0.00259	<0.00245
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.0023	<0.00228	<0.00222	<0.00251	<0.00214	<0.00227	<0.00225	<0.00221	<0.0022	<0.00229	<0.00238	<0.00226
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	<0.00518	<0.00513	<0.00501	<0.00566	<0.00482	<0.00511	<0.00507	<0.00497	<0.00495	<0.00515	<0.00537	<0.00509
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	<0.00567	<0.00561	<0.00547	<0.00619	<0.00527	<0.00559	<0.00555	0.0603	<0.00541	0.136	<0.00587	<0.00557
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.00605	<0.006	<0.00585	0.00838	<0.00563	0.00695	0.0167	0.00984	<0.00578	<0.00601	<0.00628	<0.00595
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	<0.00344	<0.00341	<0.00332	<0.00375	<0.0032	<0.00339	<0.00337	<0.0033	<0.00328	<0.00342	<0.00356	<0.00338
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	<0.016	<0.0159	<0.0155	<0.0175	<0.0149	<0.0158	<0.0157	0.196	<0.0153	2.55	<0.0166	0.0216
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.00224	<0.00222	<0.00433	<0.00245	<0.00417	<0.00221	<0.0219	<0.00215	<0.0107	<0.00223	<0.00465	<0.0022
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	<0.00243	<0.00241	0.0107	<0.00266	<0.00453	<0.0024	<0.0238	0.0452	<0.0116	<0.00242	<0.00505	0.0141
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	<0.000184	<0.000182	<0.000355	<0.000201	<0.000343	<0.000181	<0.0018	<0.000177	<0.00176	<0.000183	<0.000382	<0.000181
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	<0.000251	<0.000248	<0.000484	<0.000274	<0.000467	<0.000247	<0.00245	<0.00024	<0.0024	<0.000249	<0.00052	<0.000246
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.00188	<0.00186	<0.00362	<0.00205	<0.00349	<0.00185	<0.0184	<0.0018	<0.00896	<0.00186	<0.00389	<0.00184
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<0.00739**	**<0.00731**	**<0.0143**	**<0.00806**	**<0.0138**	**<0.00728**	**<0.0723**	**<0.00708**	**<0.0353**	**<0.00734**	**<0.0153**	**<0.00725**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	0.0345	0.00515 J	0.0178	0.0482	<0.00345	0.0559	0.385	0.432	<0.00885	2.71	0.148	4.38
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	**<0.017**	**<0.0169**	**<0.0329**	**<0.0186**	**<0.0317**	**<0.0168**	**<0.167**	**<0.0164**	**<0.0814**	**<0.0169**	**<0.0354**	**<0.0167**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	0.0871	0.0607	0.11	0.122	0.0183	0.14	28.6	0.663	0.0588	4.03	0.0485	18.5
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	0.0261	0.00601 J	0.266	0.116	0.346	0.0418	6.5	0.293	2.1	0.0928	0.133	0.713
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	0.116	0.162	0.966	0.552	0.816	0.179	28.9	3.02	2.01	2.26	0.16	11.1
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	0.101	0.153	0.567	0.874	2.25	0.238	**77.1**	1.77	1.34	0.847	0.395	**8.91**
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	0.111	0.107	0.488	**1.12**	**1.11**	0.189	**31.2**	**0.925**	**2.43**	0.232	**0.586**	**3.41**
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	<0.00242	<0.0024	<0.00468	<0.00264	<0.00451	<0.00239	<0.0237	<0.00232	<0.0116	<0.00241	<0.00502	<0.00238
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	0.0084	0.0464	0.0488	0.023	0.0385	0.037	<0.0395	<0.00387	<0.0193	<0.00401	0.0475	<0.00396
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	0.141	0.182	0.792	1.28	3.53	0.328	85.9	2.43	2.83	0.733	0.379	7.72
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	0.0367	0.015	0.0736	0.118	0.0188	0.0622	5.34	0.312	<0.00954	2.97	0.114	7.28
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	<0.00236	<0.00234	<0.00456	<0.00258	<0.0044	<0.00233	<0.0231	<0.00226	<0.0113	<0.00235	<0.0049	0.0238
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	0.394	0.955	2.65	2.95	7.04	0.674	457	12	2.74	8.99	1.25	59.5
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	0.0376	0.0567	0.165	0.14	0.059	0.08	23.8	0.836	0.106	4.21	0.0613	13.5
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	0.333	0.00933	0.0263	0.154	0.00966	0.207	0.173	3.21	0.0444	3.1	0.361	4.88
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.0031	<0.00307	<0.00599	<0.00338	<0.00577	<0.00306	<0.0303	<0.00297	<0.0148	<0.00308	<0.00643	<0.00304
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.00214	0.00485 J	<0.00414	<0.00234	<0.00399	<0.00211	<0.021	<0.00206	<0.0102	<0.00213	<0.00445	<0.0021
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.0108	0.0279	**0.202**	<0.0118	**0.153**	<0.0107	**3.13**	0.0138	**2.13**	0.0133	0.0297	0.0348
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	0.0861	0.285	1.34	2.17	0.357	0.167	230	4.53	0.25	16.5	0.253	51.4
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.00362	<0.00359	0.013	<0.00395	<0.00674	<0.00357	0.185	0.0123	0.0954	<0.0036	<0.00751	0.0237
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	0.317	0.678	2.05	2.25	7.48	0.588	322	7.91	3.96	4.08	1.32	32.2

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-92B	SB-93B	SB-94B	SB-95B	SB-96B	SB-99	SB-100		SB-101		SB-102	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	8/29/2006	8/25/2006	8/24/2006	8/16/2006	8/28/2006	4/27/2006	3/13/2007	3/13/2007	3/13/2007	3/13/2007	3/13/2007	3/13/2007
							Sample Interval:	4.5-5'	3.5-4'	4.5-5'	5-5.5'	4.7-5'	0-2'	0	1-2'	0	1-2'	0	1-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.00244	0.0108	<0.00241	<0.0024	<0.00241	--	<0.00304	<0.00297	<0.00329	<0.00316	<0.00367	<0.00296
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.00225	**0.206**	<0.00222	<0.00222	0.00641	--	<0.0021	<0.00205	<0.00227	<0.00219	<0.00254	<0.00205
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	<0.00506	<0.00515	<0.005	<0.00499	<0.005	--	<0.002	<0.00195	<0.00216	<0.00208	<0.00242	<0.00195
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	0.0609	0.0525	0.21	<0.00546	0.0838	--	<0.00175	<0.00171	<0.00189	<0.00182	<0.00212	<0.00171
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.00591	<0.00602	<0.00584	<0.00583	<0.00585	--	<0.004	<0.0039	<0.00433	<0.00417	<0.00484	<0.0039
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	0.00561	0.51	0.00951	<0.00331	0.0104	--	<0.00166	<0.00162	<0.0018	<0.00173	<0.00201	<0.00162
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	0.532	0.309	3.44	<0.01546	0.279	--	<0.00551	<0.00538	<0.00597	<0.00574	<0.00667	<0.00537
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.00219	<0.00223	<0.00216	<0.00216	<0.00217	--	<0.00001	<0.0000099	<0.000011	<0.000011	<0.00012	<0.0000099
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	0.0441	<0.0683	0.0161	<0.00235	<0.00235	--	<0.00251	<0.00245	<0.00272	<0.00262	<0.0304	<0.00245
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	<0.00018	<0.000183	<0.000178	<0.00297	<0.00297	--	<0.00019	<0.000185	<0.000206	<0.000198	<0.0023	<0.000185
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	<0.000245	<0.000249	<0.000242	<0.0036	<0.0036	--	<0.000259	<0.000253	<0.00028	<0.000269	<0.00313	<0.000252
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.00183	<0.00187	<0.00181	<0.00181	<0.00181	--	<0.00194	<0.00189	<0.0021	<0.00202	<0.0235	<0.00189
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<0.00722**	**<0.00735**	**<0.00714**	**<0.00713**	**<0.00714**	--	**<0.0104**	**<0.0102**	**<0.0113**	**<0.0108**	**<0.126**	**<0.0101**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	0.383	0.551	6.21	5.08	2.05	--	<0.00191	<0.00187	<0.00207	<0.00199	<0.0232	<0.00186
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	**<0.0167**	**<0.017**	**<0.0165**	**<0.01645**	**<0.0165**	--	<0.0047	<0.00459	<0.00509	<0.0049	**<0.213**	<0.00459
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	0.559	0.539	9.61	3.93	3.34	--	<0.00222	<0.00217	0.0109	<0.00232	0.0291	<0.00217
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	0.0108	0.0125	0.128	0.0821	0.07	--	<0.00186	<0.00182	0.00776	<0.00194	0.108	0.00574 J
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	0.107	0.0361	7.35	2.15	2.12	--	<0.00161	<0.00157	0.0286	<0.00168	0.163	0.0071
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	0.0479	0.181	2.4	0.5128	0.589	**55.9**	0.0103	0.00407 J	0.0466	<0.00204	0.338	0.00677
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	0.0141	0.0648	0.47	0.1564	0.18	**33.8**	0.0129	0.00576	0.101	0.00609	**0.982**	0.0108
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	<0.00237	<0.00241	<0.00234	<0.00234	<0.00234	--	<0.00031	<0.000303	<0.000336	<0.000323	<0.00375	<0.000302
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	<0.00394	<0.00768	0.0169	0.0160	0.0119	--	<0.00416	<0.00406	<0.00451	<0.00433	0.194	0.259
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	0.0412	0.16	2.33	0.4640	0.499	--	0.0173	0.0103	0.079	<0.00289	0.887	0.0172
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	0.457	0.479	7.9	3.21	2.52	--	<0.00206	<0.00201	0.00574 J	<0.00215	<0.025	<0.00201
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	0.0058 J	<0.00235	<0.00228	0.00639 J	<0.00228	--	<0.00244	<0.00238	<0.00264	<0.00254	<0.0295	0.00855
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	0.255	1.31	20.4	4.49	4.14	--	0.0207	0.0187	0.154	0.0072	0.392	0.0538
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	0.515	0.619	11.8	3.99	3.19	--	<0.00244	<0.00238	0.00974	<0.00254	<0.0295	<0.00238
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	0.971	1.41	10.4	7.14	4.7	33.5	<0.00149	<0.00145	0.00809	<0.00155	<0.018	<0.00145
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.00303	<0.00308	<0.003	<0.00299	<0.003	--	<0.0032	<0.00312	<0.00346	<0.00333	<0.0387	<0.00312
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.0021	<0.00213	<0.00207	<0.00207	<0.00207	--	<0.00221	<0.00216	<0.00239	<0.0023	0.02	<0.00216
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.0106	**1.47**	<0.0104	**0.2500**	<0.0104	**0.357**	<0.0104	0.0114	0.0862	<0.0108	**<0.126**	<0.0101
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	0.712	2.35	43.1	12.22	10.8	--	<0.00171	<0.00167	0.0646	<0.00178	0.0619	0.00833
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.00354	0.0289	0.00882	0.0102	<0.0035	--	<0.00374	<0.00365	<0.00405	<0.00389	<0.0452	<0.00364
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	0.27	0.7	12.5	2.61	2.68	--	0.0218	0.0154	0.112	0.00627 J	0.471	0.0344

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-103		SB-104			SB-105		SB-106	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	Off-Site	Off-Site
							Sample Date:	3/13/2007	3/13/2007	3/15/2007	3/15/2007	8/13/2008	3/13/2007	3/13/2007	3/13/2007	3/13/2007
							Sample Interval:	0	1-2'	0	1-2'	2-3'	0	1-2'	0	1-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		<0.00387	<0.00314	<0.00309	<0.00295	--	<0.00337	<0.00305	<0.00307	<0.00287
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		<0.00267	<0.00217	<0.00214	<0.00204	--	<0.00233	<0.00211	<0.00213	<0.00198
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		<0.00255	<0.00207	<0.00203	<0.00195	--	<0.00222	<0.00201	<0.00202	<0.00189
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		<0.00223	<0.00181	<0.00178	0.0408	--	<0.00194	<0.00176	<0.00177	<0.00165
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		<0.00509	<0.00414	<0.00407	<0.00389	--	<0.00444	<0.00402	<0.00405	<0.00377
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		<0.00212	<0.00172	<0.00169	<0.00162	--	<0.00184	<0.00167	<0.00168	<0.00157
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		<0.00702	<0.0057	<0.00561	0.0782	--	<0.00612	<0.00554	<0.00558	<0.0052
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		<0.00026	<0.00001	<0.00021	**1.84**	--	<0.000011	<0.00001	<0.001	<0.000095
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.0639	<0.0026	<0.0511	<0.244	--	<0.00279	<0.00253	<0.255	<0.0237
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		<0.00483	<0.000197	<0.00386	<0.0185	--	<0.000211	<0.000191	<0.0192	<0.00179
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		<0.00658	<0.000268	<0.00526	**<0.0252**	--	<0.000287	<0.00026	**<0.0262**	<0.00244
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.0493	<0.00201	<0.0394	<0.188	--	<0.00215	<0.00195	<0.196	<0.0183
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<0.265**	**<0.0108**	**<0.212**	**<1.1**	--	**<0.0115**	**<0.0105**	**<1.05**	**<0.0982**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.0487	<0.00198	<0.0389	13.2	--	<0.00212	<0.00192	<0.194	<0.018
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<0.12**	<0.00487	**<0.0957**	**<0.458**	--	<0.00522	<0.00474	**<0.477**	**<0.0444**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.0566	<0.0023	<0.0452	949	--	<0.00247	<0.00224	<0.225	<0.021
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		0.221	0.00536 J	<0.0379	19.8	--	<0.00206	<0.00187	2.27	0.2
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		0.269	0.00719	<0.0328	669	--	<0.00179	<0.00162	<0.163	<0.0152
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		0.708	0.0197	<0.0399	**401**	0.0185	0.0134	<0.00197	5.49	0.447
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		**1.77**	0.0652	0.147	**13.1**	0.0196	0.0149	0.0039	**10.6**	**1.17**
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		<0.00789	<0.000321	<0.0063	<0.0301	--	<0.000344	<0.000312	<0.0314	<0.00292
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		0.415	<0.00431	0 J	<0.405	--	<0.00461	<0.00419	<0.422	0.137
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		1.75	0.04	<0.0564	392	--	<0.00308	<0.00279	13.5	1.11
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.0525	<0.00213	<0.0419	**370**	--	<0.00229	<0.00208	<0.209	<0.0194
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<0.062	0.00548 J	<0.0496	<0.237	--	<0.0027	<0.00245	<0.247	<0.023
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		1.35	0.0393	0.151	**2990**	--	0.0563	0.00962	6.47	0.375
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<0.062	<0.00252	<0.0496	1090	--	0.00467 J	<0.00245	<0.247	<0.023
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		<0.0379	<0.00154	<0.0302	1.33	--	<0.00165	<0.0015	<0.151	<0.014
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		<0.0814	<0.00331	<0.0651	<0.311	--	<0.00355	<0.00322	<0.324	<0.0302
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.0563	<0.00229	<0.045	<0.215	--	<0.00245	<0.00223	<0.224	<0.0209
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<0.265**	<0.0108	**<0.212**	**<1.01**	<0.0103	0.0117	<0.0105	**<1.05**	<0.0982
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		0.127	<0.00177	<0.0348	**3340**	--	0.0413	0.00434 J	<0.173	0.0234
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.0951	<0.00387	<0.076	<0.363	--	<0.00414	<0.00376	<0.379	<0.0352
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		1.86	0.0449	0.114	1610	--	0.0457	0.00697	17.2	0.978

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-107	SB-108	SB-109	SB-110		SB-111		SB-112	
							On-Site/Off-Site	On-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	3/13/2007	8/13/2008	8/13/2008	8/13/2008	8/13/2008	8/13/2008	8/13/2008	2/3/2009	2/3/2009
							Sample Interval:	0	0-2'	0-2'	0	0-2'	0	0-2'	0	0-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.00343	<0.00304	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.00237	<0.0021	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	<0.00226	<0.002	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	<0.00198	<0.00175	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.00452	<0.004	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	<0.00188	<0.00166	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	<0.00623	<0.00551	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.00011	<0.00025	--	--	--	--	--	--	<0.0066	<0.0066
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	<0.0284	<0.0628	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	<0.00215	<0.00475	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	<0.00292	<0.00647	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.0219	<0.0485	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<0.118**	**<0.26**	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	<0.0216	0.108	--	--	--	--	--	--	0.005 J	0.0075 J
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	**<0.0532**	**<0.0532**	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	<0.0251	<0.0556	--	--	--	--	--	--	0.0061 J	0.0086 J
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	0.163	0.392	--	--	--	--	--	--	--	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	0.17	0.4	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	0.309	1.26	**15.3**	0.0585	4.3	2.17	2.43	0.0839	0.06	0.12
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	**0.92**	**3.6**	**23.2**	0.0716	**5.86**	**2.58**	**1.65**	0.0907	0.069	0.1
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	<0.0035	<0.00775	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	<0.047	<0.104	--	--	--	--	--	--	--	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	0.563	2.01	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	<0.0233	0.128	--	--	--	--	--	--	0.0049 J	0.0092
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	<0.0275	<0.061	--	--	--	--	--	--		
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	0.439	1.3	--	--	--	--	--	--	0.13	0.22
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	<0.0275	<0.061	--	--	--	--	--	--		
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	0.02	0.3	--	--	--	--	--	--	0.0051 J	0.0075 J
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.0362	<0.08	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.025	<0.0553	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.118	**<0.26**	**<0.477**	<0.00926	<0.0511	<0.053	<0.0943	<0.00962	0.022	0.023
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	0.0746	0.369	--	--	--	--	--	--	0.042	0.07
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.0422	<0.0935	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	0.542	1.85	--	--	--	--	--	--	0.12	0.21

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-113	SB-114		SB-115		SB-116		SB-117		SB-118	SB-119	SB-120	SB-121
							On-Site/Off-Site	On-Site	On-Site	On-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	2/3/2009	2/3/2009	2/3/2009	1/28/2009	1/28/2009	1/28/2009	1/28/2009	1/28/2009	1/28/2009	1/27/2009	1/27/2009	1/27/2009	1/27/2009
							Sample Interval:	0	0-2'	0	0	1.5-2'	0	1.5-2'	0	1.5-2'	0-2.5'	0-2.5'	0-2.5'	2.5-5'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		--	--	--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		--	--	--	--	--	--	--	--	--	0.0016 J	<0.005	0.0026 J	<0.005
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.0066	0.03	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	0.018 J	0.034	0.096	0.047
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.0066	0.025	<0.0066	<0.0066	<0.0066	0.0061	<0.0066	<0.0066	<0.0066	<0.0066	0.029 J	0.051	0.028 J	0.022
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		0.07	0.26	0.015	0.036	0.0048 J	<0.0066	0.024	<0.0066	0.038	0.039	0.24	0.18	0.36	0.085
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		0.083	0.27	0.019	0.035	0.0056 J	<0.0066	0.028	<0.0066	0.061	0.045	0.31	0.28	0.35	0.14
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		0.0058 J	0.029	<0.0066	<0.0066	<0.0066	0.0065	<0.0066	<0.0066	<0.0066	<0.0066	0.026 J	0.051	0.1	0.054
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1				--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		0.13	0.69	0.025	0.08	0.0072 J	0.0048	0.061	<0.0066	0.064	0.087	0.27	0.26	0.47	0.15
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2				--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		0.0063 J	0.024	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	0.039	0.069	0.25	0.14
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		0.0046 J	0.0091	<0.0066	<0.0066	<0.0066	<0.0066	0.0086	<0.0066	0.016	0.012	0.078	<0.0066	<0.0066	<0.0066
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		0.037	0.48	0.01	0.015	<0.0066	0.011	0.013	<0.0066	0.018	0.012	0.097	0.26	0.26	0.16
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		0.15	0.61	0.028	0.066	0.0071 J	0.0047	0.057	<0.0066	0.082	0.092	0.43	0.33	0.68	0.2

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-122	SB-123	SB-124	SB-125	SB-126	SB-127	SB-128	SB-129	SB-130	SB-131	SB-132	SB-133	SB-134	SB-135
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	1/27/2009	1/27/2009	1/27/2009	1/27/2009	1/27/2009	1/28/2009	1/28/2009	1/28/2009	1/27/2009	1/27/2009	1/27/2009	1/27/2009	1/27/2009	1/28/2009
							Sample Interval:	2-4'	0-2.5'	0-2.5'	0-2.5'	2-4'	3-4'	0-1.5'	3-4'	1-3'	1.5-3.5'	1-3'	0-2'	2.5-4.5'	2-3'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																					
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		0.11	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																					
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	0.012	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		77	0.19	0.32	0.18	0.0022 J	0.0076	0.0041	<0.0066	<0.0066	0.087	<0.0066	<0.0066	<0.0066	<0.0066
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		100	0.2	0.17	0.067	<0.0066	0.0099	<0.0066	<0.0066	<0.0066	0.15	<0.0066	<0.0066	<0.0066	<0.0066
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		**31**	1.4	**5.9**	0.2	<0.0066	0.031	0.024	<0.0066	0.007 J	4.5	0.0081	<0.0066	0.042	<0.0066
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		**10**	**2.6**	**6**	0.23	<0.0066	0.035	0.026	<0.0066	0.0067 J	**4.7**	0.011	<0.0066	0.074	<0.0066
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		93	0.21	0.35	0.048	<0.0066	0.0065	<0.0066	<0.0066	<0.0066	0.12	<0.0066	<0.0066	<0.0066	<0.0066
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		120	2.7	8.4	0.24	<0.0066	0.08	0.058	<0.0066	0.014	8.1	0.018	0.0049 J	0.062	<0.0066
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		120	0.59	0.94	0.99	<0.0066	0.0071	<0.0066	<0.0066	<0.0066	0.11	<0.0066	<0.0066	<0.0066	<0.0066
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		<0.0066	0.066	**0.32**	0.014	<0.0066	<0.0066	0.0039	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066	<0.0066
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		220	0.84	0.99	0.12	<0.0066	0.048	0.026	<0.0066	0.0044 J	4	0.0079	<0.0066	0.033	<0.0066
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		94	3.6	12	0.55	<0.0066	0.1	0.069	<0.0066	0.011	8	0.017	0.005 J	0.053	<0.0066

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-136	SB-137	SB-138	SB-139	SB-139	SB-140	SB-140	SB-141	SB-142	SB-143	SB-144	SB-145	SB-146	SB-146
							On-Site/Off-Site	On-Site	On-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	1/28/2009	1/28/2009	6/24/2010	6/24/2010	6/24/2010	6/23/2010	6/23/2010	6/23/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010
							Sample Interval:	1-2.5'	1-2'	6-8'	0-2'	13-14.4'	0-2'	13-14.3'	0-2'	0-2'	1.5-2.5'	12-13'	1.5-2.5'	0-2'	14-14.8'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																					
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	--	--	<0.00057	<0.00053	<0.00058	<0.00056	<0.0006	<0.00053	<0.00053	<0.00059	<0.00059	<0.00064	<0.00055	<0.0006
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.005	<0.005	<0.00057	<0.00053	<0.00058	<0.00056	<0.0006	<0.00053	<0.00053	<0.00059	<0.00059	<0.00064	<0.00055	<0.0006
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	--	--	<0.00057	<0.00053	<0.00058	<0.00056	<0.0006	<0.00053	<0.00053	<0.00059	<0.00059	<0.00064	<0.00055	<0.0006
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	<0.005	<0.005	<0.00057	<0.00053	<0.00058	<0.00056	<0.0006	<0.00053	<0.00053	<0.00059	0.0057 J	0.00064 J	0.00055 J	<0.0006
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	--	--	<0.0016	<0.0015	<0.0016	<0.0016	<0.0017	<0.0015	<0.0015	<0.0016	<0.0016	<0.0018	<0.0015	<0.0017
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	--	--	<0.00057	<0.00053	<0.00058	<0.00056	<0.0006	<0.00053	<0.00053	<0.00059	<0.00059	<0.00064	<0.00055	<0.0006
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	--	--	<0.0011	<0.0011	<0.0012	<0.0011	<0.0012	<0.0011	<0.0011	<0.0012	0.0079 J	<0.0013	<0.0011	<0.0012
Semivolatile Organic Compounds																					
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.0066	<0.0066	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	<0.023	<0.012	<0.026	<0.0026	<0.028	<0.012	<0.0026
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	--	--	<0.0038	<0.035	0.025	<0.0037	<0.004	<0.035	<0.018	0.018	<0.0039	0.11	<0.018	<0.0039
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	--	--	<0.0038	**<0.035**	<0.0038	<0.0037	<0.004	**<0.035**	<0.018	**<0.039**	<0.0039	**<0.042**	<0.018	<0.0039
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	--	--	<0.0037	**<0.034**	<0.0037	<0.0036	<0.0038	**<0.034**	<0.017	**<0.038**	<0.0038	**<0.041**	**<0.018**	<0.0038
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	--	--	<0.0047	<0.044	<0.0047	<0.0046	<0.0049	<0.043	<0.022	<0.048	<0.0048	<0.052	<0.023	<0.0049
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	**<0.0038**	**<0.035**	**<0.0038**	**<0.0037**	**<0.004**	**<0.035**	**<0.018**	**<0.039**	**<0.0039**	**<0.042**	**<0.018**	**<0.0039**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	0.031	<0.0066	<0.0031	<0.029	<0.0031	<0.003	<0.0032	<0.028	0.022 J	1.2	1.3	0.12	<0.15	<0.0032
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	--	--	<0.0044	**<0.04**	<0.0044	<0.0043	<0.0046	**<0.04**	**<0.02**	**<0.045**	<0.0045	**<0.048**	**<0.021**	<0.0045
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	<0.0066	<0.0066	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	0.041 J	<0.012	3.2	3.9	0.11	0.026 J	<0.0026
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	--	--	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	0.091	0.095	1.5	<0.0026	1.8	0.19	<0.0026
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	--	--	<0.0025	0.13	0.0073 J	<0.0025	<0.0026	0.3	0.36	3.7	1.7	3.7	0.46	<0.0026
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	0.05	0.038	<0.0032	0.14	<0.0032	<0.0032	<0.0034	0.28	0.11	1.1	0.35	3.0	0.2	<0.0033
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	0.049	0.044	<0.0026	0.29	<0.0027	<0.0026	<0.0028	0.44	0.31	**3.1**	0.11	**4.3**	0.33	<0.0027
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	--	--	<0.0028	<0.026	<0.0028	<0.0027	<0.0029	<0.025	<0.013	<0.028	<0.0028	<0.031	<0.013	<0.0029
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	--	--	<0.0076	0.13	<0.0076	<0.0074	<0.0079	<0.07	1.5	<0.078	<0.0077	<0.084	<0.036	<0.0079
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	--	--	<0.0033	0.22	<0.0033	<0.0033	0.005 J	0.35	0.16	2.5	0.39	4.5	0.26	<0.0035
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	<0.0066	<0.0066	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	0.024 J	0.024 J	3.2	4.2	0.16	0.02 J	<0.0026
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	--	--	<0.0029	0.077	<0.0029	<0.0028	<0.003	<0.026	<0.013	<0.029	<0.0029	<0.032	<0.014	<0.003
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	0.082	0.07	<0.0025	0.41	0.0059 J	<0.0025	0.0078 J	0.8	0.24	5.8	3.6	7.5	0.43	<0.0026
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	--	--	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	0.053 J	0.027 J	2.8	3.9	0.27	0.069	<0.0026
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	<0.0066	<0.0066	<0.0038	<0.035	<0.0038	<0.0037	0.0052 J	<0.035	0.076	5.0	5.3	0.3	0.051	<0.0039
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	--	--	<0.0038	<0.035	<0.0038	<0.0037	<0.004	<0.035	<0.018	<0.039	<0.0039	<0.042	<0.018	<0.0039
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	--	--	<0.0025	<0.023	<0.0025	<0.0025	<0.0026	<0.023	<0.012	<0.026	<0.0026	<0.028	<0.012	<0.0026
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.0066	<0.0066	<0.0032	0.014	<0.0032	<0.0032	<0.0034	0.019	0.012	<0.0033	<0.0033	<0.0036	**0.14**	0.015
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	0.056	0.033	<0.0034	0.17	<0.0035	<0.0034	0.0049 J	0.41	0.082	2.3	10	0.95	0.25	0.0045 J
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	--	--	<0.0038	<0.035	<0.0038	<0.0037	<0.004	<0.035	<0.018	<0.039	<0.0039	0.074 J	0.02 J	<0.0039
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	0.086	0.078	<0.0025	0.34	<0.0025	<0.0025	0.0056 J	0.62	0.23	5.4	2.0	9.0	0.35	<0.0026

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SB-147	SB-147	SSO-11		SSO-A01	SSO-A02		SSO-A03	SSO-A04	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	6/22/2010	6/22/2010	4/9/1997	5/1/2006	4/8/1997	4/8/1997	8/29/2006	4/8/1997	4/8/1997	8/28/2006
							Sample Interval:	2-2.9'	13-14.3'	2'	0-4'	2'	2'	0-2'	2'	2'	0-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.00063	<0.00059	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2	<0.00063	<0.00059	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2	<0.00063	<0.00059	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2	<0.00063	<0.00059	--	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.0018	0.0029 J	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2	<0.00063	<0.00059	--	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2	<0.0013	<0.0012	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.0028	<0.0026	**8.33**	--	**2.66**	**2.66**	--	**1.33**	**6.66**	--	
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	<0.0041	<0.0039	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	<0.0041	<0.0039	**<8.33**	--	**<2.66**	**<2.66**	--	**<1.33**	**<6.66**	--	
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	<0.004	<0.0038	**<8.33**	--	**<2.66**	**<2.66**	--	**<1.33**	**<6.66**	--	
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.0051	<0.0048	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<0.0041**	**<0.0039**	--	--	--	--	--	--	--	--	
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	<0.0034	<0.0032	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1	--	--	**40**	--	**<12.8**	**<12.8**	--	**<6.4**	**<32**	--	
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	<0.0048	<0.0045	**40**	--	**<12.8**	**<12.8**	--	**<6.4**	**<32**	--	
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	<0.0028	<0.0026	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	<0.0028	<0.0026	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	<0.0028	<0.0026	13	--	<2.66	<2.66	--	<1.33	<6.66	--	
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1	<0.0035	<0.0033	**10.8**	--	<2.66	<2.66	--	<1.33	**<6.66**	--	
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1	<0.0029	<0.0027	**<8.33**	**8.35**	**<2.66**	**<2.66**	**8.35**	**<1.33**	**<6.66**	--	
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	<0.003	<0.0028	**<8.33**	--	**<2.66**	**<2.66**	--	**<1.33**	**<6.66**	--	
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	--	--	--	--	--	--	--	--	--	--	
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	--	--	--	--	--	--	--	--	--	--	
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1	<0.0083	<0.0078	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1	<0.0036	<0.0034	10.8	--	<2.66	<2.66	--	<1.33	<6.66	--	
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	<0.0028	<0.0026	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1	<0.0031	<0.0029	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1	<0.0028	<0.0026	57.8	--	<2.66	9.28	--	<1.33	<6.66	--	
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	<0.0028	<0.0026	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1	<0.0041	<0.0039	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.0041	<0.0039	**<8.33**	--	**<2.66**	**<2.66**	--	**<1.33**	**<6.66**	--	
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.0028	<0.0026	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.0035	<0.0033	**40**	**0.152**	**<12.8**	**<12.8**	<0.0103	**<6.4**	**<32**	<0.0108	
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2	<0.0038	<0.0035	60.2	--	<2.66	6.12	--	<1.33	<6.66	--	
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.0041	<0.0039	<8.33	--	<2.66	<2.66	--	<1.33	<6.66	--	
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1	<0.0028	<0.0026	40	--	<2.66	8.16	--	<1.33	<6.66	--	

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SSO-A05	SSO-A06		SSO-B01	SSO-B02	SSO-B03		SSO-B04	SSO-B05	SSO-B06	SSO-C01	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	4/8/1997	4/8/1997	8/30/2006	4/8/1997	4/8/1997	4/8/1997	8/30/2006	4/8/1997	4/8/1997	4/8/1997	4/8/1997	8/29/2006
							Sample Interval:	2'	2'	0-2'	2'	2'	2'	0-2'	2'	2'	2'	2'	0-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<0.333**	**1.33**	--	**<1.33**	--	**<0.333**	--	**<0.333**	**<1.33**	**<1.33**	**<2.66**	--
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.333	<1.33	--	<1.33	--	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<0.333**	**<1.33**	--	**<1.33**	**<0.333**	**<0.333**	--	**<0.333**	**<1.33**	**<1.33**	**<2.66**	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<0.333**	**<1.33**	--	**<1.33**	**<0.333**	**<0.333**	--	**<0.333**	**<1.33**	**<1.33**	**<2.66**	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<1.6**	**<6.4**	--	**<6.4**	**<1.6**	**<1.6**	--	**<1.6**	**<6.4**	**<6.4**	**<12.8**	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<1.6**	**<6.4**	--	**<6.4**	**<1.6**	**<1.6**	--	**<1.6**	**<6.4**	**<6.4**	**<12.8**	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		<0.333	**<1.33**	--	**<1.33**	<0.333	<0.333	--	<0.333	**<1.33**	**<1.33**	**<2.66**	--
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<0.333**	**<1.33**	--	**<1.33**	**<0.333**	**<0.333**	--	**<0.333**	**<1.33**	**<1.33**	**<2.66**	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		<0.333	<1.33	--	1.8	0.382	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		<0.333	<1.33	--	2.54	0.501	<0.333	--	0.671	<1.33	1.37	<2.66	--
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		<0.333	**<1.33**	--	**<1.33**	<0.333	<0.333	--	<0.333	**<1.33**	**<1.33**	**<2.66**	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<1.6**	**<6.4**	0.0763	**<6.4**	**<1.6**	**<1.6**	<0.0484	**<1.6**	**<6.4**	**<6.4**	**<12.8**	0.0892
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.333	<1.33	--	<1.33	<0.333	<0.333	--	<0.333	<1.33	<1.33	<2.66	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		<0.333	<1.33	--	2.09	0.463	<0.333	--	0.622	<1.33	1.34	<2.66	--

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SSO-C02	SSO-C03		SSO-C04	SSO-C05			SSO-C06		SSO-D01	SSO-D02	SSO-F07	SSO-F08	
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site
							Sample Date:	4/8/1997	4/8/1997	8/29/2006	4/8/1997	4/8/1997	8/31/2006	8/31/2006	4/8/1997	8/31/2006	4/8/1997	4/8/1997	4/9/1997	4/9/1997	4/27/2006
							Sample Interval:	2'	2'	2'	2'	2'	4'	0-2'	2'	0-2'	2'	2'	2'	2'	1.5-2'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																					
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																					
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<0.333**	**<6.66**	--	**<0.333**	**<0.333**	--	--	**<1.33**	--	**<0.333**	**<0.333**	**<6.66**	**<1.33**	--
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<0.333**	**<6.66**	--	**<0.333**	**<0.333**	--	--	**<1.33**	--	**<0.333**	**<0.333**	**<6.66**	**<1.33**	--
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<0.333**	**<6.66**	--	**<0.333**	**<0.333**	--	--	**<1.33**	--	**<0.333**	**<0.333**	**<6.66**	**<1.33**	--
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.333	<6.66	--	<0.333	<0.333	**282**	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<1.6**	**<32**	--	**<1.6**	**<1.6**	--	--	**<6.4**	--	**<1.6**	**<1.6**	**<32**	**<6.4**	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<1.6**	**<32**	--	**<1.6**	**<1.6**	--	--	**<6.4**	--	**<1.6**	**<1.6**	**<32**	**<6.4**	--
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	0.456	<0.333	<6.66	<1.33	--
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		<0.333	**<6.66**	--	<0.333	<0.333	--	--	<1.33	--	0.385	<0.333	**<6.66**	<1.33	0.203
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		<0.333	**<6.66**	--	<0.333	<0.333	--	--	**<1.33**	--	<0.333	<0.333	**<6.66**	**<1.33**	0.237
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<0.333**	**<6.66**	--	**<0.333**	**<0.333**	--	--	**<1.33**	--	**<0.333**	**<0.333**	**<6.66**	**<1.33**	--
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		0.383	10.1	--	<0.333	<0.333	--	--	<1.33	--	0.586	<0.333	<6.66	<1.33	--
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		0.537	35.2	--	<0.333	<0.333	--	--	<1.33	--	1.06	<0.333	<6.66	1.46	--
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		<0.333	<6.66	--	<0.333	<0.333	**711**	--	<1.33	0.131	<0.333	<0.333	<6.66	<1.33	0.0267
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		<0.333	**<6.66**	--	<0.333	<0.333	--	--	**<1.33**	--	<0.333	<0.333	**<6.66**	**<1.33**	--
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<1.6**	**<32**	0.0733	**<1.6**	**<1.6**	--	0.0793	**<6.4**	**0.181**	**<1.6**	**<1.6**	**<32**	**<6.4**	0.0353
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		<0.333	12.8	--	<0.333	<0.333	--	--	<1.33	--	0.493	<0.333	<6.66	<1.33	--
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.333	<6.66	--	<0.333	<0.333	--	--	<1.33	--	<0.333	<0.333	<6.66	<1.33	--
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		0.47	20.9	--	<0.333	<0.333	--	--	<1.33	--	0.832	<0.333	<6.66	<1.33	--

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-1
SUMMARY OF SURFACE SOIL SAMPLING RESULTS
UPRR Houston Wood Preserving Works

							Location ID:	SSO-F09	SSO-F10	SSO-G07	SSO-G08	SSO-G09	SSO-G10	SSO-G11	WPW-S-002P	WPW-S-003P	WPW-S-004P	WPW-S-007P	WPW-S-009P
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	Off-Site	Off-Site	Off-Site	On-Site	On-Site
							Sample Date:	4/9/1997	4/9/1997	4/9/1997	4/9/1997	4/9/1997	4/9/1997	4/9/1997	12/13/1995	12/13/1995	12/13/1995	12/13/1995	12/13/1995
							Sample Interval:	2'	2'	2'	2'	2'	2'	2'	0	0	0	0	0
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Benzene	71-43-2	8260	1.05E-01	2	1.05E-01	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene	108-90-7	8260	6.52E+00	2	6.52E+00	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	100-41-4	8260	4.37E+01	2	4.37E+01	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	108-88-3	8260	4.32E+01	2	4.32E+01	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Xylenes (tot)	1330-20-7	8260	7.32E+02	2	7.32E+02	2		--	--	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<1.33**	**<33.3**	**<1.33**	**<1.67**	**<0.333**	**<0.333**	**<1.33**	**<0.33**	**<0.33**	**<0.66**	**<0.66**	**<0.66**
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<1.33	**<33.3**	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<1.33**	**<33.3**	**<1.33**	**<1.67**	**<0.333**	**<0.333**	**<1.33**	**<0.33**	**<0.33**	**<0.66**	**<0.66**	**<0.66**
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<1.33**	**<33.3**	**<1.33**	**<1.67**	**<0.333**	**<0.333**	**<1.33**	**<0.33**	**<0.33**	**<0.66**	**<0.66**	**<0.66**
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<6.4**	**<160**	**<6.4**	**<8**	**<1.6**	**<1.6**	**<6.4**	**<1.6**	**<1.6**	**<3.3**	**<3.3**	**<3.3**
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<6.4**	**<160**	**<6.4**	**<8**	**<1.6**	**<1.6**	**<6.4**	**<1.6**	**<1.6**	**<3.3**	**<3.3**	**<3.3**
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		<1.33	<33.3	4.13	2.51	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Benzo(a)anthracene	56-55-3	8270	5.65E+00	1	2.36E+01	1		<1.33	**44.6**	<1.33	2.72	<0.333	<0.333	<1.33	<0.33	<0.33	1.1	<0.66	<0.66
Benzo(a)pyrene	50-32-8	8270	5.64E-01	1	2.37E+00	1		**<1.33**	**<33.3**	**<1.33**	**1.69**	<0.333	<0.333	**<1.33**	<0.33	<0.33	0.36	**0.67**	**<0.66**
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<1.33**	**<33.3**	**<1.33**	**<1.67**	**<0.333**	**<0.333**	**<1.33**	**<0.33**	**<0.33**	**<0.66**	**<0.66**	**<0.66**
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1		--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.32E+01	1	5.63E+02	1		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Chrysene	218-01-9	8270	5.60E+02	1	2.36E+03	1		<1.33	57.1	<1.33	3.6	<0.333	<0.333	<1.33	<0.33	<0.33	1.4	6.2	<0.66
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.33
Di-n-butyl Phthalate	84-74-2	8270	4.40E+03	1	1.62E+04	1		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Fluoranthene	206-44-0	8270	2.32E+03	1	2.48E+04	1		<1.33	237	<1.33	11.1	<0.333	<0.333	<1.33	<0.33	<0.33	2.6	22	<0.66
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Naphthalene	91-20-3	8270	1.24E+02	1	1.90E+02	1		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	1.2	<0.66
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		**<1.33**	**<33.3**	**<1.33**	**<1.67**	<0.333	<0.333	**<1.33**	<0.33	<0.33	**<0.66**	**<0.66**	**<0.66**
n-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<1.33	**<33.3**	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<6.4**	**<160**	**<6.4**	**<8**	**<1.6**	**<1.6**	**<6.4**	**<1.6**	**<1.6**	**<3.3**	**<3.3**	**<3.3**
Phenanthrene	85-01-8	8270	1.71E+03	1	9.28E+03	2		<1.33	<33.3	<1.33	2.63	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	19	<0.66
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<1.33	<33.3	<1.33	<1.67	<0.333	<0.333	<1.33	<0.33	<0.33	<0.66	<0.66	<0.66
Pyrene	129-00-0	8270	1.70E+03	1	1.86E+04	1		<1.33	204	<1.33	8.93	<0.333	<0.333	1.51	<0.33	<0.33	2.8	15	<0.66

Notes:

1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-2
SUMMARY OF SURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-01	TW-02	TW-03	TW-03
							Sample Date:	2/28/2007	3/12/2007	3/12/2007	3/14/2007	3/14/2007
							Sample Interval:	2-4'	10-12'	10-12.5'	2-5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Volatile Organic Compounds												
1,1,1-Trichloroethane	71-55-6	8260	8.1E-01	1	8.1E-01	1	--	<0.00164	<0.00165	<0.00167	<0.00164	
1,1,2,2-Tetrachloroethane	79-34-5	8260	1.2E-02	1	2.6E-02	1	--	<0.0041	<0.00412	<0.00417	<0.0041	
1,1,2-Trichloroethane	79-00-5	8260	1.0E-02	1	1.0E-02	1	--	<0.00285	<0.00286	<0.0029	<0.00285	
1,1-Dichloroethane	75-34-3	8260	9.2E+00	1	2.8E+01	1	--	<0.00201	<0.00202	<0.00204	<0.00201	
1,1-Dichloroethene	75-35-4	8260	2.5E-02	1	2.5E-02	1	--	<0.0033	<0.00331	<0.00335	<0.00329	
1,2-Dichloroethane	107-06-2	8260	3.1E-02	2	3.1E-02	2	--	<0.00287	0.0106	<0.00292	<0.00287	
1,2-Dichloroethene (total)	540-59-0	8260	7.2E-02	1	1.2E-01	1	--	<0.00427	<0.00429	<0.00434	<0.00426	
1,2-Dichloropropane	78-87-5	8260	1.1E-02	1	1.1E-02	1	--	<0.0022	<0.00221	<0.00224	<0.0022	
2-Hexanone	591-78-6	8260	1.9E+00	1	5.8E+00	1	--	<0.00461	<0.00463	<0.00469	<0.0046	
4-Methyl-2-pentanone (MIBK)	108-10-1	8260	2.5E+00	1	7.4E+00	1	--	<0.00207	<0.00208	<0.0021	<0.00207	
Acetone	67-64-1	8260	2.1E+01	1	6.4E+01	1	--	0.0652	0.711	0.0267	0.0117	
Benzene	71-43-2	8260	1.0E-01	2	1.0E-01	2	--	0.00247	0.03	<0.00202	<0.00198	
Bromodichloromethane	75-27-4	8260	3.3E-02	1	7.3E-02	1	--	<0.00173	<0.00173	<0.00175	<0.00172	
Bromoform	75-25-2	8260	3.2E-01	1	7.1E-01	1	--	<0.00228	<0.00229	<0.00232	<0.00228	
Bromomethane	74-83-9	8260	6.5E-02	1	2.0E-01	1	--	<0.00352	<0.00354	<0.00358	<0.00352	
Carbon Disulfide	75-15-0	8260	6.8E+00	1	2.0E+01	1	--	<0.00189	<0.0019	<0.00192	<0.00189	
Carbon Tetrachloride	56-23-5	8260	3.1E-02	1	3.1E-02	1	--	<0.00188	<0.00189	<0.00191	<0.00188	
Chlorobenzene	108-90-7	8260	6.5E+00	2	6.5E+00	2	--	<0.00189	<0.0019	<0.00192	<0.00189	
Chloroethane	75-00-3	8260	1.5E+01	1	4.6E+01	1	--	<0.00259	<0.0026	<0.00263	<0.00259	
Chloroform	67-66-3	8260	5.1E-01	1	1.5E+00	1	--	<0.00294	<0.00296	<0.00299	<0.00294	
Chloromethane	74-87-3	8260	2.0E-01	1	4.5E-01	1	--	<0.00515	<0.00518	<0.00524	<0.00515	
cis-1,2-Dichloroethene	156-59-2	8260	1.2E-01	1	1.2E-01	1	--	<0.00203	<0.00204	<0.00207	<0.00203	
cis-1,3-Dichloropropene	10061-01-5	8260	3.3E-03	1	7.4E-03	1	--	<0.00152	<0.00153	<0.00155	<0.00152	
Dibromochloromethane	124-48-1	8260	2.5E-02	1	5.5E-02	1	--	<0.00195	<0.00196	<0.00198	<0.00195	
Ethylbenzene	100-41-4	8260	4.4E+01	2	4.4E+01	2	--	0.0242	8.49	<0.00168	0.00258	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	8260	1.5E+01	1	4.4E+01	1	--	<0.00557	<0.00559	<0.00566	<0.00556	
Methylene Chloride	75-09-2	8260	2.2E-02	2	2.2E-02	2	--	<0.00378	<0.0038	<0.00385	<0.00378	
Styrene	100-42-5	8260	1.6E+00	1	1.6E+00	1	--	<0.00189	0.0373	<0.00192	<0.00189	
Tetrachloroethene	127-18-4	8260	2.5E-02	1	2.5E-02	1	--	<0.00196	<0.00197	<0.00199	<0.00196	
Toluene	108-88-3	8260	4.3E+01	2	4.3E+01	2	--	0.0103	9.02	<0.0016	<0.00157	
trans-1,2-Dichloroethene	156-60-5	8260	2.5E-01	1	2.5E-01	1	--	<0.00245	<0.00246	<0.00249	<0.00244	
trans-1,3-Dichloropropene	10061-02-6	8260	1.8E-02	1	4.0E-02	1	--	<0.0016	<0.0016	<0.00162	<0.00159	
Trichloroethene	79-01-6	8260	1.7E-02	1	1.7E-02	1	--	<0.00197	<0.00198	<0.00201	<0.00197	
Vinyl Chloride	75-01-4	8260	1.1E-02	1	1.1E-02	1	--	<0.00196	<0.00197	<0.00199	<0.00196	
Xylenes (total)	1330-20-7	8260	7.3E+02	2	7.3E+02	2	--	0.0103	9.02	<0.0016	<0.00157	

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-2
SUMMARY OF SURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-01	TW-02	TW-03	TW-03
							Sample Date:	2/28/2007	3/12/2007	3/12/2007	3/14/2007	3/14/2007
							Sample Interval:	2-4'	10-12'	10-12.5'	2-5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Semivolatile Organic Compounds												
1,2,4-Trichlorobenzene	120-82-1	8270	2.4E+00	1	2.4E+00	1	--	<0.00332	<0.00334	<0.0338	<0.0332	
1,2-Dichlorobenzene	95-50-1	8270	8.9E+00	1	8.9E+00	1	--	<0.0028	<0.00281	<0.0285	<0.028	
1,2-Diphenylhydrazine	122-66-7	8270	2.3E-01	2	5.1E-01	2	--	<0.0000096	<0.00019	<0.000097	<0.000096	
1,3-Dichlorobenzene	541-73-1	8270	3.4E+00	1	1.0E+01	1	--	<0.00273	<0.00274	<0.0278	<0.0273	
1,4-Dichlorobenzene	106-46-7	8270	1.1E+00	1	1.1E+00	1	--	<0.00304	<0.00305	<0.0309	<0.0303	
2,4,5-Trichlorophenol	95-95-4	8270	1.7E+01	1	5.1E+01	1	--	<0.00434	<0.00436	<0.0442	<0.0433	
2,4,6-Trichlorophenol	88-06-2	8270	8.7E-02	1	2.6E-01	1	--	<0.00242	<0.00243	<0.0247	<0.0242	
2,4-Dichlorophenol	120-83-2	8270	1.8E-01	1	5.3E-01	1	--	<0.00435	<0.00437	<0.0443	<0.0434	
2,4-Dimethylphenol	105-67-9	8270	1.8E+01	2	5.3E+01	2	--	<0.00238	<0.00239	<0.0242	<0.0237	
2,4-Dinitrophenol	51-28-5	8270	4.7E-02	1	1.4E-01	1	--	<0.00667	<0.0067	**<0.0678**	**<0.0666**	
2,4-Dinitrotoluene	121-14-2	8270	2.2E-02	2	4.9E-02	2	--	<0.00018	<0.00361	<0.00183	<0.00179	
2,6-Dinitrotoluene	606-20-2	8270	1.8E-02	2	4.0E-02	2	--	<0.000245	<0.00492	<0.00249	<0.00244	
2-Chloronaphthalene	91-58-7	8270	5.0E+03	2	1.5E+04	2	--	<0.00183	<0.00184	<0.0186	<0.0183	
2-Chlorophenol	95-57-8	8270	8.2E-01	1	2.4E+00	1	--	<0.00314	<0.00316	<0.032	<0.0314	
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.3E-03	1	7.0E-03	1	--	**<0.00984**	**<0.198**	**<0.1**	**<0.0983**	
2-Methylnaphthalene	91-57-6	8270	1.3E+02	2	3.8E+02	2	--	19.5	13.6	<0.0184	6.14	
2-Methylphenol (o-Cresol)	95-48-7	8270	3.6E+00	1	1.1E+01	1	--	<0.00221	0.153	<0.0225	<0.0221	
2-Nitroaniline	88-74-4	8270	6.6E-02	2	2.0E-01	2	--	<0.00404	<0.00406	<0.0411	<0.0404	
2-Nitrophenol	88-75-5	8270	6.7E-02	1	2.0E-01	1	--	<0.00474	<0.00476	<0.0482	<0.0473	
3,3'-Dichlorobenzidine	91-94-1	8270	4.4E-01	2	9.9E-01	2	--	<0.0111	<0.0112	<0.113	<0.111	
3-Nitroaniline	99-09-2	8270	9.3E-02	2	2.8E-01	2	--	<0.00453	<0.00455	<0.0461	<0.0452	
4-Bromophenyl Phenyl Ether	101-55-3	8270	1.8E-01	1	4.0E-01	1	--	<0.00334	<0.00336	<0.034	<0.0334	
4-Chloro-3-methylphenol	59-50-7	8270	2.3E+00	1	6.8E+00	1	--	<0.00326	<0.00328	<0.0332	<0.0326	
4-Chloroaniline	106-47-8	8270	2.2E-01	1	6.7E-01	1	--	<0.0011	<0.0011	<0.012	<0.011	
4-Chlorophenyl Phenyl Ether	7005-72-3	8270	1.5E-01	1	5.4E-01	2	--	<0.0023	<0.00232	<0.0235	<0.023	
4-Methylphenol (p-Cresol)	106-44-5	8270	3.2E-01	1	9.4E-01	1	--	<0.0017	0.161	<0.0173	<0.017	
4-Nitroaniline	100-01-6	8270	1.0E-01	2	2.3E-01	2	--	<0.00384	<0.00386	<0.0391	<0.0384	
4-Nitrophenol	100-02-7	8270	8.3E-03	2	2.7E-01	2	--	0.00445	**0.0167**	**<0.169**	**0.0444**	
Acenaphthene	83-32-9	8270	1.8E+03	2	5.2E+03	2	--	22	17.1	<0.0214	33.7	
Acenaphthylene	208-96-8	8270	3.0E+03	2	9.1E+03	2	--	<0.00176	0.228	<0.0179	<0.0176	
Anthracene	120-12-7	8270	3.4E+03	1	1.0E+04	1	--	9.87	8.14	<0.0155	20.8	
Benzo(a)anthracene	56-55-3	8270	5.6E+00	1	2.4E+01	1	**179**	2.27	3.04	<0.0189	**6.63**	
Benzo(a)pyrene	50-32-8	8270	5.6E-01	1	2.4E+00	1	**51.5**	**0.681**	0.36	0.0089	**6.27**	
Benzo(b)fluoranthene	205-99-2	8270	5.7E+00	1	2.4E+01	1	--	0.368	0.596	<0.0267	3.18	
Benzo(ghi)perylene	191-24-2	8270	1.8E+03	1	1.9E+04	1	--	0.145	0.166	<0.0198	1.53	
Benzo(k)fluoranthene	207-08-9	8270	5.7E+01	1	2.4E+02	1	--	0.485	0.917	<0.0245	5.01	
bis(2-chloroethoxy)methane	111-91-1	8270	7.7E-02	2	1.7E-01	2	--	<0.000293	<0.00589	<0.00298	<0.00293	

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-2
SUMMARY OF SURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-01	TW-02	TW-03	TW-03
							Sample Date:	2/28/2007	3/12/2007	3/12/2007	3/14/2007	3/14/2007
							Sample Interval:	2-4'	10-12'	10-12.5'	2-5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Semivolatile Organic Compounds												
bis(2-Chloroethyl)ether	111-44-4	8270	4.6E-03	2	1.0E-02	2	--	<0.00142	<0.00143	**<0.0144**	**<0.0142**
bis(2-chloroisopropyl)ether	108-60-1	8270	9.5E-02	1	2.1E-01	1	--	0.00209	<0.00146	<0.0148	<0.0145
bis(2-ethylhexyl)phthalate	117-81-7	8270	4.3E+01	1	5.6E+02	1	--	<0.00394	<0.00395	<0.0401	<0.0393
Butyl Benzyl Phthalate	85-68-7	8270	1.3E+03	1	4.0E+03	1	--	<0.00243	<0.00245	<0.0248	<0.0243
Carbazole	86-74-8	8270	3.4E+01	2	7.5E+01	2	--	2.69	3.14	<0.0209	1.65
Chrysene	218-01-9	8270	5.6E+02	1	2.4E+03	1	--	2.29	3.01	<0.0267	9.8
Dibenzo(a,h)anthracene	53-70-3	8270	5.5E-01	1	2.4E+00	1	--	0.0639	0.106	0.113	**0.593**
Dibenzofuran	132-64-9	8270	2.5E+02	2	7.4E+02	2	--	18.3	11.2	<0.0198	26.2
Diethyl Phthalate	84-66-2	8270	7.8E+01	1	2.3E+02	1	--	<0.00238	<0.00239	<0.0242	<0.0237
Dimethyl Phthalate	131-11-3	8270	3.1E+01	1	9.3E+01	1	--	<0.00156	<0.00157	<0.0159	<0.0156
Di-n-butyl Phthalate	84-74-2	8270	4.4E+03	1	1.6E+04	1	--	<0.0023	<0.00232	<0.0235	<0.023
Di-n-octyl Phthalate	117-84-0	8270	1.3E+03	1	1.3E+04	1	--	<0.00239	<0.0024	<0.0243	<0.0238
Fluoranthene	206-44-0	8270	2.3E+03	1	2.5E+04	1	--	22.5	23	<0.017	57.5
Fluorene	86-73-7	8270	2.2E+03	2	6.6E+03	2	--	19.4	14.4	<0.0235	33.1
Hexachlorobenzene	118-74-1	8270	5.6E-01	1	5.6E-01	1	--	<0.00342	<0.00343	<0.0348	<0.0341
Hexachlorobutadiene	87-68-3	8270	1.6E+00	1	3.7E+00	1	--	<0.00345	<0.00347	<0.0351	<0.0345
Hexachlorocyclopentadiene	77-47-4	8270	7.2E+00	1	9.6E+00	1	--	<0.00385	<0.00387	<0.0392	<0.0385
Hexachloroethane	67-72-1	8270	9.2E-01	1	2.7E+00	1	--	<0.00397	<0.00399	<0.0404	<0.0397
Indeno(1,2,3-cd)pyrene	193-39-5	8270	5.7E+00	1	2.4E+01	1	--	0.168	0.254	<0.0328	1.86
Isophorone	78-59-1	8270	1.5E+00	1	3.4E+00	1	--	<0.00229	<0.0023	<0.0233	<0.0229
Naphthalene	91-20-3	8270	1.2E+02	1	1.9E+02	1	**2480**	34.4	29.7	0.0842	33.8
Nitrobenzene	98-95-3	8270	4.9E-01	2	1.5E+00	2	--	<0.00303	<0.00304	<0.0308	<0.0302
n-Nitrosodi-n-propylamine	621-64-7	8270	8.8E-04	2	2.0E-03	2	--	**<0.00469**	**<0.00471**	**<0.0478**	**<0.0468**
n-Nitrosodiphenylamine	86-30-6	8270	1.9E+01	2	4.2E+01	2	--	<0.00209	<0.0021	<0.0213	<0.0209
Pentachlorophenol	87-86-5	8270	1.2E-01	2	1.2E-01	2	**<0.505**	<0.00984	**<0.198**	<0.1	<0.0983
Phenanthrene	85-01-8	8270	1.7E+03	1	9.3E+03	2	--	62.7	48.7	<0.0165	78.7
Phenol	108-95-2	8270	4.5E+01	2	1.3E+02	2	--	<0.00353	<0.00355	<0.036	<0.0353
Pyrene	129-00-0	8270	1.7E+03	1	1.9E+04	1	--	11.9	12.3	<0.0144	34.2

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-3
Summary of Subsurface Soil Sampling Results
UPRR Houston Wood Preserving Works

							Location ID:	MW-10A		MW-11A		SB-03	SB-06	SB-07	SB-08	SB-138	SB-141	SB-142	SB-143	SB-144	SB-145
							On-Site/Off-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	On-Site	Off-Site	Off-Site	Off-Site	On-Site	On-Site	On-Site
							Sample Date:	9/13/1994	9/13/1994	9/15/1994	9/15/1994	3/5/1997	3/4/1997	3/6/1997	3/6/1997	6/24/2010	6/23/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010
							Sample Interval:	16-18'	20-22'	16-18'	20-22'	19'	19'	19'	18'	16-16.9'	16-17.1'	16-16.9'	18-18.7'	16-16.9'	16-17.4'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Volatile Organic Compounds																					
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2		--	--	--	--	<0.005	<0.005	<0.025	**<0.62**	<0.00059	<0.00061	<0.0006	<0.00059	<0.00062	<0.00058
Benzene	71-43-2	8020	1.05E-01	2	1.05E-01	2		<0.1	<0.1	<0.1	<0.1	<0.005	<0.005	**0.23**	**1.1**	<0.00059	<0.00061	<0.0006	<0.00059	0.00081 J	<0.00058
Chlorobenzene	108-90-7	8020	6.52E+00	2	6.52E+00	2		<0.1	<0.1	<0.1	<0.1	<0.005	<0.005	<0.025	<0.62	<0.00059	<0.00061	<0.0006	<0.00059	<0.00062	<0.00058
Ethylbenzene	100-41-4	8020	4.37E+01	2	4.37E+01	2		<0.1	<0.1	<0.1	<0.1	0.038	0.044	12	19	<0.00059	<0.00061	<0.0006	<0.00059	0.064	<0.00058
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2		--	--	--	--	0.006	0.005	**<0.025**	**<0.62**	0.0017 J	<0.0017	<0.0017	<0.0017	<0.0017	0.0025 J
Toluene	108-88-3	8020	4.32E+01	2	4.32E+01	2		<1.3	<0.77	1.6	1	<0.005	<0.005	12	13	<0.00059	<0.00061	<0.0006	<0.00059	0.0023 J	<0.00058
Xylenes (tot)	1330-20-7	8020	7.32E+02	2	7.32E+02	2		<0.1	<0.1	<0.1	<0.1	0.099	0.074	40	55	<0.0012	<0.0012	<0.0012	<0.0012	0.12	<0.0012
Semivolatile Organic Compounds																					
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2		**<0.66**	**<0.66**	**<0.66**	**<0.66**	**<1.6**	**<6.6**	**<33**	**<25**	<0.0026	<0.0027	<0.0026	<0.0026	<0.0027	<0.0026
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	**<33**	**25**	<0.0039	<0.004	<0.004	<0.0039	<9.0041	<0.0039
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2		**<0.66**	**<0.66**	**<0.66**	**<0.66**	**<1.6**	**<6.6**	**<33**	**<25**	<0.0039	<0.004	<0.004	<0.0039	<0.0041	<0.0039
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2		**<0.66**	**<0.66**	**<0.66**	**<0.66**	**<1.6**	**<6.6**	**<33**	**<25**	<0.0038	<0.0039	<0.0038	<0.0038	<0.004	<0.0037
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.0049	<0.005	<0.0049	<0.0048	<0.0051	<0.0048
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1		--	--	--	--	--	--	--	--	**<0.0039**	**<0.004**	**<0.004**	**<0.0039**	**<0.0041**	**<0.0039**
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2		<0.66	<0.66	<0.66	<0.66	11	28	**1700**	**400**	<0.0032	<0.0033	<0.0032	<0.0032	39	0.012
4,6-Dinitro-o-cresol	534-52-1	8270	2.34E-03	1	7.00E-03	1		**<3.3**	**<3.3**	**<3.3**	**<3.3**	**<8.2**	**<33**	**<160**	**<124**	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2		**<3.3**	**<3.3**	**<3.3**	**<3.3**	**<8.2**	**<33**	**<160**	**<124**	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0044
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2		<0.66	<0.66	<0.66	<0.66	6.1	18	460	320	<0.0026	<0.0027	<0.0026	<0.0026	39	0.052
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.0026	<0.0027	<0.0026	<0.0026	0.47	0.098
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1		<0.66	<0.66	<0.66	<0.66	3.5	15	280	200	<0.0026	<0.0027	<0.0026	<0.0026	26	0.29
Benzo(a)anthracene	56-55-3	8270	1.33E+02	2	2.98E+02	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	59	37	<0.0033	0.0048 J	<0.0034	<0.0033	3.9	0.38
Benzo(a)pyrene	50-32-8	8270	5.73E+01	2	5.73E+01	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.0027	0.006 J	<0.0028	<0.0027	1.2	0.59
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2		**<0.66**	**<0.66**	**<0.66**	**<0.66**	**<1.6**	**<6.6**	**<33**	**<25**	<0.0028	<0.0029	<0.0029	<0.0028	<0.003	<0.0028
bis(2-ethylhexyl)phthalate	117-81-7	8270	1.23E+03	2	1.23E+03	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.0078	<0.0081	<0.0079	<0.0078	0.059	0.074
Chrysene	218-01-9	8270	1.16E+04	2	2.60E+04	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	56	37	<0.0034	0.0092	0.0044 J	<0.0034	4	0.77
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2		<0.66	<0.66	<0.66	<0.66	6.4	18	**360**	**270**	<0.0026	0.003 J	0.0052 J	<0.0026	34	0.022
Di-n-butyl phthalate	84-74-2	8270	1.53E+04	1	2.14E+04	1		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.003	0.0048 J	0.0036 J	<0.0029	<0.0031	<0.0029
Fluoranthene	206-44-0	8270	1.44E+04	2	4.29E+04	2		<0.66	<0.66	<0.66	<0.66	7.9	20	330	250	<0.0026	0.018	0.005 J	0.0057 J	34	1.3
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2		<0.66	<0.66	<0.66	<0.66	5.6	21	430	300	<0.0026	<0.0027	<0.0026	<0.0026	39	0.039
Naphthalene	91-20-3	8270	1.38E+02	1	1.93E+02	1		<0.66	<0.66	<0.66	<0.66	30	61	**7600**	**17000**	<0.0039	<0.004	0.011	<0.0039	130	0.027
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2		**<0.66**	**<0.66**	**<0.66**	**<0.66**	**<1.6**	**<6.6**	**<33**	**<25**	<0.0039	<0.004	<0.004	<0.0039	<0.0041	<0.0039
N-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	**<33**	**<25**	<0.0026	<0.0027	<0.0026	<0.0026	<0.0027	<0.0026
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2		**<3.3**	**<3.3**	**<3.3**	**<3.3**	**<8.2**	**<33**	**<160**	**<120**	<0.0033	<0.0034	<0.0034	0.013	<0.0035	0.04
Phenanthrene	85-01-8	8270	3.11E+03	2	9.28E+03	2		<0.66	<0.66	<0.66	<0.66	16	44	2600	1400	<0.0036	0.014	0.0052 J	0.004 J	94	0.3
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2		<0.66	<0.66	<0.66	<0.66	<1.6	<6.6	<33	<25	<0.0039	<0.004	<0.004	<0.0039	0.018	0.018
Pyrene	129-00-0	8270	8.36E+03	2	2.50E+04	2		<0.66	<0.66	<0.66	<0.66	4.3	9.2	280	160	<0.0026	0.013	<0.0026	0.0041 J	19	1.4

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-4
SUMMARY OF TEST WELL SUBSURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY TEST WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-02	TW-03
							Sample Date:	3/12/2007	3/12/2007	3/14/2007
							Sample Interval:	10-12'	10-12.5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	
Volatile Organic Compounds										
Benzene	71-43-2	8020	1.05E-01	2	1.05E-01	2	0.00247	0.03	<0.00198	
Chlorobenzene	108-90-7	8020	6.52E+00	2	6.52E+00	2	<0.00189	<0.0019	<0.00189	
Ethylbenzene	100-41-4	8020	4.37E+01	2	4.37E+01	2	0.0242	8.49	0.00258	
Toluene	108-88-3	8020	4.32E+01	2	4.32E+01	2	0.0103	9.02	<0.00157	
1,1,1-Trichloroethane	71-55-6	8260	8.10E-01	1	8.10E-01	1	<0.00164	<0.00165	<0.00164	
1,1,2,2-Tetrachloroethane	79-34-5	8260	1.15E-02	1	2.59E-02	1	<0.0041	<0.00412	<0.0041	
1,1,2-Trichloroethane	79-00-5	8260	1.00E-02	1	1.00E-02	1	<0.00285	<0.00286	<0.00285	
1,1-Dichloroethane	75-34-3	8260	9.25E+00	1	2.76E+01	1	<0.00201	<0.00202	<0.00201	
1,1-Dichloroethene	75-35-4	8260	2.50E-02	1	2.50E-02	1	<0.0033	<0.00331	<0.00329	
1,2-Dichloroethane	107-06-2	8260	3.07E-02	2	3.07E-02	2	<0.00287	0.0106	<0.00287	
1,2-Dichloroethene (total)	540-59-0	8260	7.20E-02	1	1.20E-01	1	<0.00427	<0.00429	<0.00426	
1,2-Dichloropropane	78-87-5	8260	1.14E-02	1	1.14E-02	1	<0.0022	<0.00221	<0.0022	
2-Hexanone	591-78-6	8260	1.94E+00	1	5.78E+00	1	<0.00461	<0.00463	<0.0046	
4-Methyl-2-pentanone (MIBK)	108-10-1	8260	2.47E+00	1	7.39E+00	1	<0.00207	<0.00208	<0.00207	
Acetone	67-64-1	8260	2.14E+01	1	6.38E+01	1	0.0652	0.711	0.0117	
Bromodichloromethane	75-27-4	8260	3.27E-02	1	7.33E-02	1	<0.00173	<0.00173	<0.00172	
Bromoform	75-25-1	8260	3.16E-01	1	7.07E-01	1	<0.00228	<0.00229	<0.00228	
Bromomethane	74-83-9	8260	6.54E-02	1	1.95E-01	1	<0.00352	<0.00354	<0.00352	
Carbon Disulfide	75-15-0	8260	6.79E+00	1	2.03E+01	1	<0.00189	<0.0019	<0.00189	
Carbon Tetrachloride	56-23-5	8260	3.09E-02	1	3.09E-02	1	<0.00188	<0.00189	<0.00188	
Chloroethane	75-00-3	8260	1.55E+01	1	4.61E+01	1	<0.00259	<0.0026	<0.00259	
Chloroform	67-66-3	8260	5.10E-01	1	1.52E+00	1	<0.00294	<0.00296	<0.00294	
Chloromethane	74-87-3	8260	2.03E-01	1	4.54E-01	1	<0.00515	<0.00518	<0.00515	
cis-1,2-Dichloroethene	156-59-2	8260	1.24E-01	1	1.24E-01	1	<0.00203	<0.00204	<0.00203	
cis-1,3-Dichloropropene	10061-01-5	8260	3.32E-03	1	7.44E-03	1	<0.00152	<0.00153	<0.00152	
Dibromochloromethane	124-48-1	8260	2.46E-02	1	5.50E-02	1	<0.00195	<0.00196	<0.00195	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	8260	1.46E+01	1	4.37E+01	1	<0.00557	<0.00559	<0.00556	
Methylene Chloride	75-09-2	8260	2.25E-02	2	2.25E-02	2	<0.00378	<0.0038	<0.00378	
Styrene	100-42-5	8260	1.63E+00	1	1.63E+00	1	<0.00189	0.0373	<0.00189	
Tetrachloroethene	127-18-4	8260	2.51E-02	1	2.51E-02	1	<0.00196	<0.00197	<0.00196	
trans-1,2-Dichloroethene	156-60-5	8260	2.45E-01	1	2.45E-01	1	<0.00245	<0.00246	<0.00244	
trans-1,3-Dichloropropene	10061-02-6	8260	1.79E-02	1	4.02E-02	1	<0.0016	<0.0016	<0.00159	
Trichloroethene	79-01-6	8260	1.68E-02	1	1.68E-02	1	<0.00197	<0.00198	<0.00197	
Vinyl Chloride	75-01-4	8260	1.11E-02	1	1.11E-02	1	<0.00196	<0.00197	<0.00196	

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-4
SUMMARY OF TEST WELL SUBSURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY TEST WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-02	TW-03
							Sample Date:	3/12/2007	3/12/2007	3/14/2007
							Sample Interval:	10-12'	10-12.5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	
Semvolatile Organic Compounds										
1,2,4-Trichlorobenzene	120-82-1	8270	2.40E+00	1	2.40E+00	1	<0.00332	<0.00334	<0.0332	
1,2-Dichlorobenzene	95-50-1	8270	8.94E+00	1	8.94E+00	1	<0.0028	<0.00281	<0.028	
1,2-Diphenylhydrazine	122-66-7	8270	2.27E-01	2	5.09E-01	2	<0.0000096	<0.00019	<0.000096	
1,3-Dichlorobenzene	541-73-1	8270	3.37E+00	1	1.01E+01	1	<0.00273	<0.00274	<0.0273	
1,4-Dichlorobenzene	106-46-7	8270	1.05E+00	1	1.05E+00	1	<0.00304	<0.00305	<0.0303	
2,4,5-Trichlorophenol	95-95-4	8270	1.69E+01	1	5.05E+01	1	<0.00434	<0.00436	<0.0433	
2,4,6-Trichlorophenol	88-06-2	8270	8.75E-02	1	2.61E-01	1	<0.00242	<0.00243	<0.0242	
2,4-Dichlorophenol	120-83-2	8270	1.76E-01	1	5.25E-01	1	<0.00435	<0.00437	<0.0434	
2,4-Dimethylphenol	105-67-9	8270	1.77E+01	2	5.27E+01	2	<0.00238	<0.00239	<0.0237	
2,4-Dinitrophenol	51-28-5	8270	4.68E-02	1	1.40E-01	1	<0.00667	<0.0067	**<0.0666**	
2,4-Dinitrotoluene	121-14-2	8270	2.18E-02	2	4.89E-02	2	<0.00018	<0.00361	<0.00179	
2,6-Dinitrotoluene	606-20-2	8270	1.79E-02	2	4.02E-02	2	<0.000245	<0.00492	<0.00244	
2-Chloronaphthalene	91-58-7	8270	4.99E+03	2	1.49E+04	2	<0.00183	<0.00184	<0.0183	
2-Chlorophenol	95-57-8	8270	8.16E-01	1	2.44E+00	1	<0.00314	<0.00316	<0.0314	
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.34E-03	1	7.00E-03	1	**<0.00984**	**<0.198**	**<0.0983**	
2-Methylnaphthalene	91-57-6	8270	1.27E+02	2	3.78E+02	2	19.5	13.6	6.14	
2-Methylphenol (o-Cresol)	95-48-7	8270	3.56E+00	1	1.06E+01	1	<0.00221	0.153	<0.0221	
2-Nitroaniline	88-74-4	8270	6.56E-02	2	1.96E-01	2	<0.00404	<0.00406	<0.0404	
2-Nitrophenol	88-75-5	8270	6.73E-02	1	2.01E-01	1	<0.00474	<0.00476	<0.0473	
3,3'-Dichlorobenzidine	91-94-1	8270	4.42E-01	2	9.91E-01	2	<0.0111	<0.0112	<0.111	
3-Nitroaniline	99-09-2	8270	9.31E-02	2	2.78E-01	2	<0.00453	<0.00455	<0.0452	
4-Bromophenyl Phenyl Ether	101-55-3	8270	1.77E-01	1	3.96E-01	1	<0.00334	<0.00336	<0.0334	
4-Chloro-3-methylphenol	59-50-7	8270	2.26E+00	1	6.76E+00	1	<0.00326	<0.00328	<0.0326	
4-Chloroaniline	106-47-8	8270	2.23E-01	1	6.66E-01	1	<0.0011	<0.0011	<0.011	
4-Chlorophenyl Phenyl Ether	7005-72-3	8270	2.39E-01	2	5.36E-01	2	<0.0023	<0.00232	<0.023	
4-Methylphenol (p-Cresol)	106-44-5	8270	3.16E-01	1	9.43E-01	1	<0.0017	0.161	<0.017	
4-Nitroaniline	100-01-6	8270	1.02E-01	2	2.28E-01	2	<0.00384	<0.00386	<0.0384	
4-Nitrophenol	100-02-7	8270	8.31E-03	2	2.65E-01	2	0.00445	**0.0167**	**0.0444**	
Acenaphthene	83-32-9	8270	1.75E+03	2	5.23E+03	2	22	17.1	33.7	
Acenaphthylene	208-96-8	8270	3.05E+03	2	9.09E+03	2	<0.00176	0.228	<0.0176	
Anthracene	120-12-7	8270	3.44E+03	1	1.03E+04	1	9.87	8.14	20.8	
Benzo(a)anthracene	56-55-3	8270	1.33E+02	2	2.98E+02	2	2.27	3.04	6.63	
Benzo(a)pyrene	50-32-8	8270	5.73E+01	2	5.73E+01	2	0.681	0.36	6.27	
Benzo(b)fluoranthene	205-99-2	8270	3.01E+01	1	6.73E+01	1	0.368	0.596	3.18	
Benzo(ghi)perylene	191-24-2	8270	2.32E+04	1	6.94E+04	1	0.145	0.166	1.53	
Benzo(k)fluoranthene	207-08-9	8270	3.08E+02	1	6.89E+02	1	0.485	0.917	5.01	
bis(2-chloroethoxy)methane	111-91-1	8270	7.70E-02	2	1.73E-01	2	<0.000293	<0.00589	<0.00293	
bis(2-Chloroethyl)ether	111-44-4	8270	4.58E-03	2	1.03E-02	2	<0.00142	<0.00143	**<0.0142**	
bis(2-chloroisopropyl)ether	108-60-1	8270	9.50E-02	1	2.13E-01	1	0.00209	<0.00146	<0.0145	
bis(2-ethylhexyl)phthalate	117-81-7	8270	1.23E+03	2	1.23E+03	2	<0.00394	<0.00395	<0.0393	

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

Table 4D-4
SUMMARY OF TEST WELL SUBSURFACE SOIL SAMPLING RESULTS - A-TZ TEMPORARY TEST WELLS
UPRR Houston Wood Preserving Works

							Location ID:	TW-01	TW-02	TW-03
							Sample Date:	3/12/2007	3/12/2007	3/14/2007
							Sample Interval:	10-12'	10-12.5'	11-15'
Constituent	CAS	Method	RALs and Off-Site cPCLs	Tier	On-Site cPCLs (C/I)	Tier	mg/Kg	mg/Kg	mg/Kg	
Semvolatile Organic Compounds										
Butyl Benzyl Phthalate	85-68-7	8270	1.35E+03	1	4.03E+03	1	<0.00243	<0.00245	<0.0243	
Carbazole	86-74-8	8270	3.36E+01	2	7.54E+01	2	2.69	3.14	1.65	
Chrysene	218-01-9	8270	1.16E+04	2	2.60E+04	2	2.29	3.01	9.8	
Dibenzo(a,h)anthracene	53-70-3	8270	7.63E+00	1	1.07E+01	1	0.0639	0.106	0.593	
Dibenzofuran	132-64-9	8270	2.49E+02	2	7.44E+02	2	18.3	11.2	26.2	
Diethyl Phthalate	84-66-2	8270	7.79E+01	1	2.33E+02	1	<0.00238	<0.00239	<0.0237	
Dimethyl Phthalate	131-11-3	8270	3.11E+01	1	9.29E+01	1	<0.00156	<0.00157	<0.0156	
Di-n-butyl phthalate	84-74-2	8270	1.53E+04	1	2.14E+04	1	<0.0023	<0.00232	<0.023	
Di-n-octyl Phthalate	117-84-0	8270	2.76E+05	1	3.87E+05	1	<0.00239	<0.0024	<0.0238	
Fluoranthene	206-44-0	8270	1.44E+04	2	4.29E+04	2	22.5	23	57.5	
Fluorene	86-73-7	8270	2.23E+03	2	6.65E+03	2	19.4	14.4	33.1	
Hexachlorobenzene	118-74-1	8270	5.65E-01	1	5.65E-01	1	<0.00342	<0.00343	<0.0341	
Hexachlorobutadiene	87-68-3	8270	1.64E+00	1	3.68E+00	1	<0.00345	<0.00347	<0.0345	
Hexachlorocyclopentadiene	77-47-4	8270	7.29E+00	1	9.64E+00	1	<0.00385	<0.00387	<0.0385	
Hexachloroethane	67-72-1	8270	9.18E-01	1	2.74E+00	1	<0.00397	<0.00399	<0.0397	
Indeno(1,2,3-cd)pyrene	193-39-5	8270	8.67E+01	1	1.94E+02	1	0.168	0.254	1.86	
Isophorone	78-59-1	8270	1.50E+00	1	3.36E+00	1	<0.00229	<0.0023	<0.0229	
Naphthalene	91-20-3	8270	1.38E+02	1	1.93E+02	1	34.4	29.7	33.8	
Nitrobenzene	98-95-3	8270	4.94E-01	2	1.48E+00	2	<0.00303	<0.00304	<0.0302	
n-Nitrosodi-n-propylamine	621-64-7	8270	8.85E-04	2	1.98E-03	2	**<0.00469**	**<0.00471**	**<0.0468**	
N-Nitrosodiphenylamine	86-30-6	8270	1.87E+01	2	4.18E+01	2	<0.00209	<0.0021	<0.0209	
Pentachlorophenol	87-86-5	8270	1.24E-01	2	1.24E-01	2	<0.00984	<0.198	<0.0983	
Phenanthrene	85-01-8	8270	3.11E+03	2	9.28E+03	2	62.7	48.7	78.7	
Phenol	108-95-2	8270	4.46E+01	2	1.33E+02	2	<0.00353	<0.00355	<0.0353	
Pyrene	129-00-0	8270	8.36E+03	2	2.50E+04	2	11.9	12.3	34.2	

Notes:
1. Sampling locations shown on Figures 4A and 4B.
2. Residential Assessment Levels (RALs) used to evaluate Affected property on-site and off-site.
3. Critical PCLs (cPCLs) based on Commericial/Industrial (C/I) PCLs on-site, RALs off-site.
4. Concentrations > RALs are **bold** type.
5. Concentrations > Off-Site cPCL (RAL) or On-Site cPCL (C/I) are highlighted and bold.
6. Non-detected concentrations > RAL or cPCL are highlighted and **bold type**.
7. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated on March 31, 2010.
8. J = Estimated Value, < = Compound not detected at the specified detection limit.
9. -- = not analyzed

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

4.0 Figures

EXPLANATION

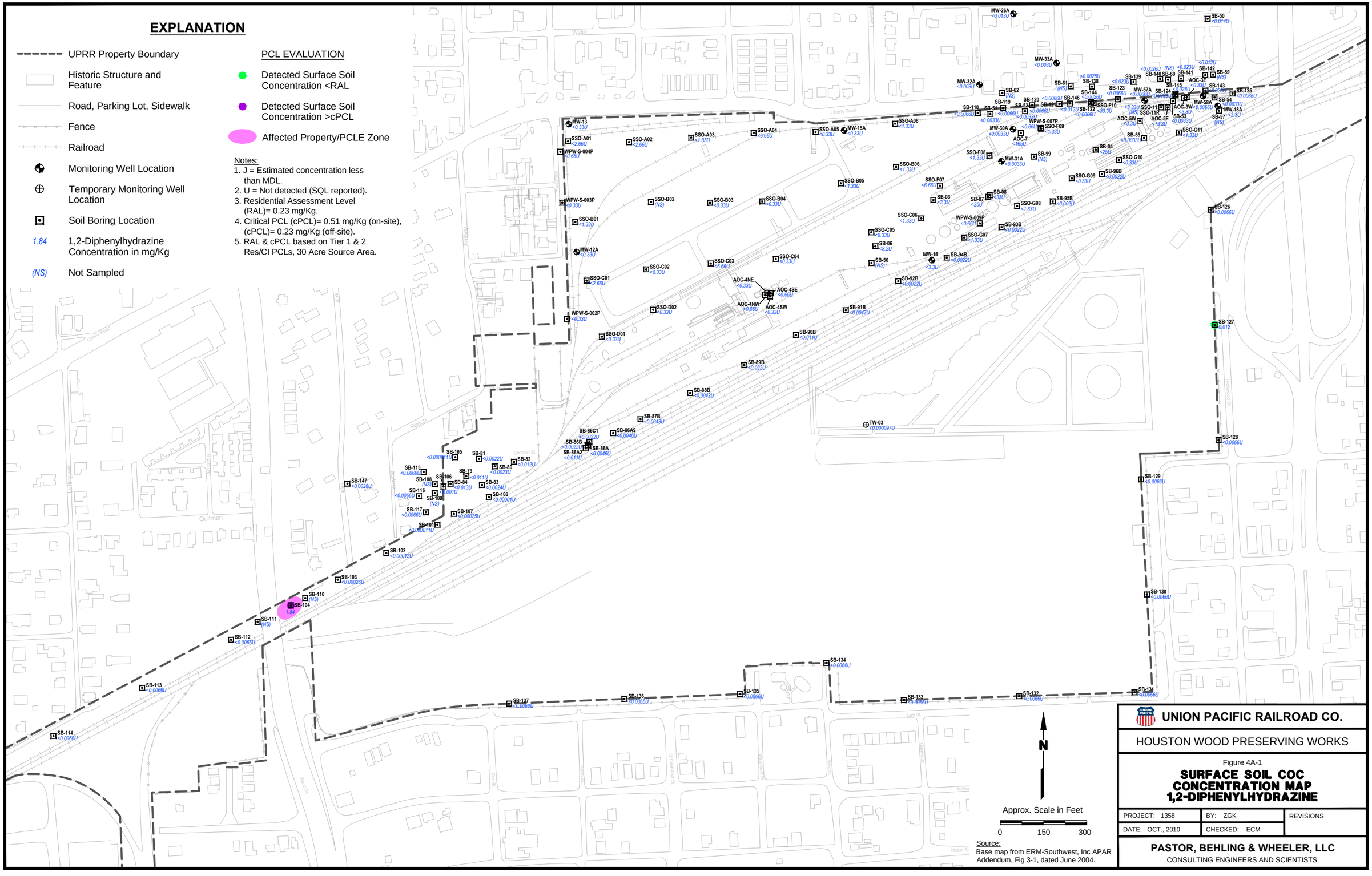
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *1.84* 1,2-Diphenylhydrazine Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property/PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.23 mg/Kg.
4. Critical PCL (cPCL)= 0.51 mg/Kg (on-site), (cPCL)= 0.23 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Approx. Scale in Feet

0 150 300

N

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-1

SURFACE SOIL COC CONCENTRATION MAP 1,2-DIPHENYLHYDRAZINE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

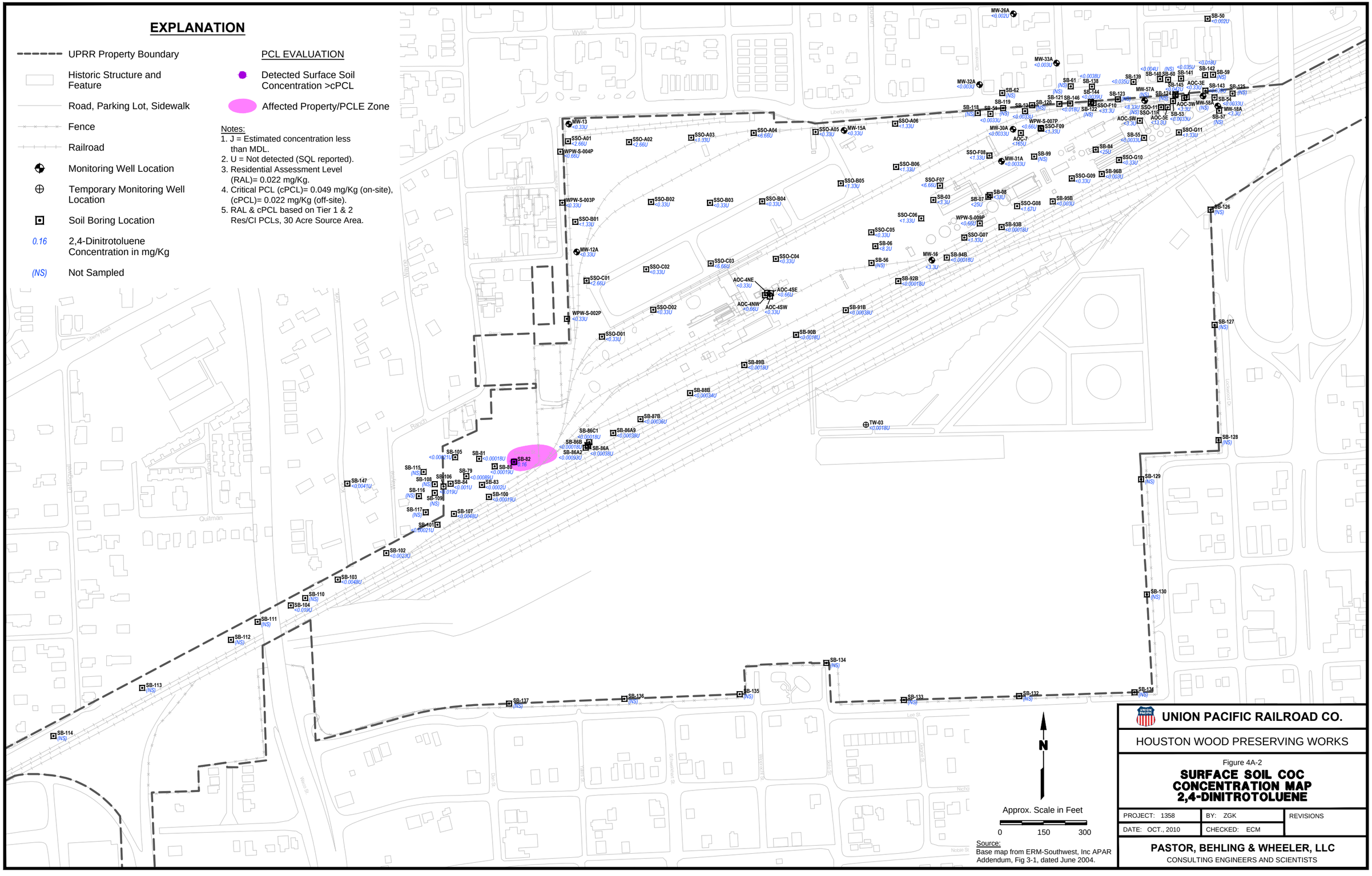
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 0.16 — 2,4-Dinitrotoluene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration >cPCL
- Affected Property/PCLE Zone

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.022 mg/Kg.
4. Critical PCL (cPCL)= 0.049 mg/Kg (on-site), (cPCL)= 0.022 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-2

SURFACE SOIL COC CONCENTRATION MAP 2,4-DINITROTOLUENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

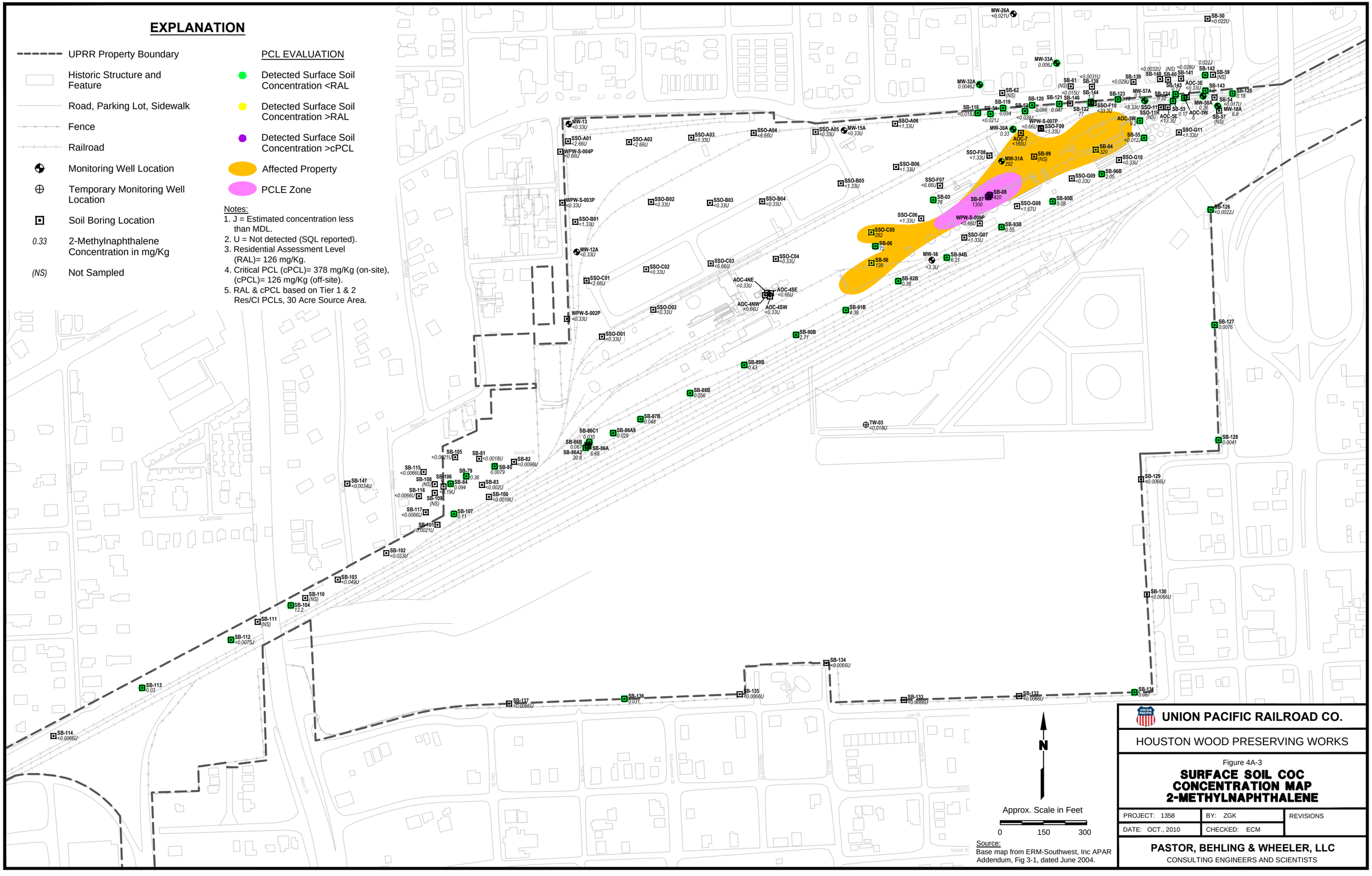
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *0.33* — 2-Methylnaphthalene Concentration in mg/Kg
- *(NS)* — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 126 mg/Kg.
4. Critical PCL (cPCL)= 378 mg/Kg (on-site), (cPCL)= 126 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-3

SURFACE SOIL COC CONCENTRATION MAP 2-METHYLNAPHTHALENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

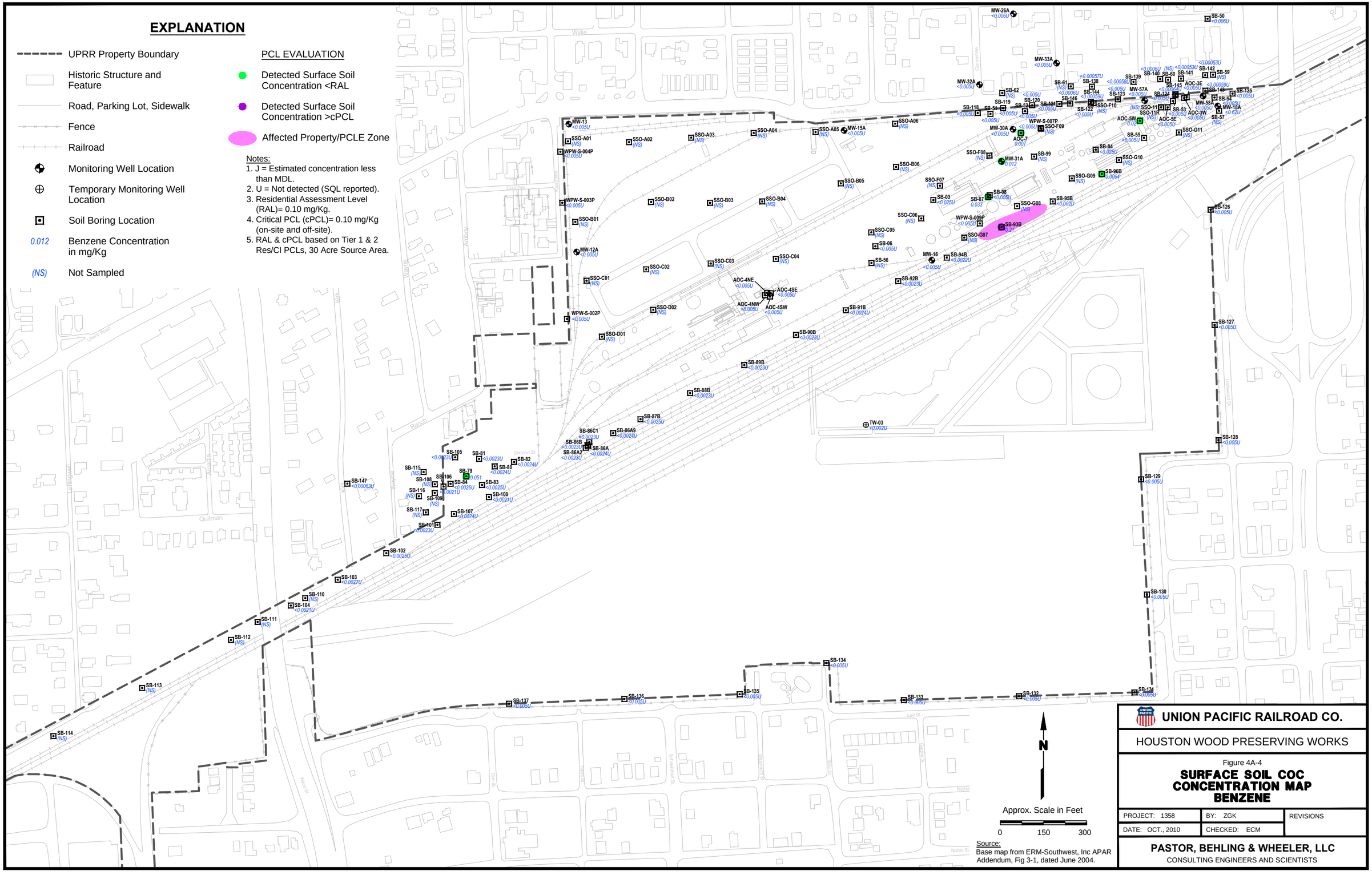
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *0.012* Benzene Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property/PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.10 mg/Kg.
4. Critical PCL (cPCL)= 0.10 mg/Kg (on-site and off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Approx. Scale in Feet

0 150 300

N

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 4A-4

SURFACE SOIL COC CONCENTRATION MAP BENZENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

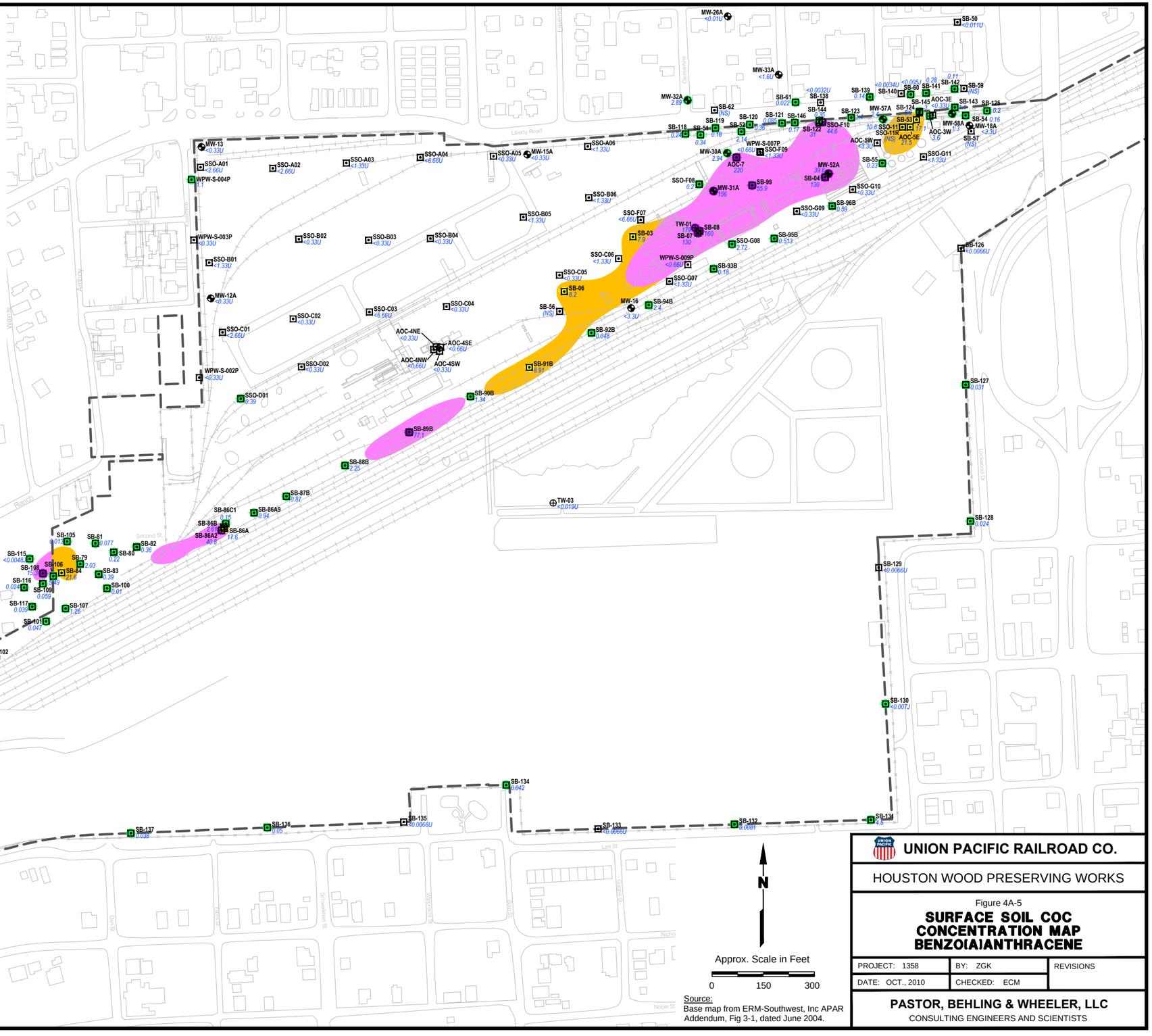
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 2.94 — Benzo(a)anthracene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 5.6 mg/Kg.
4. Critical PCL (cPCL)= 23 mg/Kg (on-site), (cPCL)= 5.6 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Approx. Scale in Feet

0 150 300

N

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 4A-5

SURFACE SOIL COC CONCENTRATION MAP BENZO(A)ANTHRACENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC

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EXPLANATION

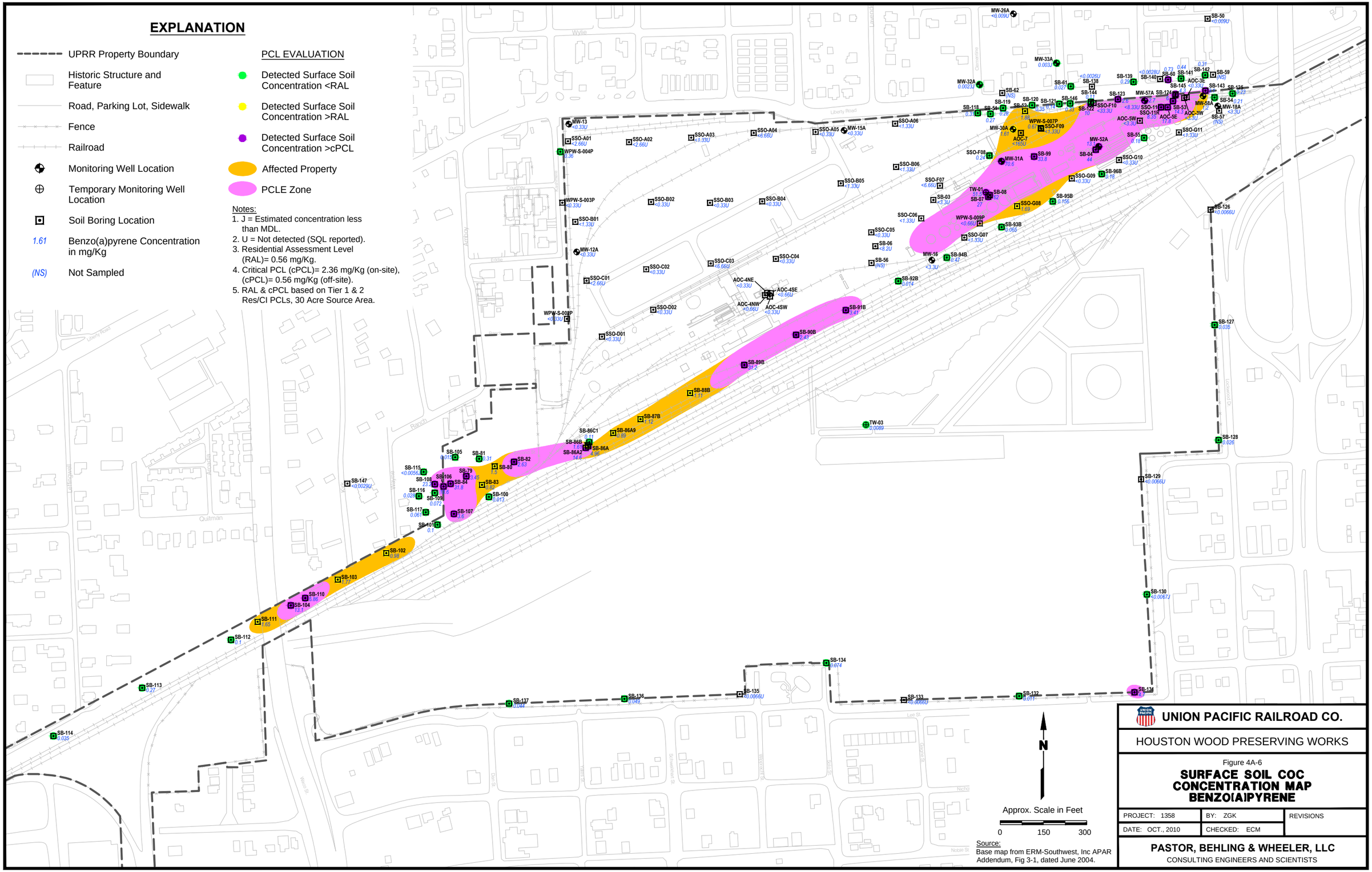
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 1.61 — Benzo(a)pyrene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.56 mg/Kg.
4. Critical PCL (cPCL)= 2.36 mg/Kg (on-site), (cPCL)= 0.56 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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Figure 4A-6

SURFACE SOIL COC CONCENTRATION MAP BENZO(A)PYRENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

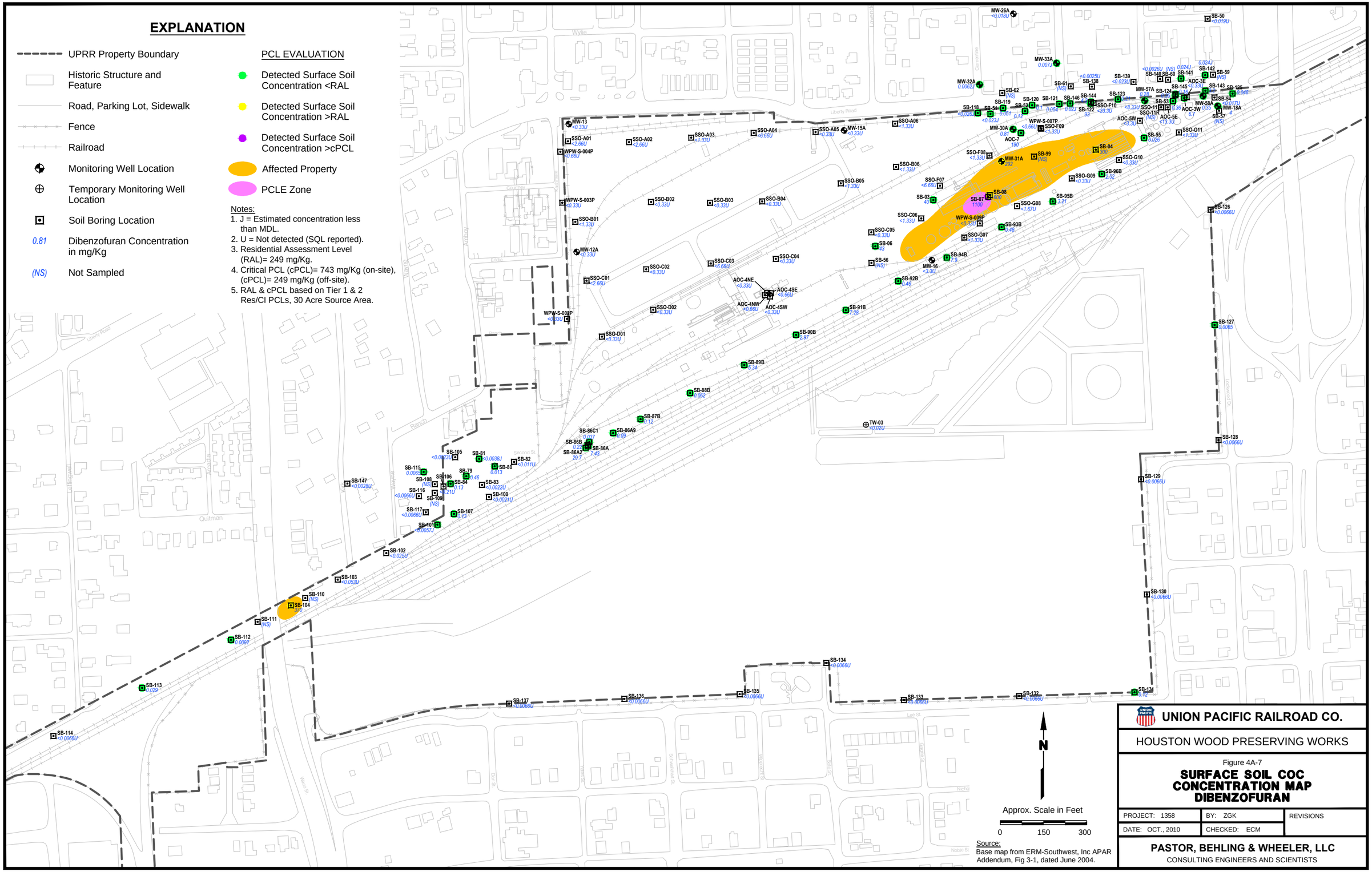
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 0.81 — Dibenzofuran Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 249 mg/Kg.
4. Critical PCL (cPCL)= 743 mg/Kg (on-site), (cPCL)= 249 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-7

SURFACE SOIL COC CONCENTRATION MAP DIBENZOFURAN

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

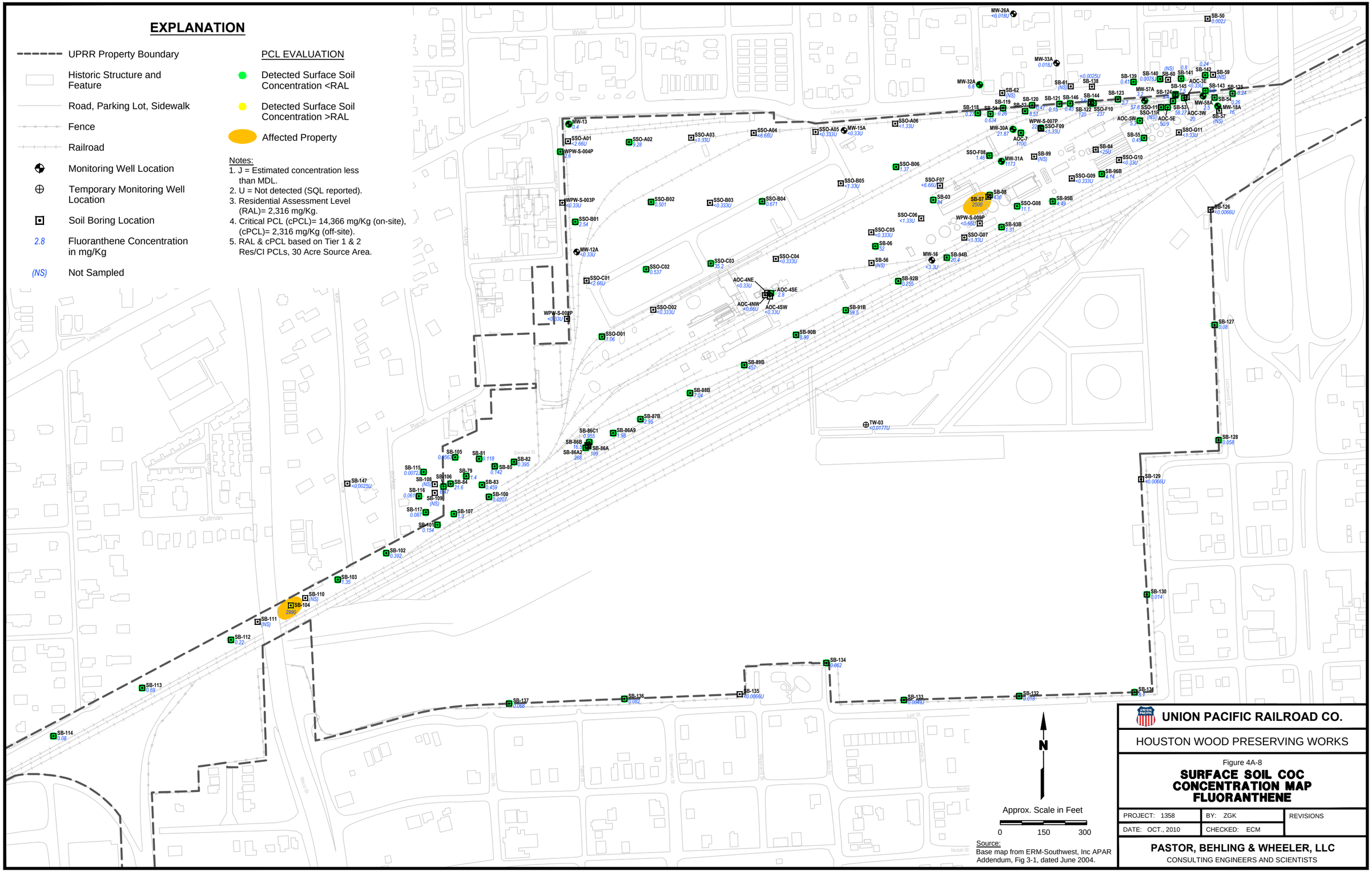
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 2.8 — Fluoranthene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Affected Property

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 2,316 mg/Kg.
4. Critical PCL (cPCL)= 14,366 mg/Kg (on-site), (cPCL)= 2,316 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-8

SURFACE SOIL COC CONCENTRATION MAP FLUORANTHENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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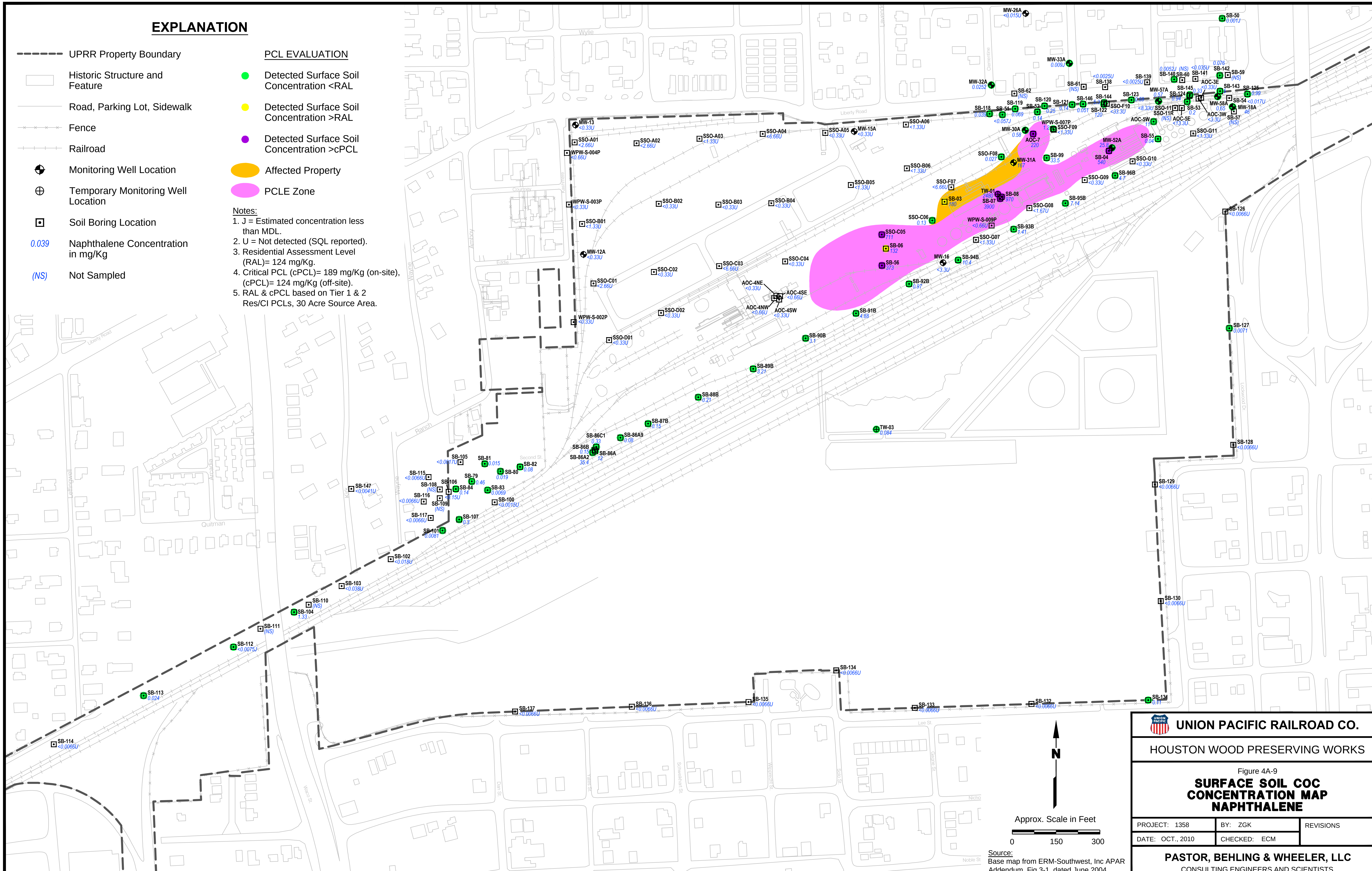
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 0.039 Naphthalene Concentration in mg/Kg
- (NS) Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 124 mg/Kg.
4. Critical PCL (cPCL)= 189 mg/Kg (on-site), (cPCL)= 124 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-9

SURFACE SOIL COC CONCENTRATION MAP NAPHTHALENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

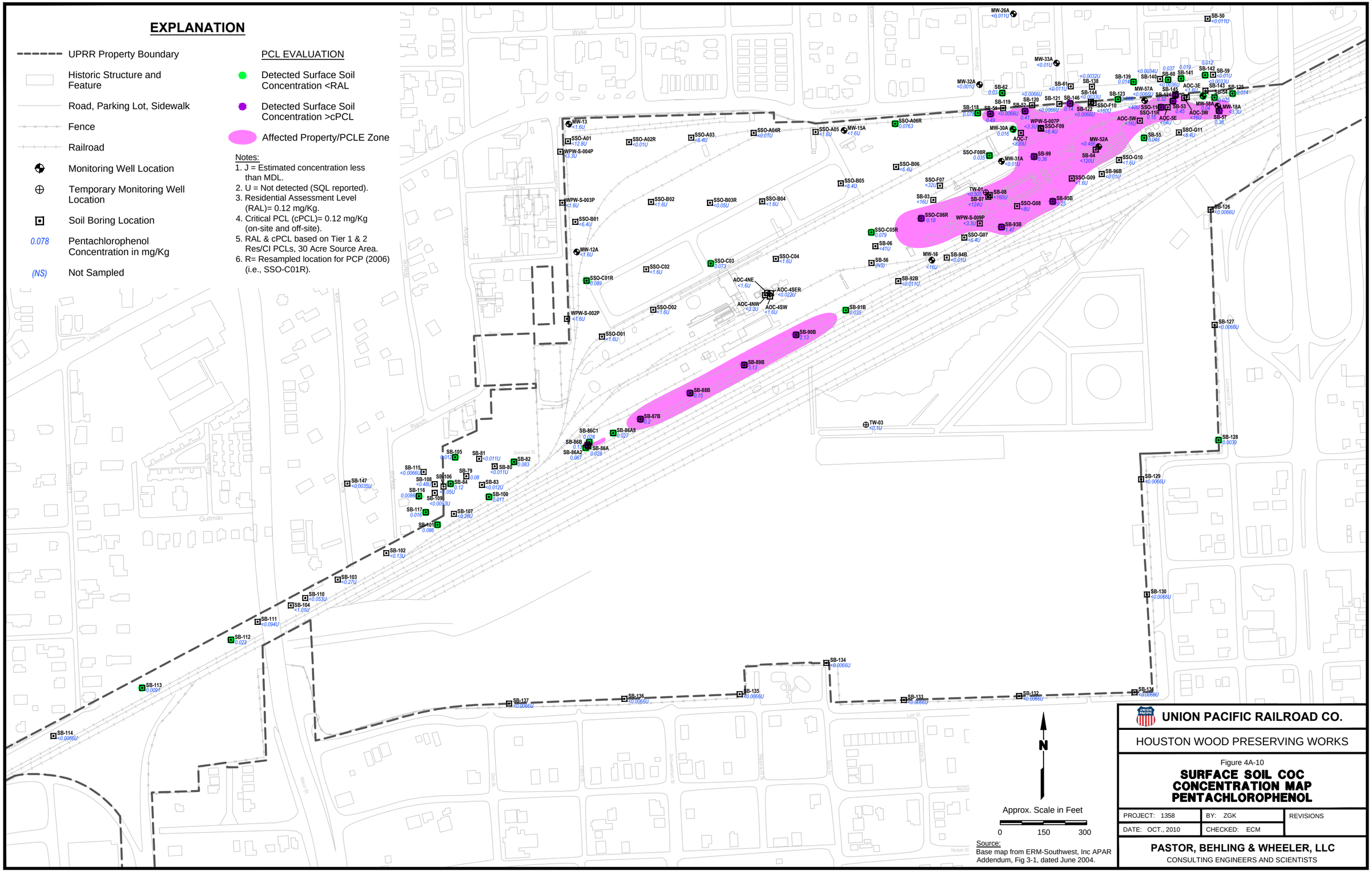
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 0.078 — Pentachlorophenol Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >cPCL
- Affected Property/PCLE Zone

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.12 mg/Kg.
4. Critical PCL (cPCL)= 0.12 mg/Kg (on-site and off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.
6. R= Resampled location for PCP (2006) (i.e., SSO-C01R).



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-10

SURFACE SOIL COC CONCENTRATION MAP PENTACHLOROPHENOL

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

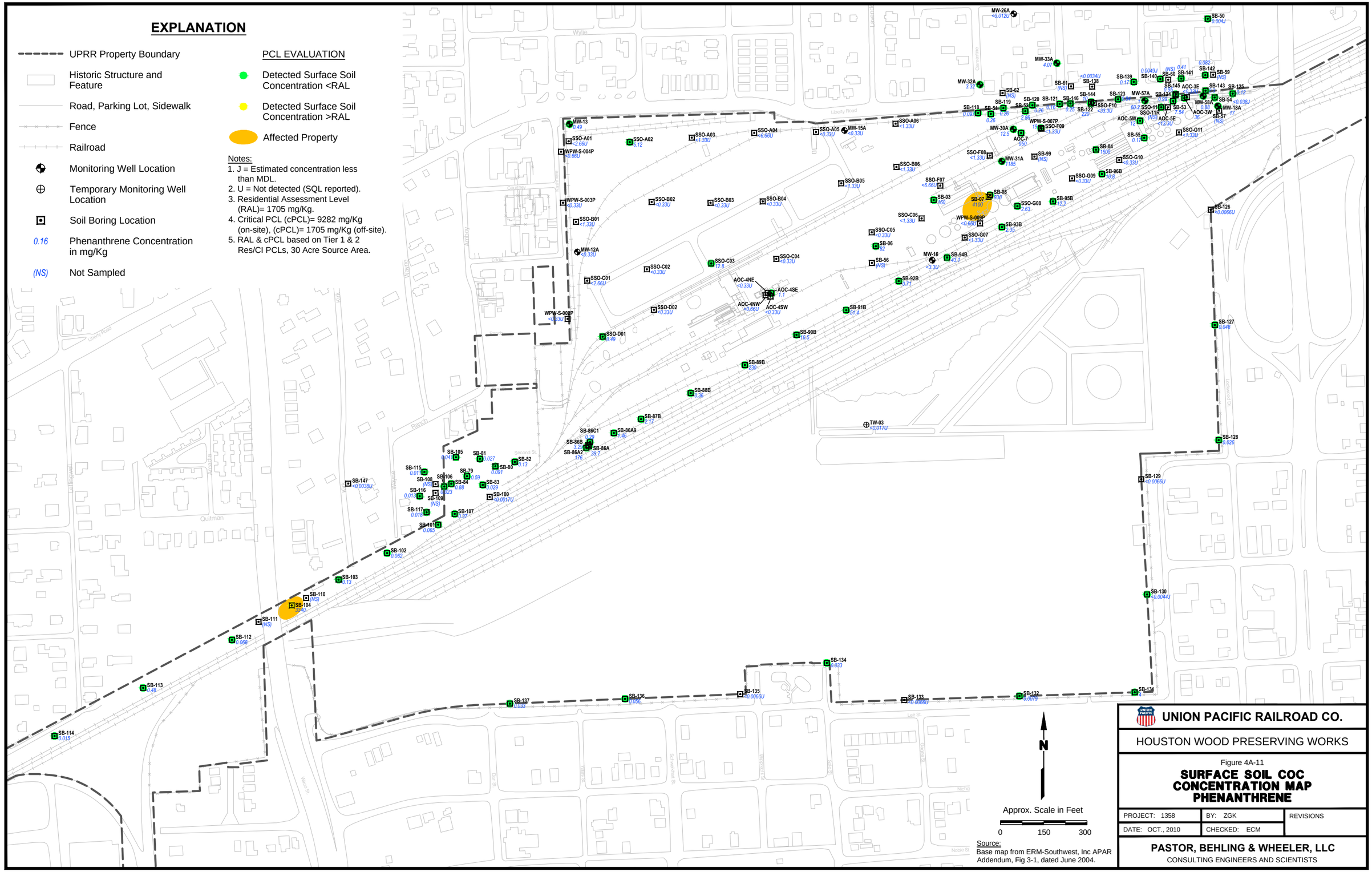
- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *0.16* Phenanthrene Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Surface Soil Concentration <RAL
- Detected Surface Soil Concentration >RAL
- Affected Property

Notes:

1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 1705 mg/Kg.
4. Critical PCL (cPCL)= 9282 mg/Kg (on-site), (cPCL)= 1705 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

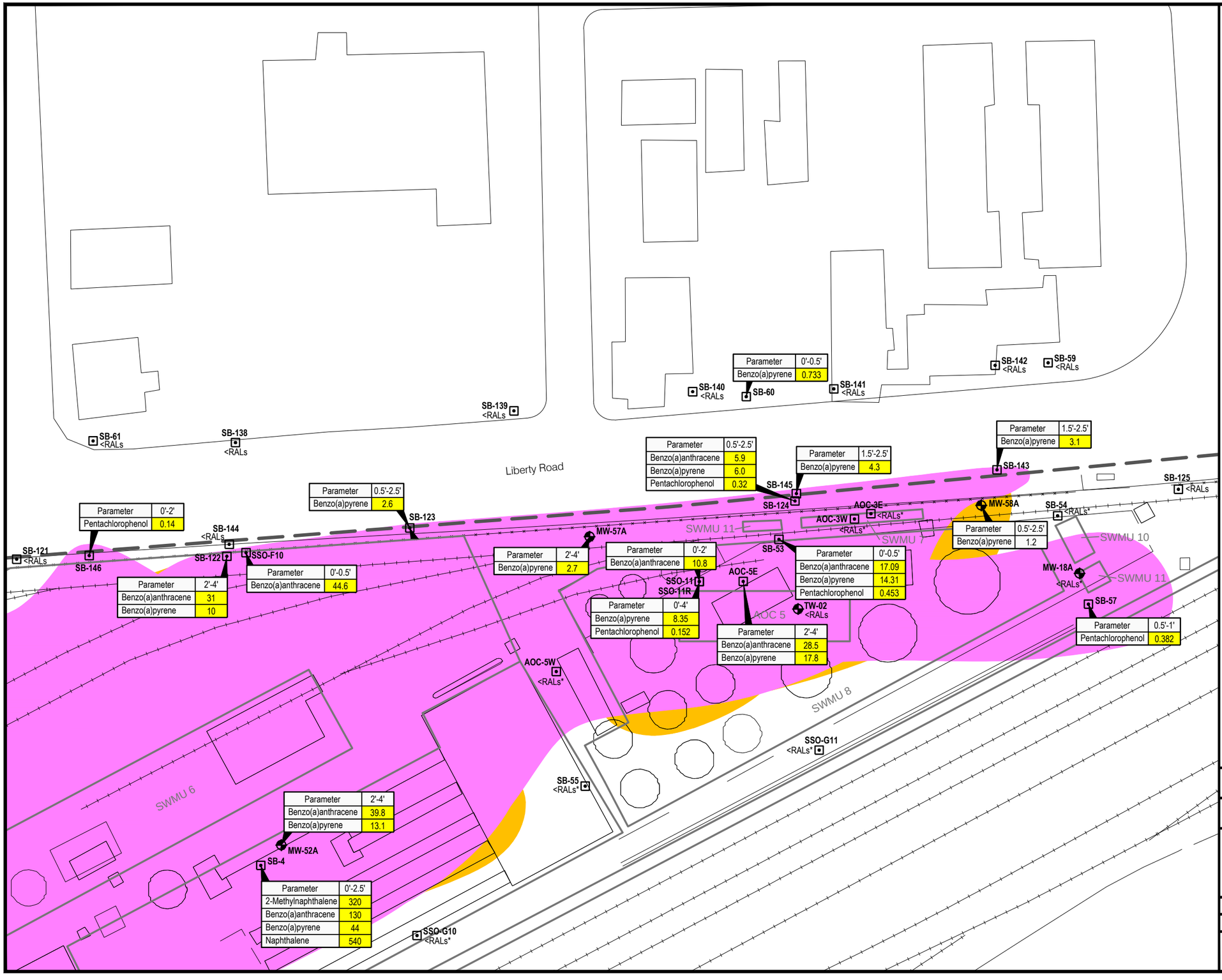
Figure 4A-11

SURFACE SOIL COC CONCENTRATION MAP PHENANTHRENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Soil Boring Location
- Surface Soil Affected Property
- Surface Soil PCLE Zone

Notes:
1. Concentration are in mg/Kg.
2. Highlighted concentrations exceed cPCLs.
3. * Some MQLs > RALs.
4. RAL and cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.
5. Benzo(a)pyrene at SB-60 was not included in the Affected Property, likely from asphalting activities on Liberty Road.

N

Approx. Scale in Feet

0 25 50

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4A-12

SURFACE SOIL AFFECTED PROPERTY PCLE ZONE - SWMU NO. 8 AREA

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

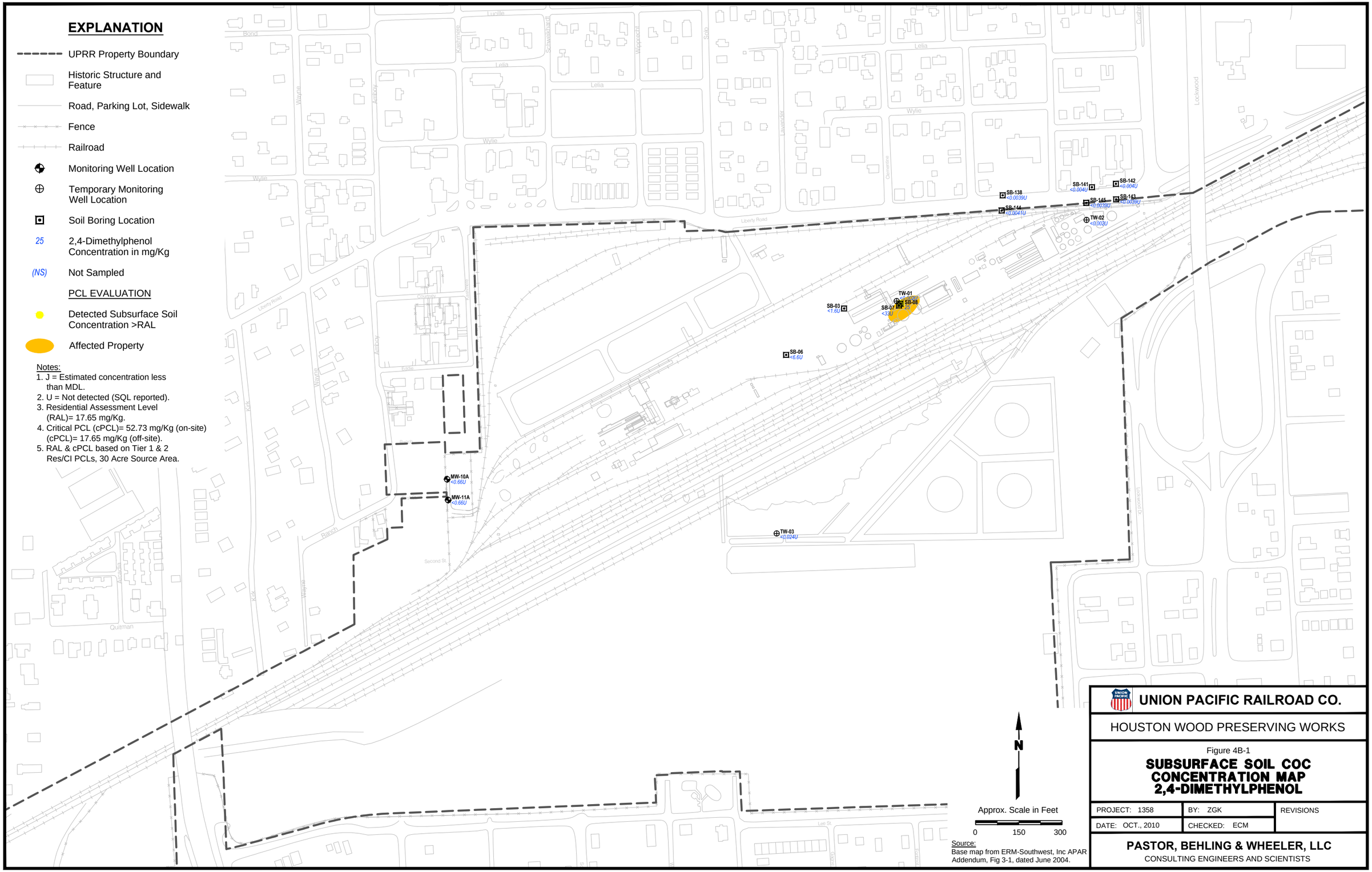
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 25 — 2,4-Dimethylphenol Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration >RAL
- Affected Property

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 17.65 mg/Kg.
4. Critical PCL (cPCL)= 52.73 mg/Kg (on-site) (cPCL)= 17.65 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-1

SUBSURFACE SOIL COC CONCENTRATION MAP 2,4-DIMETHYLPHENOL

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

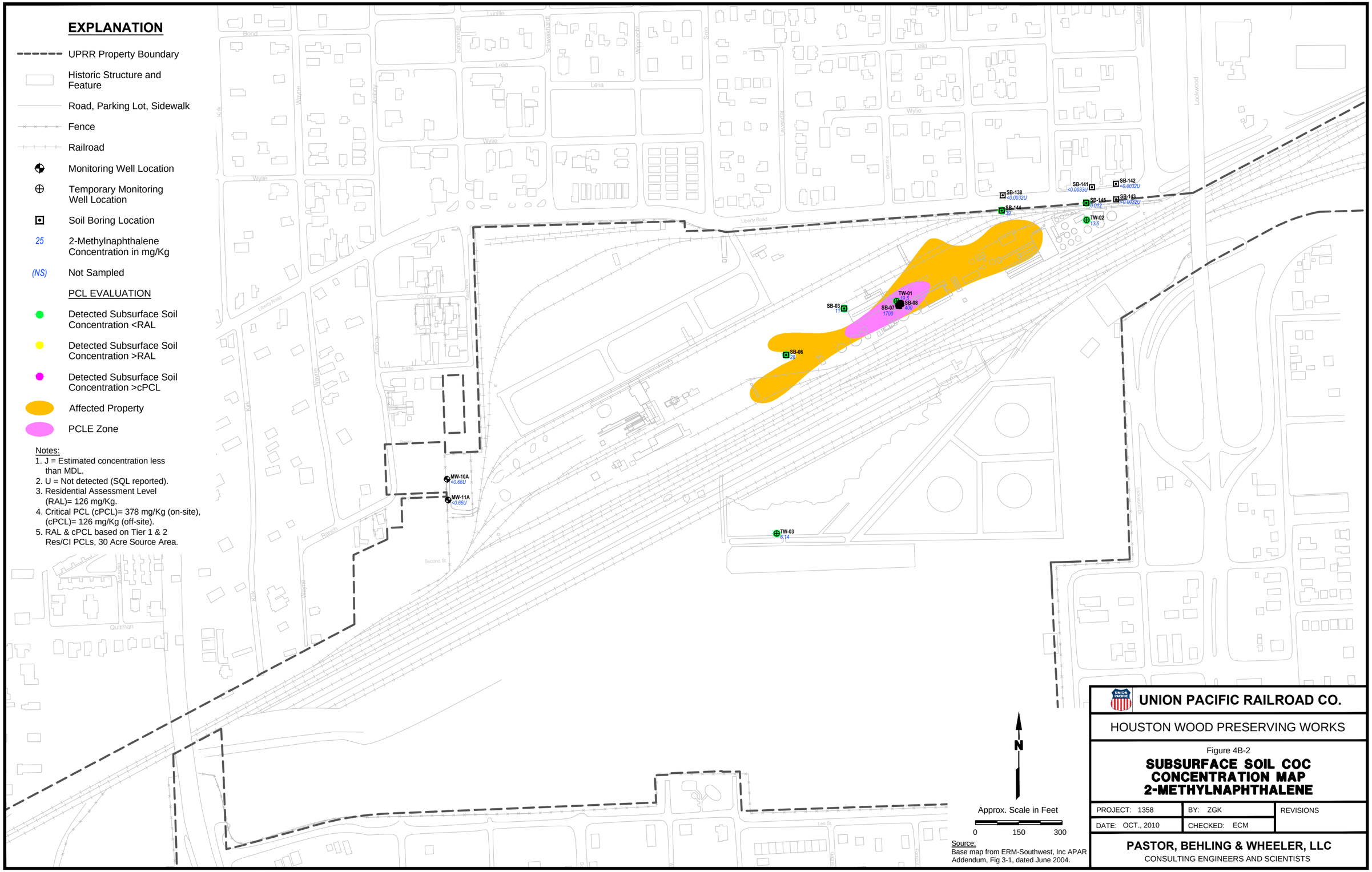
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *25* — 2-Methylnaphthalene Concentration in mg/Kg
- *(NS)* — Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL
- Detected Subsurface Soil Concentration >RAL
- Detected Subsurface Soil Concentration >cPCL
- Affected Property
- PCLE Zone

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 126 mg/Kg.
4. Critical PCL (cPCL)= 378 mg/Kg (on-site), (cPCL)= 126 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-2

SUBSURFACE SOIL COC CONCENTRATION MAP 2-METHYLNAPHTHALENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

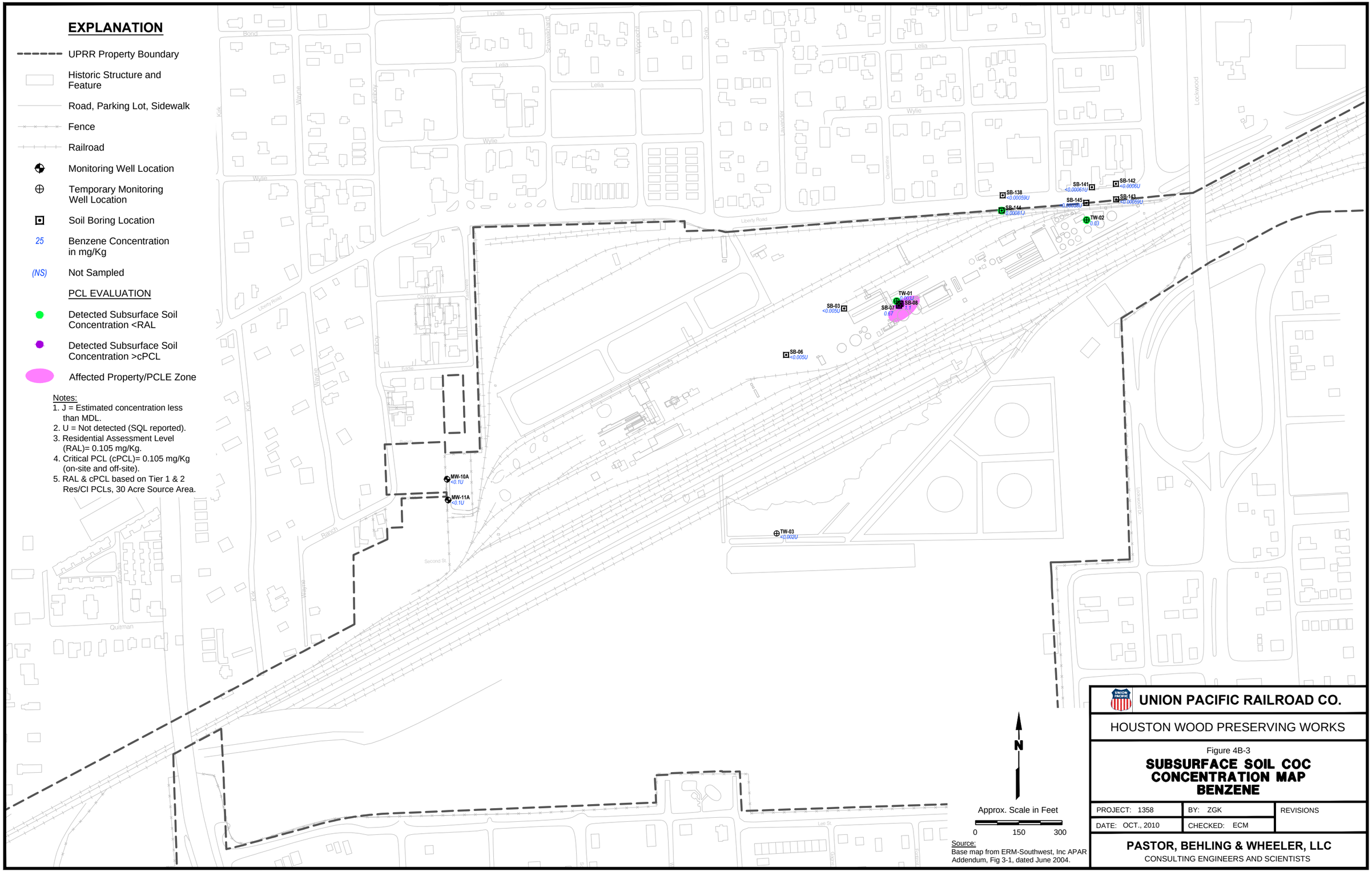
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 25 — Benzene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL
- Detected Subsurface Soil Concentration >cPCL
- Affected Property/PCLE Zone

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 0.105 mg/Kg.
4. Critical PCL (cPCL)= 0.105 mg/Kg (on-site and off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-3

SUBSURFACE SOIL COC CONCENTRATION MAP BENZENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- 25 — Benzo(a)pyrene Concentration in mg/Kg
- (NS) — Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 57 mg/Kg.
4. Critical PCL (cPCL)= 57 mg/Kg (on-site and off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.

SB-138 <0.0027U
SB-141 0.006 J
SB-142 <0.0028U
SB-143 <0.0027U
SB-144 1.2
SB-145 0.59
TW-02 0.36
TW-01 1.68
SB-08 330U
SB-03 <1.6U
SB-07 5
SB-06 <6.6U
MW-10A <0.66U
MW-11A <0.66U
TW-03 5.27

Approx. Scale in Feet
0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-4

SUBSURFACE SOIL COC CONCENTRATION MAP BENZO(A)PYRENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

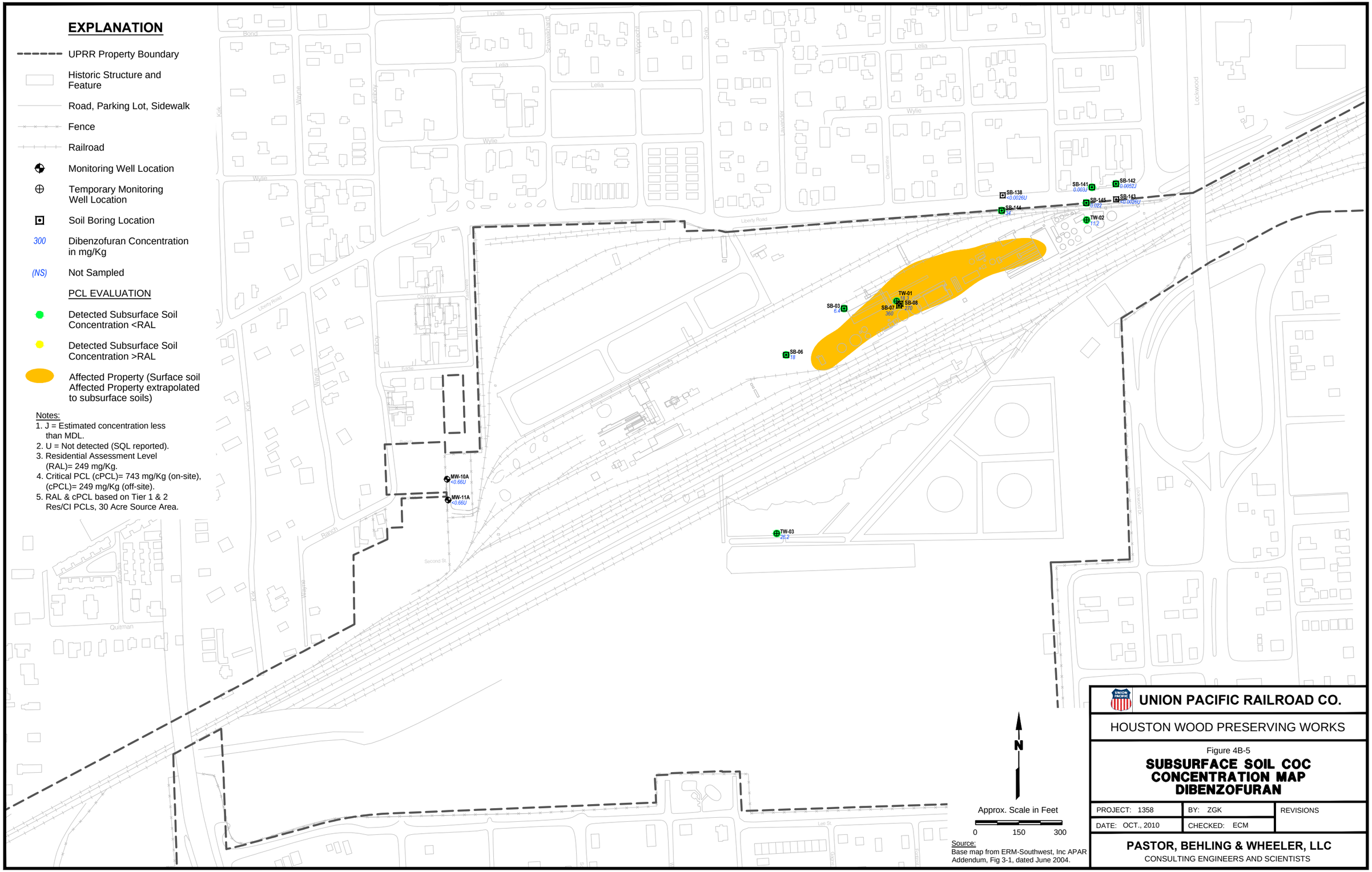
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *300* Dibenzofuran Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL
- Detected Subsurface Soil Concentration >RAL
- Affected Property (Surface soil Affected Property extrapolated to subsurface soils)

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 249 mg/Kg.
4. Critical PCL (cPCL)= 743 mg/Kg (on-site), (cPCL)= 249 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-5

SUBSURFACE SOIL COC CONCENTRATION MAP DIBENZOFURAN

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

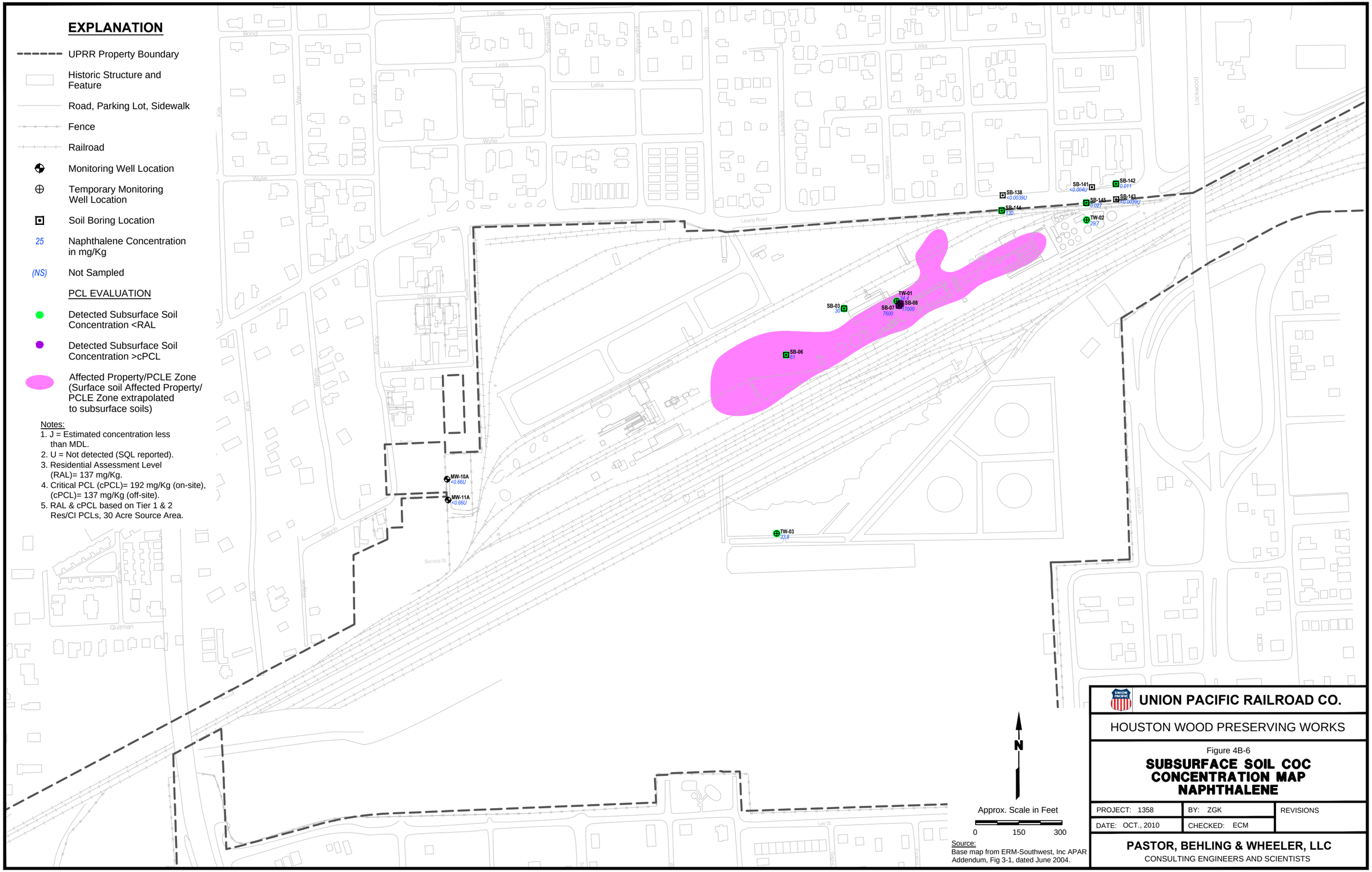
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *25* Naphthalene Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL
- Detected Subsurface Soil Concentration >cPCL
- Affected Property/PCLE Zone (Surface soil Affected Property/ PCLE Zone extrapolated to subsurface soils)

Notes:
1. J = Estimated concentration less than MDL.
2. U = Not detected (SQL reported).
3. Residential Assessment Level (RAL)= 137 mg/Kg.
4. Critical PCL (cPCL)= 192 mg/Kg (on-site), (cPCL)= 137 mg/Kg (off-site).
5. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-6

SUBSURFACE SOIL COC CONCENTRATION MAP NAPHTHALENE

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

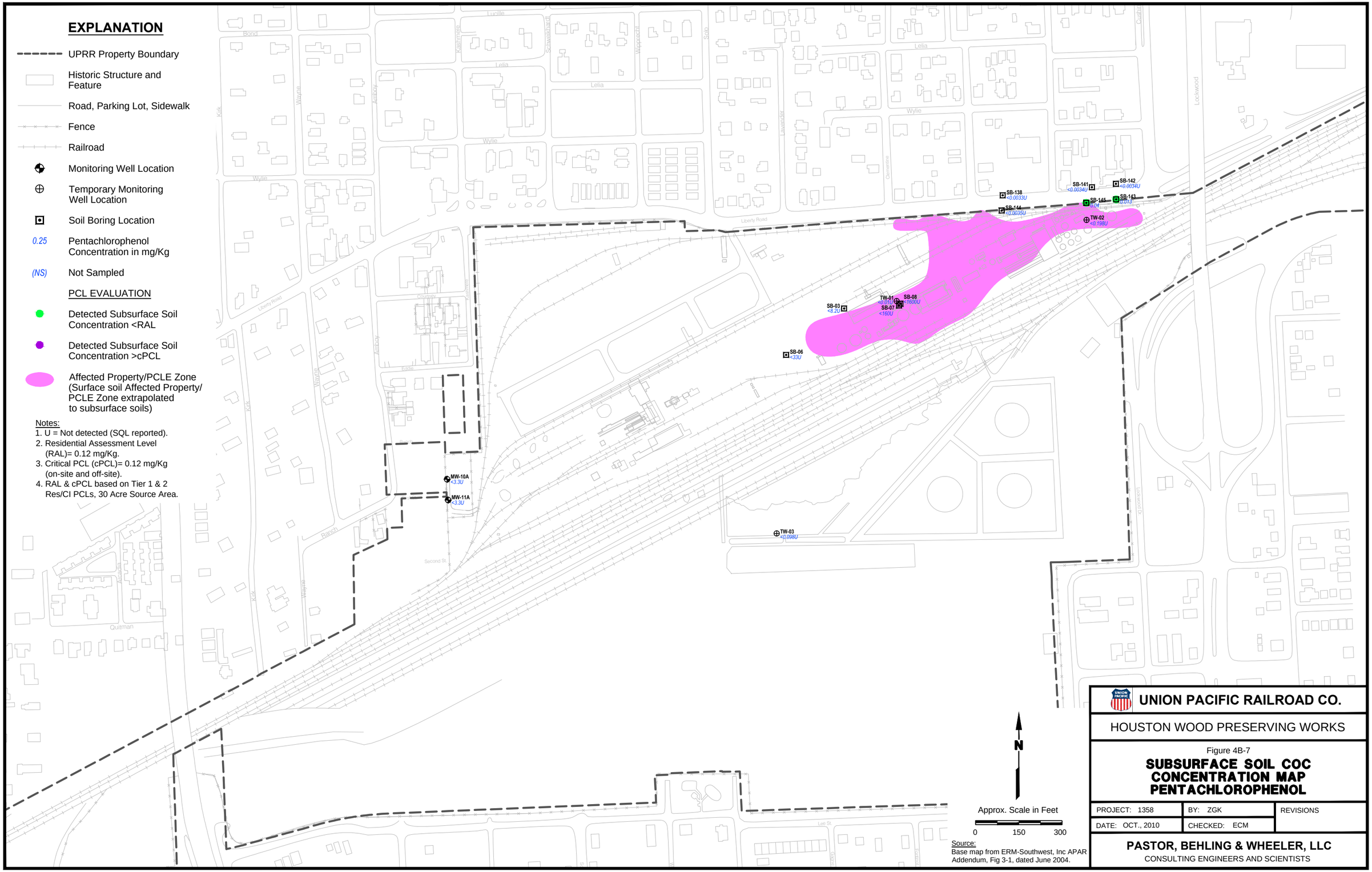
EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- Soil Boring Location
- *0.25* Pentachlorophenol Concentration in mg/Kg
- *(NS)* Not Sampled

PCL EVALUATION

- Detected Subsurface Soil Concentration <RAL
- Detected Subsurface Soil Concentration >cPCL
- Affected Property/PCLE Zone (Surface soil Affected Property/ PCLE Zone extrapolated to subsurface soils)

Notes:
1. U = Not detected (SQL reported).
2. Residential Assessment Level (RAL)= 0.12 mg/Kg.
3. Critical PCL (cPCL)= 0.12 mg/Kg (on-site and off-site).
4. RAL & cPCL based on Tier 1 & 2 Res/CI PCLs, 30 Acre Source Area.



N

Approx. Scale in Feet

0 150 300

Source:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 4B-7

SUBSURFACE SOIL COC CONCENTRATION MAP PENTACHLOROPHENOL

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

Fill: Sand, Silt, Clay & Gravel, wood fragments, bricks, scrap metal

Transmissive Zone (TZ): Sand & Silty Sand

Cohesive Zone (CZ): Clay, Silty Clay & Silt

Water Level Elevation (Ft HVD) (A-ATZ, B-BTZ, C-CTZ, D-DTZ)

Elevation of Top of DNAPL (Ft HVD), and Measured DNAPL Thickness in Well (Ft) (June/July 2010)

NAPL or Sheen/Staining Noted in Soils for Boring Log, or for CPT/ROST Location ROST Result >25% RE

MONITORING WELL CONSTRUCTION

- Boring
- Water Level (Ft HVD) Measured 7/12/2010
- Well Screen
- Well Sump

ROST LOGS

ROST (% RE) 0 50 100

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

Groundwater Affected Property/ PCLE Zone

Notes:
1. Topography is estimated.
2. See Figure 1B for cross section location.
3. Concentration are in mg/L.
4. Highlighted and bolded concentrations exceed RALs.
5. Utility locations based on drawings provided by the City of Houston Department of Public Works & Engineering.
6. Vertical datum based on City of Houston Monument System (HVD), Ft HVD.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Vertical Exaggeration 5X

75 0 75 150

scale in feet

STATE OF TEXAS ERIC C. MATZNER GEOLOGY LIC. # 795 LICENSED PROFESSIONAL GEOSCIENTIST

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

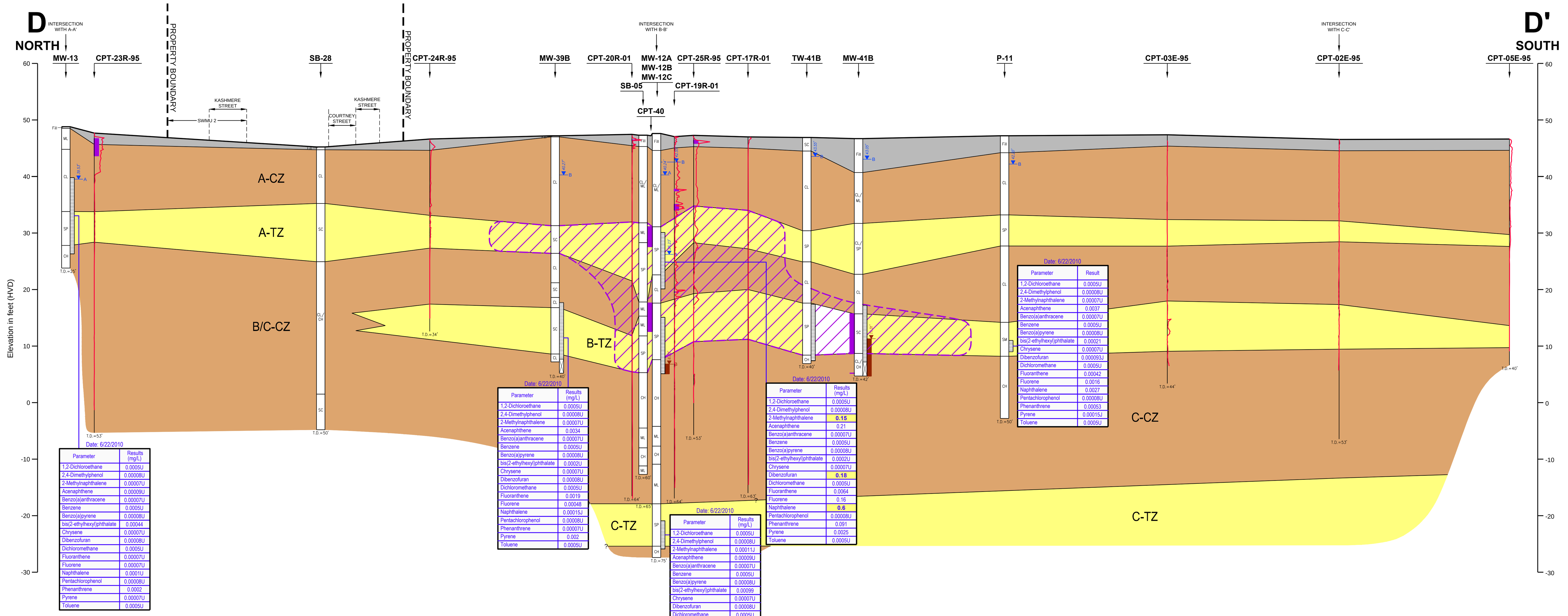
Figure 4C-1

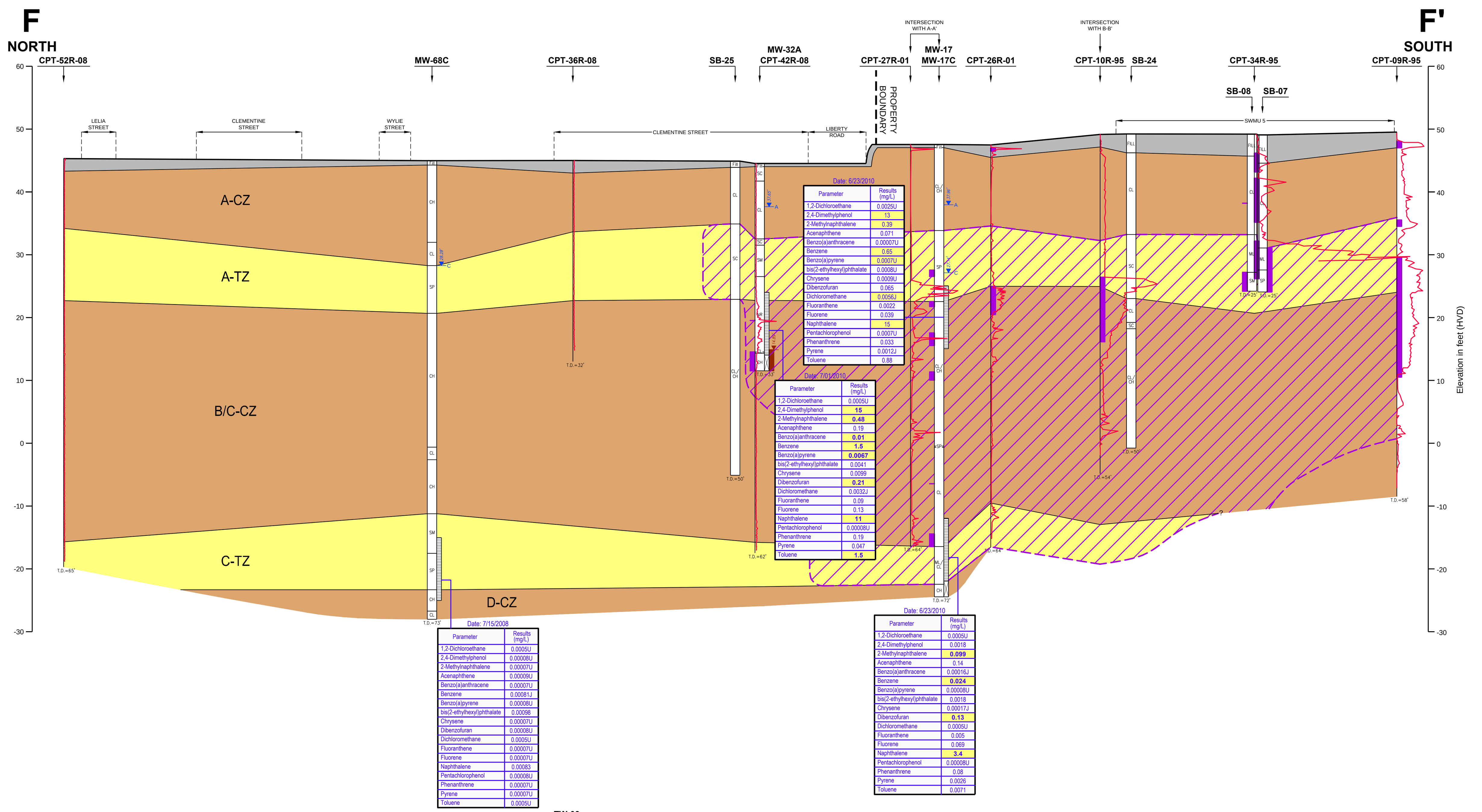
CROSS SECTIONS A-A', B-B' & C-C'

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS





Cross section D-D' groundwater results (mg/L)

Parameter	MW-13 (6/22/2010)	MW-39B (6/22/2010)	MW-12C (6/22/2010)	TW-41B (6/22/2010)	P-11 (6/22/2010)
1,2-Dichloroethane	0.0005U	0.0005U	0.0005U	0.0005U	0.0005U
2,4-Dimethylphenol	0.00008U	0.00008U	0.00008U	0.00008U	0.00008U
2-Methylnaphthalene	0.00007U	0.00007U	0.00011J	**0.15**	0.00007U
Acenaphthene	0.00009U	0.0034	0.00009U	0.21	0.0037
Benzo(a)anthracene	0.00007U	0.00007U	0.00007U	0.00007U	0.00007U
Benzene	0.0005U	0.0005U	0.0005U	0.0005U	0.0005U
Benzo(a)pyrene	0.00008U	0.00008U	0.00008U	0.00008U	0.00008U
bis(2-ethylhexyl)phthalate	0.00044	0.0002U	0.00099	0.0002U	0.00021
Chrysene	0.00007U	0.00007U	0.00007U	0.00007U	0.00007U
Dibenzofuran	0.00008U	0.00008U	0.00008U	**0.18**	0.000093J
Dichloromethane	0.0005U	0.0005U	0.0005U	0.0005U	0.0005U
Fluoranthene	0.00007U	0.0019	0.00007U	0.0064	0.00042
Fluorene	0.00007U	0.00048	0.00007U	0.16	0.0016
Naphthalene	0.0001U	0.00015J	0.00046	**0.6**	0.0027
Pentachlorophenol	0.00008U	0.00008U	0.00008U	0.00008U	0.00008U
Phenanthrene	0.0002	0.00007U	0.00007U	0.091	0.00053
Pyrene	0.00007U	0.002	0.00007U	0.0025	0.00015J
Toluene	0.0005U	0.0005U	0.0005U	0.0005U	0.0005U

Cross section F-F' groundwater results (mg/L)

Parameter	MW-68C (7/15/2008)	MW-32A (6/23/2010)	MW-32A (7/01/2010)	MW-17C (6/23/2010)
1,2-Dichloroethane	0.0005U	0.0025U	0.0005U	0.0005U
2,4-Dimethylphenol	0.00008U	**13**	**15**	0.0018
2-Methylnaphthalene	0.00007U	**0.39**	**0.48**	**0.099**
Acenaphthene	0.00009U	0.071	0.19	0.14
Benzo(a)anthracene	0.00007U	0.00007U	**0.01**	0.00016J
Benzene	0.00081J	**0.65**	**1.5**	**0.024**
Benzo(a)pyrene	0.00008U	**0.0007U**	**0.0067**	0.00008U
bis(2-ethylhexyl)phthalate	0.00098	0.0008U	0.0041	0.0018
Chrysene	0.00007U	0.0009U	0.0099	0.00017J
Dibenzofuran	0.00008U	0.065	**0.21**	**0.13**
Dichloromethane	0.0005U	**0.0056J**	0.0032J	0.0005U
Fluoranthene	0.00007U	0.0022	0.09	0.005
Fluorene	0.00007U	0.039	0.13	0.069
Naphthalene	0.00083	**15**	**11**	**3.4**
Pentachlorophenol	0.00008U	0.0007U	0.00008U	0.00008U
Phenanthrene	0.00007U	0.033	0.19	0.08
Pyrene	0.00007U	0.0012J	0.047	0.0026
Toluene	0.0005U	0.88	**1.5**	0.0071

Cross section E-E' groundwater results (mg/L)

Parameter	CPT-51R-08 (8/12/2008)	MW-35A (6/30/2010)	MW-35B (7/01/2010)	MW-16 (6/23/2010)	MW-51A (6/24/2010)
1,2-Dichloroethane	0.00052U	0.0005U	0.005U	0.0025U	0.0005U
2,4-Dimethylphenol	0.00029U	0.00008U	0.00008U	0.0054	0.00008U
2-Methylnaphthalene	0.00038U	0.00007U	**0.36**	0.04	0.00013J
Acenaphthene	0.00689	0.0077	0.2	0.18	0.00013J
Benzo(a)anthracene	0.00019U	0.00007U	0.00022	0.00007U	0.00014J
Benzene	0.00025U	0.0005U	**0.068**	**0.058**	0.0005U
Benzo(a)pyrene	0.00019U	0.00008U	0.00012J	0.00008U	0.00008U
bis(2-ethylhexyl)phthalate	0.000506	0.00048	0.00097	0.0014	0.00035
Chrysene	0.00019U	0.00007U	0.00017J	0.00007U	0.00013J
Dibenzofuran	0.00029U	0.0026	**0.22**	0.091	0.00012J
Dichloromethane	0.00054U	0.0005U	0.0005U	**0.0062J**	0.0005U
Fluoranthene	0.00078	0.00048	0.006	0.0049	0.00072
Fluorene	0.001	0.0014	0.11	0.086	0.00011J
Naphthalene	0.0047	0.0017	**11**	**1.4**	0.00087
Pentachlorophenol	0.00019U	0.00008U	0.00008U	0.00008U	0.00008U
Phenanthrene	0.00019U	0.00007U	0.12	0.042	0.00068
Pyrene	0.00343	0.00031	0.0025	0.0025	0.00037
Toluene	0.00041U	0.0005U	0.005	0.01J	0.0005U

EXPLANATION

- Fill: Sand, Silt, Clay & Gravel, wood fragments, bricks, scrap metal
- Transmissive Zone (TZ): Sand & Silty Sand
- Cohesive Zone (CZ): Clay, Silty Clay & Silt
- Water Level Elevation (Ft HVD) (A-ATZ, B-BTZ, C-CTZ, D-DTZ)
- Elevation of Top of DNAPL (Ft HVD), and Measured DNAPL Thickness in Well (Ft) (June/July 2010)
- NAPL or Sheen/Staining Noted in Soils for Boring Log, or for CPT/ROST Location ROST Result >25% RE

MONITORING WELL CONSTRUCTION

- Boring
- Water Level (Ft HVD) Measured 7/12/2010
- Well Screen
- Well Sump

ROST LOGS

ROST (% RE) 0 50 100

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

- Groundwater Affected Property/ PCLE Zone

Notes:
1. Topography is estimated.
2. See Figure 1B for cross section location.
3. Concentration are in mg/L.
4. Highlighted and bolded concentrations exceed RALs.
5. Utility locations based on drawings provided by the City of Houston Department of Public Works & Engineering.
6. Vertical datum based on City of Houston Monument System (HVD), Ft HVD.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST

Vertical Exaggeration 5X

75 0 75 150

scale in feet

UNION PACIFIC RAILROAD CO.

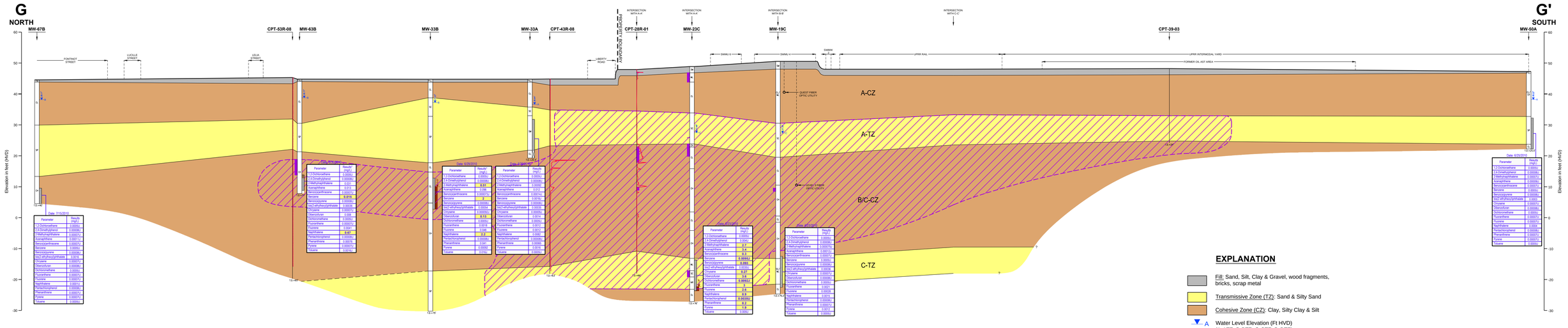
HOUSTON WOOD PRESERVING WORKS

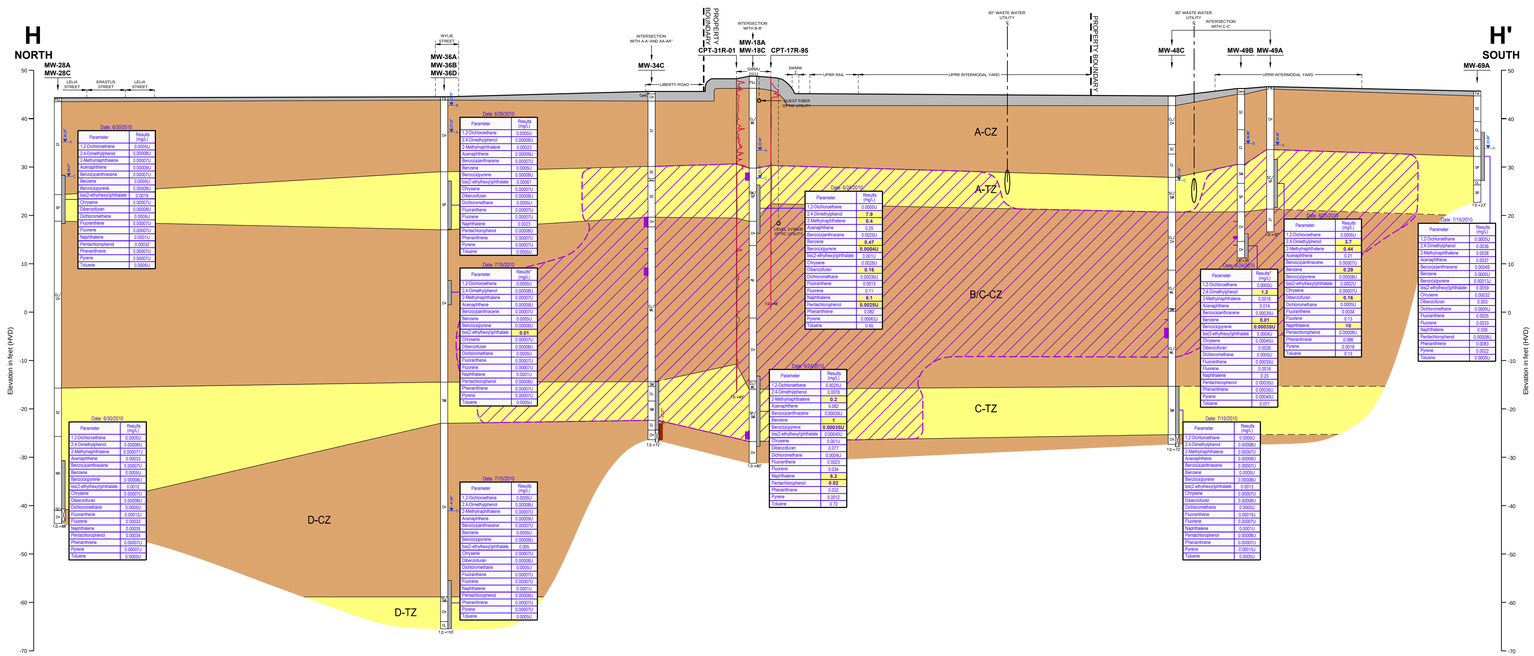
Figure 4C-2

CROSS SECTIONS D-D', E-E' & F-F'

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS





EXPLANATION

Fill: Sand, Silt, Clay & Gravel, wood fragments, bricks, scrap metal

Transmissive Zone (TZ): Sand & Silty Sand

Cohesive Zone (CZ): Clay, Silty Clay & Silt

Water Level Elevation (Ft HVD) (A-ATZ, B-BTZ, C-CTZ, D-DTZ)

Elevation of Top of DNAPL (Ft HVD), and Measured DNAPL Thickness in Well (Ft) (June/July 2010)

NAPL or Sheen/Staining Noted in Soils for Boring Log, or for CPT/ROST Location ROST Result >25% RE

MONITORING WELL CONSTRUCTION

Boring

Water Level (Ft HVD) Measured 7/12/2010

Well Screen

Well Sump

ROST LOGS

ROST (% RE)

0 50 100

Groundwater Affected Property/ PCLE Zone

Notes:
1. Topography is estimated.
2. See Figure 1B for cross section location.
3. Concentration are in mg/L.
4. Highlighted and bolded concentrations exceed RALs.
5. Utility locations based on drawings provided by the City of Houston Department of Public Works & Engineering.
6. Vertical datum based on City of Houston Monument System (HVD), Ft HVD.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
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PROFESSIONAL GEOSCIENTIST

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Vertical Exaggeration 5X

75 0 75 150

scale in feet

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

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HOUSTON WOOD PRESERVING WORKS

Figure 4C-3

CROSS SECTIONS G-G' & H-H'

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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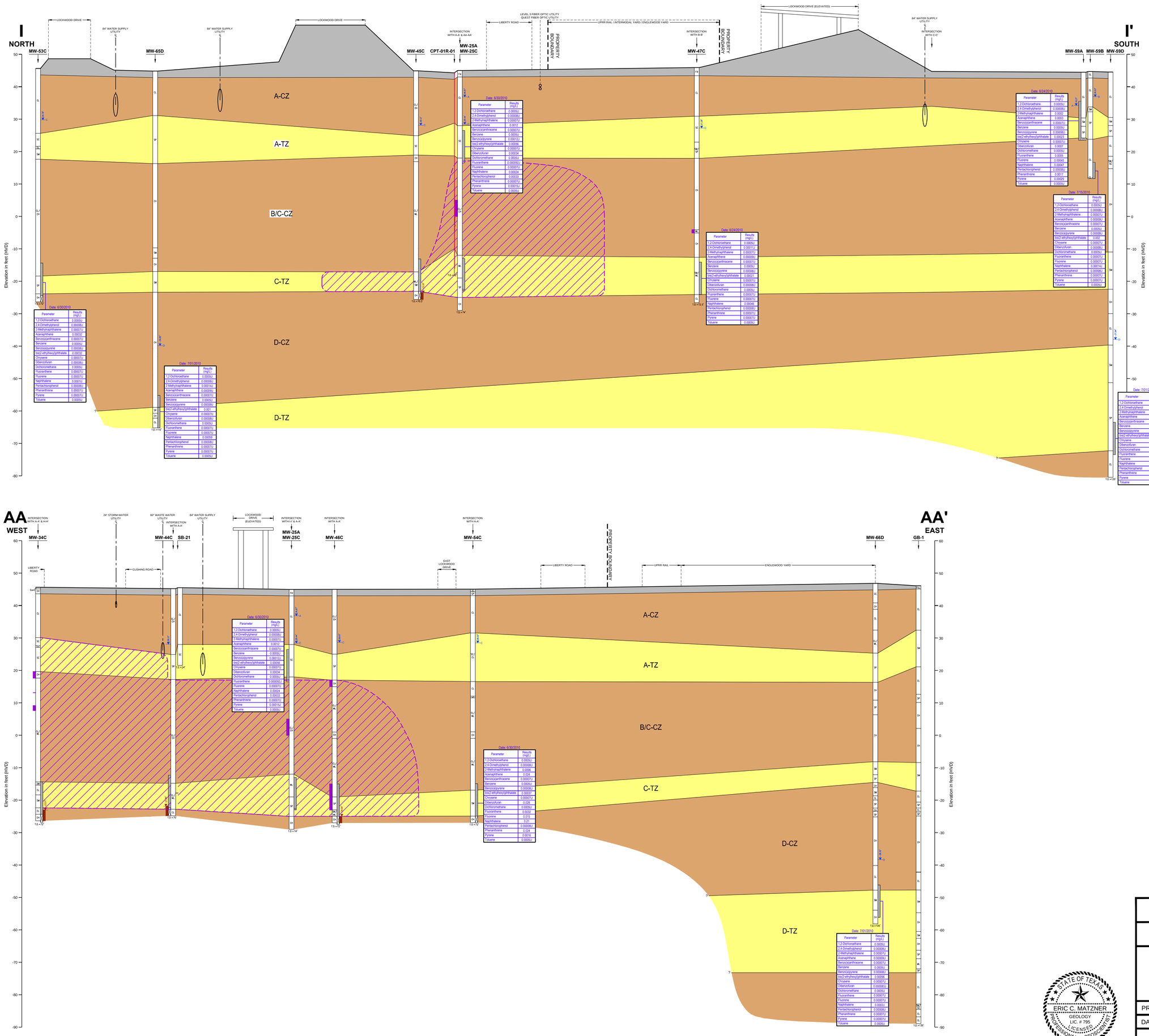

EXPLANATION

- Fill: Sand, Silt, Clay & Gravel, wood fragments, bricks, scrap metal
- Transmissive Zone (TZ): Sand & Silty Sand
- Cohesive Zone (CZ): Clay, Silty Clay & Silt
- Water Level Elevation (Ft HVD) (A-ATZ, B-BTZ, C-CTZ, D-DTZ)
- Elevation of Top of DNAPL (Ft HVD), and Measured DNAPL Thickness in Well (Ft) (June/July 2010)
- NAPL or Sheen/Staining Noted in Soils for Boring Log, or for CPT/ROST Location ROST Result >25% RE

MONITORING WELL CONSTRUCTION

- Boring
- Water Level (Ft HVD) Measured 7/12/2010
- Well Screen
- Well Sump

ROST LOGS

ROST (% RE): 0 50 100

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

Groundwater Affected Property/ PCLE Zone

Notes:
1. Topography is estimated.
2. See Figure 1B for cross section location.
3. Concentration are in mg/L.
4. Highlighted and bolded concentrations exceed RALs.
5. Utility locations based on drawings provided by the City of Houston Department of Public Works & Engineering.
6. Vertical datum based on City of Houston Monument System (HVD), Ft HVD.

SWMU/AOC AREAS

No.	Description
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SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Vertical Exaggeration 5X

75 0 75 150

scale in feet

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HOUSTON WOOD PRESERVING WORKS

Figure 4C-4

CROSS SECTIONS I-I' & AA-AA'

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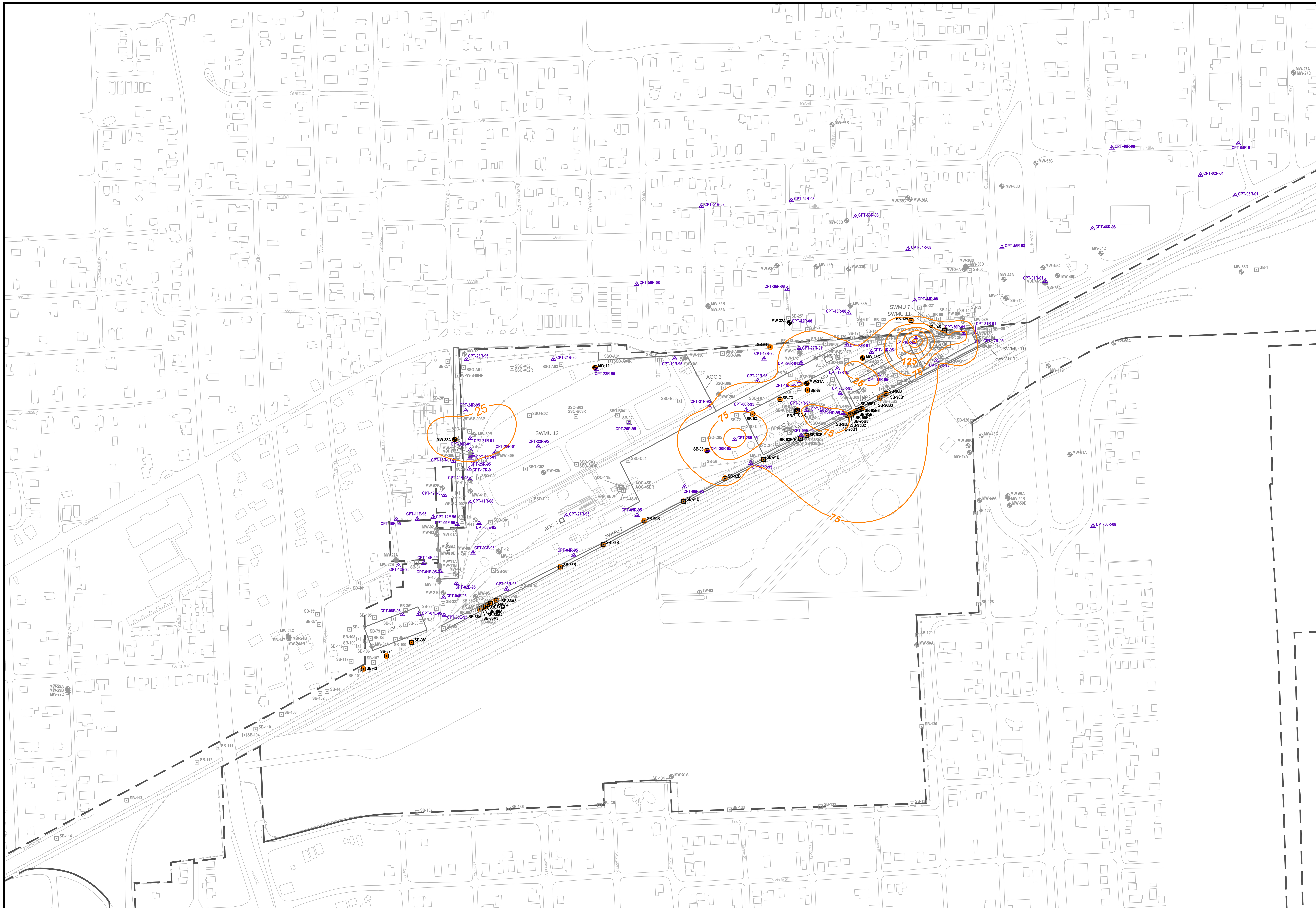
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- Monitoring Well Location
- Temporary Monitoring Well Location
- CPT with Rost Location
- Soil Boring Location
- NAPL Noted on Boring Log as Observed in Vadose Zone
- 75 Rost Response (%RE, 50%RE Contour)

Note:
* Soil analytical data rejected by validator.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

N

Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 4D

VADOSE ZONE NAPL OBSERVATION AND ROST READING

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5.0 GROUNDWATER ASSESSMENT

Section 5.1 Derivation of Assessment Levels

The groundwater assessment levels at the Site were selected in consideration of the well yield testing detailed in the Revised APAR (ERM, 2004). Based on the evaluation of potentially complete expose pathways, the following groundwater-related residential pathways were assessed at the Site:

- $^{GW}GW_{Ing}$, and
- $^{Air}GW_{Inh\text{-}V}$.

For this updated APAR Addendum, groundwater analytical data collected from the Site collected in January 2010 and June/July 2010 were compared to the TCEQ TRRP Residential Groundwater PCLs dated March 2010, assuming the source area is greater than 0.5 acres (30-acre size), to evaluate target COCs that exceeded the groundwater RALs. RALs were established as the lesser value of the Residential $^{GW}GW_{Ing}$ and $^{Air}GW_{Inh\text{-}V}$ PCLs.

As discussed in the APAR Addendum (PBW, 2009), there are no water bodies within 0.5 miles of the Site. The closest water body is Buffalo Bayou, which is located about 1.6 miles southwest of the Site. Therefore, the surface water pathway as a function of groundwater-to-surface water evaluation (^{SW}GW PCLs) and the sediment pathway as a function of groundwater-to-sediment evaluation (^{Sed}GW PCLs) were considered incomplete for the purposes of this affected property assessment.

The Affected Property was established based on groundwater COC results using the groundwater analytical data collected in 2010 (January and June/July). Details of the nature and extent of the COCs in groundwater as indicated by recent groundwater data are discussed below.

Section 5.2 Nature and Extent of COCs and NAPL in Groundwater

Groundwater samples were collected from monitoring wells installed in the four units of the uppermost GWBUs at the Site. Laboratory data packages for the data collected in 2010 are provided in Appendix 10. A complete summary of groundwater analytical data for the Site from 2004 through 2010 is presented on the following tables:

Table	Description
5B-1	Summary of Groundwater Sampling Results – A-TZ
5B-2	Summary of Groundwater Sampling Results – Selected A-TZ Wells - VOCs
5B-3	Summary of Groundwater Sampling Results – Temporary Wells – A-TZ
5B-4	Summary of Groundwater Sampling Results – B-TZ and B-CZ
5B-5	Summary of Groundwater Sampling Results – C-TZ
5B-6	Summary of Groundwater Sampling Results – D-TZ

COCs evaluated for the purpose of the APAR were site-specific COCs identified in the RFI Work Plan (IC, 1994) prepared for the Site. In addition to the 34 site-specific COCs, groundwater samples collected in January 2010 from monitoring wells in and around the former Aboveground Storage Tank Area (SWMU No. 8) MW-18A, MW-57A, MW-58A, and TW-56A were analyzed for the target constituent list (TCL) of volatile organic compounds (VOCs) by EPA Method 8260 (Table 5B-2). Comparing the maximum groundwater analytical data from the 2010 groundwater sampling events to RALs, concentrations of 24 target COCs exceeded their respective RALs or had a SDL greater than the RAL (>SDL) for COCs with no detections:

VOCs

- 1,2-Dichloroethane (A-TZ only)
- Benzene (A-TZ, B-TZ, C-TZ)
- Dichloromethane (A-TZ and C-TZ,
- Toluene (A-TZ only)
- Vinyl Chloride (A-TZ, only one well)*

SVOCs

- 1,2-Diphenylhydrazine (B-CZ)*
- 2-Methylnaphthalene (A-TZ, B-TZ, C-TZ)
- Acenaphthene (A-TZ and C-TZ only)
- Benzo(a)pyrene (A-TZ, B-TZ, C-TZ)
- Bis(2-chloroethoxy)methane (>SDL, only one C-TZ well)
- Bis(2-ethylhexyl)phthalate (B-CZ, possible lab contaminant)
- Chrysene (A-TZ and C-TZ)
- Dibenzofuran (A-TZ, B-TZ, C-TZ)
- Fluoranthene (A-TZ and C-TZ)
- Fluorene (A-TZ and C-TZ)
- Naphthalene (A-TZ, B-TZ, C-TZ)
- Pentachlorophenol (A-TZ and C-TZ)
- Phenanthrene (A-TZ and C-TZ)
- Phenol (A-TZ only)
- Pyrene (A-TZ and C-TZ)

* - first time PCL exceedance, will be resampled and verified.

Groundwater flow conditions at the Site have been evaluated based on multiple fluid measurements collected since 2004, with the potentiometric surface relatively consistent in the transmissive zones over that time period. Groundwater data collected from the January and June/July 2010 gauging events are consistent with data collected previously at the Site, and with the additional wells installed in units A-TZ,

B-CZ, C-TZ and D-TZ in June 2010. Potentiometric surface maps from the two semi-annual events in 2010 for each of the four transmissive zones, A-TZ, B-TZ, C-TZ, and D-TZ, are presented on Figures 5A-1 through and 5A-8, respectively.

The spatial distributions of the COCs exceeding RALs in each GWBU from the January 2010 and June/July 2010 monitoring events are presented on the following figures:

- Figures 5B-1 (Jan 2010) and 5B-2 (June/July 2010) for unit A-TZ,
- Figures 5B-3 (Jan 2010) and 5B-4 (June/July 2010) for B-TZ/B-CZ,
- Figures 5B-5 (Jan 2010) and 5B-6 (June/July 2010) for C-TZ, and
- Figures 5B-7 (Jan 2010) and 5B-8 (June/July 2010) for D-TZ.

The NAPL distribution at the Site based on DNAPL measurements from monitoring wells completed in the A-TZ, B-TZ/B-CZ, and C-TZ units are presented for January and July 2010 on Figures 5A-9 through 5A-14, respectively. Table 5D provides a summary of the fluid-level measurements since 2004.

Details of the potentiometric surface, distribution of the COCs, and the occurrence of NAPL for each transmissive zone are discussed below.

Section 5.2.1 Groundwater Flow Conditions and COC Distribution

Transmissive Zone A-TZ

Groundwater in the A-TZ generally flows from west to east across the Site at a gradient of approximately 0.006 ft/ft, with groundwater divide on the east side of the Site just west of the Lockwood Road Bridge (Figures 5A-1 and 5A-2). Identified just west of the bridge is the 60-in wastewater line that runs north to south (Figure 3A) and appears to intersect the A-TZ (see Cross Section A-A', B-B', and C-C', Figure 4C-1). Groundwater flow in the A-TZ flows to the east on the west side of the wastewater line, and flows to the west on the east side of the wastewater line. The highest groundwater elevations in the A-TZ are generally near SWMU No.1 (45.22 feet relative to the City of Houston Vertical Datum (HVD) (MW-10A, Jan 2010)), with the lowest elevations near the east side of the Site along Lockwood Drive (33.46 feet HVD (MW-18A, July 2010)) near the area where the wastewater line is located. Although these groundwater flow directions suggest potential discharge to the wastewater line, as discussed in Section 3.0, fluid samples collected from the line suggested there is not a significant loading of COCs from groundwater into the wastewater line.

VOCs – A-TZ

During the two semi-annual 2010 groundwater monitoring events, benzene concentrations were detected above the RAL of 0.005 mg/L in A-TZ wells located predominantly on the eastern portion of the Site near SWMU Nos. 4, 5, and 8 (Figures 5B-1 and 5B-2). The maximum benzene concentration detected in the A-TZ wells in 2010 was 1.5 mg/L at off-site well MW-32A. Benzene concentrations on-site were detected generally between 0.038 mg/L and 0.65 mg/L. Naphtha, a common drying agent used in the wood-treating process, consists of lighter fraction carbon chain compounds, including benzene.

Other VOC compounds detected in the groundwater samples from A-TZ wells included one PCL exceedance for 1,2-dichloroethane (0.023J mg/L at TW-56A, Jan 2010), three PCL exceedances for dichloromethane (MW-16, MW-17, and MW-57A, only in June/July 2010 event, possible laboratory contaminant), one PCL exceedance for toluene (1.5 mg/L at MW-32A, June/July 2010), and one PCL exceedance for vinyl chloride (0.059 mg/L at MW-18A, Jan 2010). Monitoring wells MW-57A, MW-58A, and TW-56A were also analyzed for vinyl chloride, with none of the concentrations in these wells exceeding the vinyl chloride PCL (0.002 mg/L) (Table 5B-2). During the next scheduled sampling event (January 2011), the groundwater sample from MW-18A will analyzed for vinyl chloride to confirm the January 2010 result. The horizontal distribution of VOCs has been delineated to RALs based on the monitoring points located in all directions around the area with detections of VOCs less than RALs or not detected at downgradient, cross-gradient, and up-gradient well locations.

SVOCs – A-TZ

SVOCs were detected above the applicable RALs in A-TZ wells located generally on the eastern portion of the Site near SWMU Nos. 4, 5, and 8; and one A-TZ well located on the western portion of the Site (MW-12A) (Figures 5B-1 and 5B-2). The predominant SVOCs detected in the A-TZ above RALs include 2-methylnaphthalene, 2,4-dimethylphenol, dibenzofuran, and naphthalene. Other SVOCs, including benz(a)anthracene, benzo(a)pyrene, and phenol, were also detected at concentrations greater than RALs. Acenaphthene, chrysene, fluoranthene, fluorine, phenanthrene, and pyrene were detected in only one sample above RALs, in the MW-57A sample collected during the June/July 2010 sampling event. The increase in SVOC concentration coincides with the first occurrence of DNAPL in the well (see Section 5.3). The horizontal distribution of SVOCs has been delineated to RALs based on the monitoring points located in all directions around the area with detections of SVOCs less than RALs or not detected.

Groundwater Plume Stability – A-TZ

For the A-TZ groundwater Affected Property, the configuration of the groundwater plume based on the data collected from 2008 through 2010 has been stable as shown on Figure 5B-9. Groundwater data from the A-TZ wells suggests the plume is not migrating and COC concentrations are predominantly limited to the on-site property except for areas near wells MW-32A and along the east portion of the Site at wells MW-18A and MW-49A. Unit A-TZ groundwater flow conditions near the wastewater utility on the east side of the Site likely controls the migration of COCs in the A-TZ downgradient to the southeast; however, as discussed in Section 3.0, there does not appear to be significant mass loading of COCs into the wastewater line.

Transmissive Zone B-TZ/Cohesive Zone B-CZ

Groundwater in the B-TZ/B-CZ generally flows from west to east across the Site at a gradient of approximately 0.004 ft/ft, and flows to the west on the far west side of the Site at a gradient approximately 0.012 ft/ft (Figures 5A-3 and 5A-4). As shown on Figures 5A-3 and 5A-4, there is a piezometric high near the west perimeter of the Site, similar to the A-TZ. The highest groundwater elevation in the B-TZ in 2010 was 45.63 feet HVD (P-10 near SWMU No. 1, July 2010), and lowest elevation in the B-TZ wells was 26.97 feet HVD (MW-29B, July 2010).

Four wells were installed in 2007 and 2009 in the B-CZ clay unit east of where the B-TZ pinches out to evaluate dissolved phase COCs and potential DNAPL migration in the clay unit (Figure 5A-3): MW-33B, MW-35B, MW-49B, and MW-63B. Three additional wells were installed in June 2010 in the B-CZ to evaluate COC concentrations in the clay (Figure 5A-4): MW36B, MW-59B, and MW-67B. At each location, groundwater was encountered in very thin carbonate seams (typically less than 0.1 feet thick) within the B-CZ clay unit. Groundwater flow based on the January 2010 measurements is to the east-southeast, with a component of flow from the north to the southeast off-site to the north (wells MW-63B and MW-33B) (Figure 5A-3). Groundwater flow during the July 2010 gauging event shows flow to the east-southeast on the east portion of the Site; however, with groundwater potentiometric elevations from the wells east of the Site (i.e., MW-36B and MW-59B), there is a component of groundwater flow to the southwest from MW-36B and flow to the northwest from MW-59B (Figure 5A-4).

As detailed in the APAR Addendum, the B-CZ yields less than 0.1 gallons per minute (GPM) (i.e., behaves as a Class 3 Groundwater-Bearing Unit (GWBU)) in those areas east of MW-35B. Additional groundwater yield testing was conducted on the three new B-CZ wells (MW-36B, MW-59B, and MW-

67B installed in 2010. Based on the aquifer testing results, the hydraulic conductivity estimated using the Bouwer-Rice analysis ranged from 6 x 10^{-8} cm/sec to 1 x 10^{-7} cm/sec for six of the seven wells completed in the B-CZ. The only well with a hydraulic conductivity greater than 1 x 10^{-5} cm/sec (criteria for saturated soils) was well MW-35B, which had a hydraulic conductivity estimate at 1 x 10^{-4} cm/sec. MW-35B appears to be installed in the area of the lateral transitional boundary where the B-TZ pinches out into the B-CZ with some hydraulic connection between the more transmissive sands to the southwest and the carbonate seams encountered in MW-35B. Details of the aquifer testing and results are discussed in Section 2.1 and Appendix 7. For the purposes of evaluating the Affected Property, COCs detected in groundwater encountered in the B-CZ were conservatively evaluated to Class 2 groundwater PCLs, as discussed below.

Based on the potentiometric elevations within the A-TZ and B-TZ, there appears to be communication between the two GWBUs on the west side of the Site as shown with the relatively similar groundwater elevations shown for the two units on Figures 5A-1 and 5A-2 for the A-TZ wells, and Figures 5A-3 and 5A-4 for the B-TZ/B-CZ wells. Groundwater elevations in the B-CZ on the east side of the Site are generally higher relative to the groundwater elevations in the A-TZ, indicating an upward vertical gradient between the B-CZ and the A-TZ.

VOCs – B-TZ/B-CZ

Benzene was detected above the RAL in the B-TZ on the west side of the Site at only one monitoring well, MW-40B, at 0.028 mg/L in January 2010, and at 0.026 mg/L in June/July 2010, with no detections above the SDL (<0.0005 mg/L) at any B-TZ monitoring points located downgradient from this area (i.e., MW-42B, MW-14, MW-39B, and MW-38B) (Figures 5B-3 and 5B-4). With benzene concentrations less than the PCL in on-site monitoring wells MW-14, MW-39B, P-11, and off-site well MW-38B, benzene concentrations are delineated on-site to the RAL in the B-TZ. No other VOCs were detected in Unit B-TZ monitoring wells at concentrations exceeding the applicable RALs.

As previously discussed, the B-CZ, where monitoring wells MW-33B, MW-36B, MW-49B, MW-59B, MW-63B, and MW-67B are completed in the non-groundwater bearing unit, does not yield a sufficient quantity of groundwater to be considered a current or future usable water resource. However, COC concentrations detected in groundwater samples from these wells were compared to Class 2 groundwater PCLs to conservatively evaluate the Affected Property. Using the Class 2 Tier 1 PCLs, benzene was detected above the RAL in the four B-CZ wells MW-33B, MW-35B, MW-49B, and MW-63B during the January 2010 monitoring event ranging from 0.013 mg/L (MW-49B) to 1.2 mg/L (MW-33B) where

DNAPL was encountered (Figure 5B-3). After three new B-CZ wells were installed in June 2010, benzene concentrations detected during the June/July 2010 event (Figure 5B-4) were again detected in the same four B-CZ wells listed above with concentrations ranging from 0.01 mg/L (MW-49B) to 2 mg/L (MW-33B); however, benzene concentrations were not detected above the SDL (<0.0005 mg/L) in new wells MW-36B, MW-59B, and MW-67B. These data indicate that the benzene is delineated to RALs in the B-CZ. No other VOCs were detected in Unit B-CZ monitoring wells in 2010 at concentrations exceeding the applicable RALs.

SVOCs – B-TZ/B-CZ

SVOCs exceeding the applicable RALs in the B-TZ were detected at MW-40B on the west side of the Site. The SVOCs detected above RALs consisted of 2-methylnaphthalene, dibenzofuran, and naphthalene. SVOCs were not detected above RALs at any of the monitoring wells located downgradient of MW-40B during either the January 2010 or June/July 2010 events (Figures 5B-3 and 5A-4, respectively), demonstrating delineation to the RALs in this portion of the B-TZ. The general absence of COCs in monitoring wells MW-38B and MW-39B located downgradient of MW-12B and MW-41B, which contain DNAPL, show that COCs in groundwater attenuate below RALs over a short distance (<100 feet). Well TW-41B, located within 50 feet of MW-41B, had no COCs detected at concentrations greater than RALs (Figure 5B-3).

On the northeastern portion of the Site, 2-methylnaphthalene and naphthalene were detected at concentrations based on the January 2010 sampling event above RALs in three monitoring wells completed in the B-CZ located north of the Site (MW-33B, MW-35B, and MW-63B) (Figure 5B-3). None of the site-specific SVOCs were detected in MW-49B above RALs. Bis(2-ethylhexyl)phthalate, a common laboratory contaminant, and dibenzofuran were the only other SVOCs detected above RALs in MW-33B. Groundwater data collected in June/July 2010 from the seven B-CZ wells had concentrations of 2-methylnaphthalene, dibenzofuran, and naphthalene greater than RALs in MW-33B, MW-35B, and MW-63B (Figure 5B-4). None of the site-specific SVOC COCs were detected above RALs in MW-59B and MW-67B. The only COC detected above MQLs in MW-36B was bis(2-ethylhexyl)phthalate at 0.010 mg/L, which exceeds the RAL of 0.006 mg/L. Bis(2-ethylhexyl)phthalate was commonly detected in field blanks collected during the sampling event ranging from 0.0002 mg/L to 0.0033 mg/L, as discussed in Appendix 10. Therefore, the bis(2-ethylhexyl)phthalate detected in MW-36B is likely a sampling/laboratory artifact and not indicative of concentrations in the groundwater. Two other SVOCs were detected above RALs in the B-CZ groundwater samples: 1,2-diphenylhydrazine (PCL=0.0011 mg/L, detected at 0.0012 mg/L at MW-35B, July 2010); 2,4-dimethylphenol (PCL=0.049 mg/L, detected

at 1.2 mg/L at MW-49B, June 2010). Benzo(a)pyrene was not detected above the RAL in any B-TZ or B-CZ samples; however, the SDL for benzo(a)pyrene at MW-49B (0.00035U) was higher than the PCL (0.0002 mg/L). Using the June/July 2010 groundwater data, SVOCs are shown to be delineated to RALs within the B-CZ.

Groundwater Plume Stability – B-TZ/B-CZ

The groundwater Affected Property in the B-TZ and the B-CZ appears to be stable based on the groundwater data collected from 2008 through 2010. The groundwater PCLE Zone in the B-TZ on the west side of the Site is stable and limited in extent laterally (Figures 5B-10). With the limited data set for the B-CZ wells (recently installed wells only sampled once), additional sampling of the wells is necessary to evaluate any trends in the COC data.

Transmissive Zone C-TZ

Groundwater in the C-TZ flows from northeast to southwest across the Site (Figures 5A-5 and 5A-6) at a gradient ranging from 0.0006 ft/ft to 0.0008 ft/ft. Groundwater elevations measured in 2010 ranged from a high of approximately 30.81 feet (MW-25C, Jan 2010) to 25.14 feet (MW-29C, July 2010). This flow pattern has been consistent at the Site since 2004.

VOCs – C-TZ

Of the VOCs analyzed during the January and June/July 2010 groundwater monitoring events, benzene concentrations were detected above the RAL in five C-TZ monitoring wells located on the eastern portion of the Site: MW-17C, MW-18C, MW-19C (only in Jan 2010), MW-23C, and MW-25C with a maximum concentration in each well at 0.024 mg/L, 1.5 mg/L, 0.0056 mg/L, 0.012 mg/L, and 0.11J mg/L, respectively (Figures 5B-5 and 5B-6). Benzene was not detected above the RAL in monitoring wells MW-12C, MW-15C, or MW-21C located downgradient of well MW-17C, indicating that benzene is delineated to the RAL downgradient in the C-TZ. Groundwater data from monitoring wells MW-27C, MW-28C, MW-47C, MW-48C, MW-53C, MW-54C, and MW-68C (installed in June 2010) installed in the C-TZ confirm the horizontal extent of benzene concentrations to the RAL cross gradient and upgradient. Dichloromethane was detected at one location, MW-23C, at a concentration 0.0092J mg/L in June 2010 just above the RAL (0.005 mg/L). No other VOCs were detected during the 2010 sampling events in the C-TZ monitoring wells at concentrations exceeding applicable RALs.

SVOCs– C-TZ

SVOCs were detected above RALs in four monitoring wells, MW-17C, MW-18C, MW-23C, and MW-25C located on the eastern portion of the Site. Site-specific SVOC COCs detected above RALs included 2-methylnaphthalene, benz(a)anthracene, benzo(a)pyrene, dibenzofuran, naphthalene, and pentachlorophenol; with numerous SVOCs (acenaphthalene, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene) detected in MW-23C. The higher concentrations of these COCs in MW-23C are likely a result of DNAPL being present in the well. Pentachlorophenol concentrations were detected above the RAL (0.001 mg/L) in MW-18C (0.041 mg/L); however, no other C-TZ monitoring wells had pentachlorophenol detected above the SDL (Figures 5B-5 and 5B-6). SVOCs were not detected above RALs at monitoring wells located downgradient of MW-17C and MW-23C, indicating that SVOCs are sufficiently delineated in Unit C-TZ. Dissolved-phase data show relatively limited COC migration beyond the area where DNAPL has been observed in monitoring wells.

Groundwater Plume Stability – C-TZ

VOCs and SVOCs detected in the C-TZ wells appear to be stable with some shrinking of the C-TZ groundwater Affected Property with concentrations in MW-54C decreasing over time (specifically, 2-methylnaphthalene and naphthalene (Table 5B-5)). There does not appear to be any expansion of the C-TZ groundwater Affected Property (Figure 5B-11).

Transmissive Unit D-TZ

Using the groundwater elevations measured from the D-TZ wells in January and July 2010, groundwater in the D-TZ appears to flow from the southeast to northwest at a gradient of 0.002 ft/ft (Figure 5A-7 (Jan 2010)) to 0.003 ft/ft (Figure 5A-8 (July 2010)). Groundwater elevations range from a high of -37.51 feet HVD (MW-59D and MW-66D, Jan 2010) to a low of -41.06 feet HVD (MW-36D, July 2010).

None of the site-specific COCs were detected at concentrations greater than RALs in the D-TZ wells (three wells in January 2010 (Figure 5B-7), four well in June/July 2010 (Figure 5B-8)) sampled in 2010. Based on these results, COCs at the Site are vertically delineated to the applicable RALs.

Section 5.2.2 Occurrence of NAPL

NAPL in the A-TZ

DNAPL and LNAPL are evaluated for each of the monitoring wells at the Site. During previous sampling events, light NAPL (LNAPL) was observed at A-TZ in temporary well TW-02 within the AST

Area (SWMU No. 8); however, no LNAPL was observed in January or July 2010 at this location. DNAPL is present in A-TZ monitoring wells on the northern edge and off site to the north. DNAPL was measured in MW-32A at 7.14 feet and 2.95 feet thick (in-well thickness) in January and July 2010, respectively. The decrease in DNAPL thickness from January to July 2010 is a result of the monthly DNAPL recovery pilot test that began in May 2010. Details of the DNAPL pilot test are discussed in Section 5.3. The in-well DNAPL thickness measured in MW-32A is not representative of the apparent thickness in the formation. The monitoring well was completed approximately 11 feet below the assumed base of the A-TZ. Therefore, the well appears to be acting as a collection sump for DNAPL, and may be collecting DNAPL from the B-CZ (Figure 4C-2). This is supported by the CPT/ROST data for CPT-42R-08 located approximately adjacent to MW-32A (shown on Cross Section F-F', Figure 4C-2). The ROST fluorescence response of approximately 44% RE was observed at approximately 25.5 feet at this location, and smaller responses at 26 and 28.5 feet bgs. The base of the A-TZ as interpreted from the CPT boring for CPT-42R-08 to be about 20 feet bgs. With the base of MW-32A at 32 feet bgs, the DNAPL does not appear to be from the A-TZ, but rather the underlying B-CZ. The DNAPL near MW-32A appears to be delineated to the north based on the ROST response for CPT-36R-08 (Figure 4C-2). DNAPL was measured in well MW-57A for the first time in July 2010 with an in-well thickness of 2.55 feet (Figure 5A-10).

In addition to the measured DNAPL thicknesses in the monitoring wells completed in the A-TZ, Figures 5A-9 and 5A-10 present contours of ROST readings from CPT/ROST borings that encountered the A-TZ; and the figures also highlight monitoring wells where NAPL was observed in the A-TZ as noted on the soil boring logs for the A-TZ wells. Following the same format for presenting ROST readings in the vadose zone (discussed in Section 4.2), ROST readings greater than 25% RE encountered in the A-TZ unit were contoured (50% RE contour interval) based on ROST data from the CPT/ROST borings. The majority of the elevated ROST readings in the A-TZ are located in and around the Recent Process Area, Original Process Area, and the AST Area (SWMU Nos. 4, 5, and 8, respectively).

ROST profiles are posted on the geologic cross sections for the Site (Figures 4C-1 through 4C-4). Highlighted intervals where ROST readings were greater than 25% RE are posted on the cross sections. Three CPT/ROST borings with the highest ROST readings in the A-TZ include CPT-16R-95 (Cross Section A-A', Figure 4C-1), CPT-34R-95 (Cross Section F-F', Figure 4C-2), and CPT-26R-95 (Cross Section E-E', Figure 4C-1). At each of these locations, elevated ROST readings were also noted in the vadose zone above the A-TZ.

The elevated ROST readings are generally consistent with intervals where NAPL was visually observed in soil borings for A-TZ wells. As an example, NAPL was noted in the MW-55A boring log as "oily sheen/NAPL pockets at 18.0 to 20.0 [feet bgs]". This well is located near CPT/ROST boring CPT-32R-95, which had one of the highest ROST readings in the A-TZ (approximately 440% RE between 18 to 20 feet bgs). However, no DNAPL has been measured in well MW-55A (installed in January 2009). This indicates that areas of the A-TZ may have residual saturation of DNAPL in the sand matrix (i.e., MW-30A, MW-31A, MW-52A, MW-55A) that is not mobile, especially given the high viscosity of the DNAPL material (ranges from 8.52 to 192 centipoises (PBW, 2009)).

NAPL in the B-TZ/B-CZ

DNAPL has been detected in the B-TZ along the western boundary of the Site at MW-12B and MW-41B (Figure 5A-11 and 5A-12). During the 2010 monitoring events, DNAPL present in the B-TZ on the west side of the Site had a maximum in-well thickness of 21.15 feet observed at MW-41B, with MW-12B having a measured thickness of 8.34 feet in January 2010 (Figure 5A-11). With the DNAPL recovery pilot test beginning in May 2010, the in-well DNAPL thicknesses measured in July 2010 in these two wells ranged from 4.3 feet in MW-41B to 3.85 feet in MW-12B (Figure 5A-12). DNAPL has not been detected in monitoring wells MW-38B, MW-39B, MW-40B, TW-41B (located approximately 50 feet from MW-41B), and P-11, which indicates sufficient horizontal delineation of the DNAPL in the B-TZ.

DNAPL was detected in one of the wells completed in the non-groundwater bearing unit B-CZ located off site to the north of the Recent Process Area. Approximately 7.24 feet of DNAPL (in-well thickness) was observed at MW-33B in January 2010 (Figure 5A-11). During the July 2010 monitoring event, an obstruction was encountered in the well that prevented access to the bottom of the well to gauge the DNAPL.

As discussed in the APAR Addendum (PBW, 2009), the B-CZ north of the Site is a silty clay with thin intervals of carbonaceous nodules. In the vicinity of MW-33B, the DNAPL appears to be travelling laterally along these nodule intervals within the B-CZ. Cross Section G-G' (Figure 4C-3) shows the DNAPL measured in MW-33B, and potential DNAPL based on the ROST readings in the CPT/ROST borings CPT-43R-08 and CPT-26R-01 within the B-CZ at depths below the A-TZ. The ROST log for CPT-43R-08 shows fluorescence spikes approximately 28 feet and 35 feet bgs within the B-CZ. ROST readings greater than 25% RE from CPT/ROST borings that encountered the B-TZ or B-CZ are also posted on Figures 5A-11 and 5A-12, showing the overall distribution of ROST responses in the unit. As show on the figures, the majority of the elevated ROST readings are in the vicinity of SWMU Nos. 4 and

5. However, elevated ROST readings were observed in the B-CZ north of the Site at CPT/ROST boring CPT-43R-08, between the Site and well MW-33B (Figure 5A-11). The ROST readings in this area are consistent with the observations of NAPL in monitoring well soil borings in the B-CZ (i.e., MW-33B).

Highlighted ROST readings posted on the geologic cross sections for the Site (Figures 4C-1 through 4C-4) show the depth range of elevated ROST readings in the B-CZ. Specifically, Cross Section B-B' (Figure 4C-1) shows elevated ROST readings at intervals ranging from 25 feet bgs to 50 feet bgs, within the B-CZ clay unit. CPT-26R-95 posted on Cross Section E-E' (Figure 4C-2) shows elevated ROST readings to a depth of approximately 56 feet bgs.

In the area of MW-33B, groundwater samples collected from the A-TZ monitoring wells (MW-33A and MW-26A) have shown COC concentrations less than RALs; suggesting that the DNAPL is not travelling horizontally through the A-TZ, but rather through these carbonate nodule intervals in the B-TZ.

NAPL in the C-TZ

DNAPL is present in the C-TZ extending from the northeast side of the Site at MW-23C to approximately 900 feet off site to the northeast near MW-46C. During the 2010 monitoring events, DNAPL was observed in on-site monitoring well MW-23C, and off-site monitoring wells MW-25C (no DNAPL detected in July 2010), MW-34C (only gauged in January 2010), MW-44C, MW-45C, and MW-46C. Maximum DNAPL in-well thicknesses observed in the C-TZ during the 2010 sampling events was 9.29 feet at MW-45C, with the thickest DNAPL measured in the on-site well MW-23C at 1.70 feet (January 2010) (Figure 5A-13). As noted previously, the thickness of DNAPL in the wells does not represent actual thicknesses in the GWBU. The monitoring wells generally extend below the lower confining unit and typically have at least a 0.5-foot to 1-foot sump at the bottom of the well, which allows DNAPL to collect in the bottom of the well. DNAPL thicknesses measured in the wells in July 2010 were less than the measurements in January 2010 as a result of the DNAPL recovery pilot test.

As with the other transmissive zone NAPL figures, ROST readings from CPT/ROST borings that encountered the C-TZ unit were contoured and presented on Figures 5A-13 and 5A-14 with the measured in-well DNAPL thicknesses for the C-TZ unit. Of the 76 CPT/ROST borings conducted at the Site, only 13 CPT/ROST borings were advanced to the top of the C-TZ. Only one of the 13 CPT/ROST borings that penetrated the C-TZ had ROST readings greater than 25% RE, CPT-27R-01, as shown on Figures 5A-13 and 5A-14, and Cross Section A-A' (Figure 4C-1).

The groundwater gradient of Unit C-TZ is to the southwest; however, DNAPL in this unit was encountered in wells located upgradient to the northeast (i.e., MW-25C, MW-45C, MW-46C) and DNAPL has not been observed southwest of the suspected historic source areas. CPT/ROST borings were conducted north and northwest of the DNAPL plume observed in the C-TZ to evaluate the lateral extent of the DNAPL. CPT/ROST locations CPT-44R-08, CPT-45R-08, and CPT-46R-08 (logs provided in the APAR Addendum, PBW, 2009) did not show any ROST fluorescence responses in the C-TZ, suggesting no DNAPL present at those locations. Based on the monitoring wells and CPT/ROST borings completed in the C-TZ, the horizontal extent of the DNAPL has sufficiently been delineated at the Site.

Section 5.3 DNAPL Recovery Pilot Test

As discusses in Section 3.0, PBW initiated a 12-month pilot study in May 2010 to evaluate DNAPL recovery by conducting tests on selected wells where DNAPL had been observed. The following wells are included in the monthly evaluation:

- A-TZ wells: MW-32A, MW-57A (added in August 2010),
- B-TZ/B-CZ wells: MW-12B, MW-33B, MW-41B,
- C-TZ wells: MW-23C, MW-25C, MW-44C, MW-45C, MW-46C.

At each of these wells on a monthly basis, the initial product thickness is measured and tubing is placed in the well to near the total depth. DNAPL in the well is then pumped with either a peristaltic or diaphragm pump until DNAPL is no longer measured in the well or the fluids removed were mostly water. The pump was then turned off and DNAPL thickness measurements are collected. Graphs of in-well DNAPL thicknesses from 2001 through August 2010 (including measurements taken during the pilot test) for the A-TZ, B-TZ/B-CZ, and C-TZ wells are provided on Figures 5E-1 through 5E-3, respectively. Field forms for the monthly tests conducted from May through August 2010 are provided in Appendix 11.

In-well DNAPL thicknesses in MW-32A were typically greater than 6 feet thick from 2005 through January 2010 (Figure 5E-1), and showed relative stability except for the reading in 2007. With the initiation of the pilot test in May 2010, in-well DNAPL thicknesses have decreased to less than 2 feet thick based on the August 2010 readings.

DNAPL thicknesses in the two wells on the west side of the Site, MW-12B and MW-41B, had increasing in-well DNAPL thicknesses from July 2004 through February 2008 for MW12B and January 2009 for MW-41B (Figure 5E-2). The drop in thickness in MW-12B in February 2008 was a result of a DNAPL

well test conducted at that well. Both MW-12B and MW-41B had in-well DNAPL thicknesses drop significantly following initiation of the DNAPL recovery pilot test with monthly recovery in each well being relatively minor (in-well DNAPL thicknesses in MW-12B at 2.68 feet thick and in MW-41B at 3.48 feet thick in August 2010).

The C-TZ monitoring wells that are part of the monthly pilot test showed relatively stable thicknesses from 2005 through 2010, with slight increases in MW-23C and MW-44C. As with the other wells, in-well DNAPL thicknesses have significantly dropped since initiation of the pilot test, with recovery relatively minor in the C-TZ wells.

For each of the wells that are part of the pilot test, the little amount of recovery in the wells suggests minor amounts of DNAPL in the units. Further evaluation will be conducted following the 12-month pilot test period that will be submitted to the TCEQ as part of evaluating readily recoverable NAPL in accordance with the TCEQ TRRP-32 Risk-Based NAPL Management guidance document. The procedures outlined in the TCEQ guidance document, specifically Steps 2 (Identify NAPL Response Triggers) and 3 (Determine NAPL Response Objectives and Endpoints), are detailed in Appendix 11A.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

5.0 Tables

TABLE 5A
GROUNDWATER RESIDENTIAL ASSESSMENT LEVELS
UPRR HOUSTON WOOD PRESERVING WORKS

COC	Source area size (acres)	$^{GW}GW_{Ing}{}^{PCL}$ (mg/l)	Residential Assesment Level		SDL	Maximum Groundwater Concentration			Notes
			(mg/l)	exposure pathway		Sample ID	Sample Date	Concentration (mg/l)	
Site-Specific COCs									
1,2-Dichloroethane	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-TW56A-012010	1/20/2010	**0.023**	
Benzene	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW33B-20100629	6/29/2010	**2**	
Chlorobenzene	30	1.0E-01	1.0E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW58A-20100623	6/23/2010	0.01	
Ethylbenzene	30	7.0E-01	7.0E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW33B-20100629	6/29/2010	0.62	
Dichloromethane	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-20100623	6/23/2010	**0.014**	
Toluene	30	1.0E+00	1.0E+00	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW32A-20100701	7/1/2010	**1.5**	
Xylenes, Total	30	1.0E+01	1.0E+01	$^{GW}GW_{Ing}$	0.001	WG-1620-MW33B-20100629	6/29/2010	1.5	
1,2-Diphenylhydrazine	30	1.1E-03	1.1E-03	$^{GW}GW_{Ing}$	0.0001	WG-1620-MW35B-20100701	7/1/2010	**0.012**	
2,4-Dimethylphenol	30	4.9E-01	4.9E-01	$^{GW}GW_{Ing}$	0.00008	WG-1620-MW32A-20100701	7/1/2010	**15**	
2,4-Dinitrotoluene	30	1.3E-03	1.3E-03	$^{GW}GW_{Ing}$	0.00009	WG-1620-MW25A-20100630	6/30/2010	0.00066	
2,6-Dinitrotoluene	30	1.3E-03	1.3E-03	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW13-011910	1/19/2010	0.00066	
2-Chloronaphthalene	30	2.0E+00	2.0E+00	$^{GW}GW_{Ing}$	0.0001	WG-1620-MW23C-20100623	6/23/2010	<0.005	
4,6-Dinitro-2-methylphenol	30	2.4E-03	2.4E-03	$^{GW}GW_{Ing}$	0.00008	WG-1620-MW25A-20100630	6/30/2010	0.00026	
2-Methylnaphthalene	30	9.8E-02	9.8E-02	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW57A-20100623	6/23/2010	**3.5**	
4-Nitrophenol	30	4.9E-02	4.9E-02	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	<0.0035	
Acenaphthene	30	1.5E+00	1.5E+00	$^{GW}GW_{Ing}$	0.00009	WG-1620-MW23C-20100623	6/23/2010	**3.4**	
Acenaphthylene	30	1.5E+00	1.5E+00	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	0.03	
Anthracene	30	7.3E+00	7.3E+00	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	1.2	
Benz(a)anthracene	30	1.3E-03	1.3E-03	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**0.3**	
Benzo(a)pyrene	30	2.0E-04	2.0E-04	$^{GW}GW_{Ing}$	0.00008	WG-1620-MW23C-20100623	6/23/2010	**0.093**	
Bis(2-chloroethoxy)methane	30	8.3E-04	8.3E-04	$^{GW}GW_{Ing}$	0.00009	WG-1620-MW23C-20100623	6/23/2010	**<0.0035**	1 out of 147 samples with SDL>RAL
Bis(2-ethylhexyl)phthalate	30	6.0E-03	6.0E-03	$^{GW}GW_{Ing}$	0.0002	WG-1620-MW36B-20100715	7/15/2010	**0.01**	
Chrysene	30	1.3E-01	1.3E-01	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**0.27**	
Dibenzofuran	30	9.8E-02	9.8E-02	$^{GW}GW_{Ing}$	0.00008	WG-1620-MW23C-20100623	6/23/2010	**3.6**	
Di-n-butyl phthalate	30	2.4E+00	2.4E+00	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	<0.004	
Fluoranthene	30	9.8E-01	9.8E-01	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**3**	
Fluorene	30	9.8E-01	9.8E-01	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**2.6**	
Naphthalene	30	4.9E-01	4.9E-01	$^{GW}GW_{Ing}$	0.0001	WG-1620-MW57A-20100623	6/23/2010	**20**	
Nitrobenzene	30	4.9E-02	4.9E-02	$^{GW}GW_{Ing}$	0.00009	WG-1620-MW23C-20100623	6/23/2010	<0.01	
N-Nitrosodiphenylamine	30	1.9E-01	1.9E-01	$^{GW}GW_{Ing}$	0.00009	WG-1620-MW32A-20100701	7/1/2010	0.014	
Pentachlorophenol	30	1.0E-03	1.0E-03	$^{GW}GW_{Ing}$	0.00008	WG-1620-MW18C-011910	1/19/2010	**0.041**	
Phenanthrene	30	7.3E-01	7.3E-01	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**8.2**	
Phenol	30	7.3E+00	7.3E+00	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW17-20100623	6/23/2010	**19**	
Pyrene	30	7.3E-01	7.3E-01	$^{GW}GW_{Ing}$	0.00007	WG-1620-MW23C-20100623	6/23/2010	**1.9**	

TABLE 5A
GROUNDWATER RESIDENTIAL ASSESSMENT LEVELS
UPRR HOUSTON WOOD PRESERVING WORKS

COC	Source area size (acres)	$^{GW}GW_{Ing}$ ^{PCL} (mg/l)	Residential Assesment Level		SDL	Maximum Groundwater Concentration			Notes
			(mg/l)	exposure pathway		Sample ID	Sample Date	Concentration (mg/l)	
Other COCs									
1,1,1-Trichloroethane	30	2.0E-01	2.0E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
1,1,2,2-Tetrachloroethane	30	4.6E-03	4.6E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
1,1,2-Trichloroethane	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
1,1-Dichloroethane	30	4.9E+00	4.9E+00	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
1,1-Dichloroethene	30	7.0E-03	7.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
1,2-Dichloropropane	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
2-Butanone	30	1.5E+01	1.5E+01	$^{GW}GW_{Ing}$	0.0008	WG-1620-MW57A-012010	1/20/2010	<0.0008	
2-Hexanone	30	1.2E-01	1.2E-01	$^{GW}GW_{Ing}$	0.001	WG-1620-MW57A-012010	1/20/2010	<0.001	
4-Methyl-2-pentanone	30	2.0E+00	2.0E+00	$^{GW}GW_{Ing}$	0.001	WG-1620-MW57A-012010	1/20/2010	<0.001	
Acetone	30	2.2E+01	2.2E+01	$^{GW}GW_{Ing}$	0.001	WG-1620-TW56A-012010	1/20/2010	0.069	
Bromodichloromethane	30	1.5E-02	1.5E-02	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Bromoform	30	1.2E-01	1.2E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Bromomethane	30	3.4E-02	3.4E-02	$^{GW}GW_{Ing}$	0.0009	WG-1620-MW57A-012010	1/20/2010	<0.0009	
Carbon disulfide	30	2.4E+00	2.4E+00	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Carbon tetrachloride	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Chloroethane	30	9.8E+00	9.8E+00	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Chloroform	30	2.4E-01	2.4E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Chloromethane	30	7.0E-02	7.0E-02	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
cis-1,2-Dichloroethene	30	7.0E-02	7.0E-02	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW18A-011810	1/18/2010	0.02	
cis-1,3-Dichloropropene	30	1.7E-03	1.7E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW58A-012010	1/20/2010	<0.0005	
Dibromochloromethane	30	1.1E-02	1.1E-02	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Methyl tert-butyl ether	30	2.4E-01	2.4E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Styrene	30	1.0E-01	1.0E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Tetrachloroethene	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0006	WG-1620-MW57A-012010	1/20/2010	<0.0006	
trans-1,2-Dichloroethene	30	1.0E-01	1.0E-01	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
trans-1,3-Dichloropropene	30	9.1E-03	9.1E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Trichloroethene	30	5.0E-03	5.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW57A-012010	1/20/2010	<0.0005	
Vinyl chloride	30	2.0E-03	2.0E-03	$^{GW}GW_{Ing}$	0.0005	WG-1620-MW18A-011810	1/18/2010	**0.059**	

Notes:

1). GWGWIng PCL = TRRP Tier 1 Protective Concentration Level for Class 2 groundwater ingestion pathway (30 acre source area).
2). Residential land use assumed to provide most conservative TRRP PCLs.
3). Only COCs having at least one detection and/or a non-detection with a SQL greater than the RAL are included in this table.
4). Concentrations exceeding the PCL have been highlighted.
5). U = not detected above MCL
6). J = Estimated Concentration between the SQL and the Reporting Limit

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-01A													
				3/17/2004	3/4/2005	7/19/2005	9/8/2005	1/6/2006	7/28/2006	1/23/2007	7/18/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	0.00416 J	--	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	0.00209 J	--	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	0.00777 J	--	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000032	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	0.0128	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00004	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.005221	0.0882	0.0557	--	0.00169	0.0205	0.000262	<0.00133	<0.00044	0.0109	0.0069	0.0017 J	0.0019 J	<0.0009
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--			
Acenaphthene	83-32-9	8270	1.47E+00	0.04226	0.224	0.245	--	0.0937	0.163	0.0509	0.11	0.0415	0.126	0.054	0.085	0.04	0.068
Acenaphthylene	208-96-8	8270	1.47E+00	0.000785	0.00326	0.00221	--	0.00387	0.00182	0.00137	<0.00114	0.00099	0.00143	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.001854	0.00754	0.0101	--	0.0021	0.00613	0.00226	<0.00095	0.00129	0.00267	0.0012 J	0.0011 J	<0.0006	0.0017 J
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000024	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000013	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000973	<0.00035	<0.00036	--	<0.00036	<0.00009	<0.00009	<0.00352	<0.00022	0.00137 J	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	0.0194	**0.101**	**0.11**	**0.133**	0.0143	0.0639	0.00839	0.00849 J	0.00129	0.00774	0.0058	0.0037 J	0.0016 J	0.0044 J
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000691	0.0002 J	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	9.78E-01	0.003337	0.00935	0.0139	--	0.00557	0.0079	0.00251	0.00696 J	0.00234	0.00923	0.0024 J	0.0037 J	0.0017 J	0.004 J
Fluorene	86-73-7	8270	9.78E-01	0.02334	0.124	0.137	--	0.0221	0.0792	0.0155	0.0514	0.0162	0.0659	0.028	0.04	0.022	0.04
Naphthalene	91-20-3	8270	4.9E-01	0.000919	0.12	0.0216	--	0.000519	0.00292	0.000302	<0.00124	<0.00044	0.0168	<0.0008	0.0029 J	0.0043 J	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000066	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	0.002194	0.0182	0.0233	--	0.00065	0.00698	0.000229	0.00336 J	<0.00022	0.00177	0.001 J	<0.0005	<0.0005	0.0011 J
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00004	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	7.33E-01	0.00117	0.00362	0.00593	--	0.0025	0.00376	0.00105	0.00304 J	0.00107	0.00417	0.001 J	0.0019 J	<0.0005	0.0021 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-02												
				3/17/2004	3/4/2005	7/19/2005	1/5/2006	7/28/2006	1/23/2007	7/18/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0122 J	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000032	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00004	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.001694	0.00008 J	<0.00007	0.00046 J	0.000622	<0.00008	0.0024 J	<0.00038	<0.00039	<0.0008	0.0025 J	<0.0009	<0.0009
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.03018	0.0394	0.0031	0.0142	0.0098	0.00675	0.0256	0.017	0.0218	0.014	0.032	0.0073	0.018
Acenaphthylene	208-96-8	8270	1.47E+00	0.000418 J	0.0004 J	<0.00006	0.00128	0.0002	0.00015 J	<0.00114	<0.00028	0.0003 J	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.001494	0.00114	0.00032 J	0.000857	0.000783	0.000542	0.00138 J	0.000922	0.00042 J	<0.0007	<0.0006	<0.0006	<0.0006
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000024	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000013	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	<0.00035	<0.000352	<0.00037	0.00018 J	<0.00009	<0.00352	0.00049 J	<0.00019	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	0.01945	0.0152	0.00245	0.0152	0.00767	0.00488	0.0174	0.0106	0.00673	<0.0007	0.0042 J	<0.0007	<0.0007
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000792	0.00031 J	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	9.78E-01	0.001861	0.00421	0.000796	0.00113	0.00123	0.000625	0.00165 J	0.0015	0.000961	<0.0006	0.0011 J	<0.0005	<0.0005
Fluorene	86-73-7	8270	9.78E-01	0.02035	0.0268	0.00268	0.0148	0.00604	0.00479	0.0157	0.0119	0.0103	0.0039 J	0.015	0.0037 J	0.011
Naphthalene	91-20-3	8270	4.9E-01	0.000604	0.00161	<0.00006	0.0053	0.0106	0.000406	0.0188	0.000827	0.00118	<0.0008	0.012	<0.0006	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000066	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	0.002468	0.00024 J	0.00036 J	0.00024 J	0.00103	0.00005 J	0.00167 J	0.000532	<0.00019	<0.0007	<0.0005	<0.0005	<0.0005
Phenol	108-95-2	8270	7.33E+00	<9.53E-05	<0.00004	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	7.33E-01	0.000883	0.00183	0.00042 J	0.00041 J	0.000634	0.000299	<0.000952	0.000816	0.00045 J	<0.0009	<0.0005	<0.0005	<0.0005

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-03				MW-04				MW-05			
				3/17/2004	3/4/2005	3/15/2007	1/30/2008	3/16/2004	3/3/2005	3/15/2007	1/29/2008	3/16/2004	3/1/2005	3/10/2007	1/29/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	<0.00245	<0.00052	<0.00136	<0.00136	<0.00245	<0.00052	<0.00136	<0.00136	<0.00245	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	<0.00257	<0.00025	<0.00143	<0.00143	<0.00257	<0.00025	<0.00143	<0.00143	<0.00257	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	<0.00239	<0.00047	<0.00155	<0.00155	<0.00239	<0.00047	<0.00155	<0.00155	<0.00239	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	<0.00203	<0.00025	<0.00137	<0.00137	<0.00203	<0.00025	<0.00137	<0.00137	<0.00203	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	<0.00195	<0.00054	<0.0013	<0.0013	<0.00195	<0.00054	<0.0013	<0.0013	<0.00195	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	<0.00274	<0.00041	<0.00136	<0.00136	<0.00274	<0.00041	<0.00136	<0.00136	<0.00274	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	<0.00581	<0.00127	<0.00441	<0.00441	<0.00581	<0.00127	<0.00441	<0.00441	<0.00581	<0.00127
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000032	<0.00004	<0.00008	<0.00005	<0.000032	<0.00004	<0.00008	<0.00005	<0.00001	<0.00006	<0.00008
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	<0.00005	<0.0003	<0.000116	<0.0003	<0.00005	<0.00029	<0.000116	<0.0003	<0.00018	<0.00029
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00004	<0.00009	<0.0002	<0.000009	<0.00004	<0.00009	<0.00019	<0.000009	<0.000009	<0.00007	<0.00019
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	<0.0001	<0.0002	<0.000026	<0.000026	<0.0001	<0.00019	<0.000026	<0.000026	<0.00006	<0.00019
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	<0.00004	<0.0004	<0.000076	<0.00008	<0.00004	<0.00038	<0.000076	<0.00008	<0.00004	<0.00038
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	<0.00022	<0.0002	<0.000295	<0.00079	<0.00022	<0.00019	<0.000295	<0.00079	<0.0001	<0.00019
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.000067	0.00181	<0.00008	<0.0004	<0.000067	<0.00007	<0.00008	<0.00038	<0.000067	<0.00007	0.0001 J	<0.00038
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	<0.00014	<0.00025	<0.000285	<0.00053	<0.00014	<0.00024	<0.000285	<0.00053	<0.000952	<0.00024
Acenaphthene	83-32-9	8270	1.47E+00	0.1104	0.117	0.173	0.118	<0.000074	<0.00007	<0.00004	<0.00029	0.000283 J	0.00176	0.00016 J	0.000545
Acenaphthylene	208-96-8	8270	1.47E+00	0.000833	0.000948	0.00188	<0.0003	<0.000076	<0.00006	<0.00008	<0.00029	<0.000076	<0.00006	<0.00005	<0.00029
Anthracene	120-12-7	8270	7.33E+00	0.00129	0.0039	0.00221	0.00172	0.00026 J	0.00036 J	0.000525	0.000739	0.000251 J	0.00014 J	0.000206	0.000811
Benzo(a)anthracene	56-55-3	8270	1.25E-03	0.000379 J	0.00023 J	0.000249	<0.0002	<0.000267	<0.00011	<0.00005	<0.00019	<0.000267	<0.00011	<0.00005	<0.00019
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.000511**	<0.000024	<0.00005	<0.0002	<0.000007	<0.000024	<0.00005	<0.00019	<0.000007	<0.000007	<0.00011	<0.00019
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000013	<0.00007	<0.0004	<0.000009	<0.000013	<0.00007	<0.00038	<0.000009	<0.000009	<0.00008	<0.00038
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000943	0.000797	<0.00009	0.001 J	0.001025	0.000815	<0.00009	0.00029 J	<0.000172	<0.00035	<0.000095	0.00034 J
Chrysene	218-01-9	8270	1.25E-01	0.00052	0.00021 J	<0.00007	<0.0002	<0.00009	<0.00012	<0.00007	<0.00019	<0.00009	<0.00012	<0.00007	<0.00019
Dibenzofuran	132-64-9	8270	9.78E-02	0.0097	0.0347	0.00647	0.00415	<0.000076	<0.00008	<0.00006	<0.00029	<0.000076	0.00022 J	0.00014 J	<0.00029
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000654	0.00029 J	<0.0001	<0.0002	<0.000143	0.00019 J	<0.0001	<0.00019	0.000253 J	0.00021 J	0.00018 J	<0.00019
Fluoranthene	206-44-0	8270	9.78E-01	0.01034	0.0137	0.0153	0.0125	<0.000093	<0.00008	<0.00004	0.00045 J	<0.000093	<0.00008	0.00016 J	0.00047 J
Fluorene	86-73-7	8270	9.78E-01	0.0427	0.0637	0.0926	0.058	<0.000068	<0.00007	0.00018 J	<0.00019	<0.000068	0.00035 J	0.0001 J	0.0002 J
Naphthalene	91-20-3	8270	4.9E-01	0.000264 J	0.05	<0.00007	0.000872	<0.000067	<0.00006	<0.00007	<0.00038	<0.000067	0.00909	0.000845	<0.00038
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	<0.00006	<0.0004	<0.000143	<0.0001	<0.00006	<0.00038	<0.000143	<0.0001	<0.00007	<0.00038
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.00005	<0.00025	<0.00009	<0.00005	<0.00005	<0.00024	<0.00009	<0.00005	<0.00005	<0.00024
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000066	<0.00019	<0.0002	<0.000038	<0.000066	<0.00019	<0.00019	<0.000038	<0.000038	<0.000952	<0.00019
Phenanthrene	85-01-8	8270	7.33E-01	0.000663	0.0104	0.000629	0.000592	<0.000077	<0.00009	0.000337	0.00037 J	<0.000077	<0.00009	0.000276	0.00039 J
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00004	<0.00007	<0.0002	<9.53E-05	<0.00004	<0.00007	<0.00019	<9.53E-05	<0.00004	<0.00007	<0.00019
Pyrene	129-00-0	8270	7.33E-01	0.004965	0.00578	0.00581	0.00538	<0.000084	<0.00009	<0.00004	<0.00019	<0.000084	0.00015 J	0.0001 J	0.00045 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-07												
				3/16/2004	3/1/2005	7/19/2005	1/5/2006	7/28/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000011	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.000067	<0.00007	<0.00007	<0.00007	<0.00008	<0.00008	<0.00133	<0.00038	<0.00039	<0.0008	<0.0009	<0.0009	<0.0009
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.000285 J	0.0001 J	0.0015	0.00286	0.00362	<0.00004	<0.00114	<0.00028	<0.00029	<0.0008	<0.0009	<0.0009	<0.0009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	<0.00006	<0.00006	0.00008 J	<0.00008	<0.00008	<0.00114	<0.00028	0.00044 J	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.000219 J	0.0004 J	0.000653	0.000537	0.000417	0.000353	<0.000952	0.000516	0.000982	<0.0007	<0.0006	<0.0006	<0.0006
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000007	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	0.000791	<0.000352	0.000422 J	<0.00009	<0.00009	<0.00352	<0.00019	<0.00019	<0.0012	<0.0033	<0.0033	0.0049 J
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	<0.000076	<0.00008	0.00015 J	0.00009 J	<0.00006	<0.00006	<0.0041	<0.00028	<0.00029	<0.0007	<0.0007	<0.0007	<0.0007
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000199 J	0.00016 J	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	9.78E-01	<0.000093	<0.00008	0.00017 J	<0.00008	0.000275	<0.00004	<0.000952	<0.00019	<0.00019	<0.0006	<0.0005	<0.0005	<0.0005
Fluorene	86-73-7	8270	9.78E-01	<0.000068	<0.00007	<0.00007	0.00038 J	0.00018 J	<0.00004	<0.000952	<0.00019	<0.00019	<0.0008	<0.0006	<0.0006	<0.0006
Naphthalene	91-20-3	8270	4.9E-01	<0.000067	<0.00006	<0.00006	0.00019 J	<0.00007	0.000637	<0.00124	<0.00038	0.000675	<0.0008	<0.0006	<0.0006	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000039	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	<0.000077	<0.00009	<0.00009	<0.00009	<0.00004	<0.00004	<0.000952	<0.00019	0.00036 J	<0.0007	<0.0005	<0.0005	<0.0005
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00004	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	7.33E-01	<0.000084	<0.00009	0.00026 J	<0.00009	0.000532	<0.00004	<0.000952	<0.00019	<0.00019	<0.0009	<0.0005	<0.0005	<0.0005

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-08													MW-09			
				3/16/2004	3/1/2005	7/18/2005	1/6/2006	7/28/2006	1/22/2007	7/17/2007	1/29/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010	3/15/2004	3/3/2005	3/10/2007	1/29/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00109	--	--	--	--	<0.00136	<0.00136	<0.00245	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00112	--	--	--	--	<0.00143	<0.00143	<0.00257	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.0015	--	--	--	--	<0.00155	<0.00155	<0.00239	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00142	--	--	--	--	<0.00137	<0.00137	<0.00203	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00122	--	--	--	--	<0.0013	<0.0013	<0.00195	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00138	--	--	--	--	<0.00136	<0.00136	<0.00274	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00302	--	--	--	--	<0.00441	<0.00441	<0.00581	<0.00127
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00001	--	--	--	--	--	--	--	--	--	--	--	<0.00005	<3.2E-05	<0.00006	<0.00008
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00012	<0.0003	--	--	--	--	--	--	--	--	--	--	--	<0.00012	<0.0003	<0.00018	<0.00029
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<9E-06	<9E-06	--	--	--	--	--	--	--	--	--	--	--	<9E-06	<0.00004	<0.00007	<0.00019
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<2.6E-05	<2.6E-05	--	--	--	--	--	--	--	--	--	--	--	<2.6E-05	<2.6E-05	<0.00006	<0.00019
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<7.6E-05	<0.00008	--	--	--	--	--	--	--	--	--	--	--	<7.6E-05	<0.00008	<0.00004	<0.00038
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0003	<0.00079	--	--	--	--	--	--	--	--	--	--	--	<0.0003	<0.00079	<0.0001	<0.00019
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<6.7E-05	<0.00007	<0.00007	<0.00007	<0.00008	<0.00008	<0.00133	<0.00044	<0.0004	<0.0008	<0.0009	<0.0009	<0.0009	<6.7E-05	<0.00007	<0.00006	<0.00038
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00029	<0.00053	--	--	--	--	--	--	--	--	--	--	--	<0.00029	<0.00053	<0.00095	<0.00024
Acenaphthene	83-32-9	8270	1.47E+00	<7.4E-05	0.00012 J	<0.00007	<0.00007	<0.00004	<0.00004	<0.00114	<0.00033	<0.0003	<0.0008	<0.0009	<0.0009	<0.0009	<7.4E-05	<0.00007	<0.00005	<0.00029
Acenaphthylene	208-96-8	8270	1.47E+00	<7.6E-05	<0.00006	<0.00006	<0.00006	<0.00008	<0.00008	<0.00114	<0.00033	0.00044 J	<0.0007	<0.0005	<0.0005	<0.0005	<7.6E-05	<0.00006	<0.00005	<0.00029
Anthracene	120-12-7	8270	7.33E+00	<0.00012	0.00015 J	0.00026 J	0.00011 J	0.00018 J	<0.00004	0.00135 J	0.00031 J	0.000669	<0.0007	<0.0006	<0.0006	<0.0006	<0.00012	0.00028 J	0.000352	<0.00019
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00027	<0.00011	--	--	--	--	--	--	--	--	--	--	--	<0.00027	<0.00011	<0.00005	<0.00019
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<7E-06	<7E-06	--	--	--	--	--	--	--	--	--	--	--	<7E-06	<2.4E-05	<0.00011	<0.00019
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<9E-06	<9E-06	--	--	--	--	--	--	--	--	--	--	--	<9E-06	<1.3E-05	<0.00008	<0.00038
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00017	<0.00035	0.00036 J	<0.00036	0.00012 J	<0.00009	<0.00352	<0.00022	<0.0002	<0.0012	<0.0033	<0.0033	<0.0033	0.00099	<0.00035	<9.5E-05	0.00034 J
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--	<0.00009	<0.00012	<0.00007	<0.00019
Dibenzofuran	132-64-9	8270	9.78E-02	<7.6E-05	<0.00008	<0.00008	<0.00008	<0.00006	<0.00006	<0.0041	<0.00033	<0.0003	<0.0007	<0.0007	<0.0007	<0.0007	<7.6E-05	0.00026 J	<0.00005	<0.00029
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00027 J	0.00019 J	--	--	--	--	--	--	--	--	--	--	--	0.00033 J	0.00022 J	0.00014 J	<0.00019
Fluoranthene	206-44-0	8270	9.78E-01	<9.3E-05	<0.00008	<0.00008	<0.00008	<0.00004	<0.00004	<0.00095	<0.00022	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<9.3E-05	<0.00008	<0.00007	0.00045 J
Fluorene	86-73-7	8270	9.78E-01	<6.8E-05	<0.00007	<0.00007	<0.00007	<0.00004	<0.00004	<0.00095	<0.00022	<0.0002	<0.0008	<0.0006	<0.0006	<0.0006	<6.8E-05	<0.00007	<0.00004	<0.00019
Naphthalene	91-20-3	8270	4.9E-01	<6.7E-05	<0.00006	<0.00006	<0.00006	<0.00007	<0.00007	<0.00124	<0.00044	0.000654	<0.0008	<0.0006	<0.0006	<0.0006	<6.7E-05	<0.00006	0.000556	<0.00038
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00014	<0.0001	--	--	--	--	--	--	--	--	--	--	--	<0.00014	<0.0001	<0.00007	<0.00038
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--	<0.00009	<0.00005	<0.00005	<0.00024
Pentachlorophenol	87-86-5	8270	1.00E-03	<3.8E-05	<3.8E-05	--	--	--	--	--	--	--	--	--	--	--	<3.8E-05	<6.6E-05	<0.00095	<0.00019
Phenanthrene	85-01-8	8270	7.33E-01	<7.7E-05	<0.00009	<0.00009	<0.00009	<0.00004	<0.00004	<0.00095	<0.00022	0.00036 J	<0.0007	<0.0005	<0.0005	<0.0005	<7.7E-05	<0.00009	<0.00004	0.000541
Phenol	108-95-2	8270	7.33E+00	<9.5E-05	<0.00004	--	--	--	--	--	--	--	--	--	--	--	<9.5E-05	<0.00004	<0.00007	<0.00019
Pyrene	129-00-0	8270	7.33E-01	<8.4E-05	<0.00009	0.00012 J	<0.00009	<0.00004	<0.00004	<0.00095	<0.00022	<0.0002	<0.0009	<0.0005	<0.0005	<0.0005	<8.4E-05	<0.00009	<0.00005	<0.00019

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-10A												
				3/16/2004	3/1/2005	7/19/2005	1/5/2006	7/28/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/21/2010	7/13/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00001	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.000067	<0.00007	<0.00007	<0.00007	<0.00008	<0.00008	<0.00133	<0.0004	<0.00038	<0.0008	<0.0009	<0.0009	<0.0009
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	<0.000074	<0.00007	0.00011 J	<0.00007	0.000327	0.000714	<0.00114	<0.0003	<0.00029	<0.0008	<0.0009	<0.0009	<0.0009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	<0.00006	<0.00006	<0.00006	<0.00008	<0.00008	<0.00114	<0.0003	<0.00029	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	<0.000124	0.00013 J	<0.00007	0.00011 J	<0.00004	0.000273	<0.00095	<0.0002	<0.00019	<0.0007	<0.0006	<0.0006	<0.0006
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000007	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000916	<0.00035	<0.00035	<0.00036	<0.00009	<0.00009	<0.00352	<0.0002	0.0002 J	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	<0.000076	<0.00008	<0.00008	<0.00008	0.00017 J	0.00009 J	<0.0041	<0.0003	<0.00029	<0.0007	<0.0007	<0.0007	<0.0007
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.000143	0.00013 J	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	9.78E-01	<0.000093	<0.00008	<0.00008	<0.00008	<0.00004	<0.00004	<0.00095	<0.0002	<0.00019	<0.0006	<0.0005	<0.0005	<0.0005
Fluorene	86-73-7	8270	9.78E-01	<0.000068	<0.00007	<0.00007	<0.00007	<0.00004	0.00015 J	<0.00095	<0.0002	<0.00019	<0.0008	<0.0006	<0.0006	<0.0006
Naphthalene	91-20-3	8270	4.9E-01	<0.000067	<0.00006	<0.00006	<0.00006	<0.00007	<0.00007	<0.00124	<0.0004	<0.00038	<0.0008	<0.0006	<0.0006	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000038	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	<0.000077	<0.00009	<0.00009	<0.00009	<0.00004	<0.00004	<0.00095	<0.0002	<0.00019	<0.0007	<0.0005	<0.0005	<0.0005
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00004	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	7.33E-01	<0.000084	<0.00009	<0.00009	<0.00009	<0.00004	<0.00004	<0.00095	<0.0002	<0.00019	<0.0009	<0.0005	<0.0005	<0.0005

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-11A												
				3/16/2004	3/3/2005	7/19/2005	1/5/2006	7/28/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/21/2010	7/13/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000032	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000122	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00004	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000027	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00008	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00031	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00007	0.00016 J	0.00019 J	<0.00007	<0.00008	<0.00008	<0.00133	<0.00038	<0.0004	<0.0008	<0.0009	<0.0009	<0.0009
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000299	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.002777	0.0139	0.0732	<0.00007	0.0306	0.00685	0.0404	0.0346	0.02	0.0076	0.014	<0.0009	0.0028 J
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.00006	0.00074	<0.00006	0.000263	<0.00008	<0.00114	<0.00029	<0.0003	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.000321 J	0.000833	0.00201	<0.00007	0.000543	0.000287	<0.00095	0.000798	0.00054	<0.0007	<0.0006	<0.0006	<0.0006
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00028	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000024	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000013	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.001042	0.000806	<0.00035	<0.00036	0.00014 J	<0.00009	<0.00352	0.00028 J	<0.0002	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.000094	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	0.000463 J	0.00451	0.00957	<0.00008	0.000566	0.0019	<0.0041	0.00276	<0.0003	<0.0007	<0.0007	<0.0007	<0.0007
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000521	0.00013 J	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	8270	9.78E-01	0.000394 J	0.000786	0.0064	0.000516	0.00362	0.000292	0.00297 J	0.00338	0.00387	0.0012 J	0.0011 J	<0.0005	<0.0005
Fluorene	86-73-7	8270	9.78E-01	0.000354 J	0.00663	0.0229	0.00008 J	0.000657	0.00326	<0.00095	0.0069	0.00089	<0.0008	<0.0006	<0.0006	<0.0006
Naphthalene	91-20-3	8270	4.9E-01	0.002776	0.011	0.00482	<0.00006	0.00012 J	0.00481	<0.00124	<0.00038	<0.0004	<0.0008	<0.0006	<0.0006	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00015	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.000094	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00004	<0.000066	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	<0.000081	0.00023 J	0.00196	<0.00009	0.00018 J	0.000829	0.0011 J	0.00036 J	<0.0002	<0.0007	<0.0005	<0.0005	<0.0005
Phenol	108-95-2	8270	7.33E+00	<0.0001	<0.00004	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	8270	7.33E-01	<0.000088	0.00016 J	0.00308	0.00011 J	0.00186	0.00016 J	0.00148 J	0.00191	0.00184	<0.0009	<0.0005	<0.0005	<0.0005

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-12A						MW-13					
				3/10/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010	3/10/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00025	0.00073 J	<0.0005	<0.0005	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.00715	0.00718	<0.00025	0.0059	0.0029 J	0.00056 J	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	0.00079 J	0.0005 J	<0.0005	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0126 J	0.0105 J	<0.00127	0.012 J	0.0056 J	0.0026 J	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00018	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008	<0.00018	<0.00029	<0.00029	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.0002	<0.00019	<0.00009	<0.00009	<0.00009	<0.00007	<0.00019	<0.00019	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00006	<0.00019	<0.00019	<0.00007	0.00066	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0004	<0.00039	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.00039	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.0002	<0.00049	--	<0.00008	<0.00008	<0.0001	<0.00019	<0.00049	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.183**	**0.174**	**0.332**	**0.22**	**0.15**	**0.15**	<0.00006	<0.00038	<0.00039	<0.00007	0.00076	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000952	<0.00025	<0.00024	<0.00007	<0.00007	<0.00007	<0.000952	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.204	0.173	0.331	0.25	0.19	0.21	<0.00005	<0.00029	<0.00029	<0.00009	0.00011 J	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	0.00375	<0.0003	0.00276	0.0036	0.0026	0.0019	<0.00005	<0.00029	<0.00029	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.0115	0.0103	0.0137	0.0099	0.0093	0.011	0.000277	0.000955	0.000642	0.0002	0.00043	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	0.000288	0.00028 J	0.00026 J	<0.00007	<0.00007	<0.00007	<0.00005	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	<0.00011	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<0.00008	<0.00038	<0.00039	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.00021	0.0013 J	0.00033 J	0.00031	0.0006	<0.0002	<0.000095	0.00051 J	<0.00019	0.00035	0.0016	0.00044
Chrysene	218-01-9	8270	1.25E-01	0.000268	0.00024 J	0.00021 J	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	**0.145**	**0.125**	**0.212**	**0.18**	**0.14**	**0.18**	<0.00005	<0.00029	<0.00029	<0.00008	0.00019 J	<0.00008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00014 J	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	0.00017 J	<0.00019	<0.00019	<0.00007	<0.00007	0.0001 J
Fluoranthene	206-44-0	8270	9.78E-01	0.00806	0.00693	0.0123	0.0061	0.0059	0.0064	<0.00007	0.00046 J	<0.00019	<0.00007	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	0.147	0.112	0.475	0.15	0.13	0.16	<0.00004	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	**2.86**	**2.27**	**1.47**	**2.6**	**1.7**	**0.6**	0.000213	<0.00038	<0.00039	<0.0001	0.007	<0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.00039	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00025	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000952	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	<0.000952	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.117	0.0833	0.372	0.1	0.087	0.091	<0.00004	<0.00019	<0.00019	<0.00007	0.00014 J	0.0002
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.00396	0.00358	0.00518	0.0025	0.0029	0.0025	<0.00005	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-15A						MW-16					
				3/8/2007	1/30/2008	7/15/2008	2/4/2009	1/18/2010	6/23/2010	3/9/2007	1/31/2008	7/15/2008	2/5/2009	1/18/2010	6/23/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0025	<0.0005	<0.0025
Benzene	71-43-2	8260	5.00E-03	<0.00257	0.00161 J	<0.00025	0.0018 J	0.0016 J	0.0017 J	**0.0443**	**0.0383**	**0.11**	**0.048**	**0.031**	**0.058**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	--	<0.0005	<0.00239	<0.00047	<0.00047	<0.0025	--	<0.0025
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	0.00122 J	<0.00025	0.0019 J	0.0015 J	0.0017 J	0.0298	0.037	0.084	0.034	0.021 J	0.032
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0025	<0.0005	**0.0062 J**
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	0.00055 J	0.00834	0.00619	0.0382	0.0025 J	0.0034 J	0.01 J
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	0.0056 J	<0.00127	0.0039 J	0.0015 J	0.0047 J	0.065	0.052	0.121	0.036 J	0.027 J	0.04 J
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	<0.0004	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.00172	<0.0003	0.00042 J	<0.00008	<0.00008	<0.00008	<0.00018	<0.00029	<0.0016	0.0039	0.0025	0.0054
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.0002	<0.0002	<0.00009	<0.00009	<0.00009	<0.00007	<0.00019	<0.0011	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.00006	<0.00019	<0.0011	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0004	<0.00041	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.0021	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.0002	<0.00051	--	<0.00008	<0.00008	<0.0001	<0.00019	**<0.0026**	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.0102	0.0127	**0.0995**	0.044	0.033	0.042	**0.158**	0.0747	**0.175**	**0.13**	0.079	0.04
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000952	<0.00025	<0.00026	<0.00007	<0.00007	<0.00007	<0.000952	<0.00024	<0.0013	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.157	0.134	0.442	0.17	0.17	0.16	0.42	0.215	0.939	0.24	0.21	0.18
Acenaphthylene	208-96-8	8270	1.47E+00	0.00185	<0.0003	<0.00031	0.0017	0.0015	0.00097	0.00724	<0.00029	0.0067	0.0044	0.0041	0.0031
Anthracene	120-12-7	8270	7.33E+00	0.00434	0.00377	0.00432	0.003	0.0036	0.0049	0.145	0.0151	0.0321	0.011	0.0084	0.0076
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	0.00023 J	<0.0002	<0.00007	<0.00007	<0.00007	**0.0017**	<0.00019	<0.0011	0.00014 J	0.00011 J	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	**0.000278**	<0.00019	**<0.0011**	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.0004	<0.00041	<0.00009	<0.00009	<0.00009	<0.00008	<0.00038	**<0.0021**	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000095	<0.0002	<0.0002	0.0026	0.00073	0.00084	<0.000095	<0.00019	<0.0011	0.0005	0.0012	0.0014
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	0.00141	0.00036 J	<0.0011	0.00014 J	0.000088 J	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.0347	0.0239	**0.156**	0.047	0.043	0.048	**0.249**	**0.112**	**0.253**	**0.14**	**0.12**	0.091
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000217	<0.0002	<0.0002	0.00029	0.00011 J	<0.00007	0.000275	<0.00019	<0.0011	0.00025	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.00213	0.00178	0.00183	0.0011	0.0015	0.02	0.07	0.00769	0.0142	0.0064	0.0037	0.0049
Fluorene	86-73-7	8270	9.78E-01	0.0473	0.0394	0.18	0.059	0.06	0.062	0.339	0.114	0.222	0.088	0.096	0.086
Naphthalene	91-20-3	8270	4.9E-01	0.0193	0.00684	0.271	0.048	0.0018	0.036	**3.81**	**1.9**	**18.9**	**4.1**	**1.9**	**1.4**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.0004	<0.00041	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.0021	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00025	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.0013	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000952	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	<0.000952	<0.00019	**<0.0011**	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.00631	0.0039	0.0229	0.0095	0.0074	0.012	0.143	0.0421	0.0743	0.04	0.038	0.042
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	0.0002	<0.00007	<0.00019	0.0047	0.00022	0.00013 J	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.000828	0.00127	0.000664	0.00042	0.00062	0.00076	0.051	0.00615	0.0114	0.004	0.0027	0.0025

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-17						MW-18A						MW-20A	
				3/12/2007	1/31/2008	7/15/2008	2/4/2009	1/18/2010	6/23/2010	3/11/2007	1/30/2008	7/15/2008	2/5/2009	1/18/2010	6/24/2010	3/9/2007	1/30/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	**<0.0245**	<0.00052	**<0.01**	<0.0005	<0.0005	<0.0025	<0.00245	<0.00052	<0.00052	<0.0025	<0.0005	<0.0005	<0.00245	<0.00052
Benzene	71-43-2	8260	5.00E-03	**0.494**	**0.545**	**0.448**	**0.65**	**0.59**	**0.65**	**0.362**	**0.503**	**0.321**	**0.48**	**0.51**	**0.47**	**0.0742**	**0.0609**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0239	<0.00047	<0.0094	<0.0005	--	<0.0025	0.0124	0.0167	0.0074	0.017 J	0.0005 J	<0.00045	<0.00239	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	0.218	0.193	0.142	0.26	0.26	0.2	0.316	0.555	0.153	0.52	0.48	0.54	0.124	0.0965
Methylene Chloride	75-09-2	8260	5.00E-03	**<0.0195**	<0.00054	**<0.011**	<0.0005	<0.0005	**0.0056 J**	<0.00195	<0.00054	<0.00054	<0.0025	<0.0005	<0.00035	<0.00195	<0.00054
Toluene	108-88-3	8260	1.00E+00	0.943	0.909	0.728	**1.1**	1.0	0.88	0.421	0.374	0.0718	0.23	0.32	0.45	0.0359	0.00716
Xylenes (total)	1330-20-7	8260	1.00E+01	0.647	0.582	0.44	0.55	0.72	0.61	0.639	1.13	0.292	0.98	1.2	1.2	0.166	0.113
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	**<0.002**	**<0.008**	<0.0001	<0.0001	<0.0009	<0.00004	**<0.008**	<0.0008	<0.0001	<0.0001	<0.0005	<0.00006	**<0.02**
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	**11.7**	**13.4**	**2.6**	**3.7**	**13**	**7.52**	**12.5**	**2.17**	**1.9**	**4.5**	**7.9**	0.308	0.134
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	**<0.0038**	**<0.021**	<0.00009	<0.00009	<0.0007	<0.00009	**<0.02**	**<0.002**	<0.00009	<0.00009	<0.0004	<0.00007	**<0.039**
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	**<0.0038**	**<0.021**	<0.00007	<0.00007	<0.001	<0.0001	**<0.02**	**<0.002**	<0.00007	<0.00007	<0.00035	<0.00006	**<0.039**
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0076	<0.042	<0.00012	<0.0001	<0.0008	<0.00004	<0.041	<0.004	<0.00012	<0.0001	<0.00035	<0.00004	<0.078
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	**<0.0038**	**<0.053**	--	<0.00008	<0.0007	<0.00022	**<0.02**	**<0.005**	--	<0.00008	<0.00035	<0.00011	**<0.039**
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.637**	**0.42**	**0.582**	**0.27**	**0.56**	**0.39**	**0.439**	**0.548**	**0.594**	**0.42**	**0.36**	**0.4**	**0.593**	**0.204**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.0048	<0.026	<0.00007	<0.00007	<0.0009	<0.00014	<0.026	<0.0025	<0.00007	<0.00007	<0.00035	<0.001	**0.177**
Acenaphthene	83-32-9	8270	1.47E+00	0.221	0.137	0.241	0.094	0.17	0.071	0.346	0.343	0.466	0.19	0.23	0.25	0.396	0.113
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.0057	<0.032	0.0041	0.0067	0.003	<0.00008	<0.031	0.0131	0.0092	0.0062	0.0095	0.00268	<0.059
Anthracene	120-12-7	8270	7.33E+00	0.0262	0.0115	0.022	0.0099	0.013	0.0075	0.0181	<0.02	0.0114	0.009	0.0069	0.0075	0.00778	<0.039
Benzo(a)anthracene	56-55-3	8270	1.25E-03	**0.00194**	**<0.0038**	**<0.021**	<0.0004	<0.00007	<0.0007	<0.00005	**<0.02**	**<0.002**	<0.00007	<0.00007	**<0.0025**	<0.00005	**<0.039**
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.000995**	**<0.0038**	**<0.021**	0.00014 J	<0.00008	**<0.0007**	<0.00005	**<0.02**	**<0.002**	<0.00008	<0.00008	**<0.0004**	<0.00012	**<0.039**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	**<0.0076**	**<0.042**	<0.00009	<0.00009	<0.0007	<0.00007	**<0.041**	**<0.004**	<0.00009	<0.00009	<0.00045	<0.00008	**<0.078**
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	<0.0038	**<0.021**	<0.0002	<0.0002	<0.0008	<0.00009	**<0.02**	<0.002	0.00033	0.0002	<0.001	<0.0001	**<0.039**
Chrysene	218-01-9	8270	1.25E-01	0.00176	<0.0038	<0.021	0.00032	0.00007	<0.0009	<0.00007	<0.02	<0.002	<0.00007	<0.00007	<0.0025	<0.00007	<0.039
Dibenzofuran	132-64-9	8270	9.78E-02	**0.172**	**0.115**	**0.195**	0.079	**0.15**	0.065	**0.23**	**0.233**	**0.29**	**0.12**	**0.15**	**0.16**	**0.267**	0.071
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.0038	<0.021	<0.00007	<0.00007	<0.002	<0.0001	<0.02	<0.002	<0.00007	<0.00007	<0.00035	<0.00006	<0.039
Fluoranthene	206-44-0	8270	9.78E-01	0.0209	0.0044	<0.021	0.0035	0.0037	0.0022	0.00289	<0.02	0.0021	0.0026	0.0013	0.0013	0.00217	<0.039
Fluorene	86-73-7	8270	9.78E-01	0.108	0.0701	0.109	0.047	0.076	0.039	0.157	0.155	0.182	0.089	0.096	0.11	0.193	0.045
Naphthalene	91-20-3	8270	4.9E-01	**14.8**	**23.6**	**25.5**	**9.7**	**16**	**15**	**6.75**	**7.93**	**7.43**	**3.3**	**4.3**	**6.1**	**7.81**	**4.75**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.0076	<0.042	<0.00009	<0.00009	<0.0008	<0.00006	<0.041	<0.004	<0.00009	<0.00009	<0.00035	<0.00007	**<0.078**
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.0048	<0.026	<0.00009	<0.00009	<0.0007	<0.00005	<0.026	<0.0025	<0.00009	<0.00009	<0.0025	<0.00005	<0.049
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	**<0.0038**	**<0.021**	<0.00008	<0.00008	<0.0007	<0.00019	**<0.02**	**<0.002**	<0.00008	<0.00008	**<0.0025**	<0.001	**<0.039**
Phenanthrene	85-01-8	8270	7.33E-01	0.112	0.0502	0.099	0.038	0.06	0.033	0.121	0.118	0.12	0.078	0.067	0.082	0.0837	<0.039
Phenol	108-95-2	8270	7.33E+00	**14.8**	**20.2**	**16.5**	5.5	**7.7**	**19**	0.235	0.364	<0.002	0.005	0.043	0.0054	<0.00007	<0.039
Pyrene	129-00-0	8270	7.33E-01	0.00839	0.0076	<0.021	0.002	0.0021	0.0012 J	0.00111	<0.02	<0.002	0.0013	0.00075	0.00063 J	0.00127	<0.039

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-22A					MW-24A	MW24AR			MW-25A					
				1/29/2008	7/14/2008	2/3/2009	1/15/2010	6/29/2010	1/28/2008	2/5/2009	1/14/2010	6/29/2010	3/15/2007	1/28/2008	7/14/2008	2/3/2009	1/15/2010	6/30/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																		
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00025	0.0029 J	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.00041	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00041	0.00074 J	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00127	0.0047 J	<0.001	<0.001
Semivolatile Organic Compounds																		
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	<0.00008	<0.00009	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00029	<0.00028	<0.00008	<0.00008	<0.00008	<0.00029	<0.00008	<0.00008	<0.00008	<0.00005	<0.00029	<0.00033	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.0002	<0.00019	<0.00009	<0.00009	<0.00009	<0.00019	<0.00009	<0.00009	<0.00009	<0.00009	<0.00019	<0.00022	<0.00009	<0.00009	0.00066
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00039	<0.00038	<0.00012	<0.0001	<0.0001	<0.00038	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.00044	<0.00012	<0.001	<0.001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0002	<0.00019	--	<0.00008	<0.00008	<0.00019	--	<0.00008	<0.00008	<0.00022	<0.00019	<0.00022	--	<0.00008	0.00026
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00039	<0.00038	<0.00007	<0.00007	<0.00007	<0.00038	<0.00007	0.00023	<0.00007	<0.00008	<0.00038	<0.00044	0.024	0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007	<0.00024	<0.00007	<0.00007	<0.00007	<0.00014	<0.00024	<0.00028	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.00029	<0.00028	<0.00009	<0.00009	<0.00009	<0.00029	<0.00009	<0.00008	<0.00009	0.00102	0.00038 J	<0.00033	0.034	0.0014	0.0012
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00029	<0.00028	<0.00006	<0.00007	<0.00007	<0.00029	<0.00006	<0.00007	<0.00007	<0.00008	<0.00029	<0.00033	0.0004	<0.00007	0.00034
Anthracene	120-12-7	8270	7.33E+00	<0.0002	<0.00019	0.0002	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.000292	0.00067	<0.00022	0.0005	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.0002	<0.00019	<0.00015	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.000277	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	<0.00019	<0.00008	<0.00008	<0.00008	<0.00005	<0.00019	**<0.00022**	<0.00008	<0.00008	0.00012 J
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00039	<0.00038	<0.00009	<0.00009	<0.00009	<0.00038	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	**0.0104**	<0.00019	0.00033	0.0013	0.0012	<0.00019	0.00031	0.00029	0.0024	<0.00009	0.00021 J	<0.00022	0.00033	<0.0002	0.00056
Chrysene	218-01-9	8270	1.25E-01	<0.0002	<0.00019	0.00014 J	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.000285	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00029	<0.00028	<0.00008	<0.00008	<0.00008	0.000571	<0.00008	0.000084 J	0.00011 J	0.00018 J	0.000601	<0.00033	0.018	<0.00008	0.00034
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.0002	<0.00019	0.00017 J	<0.00007	<0.00007	0.00063 J	0.0019	0.0001 J	<0.00007	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	0.000529	<0.00007	0.00011 J	<0.00007	0.00099	0.000556	<0.00022	0.00057	0.000084 J	0.000092 J
Fluorene	86-73-7	8270	9.78E-01	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.00027	0.00033 J	<0.00022	0.0049	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	<0.00039	<0.00038	<0.0001	<0.0001	<0.0001	<0.00038	<0.0001	0.0023	0.00036	0.00083	0.0011	<0.00044	0.45	<0.0001	0.00024
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00039	<0.00038	<0.00009	<0.00009	<0.00009	<0.00038	<0.00009	<0.00009	<0.00009	<0.00006	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00028	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	<0.00019	<0.00008	<0.00008	<0.00008	<0.00019	<0.00019	<0.00022	<0.00008	<0.00008	0.00033
Phenanthrene	85-01-8	8270	7.33E-01	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	0.000677	<0.00007	0.00018 J	<0.00007	0.000844	0.000715	<0.00022	0.0034	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	<0.0002	<0.00019	0.00013 J	<0.00007	<0.00007	0.00041 J	<0.00007	<0.00007	<0.00007	0.000786	0.000484	<0.00022	0.00036	0.00047	0.00015 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-26A						MW-27A			MW-28A						MW-29A	
				3/11/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/25/2010	3/15/2007	1/28/2008	7/14/2008	3/9/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/30/2010	3/8/2007	1/28/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																				
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00109	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.00112	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.0015	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00142	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00122	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00138	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00302	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127
Semivolatile Organic Compounds																				
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	<0.00008	<0.00008	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.0002
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.0003	<0.0003	0.00054	<0.00008	<0.00008	<0.00005	<0.00029	<0.0003	<0.00018	<0.0003	<0.00032	<0.00008	<0.00008	<0.00008	<0.00018	<0.00057
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.0002	<0.0002	<0.00009	<0.00009	<0.00009	<0.00009	<0.00019	<0.0002	<0.00007	<0.0002	<0.00021	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.0002	<0.00006	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00006	<0.00038
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0004	<0.0004	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.0004	<0.00004	<0.0004	<0.00042	<0.00012	<0.0001	<0.0001	<0.00004	<0.00076
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.0002	<0.0002	--	<0.00008	<0.00008	<0.00022	<0.00019	<0.0002	<0.0001	<0.0002	<0.00021	--	<0.00008	<0.00008	<0.0001	<0.00038
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.000407	<0.0004	<0.0004	0.0024	<0.00007	<0.00007	<0.00008	<0.00038	<0.0004	<0.00006	<0.0004	<0.00042	<0.00007	<0.00007	<0.00007	<0.00006	<0.00076
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.00025	<0.00025	<0.00007	<0.00007	<0.00007	<0.00014	<0.00024	<0.00025	<0.00095	<0.00025	<0.00026	<0.00007	<0.00007	<0.00007	<0.00095	<0.00048
Acenaphthene	83-32-9	8270	1.47E+00	0.045	0.0519	0.0173	0.015	0.0097	0.005	<0.00004	<0.00029	<0.0003	<0.00005	<0.0003	<0.00032	<0.00009	<0.00009	<0.00009	<0.00005	<0.00057
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.0003	<0.0003	<0.00006	0.00014 J	<0.00007	<0.00008	<0.00029	<0.0003	<0.00005	<0.0003	<0.00032	<0.00006	<0.00007	<0.00007	<0.00005	<0.00057
Anthracene	120-12-7	8270	7.33E+00	0.00128	0.0018	0.00047 J	0.00079	<0.00007	0.0002	<0.00004	<0.00019	<0.0002	<0.00004	0.000611	<0.00021	<0.00007	<0.00007	<0.00007	<0.00004	<0.00038
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.0002	<0.0002	0.00016 J	<0.00007	<0.00007	<0.00005	<0.00019	<0.0002	<0.00005	<0.0002	<0.00021	<0.00013	<0.00007	<0.00007	<0.00005	<0.00038
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00005	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	<0.00005	<0.00019	<0.0002	<0.00011	<0.0002	**<0.00021**	0.00011 J	<0.00008	<0.00008	<0.00011	**<0.00038**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.0004	<0.0004	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.0004	<0.00008	<0.0004	<0.00042	<0.00009	<0.00009	<0.00009	<0.00008	<0.00076
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	**0.0214**	<0.0002	0.00042	0.00026	0.00045	<0.00009	0.00039 J	0.00026 J	<9.5E-05	0.0003 J	<0.00021	0.0037	0.00022	0.0019	0.00072	0.00232 J
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.0002	<0.0002	0.00018 J	<0.00007	0.0003	<0.00007	<0.00019	<0.0002	<0.00007	<0.0002	<0.00021	0.00013 J	<0.00007	<0.00007	<0.00007	<0.00038
Dibenzofuran	132-64-9	8270	9.78E-02	0.00339	0.00492	0.00123	0.0026	0.00078	0.00033	<0.00006	<0.00029	<0.0003	<0.00005	0.00032 J	<0.00032	<0.00008	<0.00008	<0.00008	<0.00005	<0.00057
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00013 J	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.0002	0.00012 J	<0.0002	<0.00021	0.00016 J	<0.00007	<0.00007	0.00015 J	<0.00038
Fluoranthene	206-44-0	8270	9.78E-01	0.0024	0.00244	0.000523	0.00091	0.0003	0.0004	<0.00004	<0.00019	<0.0002	<0.00007	<0.0002	<0.00021	0.00012 J	<0.00007	<0.00007	0.0001 J	<0.00038
Fluorene	86-73-7	8270	9.78E-01	0.00108	0.00235	0.000742	0.0016	0.00028	0.00034	<0.00004	<0.00019	<0.0002	<0.00004	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00004	<0.00038
Naphthalene	91-20-3	8270	4.9E-01	0.00245	0.00078	<0.0004	0.0074	0.00051	<0.0001	0.00072	<0.00038	<0.0004	0.000339	0.000699	<0.00042	0.00017 J	0.0001 J	<0.0001	0.00017 J	<0.00076
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.0004	<0.0004	<0.00009	<0.00009	<0.00009	<0.00006	<0.00038	<0.0004	<0.00007	<0.0004	<0.00042	<0.00009	<0.00009	<0.00009	<0.00007	<0.00076
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00025	<0.00025	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00025	<0.00005	<0.00025	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.00048
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	<0.00019	<0.00019	<0.0002	<0.00095	<0.0002	<0.00021	<0.00008	<0.00008	0.00032	<0.00095	<0.00038
Phenanthrene	85-01-8	8270	7.33E-01	0.000254	<0.0002	<0.0002	0.003	0.00021	0.00017 J	<0.00004	<0.00019	<0.0002	<0.00004	0.00046 J	<0.00021	<0.00007	<0.00007	<0.00007	0.00009 J	<0.00038
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	0.000212	<0.00019	<0.0002	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00007	<0.00038
Pyrene	129-00-0	8270	7.33E-01	0.00107	0.00126	0.00021 J	0.00069	0.000092 J	0.0002 J	<0.00004	<0.00019	<0.0002	<0.00005	0.00041 J	<0.00021	0.00016 J	<0.00007	<0.00007	0.00008 J	<0.00038

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-30A			MW-31A			MW-32A						
				3/18/2004	3/10/2007	1/30/2008	3/17/2004	3/10/2007	1/31/2008	3/18/2004	3/15/2007	1/28/2008	7/14/2008	2/3/2009	1/14/2010	7/1/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	**<0.0136**	<0.00245	<0.00052	**<0.0136**	<0.00245	<0.00052	<0.00136	**<0.0245**	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.213**	**0.197**	**0.147**	**0.192**	**0.174**	**0.178**	**0.455**	**2.51**	**0.884**	**0.884**	**0.69**	**0.34**	**1.5**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0155	<0.00239	<0.00047	<0.0155	<0.00239	<0.00047	<0.00155	<0.0239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.276	0.14	0.153	0.191	0.171	0.166	0.316	0.453	0.373	0.365	0.34	0.076	0.45
Methylene Chloride	75-09-2	8260	5.00E-03	**0.0465 J**	<0.00195	<0.00054	**0.0175 J**	<0.00195	<0.00054	<0.0013	**<0.0195**	<0.00054	<0.00122	<0.0005	<0.0005	0.0032 J
Toluene	108-88-3	8260	1.00E+00	0.998	0.584	0.645	0.426	0.301	0.337	0.667	**1.91**	0.95	0.983	0.74	0.36	**1.5**
Xylenes (total)	1330-20-7	8260	1.00E+01	0.77	0.345	0.386	0.608	0.505	0.562	0.84	1.27	1.02	1.03	0.88	0.35	1.3
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00006	**<0.02**	<0.0005	<0.00006	**<0.002**	<0.00005	<0.00004	**<0.02**	**<0.008**	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	**6.489**	**5.96**	**4.1**	**3.718**	**5.08**	**4.74**	**5.865**	<0.00005	**9.57**	**12.6**	**2.2**	**2.1**	**15**
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00007	**<0.038**	<0.00009	<0.00007	**<0.0038**	<0.000009	<0.00009	**<0.044**	**<0.019**	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.00006	**<0.038**	<0.00026	<0.00006	**<0.0038**	<0.000026	<0.0001	**<0.044**	**<0.019**	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00004	<0.076	<7.6E-05	<0.00004	<0.0076	<0.000076	<0.00004	<0.089	<0.039	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.0001	**<0.038**	<0.0003	<0.0001	**<0.0038**	<0.000295	<0.00022	**<0.044**	**<0.019**	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**1.378**	**0.943**	**0.573**	**0.4731**	**0.844**	**0.887**	**1.896**	0.0106	**1.13**	**0.989**	**1.2**	**0.3**	**0.48**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.000952	<0.048	<0.00029	<0.00095	<0.0048	<0.000285	<0.00014	**<0.056**	<0.024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.361	0.404	0.215	0.3594	0.399	0.206	0.4108	0.201	0.341	0.294	0.34	0.13	0.19
Acenaphthylene	208-96-8	8270	1.47E+00	0.01131	0.0108	<0.057	0.006706	0.00576	<0.0057	0.00778	<0.00008	<0.067	<0.029	0.006	0.0019	0.0079
Anthracene	120-12-7	8270	7.33E+00	0.03537	0.0482	<0.038	0.02971	0.0981	0.0145	0.0318	0.0323	<0.044	0.043	0.077	0.051	0.093
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00005	**<0.038**	<0.00027	**0.00776**	**<0.0038**	0.000389 J	**0.00138**	**<0.044**	**<0.019**	**0.0096**	**0.0067**	**0.01**
Benzo(a)pyrene	50-32-8	8270	2.00E-04	0.000075 J	<0.00011	**<0.038**	<0.00007	**0.00243**	**<0.0038**	0.000055 J	**0.000627**	**<0.044**	**<0.019**	**0.003**	**0.0023**	**0.0067**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.00008	**<0.076**	<0.00009	<0.00008	**<0.0076**	<0.000009	**<0.003**	**<0.089**	**<0.039**	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	<0.000095	**<0.038**	<0.00017	0.00132	<0.0038	<0.000172	<0.00009	**<0.044**	**<0.019**	0.00042	0.0018	0.0041
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00007	<0.038	<0.00009	0.00761	<0.0038	0.000316 J	0.00113	<0.044	<0.019	0.0087	0.0064	0.0099
Dibenzofuran	132-64-9	8270	9.78E-02	**0.2616**	**0.322**	**0.156**	**0.2546**	**0.326**	**0.169**	**0.3393**	**0.181**	**0.298**	**0.26**	**0.32**	**0.14**	**0.21**
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.000143	<0.00006	<0.038	<0.00014	<0.00006	<0.0038	0.000374 J	<0.0001	<0.044	<0.019	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.01362	0.0211	<0.038	0.01447	0.107	0.006	0.01255	0.0235	<0.044	0.026	0.098	0.07	0.09
Fluorene	86-73-7	8270	9.78E-01	0.1861	0.228	0.109	0.2093	0.255	0.123	0.2088	0.107	0.163	0.156	0.22	0.087	0.13
Naphthalene	91-20-3	8270	4.9E-01	**31.12**	**17.8**	**9.77**	**11.35**	**17**	**13.7**	**31.54**	**11.2**	**25**	**16.2**	**16**	**3.5**	**11**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00007	**<0.076**	<0.00014	<0.00007	<0.0076	<0.000143	<0.00006	**<0.089**	<0.039	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.048	<0.00009	<0.00005	<0.0048	<0.00009	<0.00005	<0.056	<0.024	<0.00009	<0.00009	0.014
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000952	**<0.038**	**0.0803**	**0.0658**	**0.0895**	<0.000038	<0.00019	**<0.044**	**<0.019**	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.1575	0.228	0.075	0.181	0.347	0.0774	0.213	0.145	0.177	0.185	0.45	0.25	0.19
Phenol	108-95-2	8270	7.33E+00	0.6359	1.42	0.174	0.7687	2.88	1.56	4.494	**21.5**	**9.01**	**8.83**	1.4	1.3	**14**
Pyrene	129-00-0	8270	7.33E-01	0.007218	0.013	<0.038	0.007197	0.0502	0.0084	0.007424	0.00901	<0.044	<0.019	0.062	0.043	0.047

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-33A							MW-35A					
				3/18/2004	3/15/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/29/2010	3/9/2007	1/29/2008	7/14/2008	2/3/2009	1/14/2010	6/30/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/l
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.0115**	**0.0301**	<0.00025	**0.0062**	0.00071 J	0.0025 J	0.0018 J	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	0.0235	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00025	<0.0005	0.0015 J	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	0.0214	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00004	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	0.00012 J	<0.0001	<0.0001	0.0003
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	0.00128	<0.0005	<0.00029	<0.00008	<0.00008	<0.00008	<0.00018	<0.0003	<0.00028	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00009	<0.00033	<0.00019	<0.00009	<0.00009	<0.00009	<0.00007	<0.0002	<0.00019	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.0001	<0.00033	<0.00019	<0.00007	<0.00007	<0.00007	<0.00006	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00004	<0.00067	<0.00038	<0.00012	<0.0001	<0.0001	<0.00004	<0.0004	<0.00038	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00022	<0.00033	<0.00019	--	<0.00008	<0.00008	<0.0001	<0.0002	<0.00019	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.009677	0.0235	<0.00067	<0.00038	0.00066	0.0009	0.00092	<0.00006	<0.0004	<0.00038	<0.00007	0.00061	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00014	<0.00042	<0.00024	<0.00007	<0.00007	<0.00007	<0.00095	<0.00025	<0.00024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.02102	0.0659	0.0133	0.0124	0.013	0.028	0.012	0.0109	0.0176	0.00656	0.0035	0.017	0.0077
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	0.00053	<0.0005	<0.00029	<0.00006	0.00015 J	<0.00007	0.00014 J	<0.0003	<0.00028	<0.00006	0.000011 J	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.000762	0.00134	<0.00033	0.00024 J	0.0002 J	0.00028	0.00021	0.000693	0.000542	0.00023 J	<0.00007	0.00043	0.00035
Benzo(a)anthracene	56-55-3	8270	1.25E-03	0.000548	0.000407	<0.00033	<0.00019	0.0002 J	0.00017 J	0.00014 J	0.0001 J	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.00005	**<0.00033**	<0.00019	<0.00008	<0.00008	<0.00008	<0.00011	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.00007	<0.00067	<0.00038	<0.00009	<0.00009	<0.00009	<0.00008	<0.0004	<0.00038	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	<0.00009	0.00137 J	<0.00019	0.00033	0.003	0.00035	0.00011 J	0.00453	<0.00019	0.00024	0.00045	0.00048
Chrysene	218-01-9	8270	1.25E-01	0.000337 J	<0.00007	<0.00033	<0.00019	0.00012 J	0.00012 J	0.00009 J	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.005338	0.0144	0.00074	0.000628	0.00078	0.0019	0.0014	0.00245	0.00819	0.00319	0.0014	0.0005	0.0026
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.000143	0.00014 J	0.00055 J	<0.00019	<0.00007	<0.00007	<0.00007	0.000978	0.00046 J	<0.00019	<0.00007	0.000092 J	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.01085	0.00506	0.00141	0.00154	0.0022	0.0013	0.0012	0.00225	0.0014	0.00105	0.00034	0.0011	0.00048
Fluorene	86-73-7	8270	9.78E-01	0.00526	0.012	0.0013	0.000939	0.00067	0.0015	0.0012	0.0019	0.00328	0.00161	0.00062	0.0028	0.0014
Naphthalene	91-20-3	8270	4.9E-01	0.0437	**0.602**	0.00167	0.0047	0.0028	0.02	0.0082	0.000262	0.0257	0.000704	<0.0001	0.19	0.0017
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00006	<0.00067	<0.00038	<0.00009	<0.00009	<0.00009	<0.00007	<0.0004	<0.00038	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.00042	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.00025	<0.00024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.00019	<0.00033	<0.00019	<0.00008	<0.00008	<0.00008	<0.00095	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.003058	0.00624	<0.00033	0.00028 J	0.00037	0.00032	0.00065	<0.00004	0.00046 J	<0.00019	<0.00007	0.00039	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.0000953	0.00108	<0.00033	<0.00019	<0.00007	<0.00007	<0.00007	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.007666	0.00397	0.0019	0.00167	0.0024	0.0019	0.0016	0.00124	0.000967	0.000547	0.00025	0.00092	0.00031

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-36A						MW-38A					
				3/9/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/29/2010	3/8/2007	1/29/2008	7/14/2008	2/3/2009	1/14/2010	6/29/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.000266	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008	<0.00018	<0.00029	<0.00029	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.0002	<0.0002	<0.00009	<0.00009	<0.00009	<0.00007	<0.00019	<0.0002	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.00006	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0004	<0.00039	<0.00012	<0.0001	<0.0001	<0.00004	<0.00039	<0.00039	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.0002	<0.0002	--	<0.00008	<0.00008	<0.0001	<0.00019	<0.0002	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00006	<0.0004	<0.00039	<0.00007	0.0003	0.00023	<0.00006	<0.00039	<0.00039	0.00044	<0.00007	0.00016 J
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000952	<0.00025	<0.00024	<0.00007	<0.00007	<0.00007	<0.000952	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.00046	<0.0003	<0.00029	<0.00009	0.00036	<0.00009	<0.00005	<0.00029	<0.00029	<0.00009	0.00024	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00005	<0.0003	<0.00029	<0.00006	<0.00007	<0.00007	<0.00005	<0.00029	<0.00029	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	<0.00004	0.00065	<0.0002	<0.00007	<0.00007	<0.00007	<0.00004	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.00005	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	<0.00011	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<0.00008	<0.00039	<0.00039	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000138 J	0.00061 J	<0.0002	0.00045	0.00033	0.00061	<0.000095	0.00078 J	0.00022 J	0.00042	0.00049	0.00044
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00005	0.00049 J	<0.00029	<0.00008	0.0003	<0.00008	<0.00005	<0.00029	<0.00029	<0.00008	<0.00008	0.000083 J
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000229	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	0.000239	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	<0.00007	0.000526	<0.0002	<0.00007	<0.00007	<0.00007	0.000416	<0.00019	<0.0002	<0.00007	0.00012 J	<0.00007
Fluorene	86-73-7	8270	9.78E-01	<0.00004	0.00028 J	<0.0002	<0.00007	0.00024	<0.00007	<0.00004	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	0.000193	0.00119	<0.00039	0.0006	0.0013	0.0023	0.00015 J	<0.00039	<0.00039	0.006	<0.0001	<0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<0.00007	<0.00039	<0.00039	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00025	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000952	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008	<0.000952	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	<0.00004	0.000727	<0.0002	<0.00007	0.00039	<0.00007	<0.00004	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.000319	0.000531	<0.0002	0.00015 J	0.00021	<0.00007	0.000245	<0.00019	<0.0002	<0.00007	0.0001 J	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-44A						MW-49A					
				3/9/2007	1/30/2008	7/14/2008	2/3/2009	1/13/2010	6/30/2010	3/16/2007	1/31/2008	7/15/2008	2/4/2009	1/21/2010	6/25/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.00681**	**0.00751**	**0.00635**	0.003 J	<0.0005	0.0026 J	**0.0809**	**0.0108**	**0.165**	**0.24**	**0.2**	**0.29**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	**0.18**	0.00865	0.00702	0.0053	0.0024 J	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	0.00363 J	<0.00025	<0.0005	<0.0005	<0.0005	0.0384	0.0238	0.0837	0.084	0.085	0.14
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	0.00291 J	0.002 J	<0.00041	<0.0005	<0.0005	<0.0005	0.048	0.00805	0.0415	0.077	0.083	0.13
Xylenes (total)	1330-20-7	8260	1.00E+01	0.00846 J	0.0186	0.006 J	0.0013 J	0.001 J	0.0026 J	0.0902	0.0352	0.187	0.2	0.21	0.34
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	**<0.004**	**<0.002**	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00018	<0.0003	<0.00032	<0.00008	<0.00008	<0.00008	**0.805**	0.025	**6.08**	**6.8**	**0.86**	**3.7**
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.0002	<0.00021	<0.00009	<0.00009	<0.00009	<0.00009	**<0.0095**	**<0.004**	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.0001	**<0.0095**	**<0.004**	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0004	<0.00042	<0.00012	<0.0001	<0.0001	<0.00004	<0.019	<0.008	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.0002	<0.00021	--	<0.00008	<0.00008	<0.00022	**<0.0095**	**<0.01**	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.00596	0.0244	0.00779	0.00097	0.00012 J	0.004	**0.442**	0.0693	**0.492**	**0.6**	**0.35**	**0.44**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000952	<0.00025	<0.00026	<0.00007	<0.00007	<0.00007	<0.00014	<0.012	<0.005	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.0859	0.127	0.202	0.12	0.13	0.2	0.268	0.215	0.468	0.32	0.2	0.21
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00005	<0.0003	<0.00032	0.0012	0.00079	0.00096	0.00325	<0.014	<0.006	0.0039	0.0032	0.0052
Anthracene	120-12-7	8270	7.33E+00	0.00243	0.00195	0.00393	0.0046	0.0077	0.0067	0.0217	<0.0095	0.0164	0.01	0.0071	0.0099
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.000463	**<0.0095**	**<0.004**	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.0002	**<0.00021**	<0.00008	<0.00008	<0.00008	<0.00005	**<0.0095**	**<0.004**	**0.00024**	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.0004	<0.00042	<0.00009	<0.00009	<0.00009	<0.00007	**<0.019**	**<0.008**	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000095	0.00097 J	<0.00021	0.00043	0.00031	0.00028	0.00162	**<0.0095**	<0.004	0.0009	0.0015	<0.0002
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.000482	<0.0095	<0.004	0.0006	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.0117	0.0642	**0.125**	0.054	0.0087	0.0043	**0.176**	**0.148**	**0.293**	**0.21**	**0.14**	**0.16**
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000232	<0.0002	<0.00021	<0.00007	<0.0007	<0.0007	<0.0001	<0.0095	<0.004	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.00201	0.00269	0.00367	0.0032	0.0056	0.006	0.0228	<0.0095	0.0063	0.0058	0.0025	0.0034
Fluorene	86-73-7	8270	9.78E-01	0.0214	0.045	0.0865	0.056	0.069	0.097	0.155	0.102	0.205	0.15	0.11	0.13
Naphthalene	91-20-3	8270	4.9E-01	0.0836	**0.816**	0.287	0.021	0.0011	0.16	**4.95**	**2.13**	**11**	**9**	**5.1**	**10**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.0004	<0.00042	<0.00009	<0.00009	<0.00009	<0.00006	<0.019	<0.008	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00025	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.012	<0.005	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000952	<0.0002	<0.00021	<0.00008	<0.00008	<0.00008	<0.00019	**<0.0095**	**<0.004**	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.0107	0.0161	0.0184	0.02	0.0055	0.0025	0.206	0.0939	0.147	0.096	0.072	0.086
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00007	<0.0095	0.0111	<0.00007	0.00077	0.0011
Pyrene	129-00-0	8270	7.33E-01	0.000864	0.00159	0.00156	0.0016	0.0032	0.003	0.0101	<0.0095	<0.004	0.0046	0.0017	0.0018

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-50A						MW-51A					MW-52A		
				3/16/2007	1/31/2008	7/16/2008	2/4/2009	1/20/2010	6/25/2010	3/13/2007	1/31/2008	2/4/2009	1/20/2010	6/24/2010	3/12/2007	1/31/2008	1/18/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.0005	<0.0005	<0.0005	**<0.0245**	<0.00052	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.0005	<0.0005	<0.0005	**0.696**	**0.0576**	0.0047 J
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.0005	<0.0005	<0.0005	<0.0239	<0.00047	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.0005	<0.0005	<0.0005	0.256	0.0892	0.014
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.0005	<0.0005	<0.0005	**<0.0195**	<0.00054	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.0005	<0.0005	<0.0005	0.898	0.103	0.012 J
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.001	<0.001	<0.001	0.767	0.24	0.044 J
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.00008	<0.00009	<0.0001	<0.0001	<0.0001	<0.00004	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	**<0.008**	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.00029	<0.00033	<0.00008	<0.00008	<0.00008	<0.00005	<0.00029	<0.00008	<0.00008	<0.00008	<0.00005	**1.54**	0.0046
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00019	<0.00022	<0.00009	<0.00009	<0.00009	<0.00009	<0.00019	<0.00009	<0.00009	<0.00009	<0.00009	**<0.019**	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.00007	<0.00007	<0.00007	<0.0001	**<0.019**	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00038	<0.00044	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.00012	<0.0001	<0.0001	<0.00004	<0.038	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.00019	<0.00056	--	<0.00008	<0.00008	<0.00022	<0.00019	--	<0.00008	<0.00008	<0.00022	**<0.019**	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00008	<0.00038	<0.00044	<0.00007	<0.00007	<0.00007	0.00008 J	<0.00038	<0.00007	<0.00007	0.00013 J	**0.964**	**0.929**	**0.54**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.00024	<0.00028	<0.00007	<0.00007	<0.00007	<0.00014	<0.00024	<0.00007	<0.00007	<0.00007	<0.00014	<0.024	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.00004	<0.00029	<0.00033	<0.00009	<0.00009	<0.00009	<0.00004	<0.00029	<0.00009	<0.00009	0.00013 J	0.353	0.494	0.36
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.00029	<0.00033	<0.00006	<0.00007	<0.00007	<0.00008	<0.00029	<0.00006	<0.00007	<0.00007	<0.00008	<0.029	0.0045
Anthracene	120-12-7	8270	7.33E+00	<0.00004	<0.00019	<0.00022	0.00011 J	0.00007 J	<0.00007	<0.00004	<0.00019	<0.00007	<0.00007	0.00017 J	0.0502	0.046	0.022
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.00005	<0.00019	<0.00007	<0.00007	0.00014 J	**0.00137**	**<0.019**	0.00047
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00005	<0.00019	**<0.00022**	<0.00008	<0.00008	<0.00008	<0.00005	<0.00019	<0.00008	<0.00008	<0.00008	**0.000714**	**<0.019**	0.00013 J
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.00009	<0.00009	<0.00009	<0.00007	**<0.038**	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	<0.00019	<0.00022	0.0035	<0.0002	0.0003	<0.00009	<0.00019	0.00034	0.0019	0.00035	<0.00009	**<0.019**	0.00032
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.00007	<0.00007	0.00013 J	0.00133	<0.019	0.00041
Dibenzofuran	132-64-9	8270	9.78E-02	0.000438	<0.00029	<0.00033	0.00025	<0.00008	<0.00008	<0.00006	0.000566	<0.00008	<0.00008	0.00012 J	**0.258**	**0.373**	**0.28**
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.00007	<0.00007	<0.00007	<0.0001	<0.019	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.000252	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	0.00018 J	<0.00019	<0.00007	<0.00007	0.00072	0.0259	0.027	0.015
Fluorene	86-73-7	8270	9.78E-01	0.000382	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.00004	0.000602	<0.00007	<0.00007	0.00011 J	0.162	0.263	0.23
Naphthalene	91-20-3	8270	4.9E-01	<0.00007	<0.00038	<0.00044	0.0003	<0.0001	0.0004	0.0011	0.00182	0.00029	<0.0001	0.00087	**20.3**	**10.3**	**3.9**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009	<0.00006	<0.00038	<0.00009	<0.00009	<0.00009	<0.00006	<0.038	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00024	<0.00028	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.024	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	<0.00019	<0.00022	<0.00008	<0.00008	<0.00008	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008	<0.00019	**<0.019**	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.000411	0.00026 J	<0.00022	0.00031	<0.00007	<0.00007	0.00013 J	0.00097	<0.00007	<0.00007	0.00068	0.204	0.24	0.24
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.00007	0.00044 J	<0.00007	<0.00007	<0.00007	<0.00007	0.038	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.00015 J	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	0.00019 J	<0.00019	<0.00007	<0.00007	0.00037	0.00979	0.039	0.0066

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-55A		MW-57A			MW-58A			MW-59A			MW-60A		
				2/4/2009	1/18/2010	2/5/2009	1/20/2010	6/23/2010	2/5/2009	1/20/2010	6/23/2010	2/5/2009	1/20/2010	6/24/2010	2/4/2009	1/20/2010	6/24/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0025	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.19**	**0.072**	**0.26**	**0.17**	**0.47**	**0.052**	**0.038**	**0.075**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0005	--	<0.0005	<0.0005	<0.0005	<0.0025	0.0093 J	0.01 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.15	0.2	0.34	0.32	0.45	0.079	0.063	0.11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0005	<0.005	<0.0005	<0.0005	**0.014 J**	<0.0025	<0.0005	0.0048 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	0.44	0.29	0.63	0.13	0.86	0.022 J	0.02 J	0.045	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	0.35	0.47	0.92	0.6	1.2	0.1	0.04 J	0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	**1.2**	0.28	**1.8**	**3.0**	**2.7**	0.047	0.097	**0.61**	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00009	<0.00009	<0.00009	<0.00045	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00007	<0.00007	<0.00007	<0.00007	<0.00035	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00012	<0.0001	<0.00012	<0.0001	<0.0005	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	--	<0.00008	--	<0.00008	<0.0004	--	<0.00008	<0.00008	--	<0.00008	<0.00008	--	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.63**	**0.39**	**0.73**	**0.89**	**3.5**	**0.22**	**0.1**	**0.21**	<0.00007	<0.00007	0.0002	0.00028	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00007	<0.00007	<0.00007	<0.00007	<0.00035	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.28	0.19	0.24	0.31	**2.0**	0.31	0.18	0.28	<0.00009	<0.00009	0.0003	0.00045	<0.00009	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	0.0037	0.0028	0.0056	0.0061	0.02	0.0012	0.0013	0.0015	<0.00006	<0.00007	<0.00007	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.047	0.021	0.044	0.022	0.9	0.0045	0.0098	0.017	<0.00007	<0.00007	0.00026	0.00034	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	**0.01**	**0.0018**	**0.01**	0.00051	**0.15**	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.0069**	**0.00081**	**0.0045**	0.00012 J	**0.037**	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00009	<0.00009	<0.00009	<0.00009	<0.00035	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.00073	0.0031	0.002	0.0004	<0.0004	0.0003	<0.0002	0.00046	0.0006	0.00065	0.00023	0.002	0.0025	0.0002
Chrysene	218-01-9	8270	1.25E-01	0.0099	0.0017	0.0094	0.00034	**0.14**	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	**0.2**	**0.13**	**0.21**	**0.17**	**1.9**	**0.23**	**0.14**	**0.23**	<0.00008	<0.00008	0.0007	0.00035	<0.00008	<0.00008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.00007	<0.00007	<0.00007	<0.00007	<0.00045	0.0012	<0.00007	<0.00007	0.00077	<0.00007	<0.00007	0.0023	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.052	0.0081	0.054	0.0063	**1.4**	0.0025	0.0058	0.009	<0.00007	<0.00007	0.0005	0.00039	<0.00007	0.0003
Fluorene	86-73-7	8270	9.78E-01	0.16	0.083	0.083	0.11	**1.6**	0.15	0.12	0.16	<0.00007	<0.00007	0.00045	0.00044	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	**17**	**11**	**16**	**7.4**	**20**	**2.4**	**0.67**	**1.5**	<0.0001	<0.0001	0.00047	0.0095	<0.0001	0.0015
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00009	<0.00009	<0.00009	<0.00009	<0.00035	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00009	<0.00009	<0.00009	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	0.00053	<0.00008	<0.00008	<0.00008	<0.00045	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.2	0.084	0.22	0.088	**4.0**	0.041	0.049	0.061	<0.00007	<0.00007	0.0017	0.0011	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	0.15	0.025	0.052	0.0099	0.042	0.00029	0.0074	0.0065	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.032	0.0052	0.038	0.0037	**0.84**	0.0012	0.0034	0.0042	<0.00007	<0.00007	0.00029	0.00029	<0.00007	0.0002 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-1
Summary of Groundwater Sampling Results - A-TZ Monitoring Wells
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-61A			MW-64A			MW-69A	TW-56A	CPT56RATZ
				2/3/2009	1/20/2010	7/1/2010	2/4/2009	1/21/2010	7/14/2010	7/15/2010	1/20/2010	7/23/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds												
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**<0.023**	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**<0.26**	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.36	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.32	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.98	<0.00127
Semivolatile Organic Compounds												
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	0.0036	**2.9**	<0.0006
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.0004
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.0004
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0008
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	--	<0.00008	<0.00008	--	<0.00008	<0.00008	<0.00008	<0.00008	<0.001
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.00041	<0.00007	<0.00007	0.00014 J	<0.00007	<0.00007	0.0038	**0.15**	0.00088
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.0005
Acenaphthene	83-32-9	8270	1.47E+00	0.00017 J	<0.00009	<0.00009	0.00029	<0.00009	<0.00009	<0.0037	<0.077	<0.0006
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00006	<0.00007	<0.00007	<0.00006	<0.00007	<0.00007	<0.00007	<0.0024	<0.0006
Anthracene	120-12-7	8270	7.33E+00	<0.00007	<0.00007	<0.00007	0.00016 J	<0.00007	<0.00007	0.00039	0.0035	<0.0004
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	0.00049	0.00099	<0.0004
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	0.00013 J	**0.00031 J**	**<0.0004**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.0008
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.0017	0.002	0.0021	0.0004	0.0016	0.002	0.0059	0.00025	0.00265
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	0.00032	0.00084	<0.0004
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00008	<0.00008	<0.00008	0.00012 J	<0.00008	<0.00008	0.003	0.043	<0.0006
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.011	<0.00007	<0.00007	0.02	<0.00007	<0.00007	<0.00007	<0.00045	0.00108 J
Fluoranthene	206-44-0	8270	9.78E-01	<0.00007	<0.00007	<0.00007	0.00076	<0.00007	<0.00007	0.0025	0.01	<0.0004
Fluorene	86-73-7	8270	9.78E-01	0.00011 J	<0.00007	<0.00007	0.00018 J	<0.00007	<0.00007	0.0033	0.033	0.00099
Naphthalene	91-20-3	8270	4.9E-01	0.0066	<0.0001	0.00018 J	0.00092	<0.0001	<0.0001	0.026	**2.5**	<0.0008
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.0008
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.0005
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00008	<0.00008	0.00032	<0.00008	<0.00008	<0.00008	<0.00008	<0.00013	<0.0004
Phenanthrene	85-01-8	8270	7.33E-01	0.00021	<0.00007	<0.00007	0.00055	<0.00007	<0.00007	0.0083	0.06	0.00146
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	0.0069	0.014	<0.0004
Pyrene	129-00-0	8270	7.33E-01	<0.00007	<0.00007	<0.00007	0.00063	<0.00007	<0.00007	0.0022	0.0067	<0.0004

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection lir
7. -- = not analyzed.

Table 5B-2
Summary of Groundwater Sampling Results - Selected A-TZ Monitoring Wells - VOCs
UPRR Houston Wood Preserving Works

Constituent	CAS No.	Residential Assessment Level	MW-18A	MW-57A	MW-58A	TW-56A
			1/18/2010	1/20/2010	1/20/2010	1/20/2010
Volatile Organic Compounds (EPA 8260)		mg/L	mg/L	mg/L	mg/L	mg/L
1,1,1-Trichloroethane	71-55-6	2.0E-01	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-Tetrachloroethane	79-34-5	4.6E-03	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-Trichloroethane	79-00-5	5.0E-03	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethane	75-34-3	4.9E+00	<0.0005	<0.0005	<0.0005	<0.0005
1,1-Dichloroethene	75-35-4	7.0E-03	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Dichloroethane	107-06-2	5.0E-03	<0.0005	<0.0005	<0.0005	**0.023J**
1,2-Dichloropropane	78-87-5	5.0E-03	<0.0005	<0.0005	<0.0005	<0.0005
1,2-Diphenylhydrazine	122-66-7	1.1E-03	<0.0001	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	4.9E-01	**4.5**	**3**	0.097	**2.9**
2,4-Dinitrotoluene	121-14-2	1.3E-03	<0.00009	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	1.3E-03	<0.00007	<0.00007	<0.00007	<0.00007
2-Butanone	78-93-3	1.5E+01	<0.0008	<0.0008	<0.0008	<0.0008
2-Chloronaphthalene	91-58-7	2.0E+00	<0.0001	<0.0001	<0.0001	<0.0001
2-Hexanone	591-78-6	1.2E-01	<0.001	<0.001	<0.001	<0.001
2-Methylnaphthalene	91-57-6	9.8E-02	**0.36**	**0.89**	**0.1**	**0.15**
4,6-Dinitro-2-methylphenol	534-52-1	2.4E-03	<0.00008	<0.00008	<0.00008	<0.00008
4-Methyl-2-pentanone	108-10-1	2.0E+00	<0.001	<0.001	<0.001	<0.001
4-Nitrophenol	100-02-7	4.9E-02	<0.00007	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	1.5E+00	0.23	0.31	0.18	0.077
Acenaphthylene	208-96-8	1.5E+00	0.0062	0.0061	0.0013	0.0024
Acetone	67-64-1	2.2E+01	<0.001	<0.001	<0.001	0.069
Anthracene	120-12-7	7.3E+00	0.0069	0.022	0.0098	0.0035
Benz(a)anthracene	56-55-3	1.3E-03	<0.00007	0.00051	<0.00007	0.00099
Benzene	71-43-2	5.0E-03	**0.51**	**0.17**	**0.038**	**0.26**
Benzo(a)pyrene	50-32-8	2.0E-04	<0.00008	0.00012J	<0.00008	**0.00031**
Bis(2-chloroethoxy)methane	111-91-1	8.3E-04	<0.00009	<0.00009	<0.00009	<0.00009
Bis(2-ethylhexyl)phthalate	117-81-7	6.0E-03	<0.0002	0.0004	<0.0002	0.00025
Bromodichloromethane	75-27-4	1.5E-02	<0.0005	<0.0005	<0.0005	<0.0005
Bromoform	75-25-2	1.2E-01	<0.0005	<0.0005	<0.0005	<0.0005
Bromomethane	74-83-9	3.4E-02	<0.0009	<0.0009	<0.0009	<0.0009
Carbon disulfide	75-15-0	2.4E+00	<0.0005	<0.0005	<0.0005	<0.0005
Carbon tetrachloride	56-23-5	5.0E-03	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	1.0E-01	<0.0005	<0.0005	0.0093J	<0.0005
Chloroethane	75-00-3	9.8E+00	<0.0005	<0.0005	<0.0005	<0.0005
Chloroform	67-66-3	2.4E-01	<0.0005	<0.0005	<0.0005	<0.0005
Chloromethane	74-87-3	7.0E-02	<0.0005	<0.0005	<0.0005	<0.0005
Chrysene	218-01-9	1.3E-01	<0.00007	0.00034	<0.00007	0.00084
cis-1,2-Dichloroethene	156-59-2	7.0E-02	0.02J	0.0051J	<0.0005	0.014J
cis-1,3-Dichloropropene	10061-01-5	1.7E-03	<0.0005	<0.0005	<0.0005	<0.0005
Dibenzofuran	132-64-9	9.8E-02	**0.15**	**0.17**	**0.14**	0.043
Dibromochloromethane	124-48-1	1.1E-02	<0.0005	<0.0005	<0.0005	<0.0005
Dichloromethane	75-09-2	5.0E-03	<0.0005	<0.0005	<0.0005	<0.0005
Di-n-butyl phthalate	84-74-2	2.4E+00	<0.00007	<0.00007	<0.00007	0.00045
Ethylbenzene	100-41-4	7.0E-01	0.48	0.32	0.063	0.36
Fluoranthene	206-44-0	9.8E-01	0.0013	0.0063	0.0058	0.01
Fluorene	86-73-7	9.8E-01	0.096	0.11	0.12	0.033
Methyl tert-butyl ether	1634-04-4	2.4E-01	<0.0005	<0.0005	<0.0005	<0.0005
Naphthalene	91-20-3	4.9E-01	**4.3**	**7.4**	**0.67**	**2.5**
Nitrobenzene	98-95-3	4.9E-02	<0.00009	<0.00009	<0.00009	<0.00009
N-Nitrosodiphenylamine	86-30-6	1.9E-01	<0.00009	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	1.0E-03	<0.00008	<0.00008	<0.00008	0.00013J
Phenanthrene	85-01-8	7.3E-01	0.067	0.088	0.049	0.06
Phenol	108-95-2	7.3E+00	0.043	0.0099	0.0074	0.014
Pyrene	129-00-0	7.3E-01	0.00075	0.0037	0.0034	0.0067
Styrene	100-42-5	1.0E-01	<0.0005	<0.0005	<0.0005	<0.0005
Tetrachloroethene	127-18-4	5.0E-03	<0.0006	<0.0006	<0.0006	<0.0006
Toluene	108-88-3	1.0E+00	0.32	0.13	0.02J	0.32
trans-1,2-Dichloroethene	156-60-5	1.0E-01	<0.0005	<0.0005	<0.0005	<0.0005
trans-1,3-Dichloropropene	10061-02-6	9.1E-03	<0.0005	<0.0005	<0.0005	<0.0005
Trichloroethene	79-01-6	5.0E-03	<0.0005	<0.0005	<0.0005	<0.0005

Table 5B-2
Summary of Groundwater Sampling Results - Selected A-TZ Monitoring Wells - VOCs
UPRR Houston Wood Preserving Works

Constituent	CAS No.	Residential Assessment Level	MW-18A 1/18/2010	MW-57A 1/20/2010	MW-58A 1/20/2010	TW-56A 1/20/2010
Volatile Organic Compounds (EPA 8260)		mg/L	mg/L	mg/L	mg/L	mg/L
Vinyl chloride	75-01-4	2.0E-03	**0.059**	<0.0005	<0.0005	<0.0005
Xylenes, Total	1330-20-7	1.0E+01	1.2	0.6	0.04J	0.98

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.

Table 5B-3
SUMMARY OF GROUNDWATER SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

Constituent	CAS	Method	Residential Assessment Level mg/L	TW-01 mg/L	TW-02 mg/L	TW-03 mg/L
Volatile Organic Compounds						
1,1,1-Trichloroethane	71-55-6	8260	2.00E-01	--	<0.0202	<0.00202
1,1,2,2-Tetrachloroethane	79-34-5	8260	4.56E-03	--	**<0.0091**	<0.00091
1,1,2-Trichloroethane	79-00-5	8260	5.00E-03	--	**<0.0212**	<0.00212
1,1-Dichloroethane	75-34-3	8260	4.04E+00	--	<0.024	<0.0024
1,1-Dichloroethene	75-35-4	8260	7.00E-03	--	**<0.0134**	<0.00134
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	**<0.0245**	<0.00245
1,2-Dichloropropane	78-87-5	8260	5.00E-03	--	**<0.0252**	<0.00252
2-Hexanone	591-78-6	8260	1.47E+00	--	<0.0162	<0.00162
4-Methyl-2-pentanone (MIBK)	108-10-1	8260	1.96E+00	--	<0.0169	<0.00169
Acetone	67-64-1	8260	2.20E+01	--	0.134	<0.00326
Benzene	71-43-2	8260	5.00E-03	**0.0906**	**0.583**	0.00413 J
Bromodichloromethane	75-27-4	8260	1.47E-02	--	**<0.0263**	<0.00263
Bromoform	75-25-2	8260	1.16E-01	--	<0.0172	<0.00172
Bromomethane	74-83-9	8260	3.42E-02	--	**<0.0383**	<0.00383
Carbon Disulfide	75-15-0	8260	2.44E+00	--	<0.0191	<0.00191
Carbon Tetrachloride	56-23-5	8260	5.00E-03	--	**<0.0194**	<0.00194
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.0239	<0.00239
Chloroethane	75-00-3	8260	9.78E+00	--	<0.0205	<0.00205
Chloroform	67-66-3	8260	2.44E-01	--	<0.0277	<0.00277
Chloromethane	74-87-3	8260	7.02E-02	--	<0.0268	<0.00268
cis-1,2-Dichloroethene	156-59-2	8260	7.00E-02	--	<0.0227	<0.00227
cis-1,3-Dichloropropene	10061-01-	8260	1.69E-03	--	**<0.017**	**<0.0017**
Dibromochloromethane	124-48-1	8260	1.09E-02	--	**<0.0197**	<0.00197
Ethylbenzene	100-41-4	8260	7.00E-01	0.152	**5.35**	0.00619
Methyl Ethyl Ketone (2-Butanone)	78-93-3	8260	1.47E+01	--	<0.0187	<0.00187
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	**<0.0195**	<0.00195
Styrene	100-42-5	8260	1.00E-01	--	<0.0223	<0.00223
Tetrachloroethene	127-18-4	8260	5.00E-03	--	**<0.02**	<0.002
Toluene	108-88-3	8260	1.00E+00	0.187	**28.3**	0.00376 J
trans-1,2-Dichloroethene	156-60-5	8260	1.00E-01	--	<0.028	<0.0028
trans-1,3-Dichloropropene	10061-02-	8260	9.13E-03	--	**<0.0143**	<0.00143
Trichloroethene	79-01-6	8260	5.00E-03	--	**<0.0232**	<0.00232
Vinyl Chloride	75-01-4	8260	2.00E-03	--	**<0.0214**	**<0.00214**
Xylenes (total)	1330-20-7	8260	1.00E+01	0.278	**33.7**	0.0145 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-3
SUMMARY OF GROUNDWATER SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

Constituent	CAS	Method	Residential TRRP Assessment Level mg/L	TW-01 mg/L	TW-02 mg/L	TW-03 mg/L
Semivolatile Organic Compounds						
1,2,4-Trichlorobenzene	120-82-1	8270	7.00E-02	--	<0.00005	<0.00005
1,2-Dichlorobenzene	95-50-1	8270	6.00E-01	--	<0.00009	<0.00009
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.00004	<0.00004
1,3-Dichlorobenzene	541-73-1	8270	7.33E-01	--	<0.00007	<0.00007
1,4-Dichlorobenzene	106-46-7	8270	7.50E-02	--	<0.00008	<0.00008
2,4,5-Trichlorophenol	95-95-4	8270	2.44E+00	--	<0.000095	<0.000095
2,4,6-Trichlorophenol	88-06-2	8270	2.44E-02	--	<0.0001	<0.0001
2,4-Dichlorophenol	120-83-2	8270	7.33E-02	--	<0.00006	<0.00006
2,4-Dimethylphenol	105-67-9	8270	4.04E-01	**1.68**	0.132	<0.00005
2,4-Dinitrophenol	51-28-5	8270	4.04E-02	--	<0.00012	<0.00012
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.0001	<0.0001
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00004	<0.00004
2-Chlorophenol	95-57-8	8270	1.22E-01	--	<0.00005	<0.00005
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.00022	<0.00022
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**2.19**	**0.534**	**0.252**
2-Methylphenol (o-Cresol)	95-48-7	8270	1.22E+00	--	<0.00006	<0.00006
2-Nitroaniline	88-74-4	8270	7.33E-03	--	<0.00007	<0.00007
2-Nitrophenol	88-75-5	8270	4.04E-02	--	<0.0001	<0.0001
3,3'-Dichlorobenzidine	91-94-1	8270	2.03E-03	--	<0.00035	<0.00035
3-Nitroaniline	99-09-2	8270	7.33E-03	--	<0.00014	<0.00014
4-Bromophenyl Phenyl Ether	101-55-3	8270	6.08E-05	--	**<0.00007**	**<0.00007**
4-Chloro-3-methylphenol	59-50-7	8270	1.22E-01	--	<0.0001	<0.0001
4-Chloroaniline	106-47-8	8270	4.56E-03	--	<0.000095	<0.000095
4-Chlorophenyl Phenyl Ether	7005-72-3	8270	6.08E-05	--	<0.00006	<0.00006
4-Methylphenol (p-Cresol)	106-44-5	8270	1.22E-01	--	<0.00008	<0.00008
4-Nitroaniline	100-01-6	8270	4.56E-02	--	<0.000095	<0.000095
4-Nitrophenol	100-02-7	8270	4.04E-02	<0.00014	<0.00014	<0.00014
Acenaphthene	83-32-9	8270	1.47E+00	1.28	0.436	0.149
Acenaphthylene	208-96-8	8270	1.47E+00	0.0191	0.00781	0.0034
Anthracene	120-12-7	8270	7.33E+00	0.525	0.136	0.0127
Benzo(a)anthracene	56-55-3	8270	1.25E-03	**0.116**	**0.0449**	0.000449
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.0441**	**0.0154**	<0.00005
Benzo(b)fluoranthene	205-99-2	8270	1.25E-03	--	**0.0198**	<0.00006
Benzo(ghi)perylene	191-24-2	8270	7.33E-01	--	0.00406	<0.00007
Benzo(k)fluoranthene	207-08-9	8270	1.25E-02	--	**0.0143**	<0.00007
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00007	0.000734
bis(2-Chloroethyl)ether	111-44-4	8270	8.30E-04	--	<0.00006	<0.00006
bis(2-chloroisopropyl)ether	108-60-1	8270	1.30E-02	--	<0.00005	<0.00005
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	<0.00009	<0.00009
Butyl Benzyl Phthalate	85-68-7	8270	4.80E-01	--	<0.00009	<0.00009
Carbazole	86-74-8	8270	4.56E-02	--	**0.24**	0.00087
Chrysene	218-01-9	8270	1.25E-01	0.111	0.0429	0.000454
Dibenzo(a,h)anthracene	53-70-3	8270	2.00E-04	--	**<0.00251**	<0.00004
Dibenzofuran	132-64-9	8270	9.78E-02	**0.99**	**<0.219**	0.0873
Diethyl Phthalate	84-66-2	8270	1.96E+01	--	<0.00004	<0.00004
Dimethyl Phthalate	131-11-3	8270	1.96E+01	--	<0.00006	<0.00006
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.0001	<0.0001
Di-n-octyl Phthalate	117-84-0	8270	4.04E-01	--	<0.00006	<0.00006
Fluoranthene	206-44-0	8270	9.78E-01	0.785	0.341	0.01
Fluorene	86-73-7	8270	9.78E-01	0.971	0.303	0.0826
Hexachlorobenzene	118-74-1	8270	1.00E-03	--	<0.00007	<0.00007
Hexachlorobutadiene	87-68-3	8270	1.17E-02	--	<0.00008	<0.00008

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-3
SUMMARY OF GROUNDWATER SAMPLING RESULTS - A-TZ TEMPORARY WELLS
UPRR Houston Wood Preserving Works

Constituent	CAS	Method	Residential TRRP Assessment Level mg/L	TW-01 mg/L	TW-02 mg/L	TW-03 mg/L
Semivolatile Organic Compounds						
Hexachlorocyclopentadiene	77-47-4	8270	5.00E-02	--	<0.0001	<0.0001
Hexachloroethane	67-72-1	8270	2.44E-02	--	<0.0001	<0.0001
Indeno(1,2,3-cd)pyrene	193-39-5	8270	1.25E-03	--	**0.00665**	<0.00008
Isophorone	78-59-1	8270	9.61E-01	--	<0.00004	<0.00004
Naphthalene	91-20-3	8270	4.04E-01	**19.9**	**2.16**	**4.1**
Nitrobenzene	98-95-3	8270	4.04E-02	<0.00006	<0.00006	<0.00006
n-Nitrosodi-n-propylamine	621-64-7	8270	1.30E-04	--	<0.000095	**0.000494**
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00005	<0.00005
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	<0.00019	<0.00019
Phenanthrene	85-01-8	8270	7.33E-01	**2.11**	**0.872**	0.0823
Phenol	108-95-2	8270	7.33E+00	0.0796	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.456	0.183	0.00501

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-10B												
				3/16/2004	3/1/2005	7/19/2005	1/5/2006	7/28/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/21/2010	7/13/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	0.00231 J	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00001	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.00013 J	0.00012 J	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.04421	0.0164	0.0739	0.0113	0.0802	0.0279	0.0961	0.0743	0.0975	0.096	0.067	0.052	0.069
Acenaphthylene	208-96-8	8270	1.47E+00	0.000833	0.00035 J	0.000953	0.000711	0.00107	0.00103	<0.00114	0.00122	0.00113	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.002478	0.000995	0.00413	0.000556	0.00491	0.00126	0.00437 J	0.00432	0.00484	0.0043 J	0.0029 J	0.0025 J	0.0038 J
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000007	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000982	<0.00035	<0.00035	<0.00036	0.00022	0.00016 J	<0.0019	<0.00019	0.0002 J	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	0.0171	0.00482	0.0286	0.0002 J	0.0323	0.00312	0.0325	0.0255	0.0392	0.035	0.023	0.018	0.025
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.0003 J	0.00022 J	0.000648	<0.00011	0.000196	<0.0001	<0.00362	<0.00019	<0.0002	<0.0007	<0.0005	<0.0005	<0.0005
Fluoranthene	206-44-0	8270	9.78E-01	0.001567	0.000941	0.00288	0.000649	0.00273	0.000745	0.0028 J	0.00371	0.00397	0.0039 J	0.0022 J	0.0017 J	0.0026 J
Fluorene	86-73-7	8270	9.78E-01	0.02079	0.00601	0.0377	<0.00007	0.0434	0.00344	0.0399	0.0374	0.0457	0.051	0.033	0.031	0.041
Naphthalene	91-20-3	8270	4.9E-01	0.001853	0.00171	0.0789	<0.00006	0.0904	0.000242	0.0252	0.0185	0.014	0.0028 J	0.0082	0.0037 J	0.056
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	0.00205	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000038	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	0.008858	0.000544	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	8270	7.33E+00	<9.53E-05	<0.00004	<0.00004	<0.00004	<0.00007	<0.00007	<0.00267	<0.00019	<0.0002	<0.0015	<0.0005	<0.0005	<0.0005
Pyrene	129-00-0	8270	7.33E-01	0.000718	0.00041 J	0.00125	0.00038 J	0.00128	0.000283	<0.00095	0.00146	0.00174	0.002 J	0.0013 J	<0.0005	0.001 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-11B												
				3/16/2004	3/1/2005	7/19/2005	1/5/2006	7/31/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/21/2010	7/13/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000011	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000122	<0.00031	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000027	<0.000027	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00008	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00031	<0.00083	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.001569	<0.00007	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000299	<0.00056	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.0486	0.0131	0.0577	0.0537	0.0707	0.0125	0.088	0.0649	0.12	0.072	0.12	0.048	0.11
Acenaphthylene	208-96-8	8270	1.47E+00	0.001163	0.00031 J	0.000799	0.000617	0.00119	0.000315	<0.00114	<0.00028	0.00126	<0.0007	0.0015 J	0.0013 J	<0.0005
Anthracene	120-12-7	8270	7.33E+00	0.000854	0.00025 J	0.0024	0.00269	0.00345	0.000523	0.00396 J	0.00236	0.00472	0.0022 J	0.0043 J	0.0011 J	0.0055
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00028	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000007	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000009	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00018	<0.00037	<0.00035	<0.00035	0.00026	<0.00009	<0.0019	0.00021 J	<0.00021	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.000094	<0.00013	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	0.01581	0.00027 J	0.0289	0.0261	0.0359	0.00295	0.0411	0.0273	0.0649	0.031	0.054	0.012	0.048
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00035 J	0.0003 J	0.00036 J	0.00013 J	0.00042	<0.0001	<0.00362	<0.00019	<0.00021	<0.0007	<0.0005	<0.0005	<0.0005
Fluoranthene	206-44-0	8270	9.78E-01	0.001971	0.000589	0.00159	0.00189	0.00245	0.000549	0.0029 J	0.00175	0.00383	0.0018 J	0.0036 J	0.0014 J	0.0046 J
Fluorene	86-73-7	8270	9.78E-01	0.0112	0.0001 J	0.0261	0.0259	0.0336	0.00231	0.0353	0.0297	0.0578	0.032	0.053	0.013	0.056
Naphthalene	91-20-3	8270	4.9E-01	0.01168	<0.00006	0.186	0.0025	0.1	0.00013 J	0.0901	0.0354	0.0772	<0.0008	0.048	<0.0006	0.0068
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00015	<0.00011	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.000094	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00004	<0.00004	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	0.0002 J	<0.00009	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	8270	7.33E+00	<0.0001	<0.00004	<0.00004	<0.00004	<0.00007	<0.00007	<0.00267	<0.00019	<0.00021	<0.0015	<0.0005	<0.0005	<0.0005
Pyrene	129-00-0	8270	7.33E-01	0.000991	0.00025 J	0.000745	0.000873	0.00122	0.000319	0.00146 J	0.000848	0.00163	<0.0009	0.002 J	<0.0005	0.0022 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-12B		MW-14						MW-22B				
				3/12/2007	1/31/2008	3/9/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010	1/29/2008	7/14/2008	2/3/2009	1/15/2010	6/29/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	0.00344 J	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00025	0.00313 J	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.00832	0.0125	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00025	0.00262 J	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	0.00515	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.00041	<0.00138	<0.0005	<0.0005	0.00053 J
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0199	0.0264	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00127	0.00339 J	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.0008	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.001	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.0029	<0.00018	<0.00029	<0.00029	<0.00008	<0.00008	<0.00008	<0.0003	<0.0003	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	**<0.0019**	<0.00007	<0.00019	<0.00019	<0.00009	<0.00009	<0.00009	<0.0002	<0.0002	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	**<0.0019**	<0.00006	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.0038	<0.00004	<0.00038	<0.00038	<0.00012	<0.0001	<0.0001	<0.0004	<0.0004	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.0019	<0.0001	<0.00019	<0.00048	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.572**	**0.508**	0.00139	0.00047 J	0.000782	0.00075	0.00064	0.00049	<0.0004	<0.0004	<0.00007	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.0024	<0.000952	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007	<0.00025	<0.00025	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.379	0.336	0.00234	0.00223	0.000515	0.00047	0.00043	0.00041	0.0121	0.182	0.022	0.00016 J	0.0093
Acenaphthylene	208-96-8	8270	1.47E+00	0.0197	0.0127	<0.00005	<0.00029	<0.00029	<0.00006	<0.00007	<0.00007	<0.0003	0.00192	0.00034	<0.00007	0.00012 J
Anthracene	120-12-7	8270	7.33E+00	0.0825	0.0267	0.000394	0.000678	<0.00019	<0.00007	<0.00007	<0.00007	0.000948	0.00575	0.00071	<0.00007	0.00031
Benzo(a)anthracene	56-55-3	8270	1.25E-03	**0.0252**	**0.00746**	<0.00005	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.00768**	**<0.0019**	<0.00011	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	**<0.0038**	<0.00008	<0.00038	<0.00038	<0.00009	<0.00009	<0.00009	<0.0004	<0.0004	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	<0.0019	<0.000095	0.0004 J	<0.00019	0.00081	0.0054	0.00077	0.00172 J	<0.0002	0.00053	0.00022	0.00061
Chrysene	218-01-9	8270	1.25E-01	0.0199	0.00596	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	**0.29**	**0.204**	0.00176	0.000491	0.000502	0.00045	0.0004	0.00037	0.00363	0.0674	0.0051	0.00026	0.0019
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.0019	0.00043	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	0.00066 J	<0.0002	0.00018 J	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.185	0.0508	0.000949	0.000506	<0.00019	<0.00007	<0.00007	<0.00007	0.00029 J	0.00661	0.0011	0.00011 J	0.00061
Fluorene	86-73-7	8270	9.78E-01	0.306	0.196	0.000363	<0.00019	<0.00019	<0.00007	0.00013 J	<0.00007	0.00199	0.0395	0.0018	<0.00007	0.0018
Naphthalene	91-20-3	8270	4.9E-01	**6.33**	**5.55**	0.00561	0.00222	0.00349	0.0032	0.003	0.0022	0.000691	0.00435	0.00017 J	0.00012 J	0.00036
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.0038	<0.00007	<0.00038	<0.00038	<0.00009	<0.00009	<0.00009	<0.0004	<0.0004	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.0024	<0.00005	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009	<0.00025	<0.00025	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	**<0.0019**	<0.000952	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008	<0.0002	<0.0002	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.508	0.322	0.00423	0.000599	0.00061	0.00035	0.00041	0.00044	<0.0002	0.000764	<0.00007	0.00015 J	<0.00007
Phenol	108-95-2	8270	7.33E+00	0.00109	<0.0019	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0002	<0.0002	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.0887	0.033	0.000591	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0002	0.00239	0.00047	<0.00007	0.00027

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-24B						MW-29B		MW-33B					
				3/8/2007	1/28/2008	7/14/2008	2/3/2009	1/14/2010	6/29/2010	3/8/2007	1/28/2008	3/11/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/29/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00245	<0.00052	<0.00109	<0.005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	**1.33**	**1.92**	**2.73**	**2.4**	**1.2**	**2**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00239	<0.00047	<0.0015	<0.005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	0.397	0.491	0.626	0.47	0.41	0.62
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00195	<0.00054	<0.00122	**0.0096 J**	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	0.102	0.1	0.136	0.084	0.019 J	0.016 J
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.00581	<0.00127	1.07	1.24	1.63	1.4	1.2	1.5
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	0.00008 J	<0.00004	**<0.01**	**<0.008**	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00018	<0.00029	<0.0003	<0.00008	<0.00008	<0.00008	<0.00018	<0.0003	<0.00005	<0.043	<0.028	<0.00008	0.0035	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.00019	<0.0002	<0.00009	<0.00009	<0.00009	<0.00007	<0.0002	<0.00009	**<0.029**	**<0.019**	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	<0.00006	**0.00374**	<0.0001	**<0.029**	**<0.019**	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00038	<0.0004	<0.00012	<0.0001	<0.0001	<0.00004	<0.0004	<0.00004	<0.057	<0.038	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.0001	<0.0002	<0.00022	**<0.029**	**<0.019**	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00006	<0.00038	<0.0004	<0.00007	<0.00007	0.000099 J	<0.00006	<0.0004	**1.11**	**0.443**	**0.808**	**1.9**	**0.71**	**0.51**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000952	<0.00024	<0.00025	<0.00007	<0.00007	<0.00007	<0.00095	<0.00025	<0.00014	<0.036	<0.024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.00005	<0.00029	<0.0003	<0.00009	<0.00009	<0.00009	<0.00005	<0.0003	0.196	0.137	0.152	0.41	0.17	0.096
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00005	<0.00029	<0.0003	<0.00006	<0.00007	<0.00007	<0.00005	<0.0003	0.00276	<0.043	<0.028	0.0037	0.0016	0.0011
Anthracene	120-12-7	8270	7.33E+00	<0.00004	0.00066	<0.0002	<0.00007	<0.00007	<0.00007	<0.00004	<0.0002	0.00658	<0.029	<0.019	0.14	0.015	0.011
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.00019	<0.0002	0.00015 J	<0.00007	<0.00007	<0.00005	<0.0002	0.00025	**<0.029**	**<0.019**	**0.022**	0.00019 J	0.000073 J
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00011	<0.0002	<0.00005	**<0.029**	**<0.019**	**0.0045**	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009	<0.00008	<0.0004	<0.00007	**<0.057**	**<0.038**	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000095	<0.00019	<0.0002	0.00046	0.0021	0.00074	<9.5E-05	0.00037 J	<0.00009	**<0.029**	**<0.019**	0.00031	**0.008**	0.00054
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00019	<0.0002	0.00015 J	<0.00007	<0.00007	<0.00007	<0.0002	<0.00007	<0.029	<0.019	0.02	0.00018 J	0.00092 J
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00005	0.000568	<0.0003	<0.00008	<0.00008	<0.00008	<0.00005	<0.0003	**0.175**	**0.118**	**0.17**	**0.46**	**0.18**	**0.13**
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00012 J	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	0.0001 J	<0.0002	<0.0001	<0.029	<0.019	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	<0.00007	<0.00019	<0.0002	0.00011 J	<0.00007	<0.00007	<0.00007	<0.0002	0.00397	<0.029	<0.019	0.2	0.0033	0.0018
Fluorene	86-73-7	8270	9.78E-01	<0.00004	0.00026 J	<0.0002	<0.00007	<0.00007	<0.00007	<0.00004	<0.0002	0.0631	0.046	0.0683	0.26	0.068	0.048
Naphthalene	91-20-3	8270	4.9E-01	<0.00004	0.00105	<0.0004	<0.0001	<0.0001	0.00083	0.000197	<0.0004	**15**	**12.5**	**16**	**20**	**10**	**2.2**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009	<0.00007	<0.0004	<0.00006	**<0.057**	<0.038	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00024	<0.00025	<0.00009	<0.00009	<0.00009	<0.00005	<0.00025	<0.00005	<0.036	<0.024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000952	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00095	<0.0002	<0.00019	**<0.029**	**<0.019**	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	<0.00004	0.000676	<0.0002	<0.00007	<0.00007	<0.00007	<0.00004	<0.0002	0.059	0.0903	0.0688	0.72	0.066	0.041
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	0.000622	0.00287	<0.00007	<0.029	<0.019	0.003	<0.00007	0.0032
Pyrene	129-00-0	8270	7.33E-01	<0.00005	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	<0.00005	<0.0002	0.00159	0.045	<0.019	0.13	0.0016	0.00092

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-35B						MW-36B	MW-38B						
				3/9/2007	1/29/2008	7/14/2008	2/3/2009	1/14/2010	7/1/2010	7/15/2010	3/18/2004	3/8/2007	1/29/2008	7/14/2008	2/3/2009	1/14/2010	6/29/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00109	<0.005	<0.0005	<0.0005	<0.0005	<0.00136	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.0222**	**0.0648**	**0.0281**	**0.062**	**0.064**	**0.068**	<0.0005	<0.00143	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.0015	<0.005	<0.0005	<0.0005	<0.0005	<0.00155	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.183	0.176	0.113	0.2	0.2	0.21	<0.0005	<0.00137	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00122	<0.005	<0.0005	<0.0005	<0.0005	<0.0013	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	0.00494 J	0.00249 J	0.0057 J	<0.0005	<0.0005	<0.0005	<0.00136	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	0.145	0.135	0.0787	0.15	0.15 J	0.17	<0.001	<0.00441	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	**0.0012**	<0.0001	<0.00005	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00019	<0.00029	<0.0003	<0.00008	<0.00008	<0.00008	<0.00008	<0.00012	<0.00018	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.00019	<0.0002	<0.00009	<0.00009	<0.00009	<0.00009	<9E-06	<0.00007	<0.0002	<0.00019	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<2.6E-05	<0.00006	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00038	<0.0004	<0.00012	<0.0001	<0.0001	<0.0001	<7.6E-05	<0.00004	<0.0004	<0.00038	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00011	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00008	<0.0003	<0.0001	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**1.34**	**0.464**	0.0561	**0.4**	**0.47**	**0.36**	<0.00007	<6.7E-05	<0.00006	<0.0004	<0.00038	0.00037	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.001	<0.00024	<0.00025	<0.00007	<0.00007	<0.00007	<0.00007	<0.00029	<0.00095	<0.00025	<0.00024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.446	0.217	0.116	0.17	0.22	0.2	<0.00009	<7.4E-05	<0.00005	<0.0003	<0.00029	0.0001 J	<0.00009	0.00047
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00005	<0.00029	<0.0003	0.00088	0.0013	0.001	<0.00007	<7.6E-05	<0.00005	<0.0003	<0.00029	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.0218	0.0129	0.00842	0.0056	0.008	0.015	<0.00007	<0.00012	<0.00004	<0.0002	0.00026 J	0.00013 J	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	0.000236	0.00044 J	0.0003 J	0.00017 J	0.00032	0.00022	<0.00007	<0.00027	<0.00005	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00012	<0.00019	<0.0002	<0.00008	0.00014 J	0.00012 J	<0.00008	<7E-06	<0.00011	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009	<0.00009	<9E-06	<0.00008	<0.0004	<0.00038	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.0001	**0.0198**	<0.0002	0.00052	0.00029	0.00097	**0.01**	<0.00017	<9.5E-05	0.00103 J	<0.00019	0.00041	0.00039	0.00074
Chrysene	218-01-9	8270	1.25E-01	0.000267	0.00033 J	0.00022 J	0.00015 J	0.00028	0.00017 J	<0.00007	<0.00009	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	**0.391**	**0.198**	**0.104**	**0.16**	**0.23**	**0.22**	<0.00008	<7.6E-05	<0.00005	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000487	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.00014	0.00011 J	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.0112	0.00698	0.00624	0.0031	0.0053	0.006	<0.00007	<9.3E-05	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	0.00017 J
Fluorene	86-73-7	8270	9.78E-01	0.202	0.0912	0.0685	0.063	0.092	0.11	<0.00007	<6.8E-05	<0.00004	<0.0002	<0.00019	<0.00007	<0.00007	0.00015 J
Naphthalene	91-20-3	8270	4.9E-01	**17**	**9.3**	0.365	**12**	**14**	**11**	<0.0001	<6.7E-05	0.00011 J	<0.0004	<0.00038	0.0045	0.00014 J	<0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009	<0.00009	<0.00014	<0.00007	<0.0004	<0.00038	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00024	<0.00025	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00005	<0.00025	<0.00024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.001	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00008	<3.8E-05	<0.00095	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.235	0.1	0.0782	0.061	0.086	0.12	<0.00007	<7.7E-05	<0.00004	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00019	0.00059	<0.00007	<0.00007	<0.00007	<0.00007	<9.5E-05	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.00637	0.00411	0.0026	0.0017	0.0027	0.0025	<0.00007	<8.4E-05	<0.00005	<0.0002	<0.00019	<0.00007	<0.00007	0.00027

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-39B							MW-40B						
				3/17/2004	3/10/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010	3/17/2004	3/10/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	**<0.0136**	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	**0.0403 J**	**0.0271**	**0.0348**	**0.0269**	**0.026**	**0.028**	**0.026**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.0155	<0.00239	<0.00047	<0.00047	0.001 J	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	0.0955	0.0995	0.162	0.116	0.10	0.12	0.12
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	**0.0179 J**	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	0.0545	0.0495	0.0791	0.059	0.05	0.054	0.05
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	0.195	0.19	0.35	0.244	0.2	0.22	0.22
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	0.00008 J	<0.00006	**<0.02**	<0.0004	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.00018	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008	<0.00012	0.0201	<0.071	0.0445	0.011	0.014	0.0044
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00007	<0.0002	<0.00019	<0.00009	<0.00009	<0.00009	0.000249	<0.00007	**<0.048**	<0.001	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.00006	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<2.6E-05	<0.00006	**<0.048**	<0.001	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00004	<0.0004	<0.00039	<0.00012	<0.0001	<0.0001	<7.8E-05	<0.00004	<0.095	<0.002	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.0001	<0.0002	<0.00049	<0.00008	<0.00008	<0.00008	<0.0003	<0.00011	**<0.048**	**<0.0025**	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.000283 J	0.00015 J	<0.0004	<0.00039	<0.00007	<0.00007	<0.00007	<6.9E-05	**0.521**	**0.522**	**4.41**	**0.58**	**0.49**	**0.41**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00095	<0.00025	<0.00024	<0.00007	<0.00007	<0.00007	<0.00029	<0.000962	**<0.06**	<0.0012	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.000226 J	0.000296	0.000664	<0.00029	0.00022	0.00014 J	0.0034	<7.7E-05	0.368	0.365	**3.17**	0.35	0.33	0.27
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	<0.00005	<0.0003	<0.00029	<0.00006	<0.00006	<0.00006	<7.8E-05	<0.00005	<0.071	<0.0015	0.0027	0.0025	0.0031
Anthracene	120-12-7	8270	7.33E+00	0.000716	0.00043	0.00106	0.000619	0.00028	<0.00007	<0.00007	<0.00013	0.0176	<0.048	0.0141	0.016	0.0095	0.017
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00005	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<0.00028	0.000211	**<0.048**	<0.001	0.00028	0.0001 J	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.00011	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	<7E-06	<0.00012	**<0.048**	**<0.001**	0.0002 J	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.00008	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<9E-06	<0.00008	**<0.095**	**<0.002**	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000886	0.000205	0.00119 J	<0.00019	0.00046	0.0007	<0.0002	0.001636	<0.000096	**<0.048**	<0.001	0.00047	0.0035	<0.0002
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<9.2E-05	0.00016 J	<0.048	<0.001	0.00023	0.00011 J	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.000076	0.000218	<0.0003	<0.00029	<0.00008	<0.00008	<0.00008	<7.8E-05	**0.255**	**0.239**	**2.13**	**0.25**	**0.17**	**0.22**
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000271 J	0.00015 J	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	0.001464	<0.00006	<0.048	<0.001	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.001388	0.000486	0.00213	0.000575	0.0014	<0.00007	0.0019	<9.6E-05	0.0115	<0.048	0.0067	0.0082	0.0067	0.0064
Fluorene	86-73-7	8270	9.78E-01	<0.000068	0.000215	<0.0002	<0.00019	0.00025	0.00021	0.00048	<0.00007	0.213	0.175	0.247	0.2	0.15	0.17
Naphthalene	91-20-3	8270	4.9E-01	0.003016	0.000714	<0.0004	<0.00039	0.00052	0.00018 J	0.00015 J	0.00047 J	**9.66**	**9.34**	**94.2**	**9.7**	**8.0**	**6.8**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00007	<0.0004	<0.00039	<0.00009	<0.00009	<0.00009	<0.00015	<0.00007	**<0.095**	<0.002	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.00025	<0.00024	<0.00009	<0.00009	<0.00009	<9.2E-05	<0.00005	<0.06	<0.0012	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.00095	<0.0002	<0.00019	<0.00008	<0.00008	<0.00008	0.000354	<0.000962	**<0.048**	<0.001	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.0002 J	0.000471	0.00045 J	<0.00019	<0.00007	0.00025	<0.00007	<7.9E-05	0.2	0.173	0.177	0.16	0.12	0.15
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00007	<0.0002	<0.00019	<0.00007	<0.00007	<0.00007	<9.8E-05	<0.00007	<0.048	<0.001	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.001207	0.000292	0.00156	0.000956	0.0013	0.00018 J	0.002	<8.6E-05	0.00629	<0.048	0.0029	0.0043	0.0033	0.0035

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-41B			MW-42B			MW-49B			MW-59B	MW-62B			MW-63B		
				3/18/2004	3/16/2007	1/31/2008	3/10/2007	1/30/2008	1/19/2010	2/4/2009	1/20/2010	6/24/2010	7/15/2010	2/4/2009	1/21/2010	7/14/2010	3/10/2009	1/13/2010	6/30/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00245	<0.00052	<0.00245	<0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.0183**	**0.0146**	**0.0103**	<0.00257	0.00117 J	<0.0005	**0.0095**	**0.013**	**0.1**	<0.0005	<0.0005	<0.0005	<0.0005	**0.17**	**0.21**	**0.015**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00239	<0.00047	<0.00239	<0.00047	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.0877	0.0703	0.0508	<0.00203	0.00112 J	<0.0005	0.0081	0.024	0.019	<0.0005	0.00071 J	<0.0005	<0.0005	0.20	0.20	0.072
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.00195	<0.00054	<0.00195	<0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	0.106	0.0753	0.0525	<0.00274	0.00181 J	<0.0005	0.016	0.045	0.071	<0.0005	<0.0005	<0.0005	<0.0005	0.02	0.02	0.0016 J
Xylenes (total)	1330-20-7	8260	1.00E+01	0.237	0.205	0.127	<0.00581	0.00377 J	<0.001	0.024	0.07	0.047	<0.001	<0.001	<0.001	<0.001	0.33	0.08	0.02
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00004	<0.0008	<0.00006	<0.00008	<0.0001	<0.0001	<0.0001	<0.00045	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.1078	0.115	0.104	<0.00018	<0.00029	<0.00008	0.031	0.013	**1.2**	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00009	**<0.0019**	<0.00007	<0.00019	<0.00009	<0.00009	<0.00009	<0.00035	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.0001	**<0.0019**	<0.00006	<0.00019	<0.00007	<0.00007	<0.00007	<0.0005	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00004	<0.0038	<0.00004	<0.00039	<0.0001	<0.00012	<0.0001	<0.00035	<0.0001	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00022	<0.0019	<0.0001	<0.00019	<0.00008	<0.00008	<0.00008	<0.0004	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.7507**	**0.802**	**0.305**	<0.00006	<0.00039	<0.00007	**0.14**	<0.00007	<0.0016	<0.00007	0.00012 J	0.0016	0.00064	<0.00007	**0.11**	0.031
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00014	<0.0024	<0.00095	<0.00024	<0.00007	<0.00007	<0.00007	<0.00035	<0.00007	<0.00007	<0.00007	<0.00007	<0.00396	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.3707	0.61	0.161	<0.00005	<0.00029	0.00021	0.094	0.017	0.014	<0.00009	0.0078	0.039	0.00041	<0.00009	0.028	0.013
Acenaphthylene	208-96-8	8270	1.47E+00	0.007161	0.00851	<0.0029	<0.00005	<0.00029	<0.00007	0.0016	0.0007	0.00063 J	<0.00007	<0.00006	0.00066	<0.00007	<0.00009	0.00051	0.00018 J
Anthracene	120-12-7	8270	7.33E+00	0.02277	0.112	0.0191	<0.00004	<0.00019	<0.00007	0.019	0.00015 J	<0.00045	<0.00007	0.00024	0.0011	<0.00007	<0.00007	0.00068	0.00039
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	**0.0282**	**0.0036**	<0.00005	<0.00019	<0.00007	0.00035	<0.00007	<0.00035	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	**0.00542**	**<0.0019**	<0.00011	<0.00019	<0.00008	<0.00008	<0.00008	**<0.00035**	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.00007	**<0.0038**	<0.00008	<0.00039	<0.00009	<0.00009	<0.00009	<0.00035	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	<0.00009	<0.0019	0.000232	0.00135 J	0.00028	0.00029	0.00053	<0.0004	0.002	0.00041	0.00098	0.0016	**0.01**	0.00036	0.00036
Chrysene	218-01-9	8270	1.25E-01	<0.00009	0.0223	0.003	<0.00007	<0.00019	<0.00007	0.00038	<0.00007	<0.00045	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	**0.2578**	**0.512**	**0.142**	<0.00005	0.000699	0.00037	0.071	0.0024	0.0026	<0.00008	0.0024	0.013	0.00034	<0.00008	0.022	0.008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000406 J	<0.0001	<0.0019	0.00013 J	<0.00019	<0.00007	0.0013	0.000083 J	<0.001	<0.00007	0.00065	<0.00007	<0.00007	<0.00007	0.00019 J	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.01669	0.246	0.027	0.00007 J	0.000697	0.00059	0.014	0.00023	<0.00035	<0.00007	0.00012 J	0.0011	<0.00007	<0.00007	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	0.2383	0.496	0.148	<0.00004	<0.00019	0.00016 J	0.071	0.0036	0.0016	<0.00007	0.0012	0.015	0.00016 J	<0.00007	0.0078	0.0041
Naphthalene	91-20-3	8270	4.9E-01	**17.65**	**8.58**	**4.57**	0.000817	0.000725	0.00035	**1.4**	0.00044	0.23	0.00014 J	0.0027	0.00028	0.0096	<0.0001	**3.1**	**0.67**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00006	<0.0038	<0.00007	<0.00039	<0.00009	<0.00009	<0.00009	<0.00035	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.0024	<0.00005	<0.00024	<0.00009	<0.00009	<0.00009	<0.0004	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.00019	**<0.0019**	<0.00095	<0.00019	<0.00008	<0.00008	<0.00008	<0.00035	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.2269	**0.805**	0.161	<0.00004	<0.00019	<0.00007	0.11	0.00017 J	<0.00035	<0.00007	0.00087	0.0025	0.00025	<0.00007	0.0034	0.00076
Phenol	108-95-2	8270	7.33E+00	<0.0000953	0.00164	0.00576	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.0053	0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.007686	0.113	0.017	0.000727	0.000624	0.00035	0.0074	0.0002	<0.00045	<0.00007	<0.00007	0.00047	<0.00007	<0.00007	<0.00007	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-67B	P-10												
				7/15/2010	3/16/2004	3/3/2005	7/19/2005	1/5/2006	7/31/2006	1/23/2007	7/17/2007	1/28/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.0005	<0.00136	<0.00136	--	--	--	--	--	--	<0.00052	--	--	--	--
Benzene	71-43-2	8260	5.00E-03	<0.0005	<0.00143	<0.00143	--	--	--	--	--	--	<0.00025	--	--	--	--
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0005	<0.00155	<0.00155	--	--	--	--	--	--	<0.00047	--	--	--	--
Ethylbenzene	100-41-4	8260	7.00E-01	0.0015 J	<0.00137	<0.00137	--	--	--	--	--	--	<0.00025	--	--	--	--
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0005	<0.0013	<0.0013	--	--	--	--	--	--	<0.00054	--	--	--	--
Toluene	108-88-3	8260	1.00E+00	<0.0005	<0.00136	<0.00136	--	--	--	--	--	--	<0.00041	--	--	--	--
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0012 J	<0.00441	<0.00441	--	--	--	--	--	--	<0.00127	--	--	--	--
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.0001	<0.00005	<0.000032	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00008	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.000009	<0.00004	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00007	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.0001	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00008	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00007	<0.000067	<0.00007	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00007	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	8270	1.47E+00	0.00011 J	<0.000074	0.00453	0.0737	0.102	0.0346	0.0165	0.0688	0.00373	0.0106	<0.0008	0.0044 J	<0.0009	<0.0009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00007	<0.000076	0.00008 J	0.000476	<0.00006	0.00016 J	<0.00008	<0.00114	<0.00028	0.00053	<0.0007	<0.0005	<0.0005	<0.0005
Anthracene	120-12-7	8270	7.33E+00	<0.00007	<0.000124	0.00015 J	0.00346	0.0057	0.000981	0.000437	0.00319 J	0.000703	0.000747	<0.0007	<0.0006	<0.0006	<0.0006
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00007	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00008	<0.000007	<0.000024	--	--	--	--	--	--	--	--	--	--	--
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00009	<0.000009	<0.000013	--	--	--	--	--	--	--	--	--	--	--
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.0016	<0.000172	0.000836	<0.00035	<0.00036	0.00016 J	<0.00009	<0.0019	0.00023 J	0.00022 J	<0.0012	<0.0033	<0.0033	<0.0033
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00008	<0.000076	0.000892	0.0314	0.0325	0.00945	0.0044	0.0272	0.000713	0.00176	<0.0007	<0.0007	<0.0007	<0.0007
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	<0.00007	0.000379 J	0.00028 J	0.000481	<0.00011	0.00032	<0.0001	<0.00362	<0.00019	0.00092 J	<0.0007	<0.0005	<0.0005	<0.0005
Fluoranthene	206-44-0	8270	9.78E-01	<0.00007	<0.000093	0.00015 J	0.0024	0.00273	0.000924	<0.00004	0.0021 J	0.000506	0.00022 J	<0.0006	<0.0005	<0.0005	<0.0005
Fluorene	86-73-7	8270	9.78E-01	<0.00007	<0.000068	0.000723	0.0364	0.048	0.0115	0.00541	0.0291	0.000668	0.00245	<0.0008	<0.0006	<0.0006	<0.0006
Naphthalene	91-20-3	8270	4.9E-01	<0.0001	<0.000067	0.0142	0.464	0.433	0.062	0.0204	0.297	<0.00038	0.00079	<0.0008	<0.0006	<0.0006	<0.0006
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00009	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00008	<0.000038	<0.000066	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	8270	7.33E-01	<0.00007	<0.000077	<0.00009	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	8270	7.33E+00	<0.00007	<9.53E-05	<0.00004	<0.00004	<0.00004	<0.00007	<0.00007	<0.00267	<0.00019	<0.00021	<0.0015	<0.0005	<0.0005	<0.0005
Pyrene	129-00-0	8270	7.33E-01	<0.00007	<0.000084	<0.00009	0.00102	0.00108	0.00046	0.000215	0.001 J	0.00039 J	<0.00021	<0.0009	<0.0005	<0.0005	<0.0005

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	P-11						
				3/17/2004	3/3/2005	1/30/2008	7/15/2008	2/4/2009	1/21/2010	6/22/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds										
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds										
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000034	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.00031	<0.00031	<0.00028	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.000042	<0.00021	<0.00019	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000027	<0.00021	<0.00019	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	<0.00042	<0.00038	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00082	<0.00021	<0.00047	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.001097	0.00254	0.000783	<0.00038	<0.00007	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00055	<0.00026	<0.00024	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.1301	0.133	0.0776	<0.00028	0.0057	<0.00009	0.0037
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	<0.00006	<0.00031	<0.00028	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.005611	0.00697	0.00356	<0.00019	0.00015 J	<0.00007	0.00012 J
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00012	<0.00021	<0.00019	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000025	**<0.00021**	<0.00019	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000014	<0.00042	<0.00038	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000904	<0.00037	0.00116 J	<0.00019	0.00022	0.00051	0.00021
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00013	<0.00021	<0.00019	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.003985	0.013	<0.00031	<0.00028	0.00024	<0.00008	0.000093 J
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000923	<0.00011	<0.00021	<0.00019	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.008623	0.00706	0.0061	<0.00019	<0.00007	<0.00007	0.00042
Fluorene	86-73-7	8270	9.78E-01	0.05025	0.0536	0.0219	<0.00019	0.0018	<0.00007	0.0016
Naphthalene	91-20-3	8270	4.9E-01	0.007031	0.198	0.0324	<0.00038	0.0027	<0.0001	0.0027
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00011	<0.00042	<0.00038	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.00026	<0.00024	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.000038	<0.000068	<0.00021	<0.00019	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.01956	0.0392	0.0196	<0.00019	0.00048	<0.00007	0.00053
Phenol	108-95-2	8270	7.33E+00	<0.0000953	<0.00004	<0.00021	<0.00019	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.00445	0.00402	0.00369	<0.00019	<0.00007	<0.00007	0.00015 J

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	P-12													TW-41B
				3/17/2004	3/3/2005	7/18/2005	1/6/2006	7/28/2006	1/22/2007	7/17/2007	1/29/2008	7/16/2008	1/22/2009	7/22/2009	1/22/2010	7/14/2010	1/19/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00136	--	--	--	--	--	--	<0.00109	--	--	--	--	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00143	--	--	--	--	--	--	<0.00112	--	--	--	--	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00155	--	--	--	--	--	--	<0.0015	--	--	--	--	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00137	--	--	--	--	--	--	<0.00142	--	--	--	--	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0013	<0.0013	--	--	--	--	--	--	<0.00122	--	--	--	--	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00136	--	--	--	--	--	--	<0.00138	--	--	--	--	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00441	--	--	--	--	--	--	<0.00302	--	--	--	--	<0.001
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.000032	--	--	--	--	--	--	--	--	--	--	--	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.000116	<0.0003	--	--	--	--	--	--	--	--	--	--	--	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00004	--	--	--	--	--	--	--	--	--	--	--	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.000026	--	--	--	--	--	--	--	--	--	--	--	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00008	--	--	--	--	--	--	--	--	--	--	--	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00079	--	--	--	--	--	--	--	--	--	--	--	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.000067	<0.00007	--	--	--	--	--	--	--	--	<0.0009	<0.0009	--	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00053	--	--	--	--	--	--	--	--	--	--	--	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.000074	<0.00007	<0.00007	<0.00007	<0.00004	<0.00004	<0.00114	<0.00029	<0.0003	<0.0008	<0.0009	<0.0009	<0.0009	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.000076	<0.00006	<0.00006	<0.00006	<0.00008	<0.00008	<0.00114	<0.00029	<0.0003	<0.0007	<0.0005	<0.0005	<0.0005	<0.00007
Anthracene	120-12-7	8270	7.33E+00	<0.000124	<0.00007	<0.00007	<0.00007	<0.00004	<0.00004	<0.00095	0.000645	0.000552	<0.0007	<0.0006	<0.0006	<0.0006	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	<0.00011	--	--	--	--	--	--	--	--	--	--	--	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.000024	--	--	--	--	--	--	--	--	--	--	--	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.000013	--	--	--	--	--	--	--	--	--	--	--	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.001748	<0.00035	0.00043 J	<0.00035	0.00011 J	<0.00009	<0.0019	<0.00019	0.00034 J	<0.0012	<0.0033	<0.0033	<0.0033	0.0011
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00012	--	--	--	--	--	--	--	--	--	--	--	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.000076	<0.00008	<0.00008	<0.00008	<0.00006	<0.00006	<0.0041	<0.00029	<0.0003	<0.0007	<0.0007	<0.0007	<0.0007	<0.00008
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.000922	0.00013 J	0.000533	<0.00011	0.00017 J	<0.0001	<0.00362	<0.00019	0.00085 J	<0.0007	<0.0005	<0.0005	<0.0005	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	<0.000093	<0.00008	<0.00008	<0.00008	<0.00004	<0.00004	<0.00095	<0.00019	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<0.00007
Fluorene	86-73-7	8270	9.78E-01	<0.000068	<0.00007	<0.00007	<0.00007	<0.00004	<0.00004	<0.00095	<0.00019	<0.0002	<0.0008	<0.0006	<0.0006	<0.0006	0.00015 J
Naphthalene	91-20-3	8270	4.9E-01	<0.000067	<0.00006	<0.00006	<0.00006	<0.00007	<0.00007	<0.00124	<0.00038	0.000626	<0.0008	<0.0006	<0.0006	<0.0006	0.00014 J
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.0001	--	--	--	--	--	--	--	--	--	--	--	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	--	--	--	--	--	--	--	--	--	--	--	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	0.000337	<0.000066	--	--	--	--	--	--	--	--	--	--	--	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	<0.000077	<0.00009	--	--	--	--	--	--	--	--	<0.0005	<0.0005	--	<0.00007
Phenol	108-95-2	8270	7.33E+00	<9.53E-05	<0.00004	<0.00004	<0.00004	<0.00007	<0.00007	<0.00267	<0.00019	<0.0002	<0.0015	<0.0005	<0.0005	<0.0005	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.007348	0.00592	0.00767	0.00615	0.00545	0.00312	0.0075 J	0.00932	0.00211	0.0026 J	<0.0005	<0.0005	<0.0005	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS - B-TZ and B-CZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	CPT49RBTZ	CPT50RBTZ	CPT51RBTZ
				8/12/2008	8/12/2008	8/12/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds						
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00052	<0.00052	<0.00052
Benzene	71-43-2	8260	5.00E-03	0.00431 J	<0.00025	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00047	<0.00047	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00025	<0.00025	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00054	<0.00054	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00041	<0.00041	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00127	<0.00127	<0.00127
Semivolatile Organic Compounds						
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00008	<0.00008	<0.00008
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.0003	<0.00029	<0.00029
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.0002	<0.00019	<0.00019
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0002	<0.00019	<0.00019
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.0004	<0.00038	<0.00038
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0002	<0.00019	<0.00019
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.0004	<0.00038	<0.00038
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00025	<0.00024	<0.00024
Acenaphthene	83-32-9	8270	1.47E+00	0.0997	<0.00029	0.00689
Acenaphthylene	208-96-8	8270	1.47E+00	<0.0003	<0.00029	0.000766
Anthracene	120-12-7	8270	7.33E+00	0.00197	<0.00019	<0.00019
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.0002	<0.00019	<0.00019
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.0002	<0.00019	<0.00019
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.0004	<0.00038	<0.00038
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.000927	0.00223	0.000506
Chrysene	218-01-9	8270	1.25E-01	<0.0002	<0.00019	<0.00019
Dibenzofuran	132-64-9	8270	9.78E-02	0.023	<0.00029	<0.00029
Di-n-butyl Phthalate	84-74-2	8270	2.44E+00	0.00491	0.00042 J	0.00035 J
Fluoranthene	206-44-0	8270	9.78E-01	0.00352	<0.00019	0.00078
Fluorene	86-73-7	8270	9.78E-01	0.00761	<0.00019	0.001
Naphthalene	91-20-3	8270	4.9E-01	0.00829	<0.00038	0.0047
Nitrobenzene	98-95-3	8270	4.9E-02	<0.0004	<0.00038	<0.00038
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00025	<0.00024	<0.00024
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.0002	<0.00019	<0.00019
Phenanthrene	85-01-8	8270	7.33E-01	0.00369	<0.00019	<0.00019
Phenol	108-95-2	8270	7.33E+00	0.00126	0.000624	0.00042 J
Pyrene	129-00-0	8270	7.33E-01	0.00197	<0.00019	0.00343

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highligh
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated M
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specifie
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-12C						MW-15C					
				3/10/2007	1/30/2008	7/15/2008	2/4/2009	1/19/2010	6/22/2010	3/8/2007	1/30/2008	7/15/2008	2/4/2009	1/18/2010	6/23/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	0.00109 J	<0.00025	0.00096 J	0.0012 J	0.001 J
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	0.00135 J	<0.00025	0.00068 J	0.00058 J	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00018	<0.00031	<0.00032	<0.00008	<0.00008	<0.00008	<0.00018	<0.00029	<0.00032	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00007	<0.0002	<0.00021	<0.00009	<0.00009	<0.00009	<0.00007	<0.0002	<0.00021	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00006	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00006	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00041	<0.00042	<0.00012	<0.0001	<0.0001	<0.00004	<0.00039	<0.00042	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0001	<0.0002	<0.00053	<0.00008	<0.00008	<0.00008	<0.0001	<0.0002	<0.00053	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.00009 J	<0.00041	<0.00042	0.00045	0.00024	0.00011 J	0.000247	<0.00039	<0.00042	0.000084 J	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00095	<0.00026	<0.00026	<0.00007	<0.00007	<0.00007	<0.000952	<0.00024	<0.00026	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.00005	<0.00031	<0.00032	0.00052	0.00019 J	<0.00009	0.142	0.0293	0.103	0.034	0.0097	0.013
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00005	<0.00031	<0.00032	<0.00006	<0.00007	<0.00007	<0.00005	<0.00029	0.000651	0.00052	0.00041	0.00062
Anthracene	120-12-7	8270	7.33E+00	<0.00004	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.00481	<0.0002	0.000731	0.00078	0.00031	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00005	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00011	<0.0002	**<0.00021**	<0.00008	<0.00008	<0.00008	<0.00011	<0.0002	**<0.00021**	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00008	<0.00041	<0.00042	<0.00009	<0.00009	<0.00009	<0.00008	<0.00039	<0.00042	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000095	0.00114 J	<0.00021	0.0003	0.00077	0.00099	<0.000095	0.00044 J	<0.00021	<0.0002	0.00065	0.00059
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00005	<0.00031	<0.00032	0.0004	0.00014 J	<0.00008	**0.157**	0.0336	0.0904	0.034	0.0075	0.005
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	0.00015 J	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.00012 J	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.00007 J	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.00792	0.000607	0.00103	0.0006	0.00029	0.0002 J
Fluorene	86-73-7	8270	9.78E-01	<0.00004	<0.0002	<0.00021	0.00037	0.00014 J	<0.00007	0.0118	0.00328	0.00278	0.0027	0.0011	0.00071
Naphthalene	91-20-3	8270	4.9E-01	0.000811	0.000734	0.000833	0.003	0.0017	0.00046	0.00317	0.00137	0.00195	0.0016	0.00057	0.00094
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00007	<0.00041	<0.00042	<0.00009	<0.00009	<0.00009	<0.00007	<0.00039	<0.00042	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00026	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00026	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00095	<0.0002	<0.00021	<0.00008	<0.00008	<0.00008	<0.000952	<0.0002	<0.00021	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.000194	<0.0002	<0.00021	0.00048	0.00015 J	<0.00007	0.00271	<0.0002	0.00028 J	<0.00007	0.00014 J	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	<0.00007	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	<0.00005	<0.0002	<0.00021	<0.00007	<0.00007	<0.00007	0.00374	0.000542	0.00052	0.00027	0.00012 J	0.00011 J

Notes:

1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-17C							MW-18C					
				3/17/2004	3/12/2007	1/30/2008	7/15/2008	2/4/2009	1/18/2010	6/23/2010	3/11/2007	1/30/2008	7/15/2008	2/5/2009	1/19/2010	6/24/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																
1,2-Dichloroethane	107-06-2	8260	5.00E-03	**<0.0136**	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.005	<0.0005	<0.0025
Benzene	71-43-2	8260	5.00E-03	**0.0928**	**0.0734**	**0.0565**	**0.0426**	**0.03**	**0.0083**	**0.024**	**1.28**	**1.34**	**0.964**	**1.4**	**1.5**	**1.0**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0155	<0.00239	<0.00047	<0.00047	<0.0005	--	<0.0005	<0.00239	<0.00047	<0.00047	<0.005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.188	0.257	0.292	0.226	0.17	0.053	0.2	0.241	0.304	0.178	0.26	0.21	0.13
Methylene Chloride	75-09-2	8260	5.00E-03	**<0.013**	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.005	<0.0005	<0.0004
Toluene	108-88-3	8260	1.00E+00	0.049 J	0.0125	0.0137	0.0102	0.008	0.0042 J	0.0071	**1.01**	**1.2**	0.691	1.0	0.96	0.72
Xylenes (total)	1330-20-7	8260	1.00E+01	0.368	0.423	0.485	0.353	0.25	0.046	0.33	0.787	1.1	0.624	1.1	1.0	1.0
Semivolatile Organic Compounds																
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00004	<0.0008	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	**<0.04**	<0.0008	<0.0001	<0.0001	<0.00045
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.02503	<0.00005	<0.0029	0.00054 J	0.0028	0.044	0.0018	<0.00005	<0.15	<0.0031	0.084	0.0081	0.0078
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.000009	<0.00009	**<0.0019**	<0.00021	<0.00009	<0.00009	<0.00009	<0.00009	**<0.098**	**0.00636**	<0.00009	<0.00009	<0.00035
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.000026	<0.0001	**<0.0019**	<0.00021	<0.00007	<0.00007	<0.00007	<0.0001	**<0.098**	**<0.002**	<0.00007	<0.00007	<0.0005
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.000076	<0.00004	<0.0038	<0.00042	<0.00012	<0.0001	<0.0001	<0.00004	<0.2	<0.0041	<0.00012	<0.001	<0.0004
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.000295	<0.00022	<0.0019	<0.00053	<0.00008	<0.00008	<0.00008	<0.00022	**<0.098**	**<0.0051**	<0.00008	<0.00008	<0.00035
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.2936**	0.0765	**1.09**	0.0954	0.085	0.063	**0.099**	**0.812**	**0.894**	**0.674**	**0.95**	**0.46**	**0.2**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.000285	<0.00014	<0.0024	<0.00026	<0.00007	<0.00007	<0.00007	<0.00014	**<0.12**	<0.0026	<0.00007	<0.00007	<0.00035
Acenaphthene	83-32-9	8270	1.47E+00	0.1548	0.173	0.726	0.227	0.14	0.13	0.14	0.307	0.293	0.251	0.18	0.17	0.082
Acenaphthylene	208-96-8	8270	1.47E+00	0.002225	0.00253	<0.0029	0.00251	0.0012	0.0013	0.0016	0.00594	<0.15	0.00649	0.0036	0.0023	0.0015
Anthracene	120-12-7	8270	7.33E+00	0.008506	0.0116	0.178	0.00985	0.0084	0.0057	0.0071	0.085	<0.098	0.0321	0.017	0.014	0.0076
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.000267	0.000311	**0.0466**	<0.00021	0.00018 J	0.00013 J	0.00016 J	**0.00491**	**<0.098**	**0.0025**	0.00039	<0.00007	<0.00035
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.000007	<0.00005	**0.0128**	**<0.00021**	<0.00008	<0.00008	<0.00008	**0.00257**	**<0.098**	**<0.002**	0.00013 J	<0.00008	**<0.00035**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.000009	<0.00007	**<0.0038**	<0.00042	<0.00009	<0.00009	<0.00009	<0.00007	**<0.2**	**<0.0041**	<0.00009	<0.00009	<0.0004
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.000172	<0.00009	<0.0019	0.00021 J	<0.0002	0.0039	0.0018	<0.00009	**<0.098**	<0.002	0.00023	<0.0002	<0.00045
Chrysene	218-01-9	8270	1.25E-01	<0.00009	0.000252	0.0428	<0.00021	0.00017 J	0.00012 J	0.00017 J	0.00594	<0.098	0.0021	0.00033	<0.00007	<0.01
Dibenzofuran	132-64-9	8270	9.78E-02	**0.1231**	**0.13**	**0.61**	**0.19**	**0.13**	**0.11**	**0.13**	**0.293**	**0.263**	**0.23**	**0.16**	0.091	0.077
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	0.000351 J	0.000206	<0.0019	<0.00021	<0.00007	<0.00007	<0.00007	<0.0001	<0.098	<0.002	<0.00007	<0.00007	<0.0025
Fluoranthene	206-44-0	8270	9.78E-01	0.003135	0.0117	0.322	0.00845	0.007	0.0044	0.005	0.116	<0.098	0.0169	0.0047	0.0035	0.0023
Fluorene	86-73-7	8270	9.78E-01	0.04552	0.0707	0.422	0.0799	0.062	0.055	0.069	0.178	0.137	0.153	0.081	0.052	0.034
Naphthalene	91-20-3	8270	4.9E-01	**8.547**	**5.5**	**9.8**	**5.84**	**3.4**	**2.2**	**3.4**	**14.9**	**16.6**	**16.7**	**21**	**12**	**6.2**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.000143	<0.00006	<0.0038	<0.00042	<0.00009	<0.00009	<0.00009	<0.00006	**<0.2**	<0.0041	<0.00009	<0.00009	<0.0025
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.0024	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.12	<0.0026	<0.00009	<0.00009	<0.00035
Pentachlorophenol	87-86-5	8270	1.00E-03	0.000154 J	<0.00019	**<0.0019**	<0.00021	<0.00008	<0.00008	<0.00008	**<0.0095**	**<0.098**	**0.134**	**0.026**	**0.041**	**0.02**
Phenanthrene	85-01-8	8270	7.33E-01	0.06252	0.102	**1.09**	0.104	0.078	0.058	0.08	0.361	0.213	0.177	0.076	0.052	0.032
Phenol	108-95-2	8270	7.33E+00	0.07296	0.00784	<0.0019	0.0349	0.0013	0.14	<0.00007	<0.00007	<0.098	0.0944	0.031	0.059	0.026
Pyrene	129-00-0	8270	7.33E-01	0.001708	0.00561	0.19	0.00445	0.0033	0.0028	0.0026	0.0233	<0.098	0.01	0.0025	0.002	0.0012

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-19C						MW-21C					
				3/12/2007	1/31/2008	7/15/2008	2/4/2009	1/18/2010	6/23/2010	3/15/2007	1/29/2008	7/15/2008	2/4/2009	1/21/2010	6/22/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00257	0.00398 J	<0.00025	<0.0005	**0.0056**	<0.0005	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	--	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00025	<0.0005	0.0018 J	<0.0005	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00274	0.00596	<0.00041	<0.0005	0.0076	<0.0005	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	0.00639 J	<0.00127	<0.00127	<0.001	0.0043 J	<0.001	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.00008	0.00023 J	<0.0001	<0.0001	0.00024	<0.00004	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.00029	<0.00028	<0.00008	<0.00008	<0.00008	<0.00005	<0.00029	<0.0003	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00019	<0.00019	<0.00009	<0.00009	<0.00009	<0.00009	<0.00019	<0.0002	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00011	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00038	<0.00038	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.0004	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00023	<0.00019	<0.00047	<0.00008	<0.00008	<0.00008	<0.00022	<0.00019	<0.0005	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.000234	0.00132	<0.00038	0.00025	0.0017	0.000079 J	<0.00008	<0.00038	<0.0004	<0.00007	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00015	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007	<0.00014	<0.00024	<0.00025	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.000204	0.000562	<0.00028	0.00022	0.001	0.00012 J	0.000241	<0.00029	<0.0003	<0.00009	0.00041	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.00029	<0.00028	<0.00006	0.00014 J	<0.00007	<0.00008	<0.00029	<0.0003	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.00012 J	<0.00019	<0.00019	<0.00007	0.0001 J	<0.00007	0.000268	0.000563	<0.0002	<0.00007	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.00005	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00005	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008	<0.00005	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00038	<0.00038	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.00042	<0.00019	0.00027 J	<0.0002	0.0028	0.00036	<0.00009	**0.00888**	<0.0002	<0.0002	0.00072	0.00023
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	0.0001 J	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.000512	0.00042 J	<0.00028	0.00017 J	0.00051	<0.00008	0.000245	<0.00029	<0.0003	<0.00008	<0.00008	<0.00008
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	0.00013 J	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.0001	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.00223	<0.00019	0.00182	0.00015 J	0.00024	0.0021	0.000413	0.00047 J	<0.0002	<0.00007	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	<0.00004	0.00044 J	<0.00019	<0.00007	0.00032	0.00028	0.000291	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	0.00924	0.0613	0.000826	0.0077	0.09	0.0015	0.000517	<0.00038	<0.0004	0.00039	<0.0001	<0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.00038	<0.00038	<0.00009	<0.00009	<0.00009	<0.00006	<0.00038	<0.0004	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00025	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.0002	<0.00019	<0.00019	<0.00008	<0.00008	<0.00008	<0.00019	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.000285	<0.00019	<0.00019	<0.00007	0.00016 J	<0.00007	0.000654	0.00039 J	<0.0002	<0.00007	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00019	<0.00019	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.00105	0.00036 J	0.00117	<0.00007	0.0002	0.0012	0.00018 J	0.00039 J	<0.0002	<0.00007	<0.00007	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-23C				MW-24C					MW-25C		
				3/12/2007	2/4/2009	1/18/2010	6/23/2010	3/8/2007	7/14/2008	2/3/2009	1/14/2010	6/29/2010	3/11/2007	1/28/2008	1/15/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds															
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.0005	<0.0005	<0.005	<0.00245	<0.00109	<0.0005	<0.0005	<0.0005	<0.00245	<0.001	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.0207**	**0.017**	**0.012**	**0.0095 J**	<0.00257	<0.00112	<0.0005	<0.0005	<0.0005	**0.0935**	**0.11**	**0.11 J**
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	0.001 J	--	<0.005	<0.00239	<0.0015	<0.0005	<0.0005	<0.0005	<0.00239	<0.00094	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.143	0.13	0.074	0.12	<0.00203	<0.00142	<0.0005	<0.0005	<0.0005	0.398	0.545	0.47
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.0005	<0.0005	**0.0092 J**	<0.00195	<0.00122	<0.0005	<0.0005	<0.0005	<0.00195	<0.0011	<0.0005
Toluene	108-88-3	8260	1.00E+00	0.00448 J	0.0023 J	0.0012 J	<0.005	<0.00274	<0.00138	<0.0005	<0.0005	<0.0005	0.481	0.556	0.52
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0739	0.073	0.044	0.069 J	<0.00581	<0.00302	<0.001	<0.001	<0.001	1.03	1.43	1.2
Semivolatile Organic Compounds															
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.0001	<0.0001	**<0.005**	<0.00006	<0.00008	<0.0001	<0.0001	<0.0001	<0.00004	**<0.8**	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.00008	<0.00008	<0.004	<0.00018	<0.00029	<0.00008	<0.00008	<0.00008	0.0049	**<2.9**	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00009	<0.00009	**<0.0045**	<0.00007	<0.00019	<0.00009	<0.00009	<0.00009	<0.00009	**<1.9**	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.00007	<0.00007	**<0.0035**	<0.00006	<0.00019	<0.00007	<0.00007	<0.00007	<0.00011	**<1.9**	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00012	<0.0001	<0.005	<0.00004	<0.00038	<0.00012	<0.0001	<0.0001	<0.00004	**<3.8**	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.00008	<0.00008	**<0.004**	<0.0001	<0.00019	<0.00008	<0.00008	<0.00008	<0.00023	**<1.9**	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.465**	**2.6**	**0.75**	**2.7**	0.00007 J	<0.00038	<0.00007	<0.00007	<0.00007	**0.857**	**193**	**0.76**
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.00007	<0.00007	<0.0035	<0.000952	<0.00024	<0.00007	<0.00007	<0.00007	<0.00015	**<2.4**	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.496	**3.4**	1.2	**3.4**	<0.00005	<0.00029	<0.00009	<0.00009	0.00022	0.239	**97.5**	0.21
Acenaphthylene	208-96-8	8270	1.47E+00	0.00543	0.017	0.01	0.03	<0.00005	<0.00029	<0.00006	<0.00007	<0.00007	0.00604	**<2.9**	0.0027
Anthracene	120-12-7	8270	7.33E+00	0.0843	1.2	0.36	1.2	<0.00004	<0.00019	<0.00007	<0.00007	<0.00007	0.0456	**42.8**	0.035
Benzo(a)anthracene	56-55-3	8270	1.25E-03	**0.00835**	**0.31**	**0.12**	**0.3**	<0.00005	<0.00019	<0.00007	<0.00007	<0.00007	**0.00189**	**9.37**	**0.0027**
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.0025**	**0.072**	**0.029**	**0.093**	<0.00011	<0.00019	<0.00008	<0.00008	<0.00008	**0.000581**	**2.3**	**0.0014**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00009	<0.00009	**<0.0035**	<0.00008	<0.00038	<0.00009	<0.00009	<0.00009	<0.00007	**<3.8**	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	0.002	0.0011	<0.0035	0.000132 J	<0.00019	0.00055	<0.0002	0.001	<0.00009	**<1.9**	<0.0002
Chrysene	218-01-9	8270	1.25E-01	0.0115	**0.28**	0.093	**0.27**	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.00256	**8.38**	0.0025
Dibenzofuran	132-64-9	8270	9.78E-02	**0.392**	**3.5**	**1.2**	**3.6**	<0.00005	<0.00029	<0.00008	<0.00008	<0.00008	**0.236**	**102**	**0.22**
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.00007	<0.00007	<0.004	0.00011 J	<0.00019	<0.00007	<0.00007	<0.00007	<0.00011	<1.9	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.112	**3**	0.77	**3.0**	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.0197	**84.1**	0.041
Fluorene	86-73-7	8270	9.78E-01	0.22	**2.5**	0.82	**2.6**	<0.00004	<0.00019	<0.00007	<0.00007	<0.00007	0.115	**75.5**	0.12
Naphthalene	91-20-3	8270	4.9E-01	**6.74**	**9.9**	**3.9**	**8.9**	0.000301	<0.00038	0.00013 J	0.00026 J	<0.0001	**12.3**	**750**	**9.8**
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.00009	<0.00009	<0.01	<0.00007	<0.00038	<0.00009	<0.00009	<0.00009	<0.00006	**<3.8**	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00009	<0.00009	<0.0045	<0.00005	<0.00024	<0.00009	<0.00009	<0.00009	<0.00005	**<2.4**	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	<0.00008	<0.00008	**<0.0035**	<0.000952	<0.00019	<0.00008	<0.00008	<0.00008	<0.0002	**<1.9**	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.449	**8.8**	**2.7**	**8.2**	<0.00004	<0.00019	<0.00007	<0.00007	<0.00007	0.144	**214**	0.19
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00007	<0.00007	<0.0035	<0.00007	<0.00019	<0.00007	<0.00007	<0.00007	0.0155	<1.9	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.0568	**1.6**	0.59	**1.9**	<0.00005	<0.00019	<0.00007	<0.00007	<0.00007	0.0114	**49.5**	0.022

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-27C						MW-28C						MW-29C	
				3/15/2007	1/28/2008	7/14/2008	2/3/2009	1/14/2010	6/30/2010	3/9/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/30/2010	3/8/2007	1/28/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00041	0.0026 J	0.0013 J	<0.0005	<0.00274	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.00581	<0.00127	<0.00127	<0.001	<0.001	<0.001	<0.00581	<0.00127
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008	<0.00009	<0.0001	<0.0001	<0.0001	<0.00006	<0.00008
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.000462	<0.00043	<0.00032	<0.00008	<0.00008	<0.00008	<0.00018	<0.00029	0.00114 J	<0.00008	0.0002	<0.00008	<0.00018	<0.00029
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00029	<0.00021	<0.00009	<0.00009	<0.00009	<0.00007	<0.00019	<0.00022	<0.00009	<0.00009	<0.00009	<0.00007	<0.00019
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.00029	<0.00021	<0.00007	<0.00007	<0.00007	<0.00006	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	<0.00006	<0.00019
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00057	<0.00042	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038	<0.00044	<0.00012	<0.0001	<0.0001	<0.00004	<0.00038
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.00029	<0.00021	<0.00008	<0.00008	<0.00008	<0.0001	<0.00019	<0.00022	<0.00008	<0.00008	<0.00008	<0.0001	<0.00019
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.000296	<0.00057	<0.00042	<0.00007	<0.00007	<0.00007	0.000541	<0.00038	<0.00044	9.7E-05 J	0.00024	7.7E-05 J	<0.00006	<0.00038
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.00036	<0.00026	<0.00007	<0.00007	<0.00007	<0.00095	<0.00024	<0.00028	<0.00007	<0.00007	<0.00007	<0.00095	<0.00024
Acenaphthene	83-32-9	8270	1.47E+00	0.000201	<0.00043	<0.00032	0.00026	0.00015 J	0.00028	0.000306	<0.00029	<0.00033	<0.00009	0.00018 J	0.00033	<0.00005	<0.00029
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00008	<0.00043	<0.00032	<0.00006	<0.00007	<0.00007	<0.00005	<0.00029	<0.00033	<0.00006	<0.00007	<0.00007	<0.00005	<0.00029
Anthracene	120-12-7	8270	7.33E+00	0.00007 J	0.00087	<0.00021	<0.00007	<0.00007	<0.00007	0.0001 J	0.00059	<0.00022	<0.00007	<0.00007	0.00014 J	<0.00004	<0.00019
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	<0.00029	<0.00021	<0.00007	<0.00007	<0.00007	<0.00005	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	0.00011 J	<0.00019
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00005	**<0.00029**	**<0.00021**	<0.00008	<0.00008	<0.00008	<0.00011	<0.00019	**<0.00022**	<0.00008	<0.00008	<0.00008	0.00013 J	<0.00019
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00057	<0.00042	<0.00009	<0.00009	<0.00009	<0.00008	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009	<0.00008	<0.00038
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	0.00044 J	0.00029 J	0.00038	0.0016	0.0015	<9.5E-05	0.00049 J	<0.00022	0.0033	0.00046	0.0012	0.000541	0.00042 J
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00029	<0.00021	<0.00007	<0.00007	<0.00007	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	0.00012 J	<0.00019
Dibenzofuran	132-64-9	8270	9.78E-02	0.00015 J	0.00044 J	<0.00032	<0.00008	<0.00008	<0.00008	0.000296	0.00044 J	<0.00033	<0.00008	0.00018 J	<0.00008	<0.00005	<0.00029
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	<0.0001	<0.00029	<0.00021	<0.00007	<0.00007	<0.00007	0.00013 J	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007	0.00017 J	<0.00019
Fluoranthene	206-44-0	8270	9.78E-01	<0.00004	0.000756	<0.00021	<0.00007	0.00015 J	<0.00007	0.00011 J	0.000497	<0.00022	<0.00007	<0.00007	0.00012 J	0.000253	<0.00019
Fluorene	86-73-7	8270	9.78E-01	0.00012 J	<0.00029	<0.00021	<0.00007	<0.00007	0.00025	0.000224	0.00022 J	<0.00022	<0.00007	0.00016 J	0.00033	<0.00004	<0.00019
Naphthalene	91-20-3	8270	4.9E-01	0.00293	0.0018	<0.00042	0.00037	0.00013 J	0.00024	0.00443	0.00234	0.00196	0.00057	0.0014	0.00035	0.00016 J	0.00047 J
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.00057	<0.00042	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009	<0.00007	<0.00038
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00036	<0.00026	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024	<0.00028	<0.00009	<0.00009	<0.00009	<0.00005	<0.00024
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	<0.00029	<0.00021	<0.00008	<0.00008	<0.00008	<0.00095	0.00056 J	<0.00022	<0.00008	<0.00008	0.00034	<0.00095	<0.00019
Phenanthrene	85-01-8	8270	7.33E-01	0.000219	0.000746	<0.00021	<0.00007	0.00014 J	<0.00007	0.00049	0.000624	<0.00022	0.00013 J	0.00033	<0.00007	0.00017 J	<0.00019
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00029	<0.00021	<0.00007	<0.00007	<0.00007	0.0111	0.00865	0.00648	0.00063	0.0027	0.00075	<0.00007	<0.00019
Pyrene	129-00-0	8270	7.33E-01	<0.00004	0.00062	<0.00021	<0.00007	0.0001 J	<0.00007	0.00007 J	0.00041 J	<0.00022	<0.00007	<0.00007	<0.00007	0.00017 J	<0.00019

Notes:

1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-34C		MW-44C			MW-45C			MW-46C			MW-47C				
				3/18/2004	1/29/2008	3/18/2004	3/11/2007	1/29/2008	3/18/2004	3/15/2007	1/29/2008	3/18/2004	3/11/2007	1/30/2008	1/29/2008	7/14/2008	2/4/2009	1/20/2010	6/24/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																			
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00052	<0.00272	<0.00245	<0.00052	**<0.0136**	<0.00245	<0.00052	<0.00136	<0.00245	<0.00052	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	**0.0181**	**0.0287**	<0.00286	<0.00257	<0.00025	**0.125**	**0.074**	**0.0448**	**0.0807**	**0.0902**	**0.0222**	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00047	<0.0031	<0.00239	<0.00047	<0.0155	<0.00239	<0.00047	<0.00155	<0.00239	<0.00047	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	0.0232	0.0903	0.0549	0.0281	0.0204	0.328	0.206	0.111	0.129	0.128	0.0249	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	0.00317 J	<0.00054	**0.00794 J**	<0.00195	<0.00054	**0.0476 J**	<0.00195	<0.00054	<0.0013	<0.00195	<0.00054	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	0.031	0.0832	0.0264	0.0164	0.0117	0.371	0.202	0.112	0.105	0.0697	0.0167	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	0.0616	0.25	0.131	0.0865	0.0487	0.892	0.583	0.298	0.334	0.211	0.0377	<0.00127	<0.00302	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																			
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	**<0.002**	<0.00005	<0.00004	<0.0002	<0.00005	<0.00004	**<0.002**	<0.00005	<0.00004	<0.0004	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00012	<0.0059	0.00025 J	<0.00005	0.00219 J	0.002327	<0.00005	0.0104	0.000914	<0.00005	<0.0014	<0.00029	<0.00032	<0.00008	<0.00008	0.00011 J
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<9E-06	**<0.004**	<9E-06	<0.00009	<0.00039	<9E-06	<0.00009	**<0.004**	<9E-06	<0.00009	<0.00096	<0.00019	<0.00021	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<2.6E-05	**<0.004**	<2.7E-05	<0.0001	<0.00039	<2.6E-05	<0.0001	**<0.004**	<2.7E-05	<0.0001	<0.00096	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<7.7E-05	<0.0079	<0.00008	<0.00004	<0.00078	<7.6E-05	<0.00004	<0.008	<0.00008	<0.00004	<0.0019	<0.00038	<0.00042	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0003	**<0.004**	<0.00031	<0.00022	<0.00039	<0.0003	<0.00022	**<0.004**	<0.00031	<0.00022	<0.00096	<0.00019	<0.00021	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.2118**	**0.437**	**0.2035**	**0.368**	0.00551	**1.174**	**0.812**	**1.01**	**0.2029**	**0.38**	0.0825	<0.00038	<0.00042	<0.00007	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00029	<0.005	<0.0003	<0.00014	<0.00049	<0.00029	<0.00014	<0.005	<0.0003	<0.00014	<0.0012	<0.00024	<0.00026	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.1113	0.365	0.09775	0.351	0.0531	0.2788	0.416	0.472	0.2464	0.237	0.0635	<0.00029	<0.00032	<0.00009	<0.00009	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	0.0012	<0.0059	0.001053	0.0065	0.00083	0.003108	0.00675	0.0085	0.00218	0.0024	<0.0014	<0.00029	<0.00032	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.01103	0.0712	0.01077	0.0372	0.0131	0.02233	0.0653	0.18	0.03295	0.0448	0.0222	0.000584	<0.00021	<0.00007	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00027	**0.017**	<0.00028	**0.00144**	**0.00327**	0.000866	**0.0101**	**0.0416**	0.000993	**0.00146**	**0.00597**	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	**0.000272**	**0.0065**	<7E-06	**0.000363**	**<0.00039**	**0.000204**	**0.0031**	**<0.004**	0.00019	**0.000382**	**0.00215**	<0.00019	**<0.00021**	<0.00008	9.9E-05 J	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<9E-06	**<0.0079**	<9E-06	<0.00007	<0.00078	<9E-06	<0.00007	**<0.008**	<9E-06	<0.00007	**<0.0019**	<0.00038	<0.00042	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00017	**0.0076**	<0.00018	<0.00009	0.00235 J	<0.00017	<0.00009	<0.004	0.001125	<0.00009	<0.00096	0.00045 J	<0.00021	0.0036	0.00065	0.00021
Chrysene	218-01-9	8270	1.25E-01	0.000713	0.0128	<9.4E-05	0.00206	0.00278	0.000766	0.00846	0.0347	0.001116	0.00234	0.00521	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.08652	**0.412**	0.08406	**0.216**	0.046	**0.2238**	**0.338**	**0.488**	**0.2098**	**0.207**	0.0636	0.00031 J	<0.00032	<0.00008	<0.00008	<0.00008
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	<0.00014	<0.004	0.00039 J	<0.0001	<0.00039	0.00031 J	<0.0001	<0.004	0.000624	<0.0001	<0.00096	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.0161	0.14	0.01131	0.0423	0.0264	0.01533	0.107	0.384	0.02769	0.0345	0.0426	0.00047 J	<0.00021	<0.00007	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	0.05615	0.228	0.04143	0.157	0.0346	0.1301	0.207	0.357	0.1315	0.113	0.048	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	**3.765**	**5.87**	**3.712**	**2.47**	<0.00078	**24.01**	**5.52**	**6.05**	**2.197**	**8.96**	**1.1**	0.00119	<0.00042	0.00019 J	<0.0001	0.00046
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00014	<0.0079	<0.00015	<0.00006	<0.00078	<0.00014	<0.00006	<0.008	<0.00015	<0.00006	<0.0019	<0.00038	<0.00042	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.005	<9.4E-05	<0.00005	<0.00049	<0.00009	<0.00005	<0.005	<9.4E-05	<0.00005	<0.0012	<0.00024	<0.00026	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<3.8E-05	**<0.004**	<0.00004	<0.00019	<0.00039	<3.8E-05	<0.00019	**<0.004**	<0.00004	<0.00019	<0.00096	<0.00019	<0.00021	<0.00008	0.0004	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.09135	0.431	0.08156	0.000566	0.0668	0.1432	0.386	**0.903**	0.2393	0.188	0.119	0.00046 J	<0.00021	<0.00007	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<9.6E-05	<0.004	<0.0001	<0.00007	<0.00039	<9.5E-05	0.00168	<0.004	0.000698	<0.00007	0.0133	<0.00019	<0.00021	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.01404	0.0853	0.007689	0.0196	0.0159	0.008996	0.061	0.234	0.01749	0.0137	0.0252	0.00039 J	<0.00021	<0.00007	<0.00007	<0.00007

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-48C								MW-53C			MW-53C		
				3/18/2004	3/16/2007	1/29/2008	7/14/2008	2/4/2009	1/21/2010	6/24/2010	7/15/2010	3/11/2007	1/29/2008	7/14/2008	2/3/2009	1/13/2010	6/30/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds																	
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00136	<0.00245	<0.00052	<0.00109	<0.0005	<0.0005	<0.0005	<0.0005	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.00143	<0.00257	<0.00025	<0.00112	<0.0005	<0.0005	<0.0005	<0.0005	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00155	<0.00239	<0.00047	<0.0015	<0.0005	<0.0005	<0.0005	<0.0005	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.00137	<0.00203	<0.00025	<0.00142	<0.0005	<0.0005	<0.0005	<0.0005	<0.00203	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	0.00493 J	<0.00195	<0.00054	<0.00122	<0.0005	<0.0005	<0.0005	<0.0005	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.00136	<0.00274	<0.00041	<0.00138	<0.0005	<0.0005	<0.0005	<0.0005	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005
Xylenes (total)	1330-20-7	8260	1.00E+01	<0.00441	<0.00581	<0.00127	<0.00302	<0.001	<0.001	<0.001	<0.001	0.00638 J	<0.00127	<0.00127	<0.001	<0.001	<0.001
Semivolatile Organic Compounds																	
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00005	<0.00004	<0.00008	<0.00009	<0.0001	<0.0001	<0.0005	<0.0001	<0.00004	<0.00008	<0.00009	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	0.001685	<0.00005	<0.00029	<0.00033	<0.00008	<0.00008	0.0073	<0.00008	<0.00005	<0.00029	<0.00033	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<9E-06	<0.00009	<0.00019	<0.00022	<0.00009	<0.00009	<0.0004	<0.00009	<0.00009	<0.00019	<0.00022	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<2.6E-05	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00045	<0.00007	<0.00011	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<7.6E-05	<0.00004	<0.00038	<0.00044	<0.00012	<0.0001	<0.00035	<0.0001	<0.00004	<0.00038	<0.00044	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.0003	<0.00022	<0.00019	<0.00022	<0.00008	<0.00008	<0.0005	<0.00008	<0.00022	<0.00019	<0.00022	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	0.004438	<0.00008	<0.00038	<0.00044	<0.00007	<0.00007	**0.18**	<0.00007	0.00356	<0.00038	<0.00044	<0.00007	7.1E-05 J	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00029	<0.00014	<0.00024	<0.00028	<0.00007	<0.00007	<0.0004	<0.00007	<0.00014	<0.00024	<0.00028	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	0.02343	0.000349	<0.00029	<0.00033	<0.00009	<0.00009	0.073	<0.00009	0.00175	<0.00029	<0.00033	<0.00009	0.0002	0.00032
Acenaphthylene	208-96-8	8270	1.47E+00	0.00033 J	<0.00008	<0.00029	<0.00033	<0.00006	<0.00007	0.0014	<0.00007	<0.00008	<0.00029	<0.00033	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	0.003482	0.000205	0.000589	<0.00022	0.00012 J	<0.00007	0.007	<0.00007	0.000328	0.000569	<0.00022	<0.00007	<0.00007	<0.00007
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00027	<0.00005	<0.00019	<0.00022	<0.00007	<0.00007	<0.00035	<0.00007	<0.00005	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<7E-06	<0.00005	<0.00019	**<0.00022**	<0.00008	<0.00008	**<0.00035**	<0.00008	<0.00005	<0.00019	**<0.00022**	<0.00008	<0.00008	<0.00008
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<9E-06	<0.00007	<0.00038	<0.00044	<0.00009	<0.00009	<0.00035	<0.00009	0.00011 J	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00017	<0.00009	<0.00019	0.00028 J	0.00034	0.0018	<0.00035	0.0018	<0.00009	<0.00019	0.00026 J	0.00072	0.00024	0.00032
Chrysene	218-01-9	8270	1.25E-01	<0.00009	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.0004	<0.00007	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	0.01294	0.000192	<0.00029	<0.00033	0.00025	<0.00008	0.065	<0.00008	0.00156	<0.00029	<0.00033	<0.00008	<0.00008	<0.00008
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	0.00033 J	<0.0001	<0.00019	<0.00022	<0.00007	<0.00007	<0.00045	<0.00007	0.00013 J	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	0.004735	0.00129	0.000687	0.00033 J	<0.00007	0.00013 J	0.0021	0.00019 J	0.000222	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	0.01085	0.000192	<0.00019	<0.00022	<0.00007	<0.00007	0.032	<0.00007	0.00103	<0.00019	<0.00022	<0.00007	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	0.001665	0.000396	0.00062	<0.00044	0.00052	0.0002 J	**5.0**	<0.0001	0.0325	0.00075	0.00161	0.0012	0.00027	<0.0001
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00014	<0.00006	<0.00038	<0.00044	<0.00009	<0.00009	<0.00035	<0.00009	<0.00006	<0.00038	<0.00044	<0.00009	<0.00009	<0.00009
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00005	<0.00024	<0.00028	<0.00009	<0.00009	<0.001	<0.00009	<0.00005	<0.00024	<0.00028	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<3.8E-05	<0.00019	<0.00019	<0.00022	<0.00008	<0.00008	**0.019**	<0.00008	<0.00019	<0.00019	<0.00022	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	0.00032 J	0.000512	0.00043 J	<0.00022	0.00032	<0.00007	0.03	<0.00007	0.0016	0.00043 J	<0.00022	<0.00007	<0.00007	<0.00007
Phenol	108-95-2	8270	7.33E+00	<9.5E-05	<0.00007	<0.00019	<0.00022	<0.00007	<0.00007	0.024	<0.00007	<0.00007	<0.00019	0.00027 J	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	0.002762	0.000684	0.000528	<0.00022	<0.00007	0.0001 J	0.001	0.00015 J	<0.00004	0.00039 J	<0.00022	<0.00007	<0.00007	<0.00007

Notes:

1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-5
SUMMARY OF GROUNDWATER SAMPLING RESULTS - C-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-54C						MW-68C	CPT54RCTZ
				3/11/2007	1/28/2008	7/14/2008	2/3/2009	1/21/2010	6/30/2010	7/15/2010	7/24/2008
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds											
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.00245	<0.00052	<0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.00052
Benzene	71-43-2	8260	5.00E-03	<0.00257	<0.00025	<0.00025	<0.0005	<0.0005	<0.0005	0.00081 J	<0.00025
Chlorobenzene	108-90-7	8260	1.00E-01	<0.00239	<0.00047	<0.00047	<0.0005	<0.0005	<0.0005	<0.0005	<0.00047
Ethylbenzene	100-41-4	8260	7.00E-01	0.0065	0.00584	0.00391 J	0.0029 J	<0.0005	0.0024 J	<0.0005	<0.00025
Methylene Chloride	75-09-2	8260	5.00E-03	<0.00195	<0.00054	<0.00054	<0.0005	<0.0005	<0.0005	<0.0005	<0.00054
Toluene	108-88-3	8260	1.00E+00	<0.00274	<0.00041	<0.00041	<0.0005	<0.0005	<0.0005	<0.0005	<0.00041
Xylenes (total)	1330-20-7	8260	1.00E+01	0.021	0.00335 J	<0.00127	0.0027 J	<0.001	0.0011 J	<0.001	<0.00127
Semivolatile Organic Compounds											
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.00004	<0.00008	<0.00008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00005	<0.00029	<0.00029	<0.00008	<0.00008	<0.00008	<0.00008	<0.0006
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00019	<0.0002	<0.00009	<0.00009	<0.00009	<0.00009	<0.0004
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.0001	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.0004
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.00004	<0.00038	<0.00039	<0.00012	<0.0001	<0.0001	<0.0001	<0.0008
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00022	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00008	<0.001
2-Methylnaphthalene	91-57-6	8270	9.78E-02	**0.31**	**0.109**	**0.14**	**0.13**	<0.00007	0.0096	<0.00007	<0.0008
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00014	<0.00024	<0.00024	<0.00007	<0.00007	<0.00007	<0.00007	<0.0005
Acenaphthene	83-32-9	8270	1.47E+00	0.111	0.074	0.0738	0.067	0.00016 J	0.024	<0.00009	<0.0006
Acenaphthylene	208-96-8	8270	1.47E+00	0.00135	<0.00029	<0.00029	0.00072	<0.00007	0.00042	<0.00007	<0.0006
Anthracene	120-12-7	8270	7.33E+00	0.00837	0.00268	0.00293	0.003	<0.00007	0.005	<0.00007	<0.0004
Benzo(a)anthracene	56-55-3	8270	1.25E-03	<0.00005	0.00024 J	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.0004
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00005	<0.00019	<0.0002	<0.00008	<0.00008	<0.00008	<0.00008	**<0.0004**
bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00007	<0.00038	<0.00039	<0.00009	<0.00009	<0.00009	<0.00009	<0.0008
bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	<0.00009	0.00105 J	0.00029 J	0.00072	0.00077	0.00037	0.00098	0.00528
Chrysene	218-01-9	8270	1.25E-01	<0.00007	0.00021 J	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	<0.0004
Dibenzofuran	132-64-9	8270	9.78E-02	**0.113**	0.0611	0.0739	0.064	<0.00008	0.028	<0.00008	<0.0006
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	0.00011 J	0.00069 J	<0.0002	<0.00007	<0.00007	<0.00007	<0.00007	0.0007 J
Fluoranthene	206-44-0	8270	9.78E-01	0.00465	0.00426	0.00349	0.0032	<0.00007	0.0032	<0.00007	<0.0004
Fluorene	86-73-7	8270	9.78E-01	0.0427	0.0323	0.0351	0.03	<0.00007	0.015	<0.00007	<0.0004
Naphthalene	91-20-3	8270	4.9E-01	**1.94**	**0.892**	**0.912**	**1.1**	<0.0001	0.21	0.00083	<0.0008
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00006	<0.00038	<0.00039	<0.00009	<0.00009	<0.00009	<0.00009	<0.0008
n-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00005	<0.00024	<0.00024	<0.00009	<0.00009	<0.00009	<0.00009	<0.0005
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00019	0.00025 J	<0.0002	<0.00008	<0.00008	<0.00008	<0.00008	<0.0004
Phenanthrene	85-01-8	8270	7.33E-01	0.0621	0.0389	0.0495	0.042	<0.00007	0.024	<0.00007	<0.0004
Phenol	108-95-2	8270	7.33E+00	<0.00007	<0.00019	<0.0002	<0.00007	<0.00007	<0.00007	0.0005	<0.0004
Pyrene	129-00-0	8270	7.33E-01	0.00167	0.00227	0.00163	0.0018	<0.00007	0.0016	<0.00007	<0.0004

Notes:
1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.

Table 5B-6
SUMMARY OF GROUNDWATER SAMPLING RESULTS - D-TZ MONITORING WELLS
UPRR Houston Wood Preserving Works

			Residential Assessment Level	MW-36D	MW-59D			MW-65D			MW-66D*		
				7/15/2010	2/5/2009	1/20/2010	7/1/2010	2/5/2009	1/21/2010	7/1/2010	2/5/2009	1/20/2010	7/1/2010
Constituent	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Volatile Organic Compounds													
1,2-Dichloroethane	107-06-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Benzene	71-43-2	8260	5.00E-03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chlorobenzene	108-90-7	8260	1.00E-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Ethylbenzene	100-41-4	8260	7.00E-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Methylene Chloride	75-09-2	8260	5.00E-03	<0.0005	0.0011 J	<0.00005	<0.00005	0.00095 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toluene	108-88-3	8260	1.00E+00	<0.0005	0.00064 J	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Xylenes, Total	1330-20-7	8260	1.00E+01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Semivolatile Organic Compounds													
1,2-Diphenylhydrazine	122-66-7	8270	1.14E-03	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
2,4-Dimethylphenol	105-67-9	8270	4.9E-01	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
2,4-Dinitrotoluene	121-14-2	8270	1.34E-03	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
2,6-Dinitrotoluene	606-20-2	8270	1.34E-03	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
2-Chloronaphthalene	91-58-7	8270	1.96E+00	<0.0001	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001	<0.00012	<0.0001	<0.0001
2-Methyl-4,6-dinitrophenol	534-52-1	8270	2.44E-03	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
2-Methylnaphthalene	91-57-6	8270	9.78E-02	<0.00007	0.00015 J	<0.00007	<0.00007	0.00012 J	<0.00007	0.00014 J	0.00062	<0.00007	<0.00007
4-Nitrophenol	100-02-7	8270	4.9E-02	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Acenaphthene	83-32-9	8270	1.47E+00	<0.00009	0.00015 J	<0.00009	<0.00009	0.00019 J	<0.00009	<0.00009	0.0004	<0.00009	<0.00009
Acenaphthylene	208-96-8	8270	1.47E+00	<0.00007	<0.00006	<0.00007	<0.00007	<0.00006	<0.00007	<0.00007	<0.00006	<0.00007	<0.00007
Anthracene	120-12-7	8270	7.33E+00	<0.00007	<0.00007	<0.00007	<0.00007	0.000078 J	<0.00007	<0.00007	0.00015 J	<0.00007	<0.00007
Benz(a)anthracene	56-55-3	8270	1.25E-03	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Benzo(a)pyrene	50-32-8	8270	2.00E-04	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Bis(2-chloroethoxy)methane	111-91-1	8270	8.30E-04	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Bis(2-ethylhexyl)phthalate	117-81-7	8270	6.00E-03	0.005	0.006	0.00023	0.00031	0.0019	0.0027	0.001	**0.0064**	0.0028	0.00096
Chrysene	218-01-9	8270	1.25E-01	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007
Dibenzofuran	132-64-9	8270	9.78E-02	<0.00008	0.00014 J	<0.00008	<0.00008	0.00016 J	0.00012 J	<0.00008	0.00036	<0.0008	0.000083 J
Di-n-butyl phthalate	84-74-2	8270	2.44E+00	<0.00007	0.0029	<0.00007	<0.00007	0.00029	<0.00007	<0.00007	0.00044	0.000086 J	<0.00007
Fluoranthene	206-44-0	8270	9.78E-01	<0.00007	<0.00007	<0.00007	<0.00007	0.000097 J	<0.00007	<0.00007	0.00026	<0.00007	<0.00007
Fluorene	86-73-7	8270	9.78E-01	<0.00007	0.00013 J	<0.00007	<0.00007	0.00016 J	<0.00007	<0.00007	0.00033	<0.00007	<0.00007
Naphthalene	91-20-3	8270	4.9E-01	<0.0001	0.0019	<0.0001	0.00022	0.00051	0.00026	0.00059	0.0058	<0.0001	0.0002 J
Nitrobenzene	98-95-3	8270	4.9E-02	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
N-Nitrosodiphenylamine	86-30-6	8270	1.86E-01	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Pentachlorophenol	87-86-5	8270	1.00E-03	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Phenanthrene	85-01-8	8270	7.33E-01	<0.00007	0.0002	<0.00007	<0.00007	0.00014 J	<0.00007	<0.00007	0.00073	0.00012 J	<0.00007
Phenol	108-95-2	8270	7.33E+00	0.00065	<0.00007	<0.00007	<0.00007	<0.00007	0.0015	<0.00007	<0.00007	<0.00007	<0.00007
Pyrene	129-00-0	8270	7.33E-01	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	<0.00007	0.00017 J	<0.00007	<0.00007

Notes:

1. Sampling locations shown on Figure 1A
2. Concentrations > RAL are **bold** type and higlighted.
3. Non-detected concentrations > RAL are **bold** type and highlighted.
4. TRRP PCLs (30 TAC §350, Tables 1, 2, and 3), last updated March 31, 2010.
5. RAL = Residential Assessment Level
6. J = Estimated value, < = Compound not detected at the specified detection limit.
7. -- = not analyzed.
8. * = bis(2-ethylhexyl)phthalate result for MW-66D likely from laboratory contaminant.

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-01A	47.92	2-Sep-93	6.96			40.99
	47.92	21-Dec-93	3.28			44.67
	47.92	24-Mar-94	3.95			44.00
	47.92	22-Jun-94	5.30			42.65
	47.92	28-Sep-94	7.10			40.85
	47.92	13-Oct-94	7.26			40.69
	47.92	24-Jan-95	2.63			45.32
	47.92	11-Apr-95	2.61			45.34
	47.92	11-Jul-95	4.78			43.17
	47.92	23-Jan-96	5.67			42.28
	47.92	19-Jul-96	7.84			40.11
	47.92	17-Sep-96	8.33			39.62
	47.92	31-Oct-96	6.90			41.05
	47.92	22-Nov-96	8.63			39.32
	47.92	27-Dec-96	5.50			42.45
	47.92	22-Jan-97	3.41			44.54
	47.92	21-Feb-97	2.68			45.27
	47.92	25-Mar-97	2.96			44.99
	47.92	23-Apr-97	4.27			43.68
	47.92	24-Apr-97	4.47			43.48
	47.92	13-May-97	2.91			45.04
	47.92	20-Jun-97	4.88			43.07
	47.92	25-Jun-97	2.59			45.36
	47.92	1-Jul-97	4.04			43.91
	47.92	24-Jul-97	6.80			41.15
	47.92	16-Aug-97	7.84			40.11
	47.92	22-Aug-97	9.52			38.43
	47.92	25-Sep-97	6.02			41.93
	47.92	22-Oct-97	4.89			43.06
	47.92	25-Nov-97	4.88			43.07
	47.92	19-Dec-97	4.26			43.69
	47.92	20-Jan-98	3.10			44.85
	47.92	3-Mar-98	2.87			45.08
	47.92	18-Mar-98	2.68			45.27
	47.92	24-Apr-98	6.73			41.22
	47.92	21-May-98	6.89			41.06
	47.92	30-Jul-98	7.96			39.99
	47.92	25-Aug-98	6.87			41.08
	47.92	21-Sep-98	4.70			43.25
	47.92	26-Oct-98	5.98			41.97
	47.92	23-Nov-98	4.11			43.84
	47.92	29-Jan-99	3.01			44.94
	47.92	26-Feb-99	3.20			44.75
	47.92	16-Mar-99	3.71			44.24
	47.92	29-Apr-99	3.93			44.02
	47.92	1-Jun-99	3.98			43.97
	47.92	30-Jul-99	4.31			43.64
	47.92	27-Aug-99	4.11			43.84
	47.92	27-Sep-99	9.67			38.28
	47.92	29-Oct-99	10.67			37.28
	47.92	29-Dec-99	10.00			37.95
	47.92	4-Feb-00	12.71			35.24
	47.92	25-Feb-00	9.10			38.85
	47.92	27-Mar-00	7.38			40.57
	47.92	7-Apr-00	7.00			40.95
	47.92	31-May-00	7.15			40.80

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-01A	47.92	1-Jun-00	7.00			40.95
	47.92	28-Jul-00	7.11			40.84
	47.92	30-Aug-00	10.33			37.62
	47.92	19-Sep-00	11.56			36.39
	47.92	27-Oct-00	9.01			38.94
	47.92	21-Nov-00	8.49			39.46
	47.92	1-May-01	6.60			41.35
	47.92	1-Oct-01	6.85			41.10
	47.92	11-Mar-02	3.31			44.64
	47.92	23-Sep-02	3.23			44.72
	47.92	10-Mar-03	2.48			45.44
	47.92	23-Sep-03	4.29			43.63
	47.92	15-Mar-04	3.49			44.43
	47.92	13-Sep-04	8.26			39.66
	47.92	18-Jul-05	3.73			44.19
	47.92	4-Jan-06	8.54			39.38
	47.92	27-Jul-06	3.10			44.82
	47.92	23-Jan-07	2.26			45.66
	47.92	7-Mar-07	2.36			45.56
	47.92	27-Jul-07	4.05			43.87
	47.92	28-Jan-08	2.51			45.41
	47.92	16-Jul-08	7.21			40.71
	47.92	22-Jan-09	6.21			41.71
	47.92	22-Jul-09	6.96			40.96
	47.92	8-Jan-10	3.07			44.85
	47.92	12-Jul-10	3.87			44.05
MW-02	47.97	2-Sep-93	7.45			40.58
	47.97	21-Dec-93	2.58			45.45
	47.97	24-Mar-94	4.08			43.95
	47.97	22-Jun-94	5.85			42.18
	47.97	28-Sep-94	7.05			40.98
	47.97	13-Oct-94	7.69			40.34
	47.97	24-Jan-95	2.12			45.91
	47.97	11-Apr-95	2.53			45.50
	47.97	11-Jul-95	5.34			42.69
	47.97	23-Jan-96	5.69			42.34
	47.97	19-Jul-96	8.28			39.75
	47.97	17-Sep-96	8.84			39.19
	47.97	31-Oct-96	7.11			40.92
	47.97	22-Nov-96	8.99			39.04
	47.97	27-Dec-96	5.42			42.61
	47.97	22-Jan-97	3.08			44.95
	47.97	21-Feb-97	2.60			45.43
	47.97	25-Mar-97	2.98			45.05
	47.97	23-Apr-97	4.60			43.43
	47.97	24-Apr-97	4.78			43.25
	47.97	13-May-97	2.89			45.14
	47.97	20-Jun-97	5.45			42.58
	47.97	25-Jun-97	2.59			45.44
	47.97	1-Jul-97	4.48			43.55
	47.97	24-Jul-97	7.42			40.61
	47.97	16-Aug-97	8.42			39.61
	47.97	22-Aug-97	9.20			38.83
	47.97	25-Sep-97	4.53			43.50
	47.97	22-Oct-97	4.95			43.08
	47.97	25-Nov-97	4.97			43.06
	47.97	19-Dec-97	4.33			43.70
	47.97	20-Jan-98	3.05			44.98
	47.97	3-Mar-98	2.88			45.15

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-02	47.97	18-Mar-98	2.66			45.37
	47.97	24-Apr-98	7.09			40.94
	47.97	21-May-98	7.00			41.03
	47.97	30-Jul-98	8.11			39.92
	47.97	25-Aug-98	7.33			40.70
	47.97	21-Sep-98	4.18			43.85
	47.97	26-Oct-98	6.85			41.18
	47.97	23-Nov-98	4.63			43.40
	47.97	29-Jan-99	3.51			44.52
	47.97	26-Feb-99	3.61			44.42
	47.97	16-Mar-99	3.55			44.48
	47.97	29-Apr-99	3.76			44.27
	47.97	1-Jun-99	3.76			44.27
	47.97	30-Jul-99	4.61			43.42
	47.97	27-Aug-99	3.96			44.07
	47.97	27-Sep-99	10.12			37.91
	47.97	29-Oct-99	11.33			36.70
	47.97	29-Dec-99	10.66			37.37
	47.97	4-Feb-00	13.19			34.84
	47.97	25-Feb-00	9.57			38.46
	47.97	27-Mar-00	7.73			40.30
	47.97	7-Apr-00	7.30			40.73
	47.97	31-May-00	7.33			40.70
	47.97	1-Jun-00	7.31			40.72
	47.97	28-Jul-00	7.35			40.68
	47.97	30-Aug-00	10.55			37.48
	47.97	19-Sep-00	11.93			36.10
	47.97	27-Oct-00	9.04			38.99
	47.97	21-Nov-00	8.66			39.37
	47.97	1-May-01	6.91			41.12
	47.97	1-Oct-01	8.22			39.81
	47.97	11-Mar-02	3.33			44.70
	47.97	23-Sep-02	3.16			44.87
	47.97	10-Mar-03	2.54			45.43
	47.97	23-Sep-03	3.29			44.68
	47.97	15-Mar-04	2.87			45.10
	47.97	13-Sep-04	8.71			39.26
	47.97	18-Jul-05	2.98			44.99
	47.97	4-Jan-06	8.77			39.20
	47.97	27-Jul-06	2.87			45.10
	47.97	23-Jan-07	2.34			45.63
	47.97	7-Mar-07	2.23			45.74
	47.97	27-Jul-07	4.40			43.57
	47.97	28-Jan-08	2.42			45.55
	47.97	16-Jul-08	7.72			40.25
	47.97	22-Jan-09	6.31			41.66
	47.97	22-Jul-09	7.56			40.41
	47.97	8-Jan-10	3.91			44.06
	47.97	12-Jul-10	4.37			43.60
MW-03	48.34	2-Sep-93	8.17			40.17
	48.34	21-Dec-93	3.81			44.53
	48.34	24-Mar-94	4.74			43.60
	48.34	22-Jun-94	6.35			41.99
	48.34	28-Sep-94	7.56			40.78
	48.34	13-Oct-94	8.21			40.13
	48.34	24-Jan-95	3.18			45.16
	48.34	11-Apr-95	3.22			45.12
	48.34	11-Jul-95	7.90			40.44
	48.34	23-Jan-96	6.27			42.07

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-03	48.34	19-Jul-96	8.77			39.57
	48.34	17-Sep-96	9.31			39.03
	48.34	31-Oct-96	7.61			40.73
	48.34	22-Nov-96	9.48			38.86
	48.34	27-Dec-96	6.14			42.20
	48.34	22-Jan-97	5.68			42.66
	48.34	21-Feb-97	3.13			45.21
	48.34	25-Mar-97	3.48			44.86
	48.34	23-Apr-97	5.17			43.17
	48.34	24-Apr-97	5.25			43.09
	48.34	13-May-97	3.41			44.93
	48.34	20-Jun-97	5.91			42.43
	48.34	25-Jun-97	3.11			45.23
	48.34	1-Jul-97	4.91			43.43
	48.34	24-Jul-97	7.90			40.44
	48.34	16-Aug-97	8.91			39.43
	48.34	22-Aug-97	9.65			38.69
	48.34	25-Sep-97	6.96			41.38
	48.34	22-Oct-97	5.50			42.84
	48.34	25-Nov-97	5.55			42.79
	48.34	19-Dec-97	5.10			43.24
	48.34	20-Jan-98	3.58			44.76
	48.34	3-Mar-98	3.37			44.97
	48.34	18-Mar-98	3.16			45.18
	48.34	24-Apr-98	7.54			40.80
	48.34	21-May-98	7.50			40.84
	48.34	30-Jul-98	8.44			39.90
	48.34	25-Aug-98	7.56			40.78
	48.34	21-Sep-98	5.28			43.06
	48.34	26-Oct-98	6.96			41.38
	48.34	23-Nov-98	5.11			43.23
	48.34	29-Jan-99	4.21			44.13
	48.34	26-Feb-99	4.32			44.02
	48.34	16-Mar-99	4.16			44.18
	48.34	29-Apr-99	4.33			44.01
	48.34	1-Jun-99	4.39			43.95
	48.34	30-Jul-99	5.88			42.46
	48.34	27-Aug-99	4.57			43.77
	48.34	27-Sep-99	10.48			37.86
	48.34	29-Oct-99	11.61			36.73
	48.34	29-Dec-99	10.11			38.23
	48.34	4-Feb-00	13.22			35.12
	48.34	25-Feb-00	9.14			39.20
	48.34	27-Mar-00	8.06			40.28
	48.34	7-Apr-00	7.64			40.70
	48.34	31-May-00	7.70			40.64
	48.34	1-Jun-00	7.66			40.68
	48.34	28-Jul-00	7.71			40.63
	48.34	30-Aug-00	10.59			37.75
	48.34	19-Sep-00	12.29			36.05
	48.34	27-Oct-00	9.09			39.25
	48.34	21-Nov-00	9.11			39.23
	48.34	1-May-01	7.26			41.08
	48.34	1-Oct-01	7.57			40.77
	48.34	11-Mar-02	7.40			40.94
	48.34	23-Sep-02	4.60			43.74

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-03	48.34	10-Mar-03	2.89			45.45
	48.34	23-Sep-03	3.74			44.60
	48.34	15-Mar-04	3.27			45.07
	48.34	13-Sep-04	9.03			39.31
	48.34	18-Jul-05	3.94			44.40
	48.34	4-Jan-06	9.13			39.21
	48.34	27-Jul-06	3.30			45.04
	48.34	7-Mar-07	2.62			45.72
	48.34	27-Jul-07	3.74			44.60
	48.34	30-Jan-08	2.85			45.49
	48.34	16-Jul-08	7.96			40.38
	48.34	4-Feb-09	7.18			41.16
	48.34	24-Jul-09	7.63			40.71
	48.34	8-Jan-10	5.06			43.28
	48.34	12-Jul-10	3.86			44.48
MW-04	49.85	2-Sep-93	8.57			41.28
	49.85	21-Dec-93	5.42			44.43
	49.85	24-Mar-94	5.85			44.00
	49.85	22-Jun-94	6.77			43.08
	49.85	28-Sep-94	8.18			41.67
	49.85	13-Oct-94	8.93			40.92
	49.85	24-Jan-95	4.72			45.13
	49.85	11-Apr-95	4.57			45.28
	49.85	11-Jul-95	6.47			43.38
	49.85	23-Jan-96	7.85			42.00
	49.85	19-Jul-96	9.62			40.23
	49.85	17-Sep-96	10.09			39.76
	49.85	31-Oct-96	7.93			41.92
	49.85	22-Nov-96	10.62			39.23
	49.85	27-Dec-96	8.06			41.79
	49.85	22-Jan-97	6.07			43.78
	49.85	21-Feb-97	4.86			44.99
	49.85	25-Mar-97	5.16			44.69
	49.85	23-Apr-97	6.25			43.60
	49.85	24-Apr-97	6.45			43.40
	49.85	13-May-97	5.07			44.78
	49.85	20-Jun-97	6.69			43.16
	49.85	25-Jun-97	4.68			45.17
	49.85	1-Jul-97	5.91			43.94
	49.85	24-Jul-97	8.61			41.24
	49.85	16-Aug-97	9.62			40.23
	49.85	22-Aug-97	10.35			39.50
	49.85	25-Sep-97	8.13			41.72
	49.85	22-Oct-97	7.23			42.62
	49.85	25-Nov-97	7.25			42.60
	49.85	19-Dec-97	6.76			43.09
	49.85	20-Jan-98	5.40			44.45
	49.85	3-Mar-98	5.00			44.85
	49.85	18-Mar-98	4.82			45.03
	49.85	24-Apr-98	8.63			41.22
	49.85	21-May-98	9.30			40.55
	49.85	30-Jul-98	10.19			39.66
	49.85	25-Aug-98	9.05			40.80
	49.85	21-Sep-98	7.05			42.80
	49.85	26-Oct-98	8.12			41.73
	49.85	23-Nov-98	6.01			43.84
	49.85	29-Jan-99	5.19			44.66
	49.85	26-Feb-99	5.22			44.63
	49.85	16-Mar-99	6.21			43.64

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-04	49.85	29-Apr-99	6.33			43.52
	49.85	1-Jun-99	6.39			43.46
	49.85	30-Jul-99	7.79			42.06
	49.85	27-Aug-99	6.51			43.34
	49.85	27-Sep-99	11.32			38.53
	49.85	29-Oct-99	12.21			37.64
	49.85	29-Dec-99	11.52			38.33
	49.85	4-Feb-00	14.33			35.52
	49.85	25-Feb-00	10.63			39.22
	49.85	27-Mar-00	9.38			40.47
	49.85	7-Apr-00	9.09			40.76
	49.85	31-May-00	9.13			40.72
	49.85	1-Jun-00	9.10			40.75
	49.85	28-Jul-00	9.18			40.67
	49.85	30-Aug-00	12.17			37.68
	49.85	19-Sep-00	13.39			36.46
	49.85	27-Oct-00	10.69			39.16
	49.85	21-Nov-00	9.61			40.24
	49.85	1-May-01	8.41			41.44
	49.85	1-Oct-01	8.68			41.17
	49.85	11-Mar-02	5.41			44.44
	49.85	23-Sep-02	5.29			44.56
	49.85	10-Mar-03	4.36			45.49
	49.85	23-Sep-03	5.28			44.57
	49.85	15-Mar-04	4.80			45.05
	49.85	13-Sep-04	9.80			40.05
	49.85	18-Jul-05	5.84			44.01
	49.85	4-Jan-06	10.48			39.37
	49.85	27-Jul-06	5.30			44.55
	49.85	7-Mar-07	4.10			45.75
	49.85	27-Jul-07	5.36			44.49
	49.85	29-Jan-08	4.18			45.67
	49.85	16-Jul-08	8.66			41.19
	49.85	4-Feb-09	8.93			40.92
	49.85	24-Jul-09	9.27			40.58
	49.85	8-Jan-10	6.34			43.51
	49.85	12-Jul-10	5.02			44.83
MW-05	49.24	2-Sep-93	4.90			44.34
	49.24	21-Dec-93	2.21			47.03
	49.24	24-Mar-94	2.30			46.94
	49.24	22-Jun-94	2.80			46.44
	49.24	28-Sep-94	3.90			45.34
	49.24	13-Oct-94	5.05			44.19
	49.24	24-Jan-95	1.36			47.88
	49.24	11-Apr-95	3.90			45.34
	49.24	11-Jul-95	5.33			43.91
	49.24	23-Jan-96	7.42			41.82
	49.24	19-Jul-96	8.61			40.63
	49.24	17-Sep-96	9.01			40.23
	49.24	31-Oct-96	7.84			41.40
	49.24	22-Nov-96	9.68			39.56
	49.24	27-Dec-96	7.66			41.58
	49.24	22-Jan-97	5.89			43.35
	49.24	21-Feb-97	4.45			44.79
	49.24	25-Mar-97	4.65			44.59
	49.24	23-Apr-97	5.53			43.71
	49.24	24-Apr-97	5.68			43.56
	49.24	13-May-97	4.39			44.85
	49.24	20-Jun-97	5.67			43.57

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-05	49.24	25-Jun-97	3.97			45.27
	49.24	1-Jul-97	5.06			44.18
	49.24	24-Jul-97	7.46			41.78
	49.24	16-Aug-97	8.57			40.67
	49.24	22-Aug-97	9.20			40.04
	49.24	25-Sep-97	7.28			41.96
	49.24	22-Oct-97	6.70			42.54
	49.24	25-Nov-97	6.70			42.54
	49.24	19-Dec-97	6.26			42.98
	49.24	20-Jan-98	5.05			44.19
	49.24	4-Mar-98	4.54			44.70
	49.24	18-Mar-98	4.36			44.88
	49.24	24-Apr-98	7.67			41.57
	49.24	21-May-98	8.80			40.44
	49.24	30-Jul-98	9.90			39.34
	49.24	25-Aug-98	8.86			40.38
	49.24	21-Sep-98	6.59			42.65
	49.24	26-Oct-98	7.77			41.47
	49.24	23-Nov-98	5.79			43.45
	49.24	29-Jan-99	4.88			44.36
	49.24	26-Feb-99	4.96			44.28
	49.24	16-Mar-99	5.81			43.43
	49.24	29-Apr-99	5.91			43.33
	49.24	1-Jun-99	5.99			43.25
	49.24	30-Jul-99	7.00			42.24
	49.24	27-Aug-99	6.13			43.11
	49.24	27-Sep-99	10.17			39.07
	49.24	29-Oct-99	11.65			37.59
	49.24	29-Dec-99	10.90			38.34
	49.24	4-Feb-00	13.77			35.47
	49.24	25-Feb-00	9.46			39.78
	49.24	27-Mar-00	8.62			40.62
	49.24	7-Apr-00	8.20			41.04
	49.24	31-May-00	8.26			40.98
	49.24	1-Jun-00	8.21			41.03
	49.24	28-Jul-00	8.26			40.98
	49.24	30-Aug-00	11.33			37.91
	49.24	19-Sep-00	12.33			36.91
	49.24	27-Oct-00	9.94			39.30
	49.24	21-Nov-00	9.21			40.03
	49.24	1-May-01	7.47			41.77
	49.24	1-Oct-01	7.79			41.45
	49.24	11-Mar-02	4.92			44.32
	49.24	23-Sep-02	4.76			44.48
	49.24	10-Mar-03	3.77			45.47
	49.24	23-Sep-03	4.61			44.63
	49.24	15-Mar-04	4.22			45.02
	49.24	13-Sep-04	8.58			40.66
	49.24	18-Jul-05	5.61			43.63
	49.24	4-Jan-06	9.76			39.48
	49.24	27-Jul-06	4.85			44.39
	49.24	7-Mar-07	5.94			43.30
	49.24	27-Jul-07	4.53			44.71
	49.24	29-Jan-08	3.71			45.53
	49.24	15-Jul-08	7.77			41.47
	49.24	4-Feb-09	8.33			40.91
	49.24	24-Jul-09	8.67			40.57
	49.24	8-Jan-10	6.06			43.18
	49.24	12-Jul-10	4.86			44.38

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-07	48.86	2-Sep-93	8.09			40.77
	48.86	21-Dec-93	4.60			44.26
	48.86	24-Mar-94	5.06			43.80
	48.86	22-Jun-94	6.03			42.83
	48.86	28-Sep-94	7.52			41.34
	48.86	13-Oct-94	8.13			40.73
	48.86	24-Jan-95	3.81			45.05
	48.86	11-Apr-95	3.41			45.45
	48.86	11-Jul-95	5.74			43.12
	48.86	23-Jan-96	6.99			41.87
	48.86	19-Jul-96	8.89			39.97
	48.86	17-Sep-96	9.41			39.45
	48.86	31-Oct-96	8.04			40.82
	48.86	22-Nov-96	9.94			38.92
	48.86	27-Dec-96	7.30			41.56
	48.86	22-Jan-97	5.25			43.61
	48.86	21-Feb-97	4.00			44.86
	48.86	25-Mar-97	4.32			44.54
	48.86	23-Apr-97	5.51			43.35
	48.86	24-Apr-97	5.67			43.19
	48.86	13-May-97	4.26			44.60
	48.86	20-Jun-97	6.00			42.86
	48.86	25-Jun-97	3.86			45.00
	48.86	1-Jul-97	5.21			43.65
	48.86	24-Jul-97	7.99			40.87
	48.86	16-Aug-97	8.92			39.94
	48.86	22-Aug-97	9.72			39.14
	48.86	25-Sep-97	7.50			41.36
	48.86	22-Oct-97	6.48			42.38
	48.86	25-Nov-97	6.50			42.36
	48.86	19-Dec-97	6.12			42.74
	48.86	20-Jan-98	4.52			44.34
	48.86	4-Mar-98	4.14			44.72
	48.86	18-Mar-98	3.94			44.92
	48.86	24-Apr-98	7.85			41.01
	48.86	21-May-98	8.61			40.25
	48.86	30-Jul-98	9.54			39.32
	48.86	25-Aug-98	8.63			40.23
	48.86	21-Sep-98	6.34			42.52
	48.86	26-Oct-98	7.56			41.30
	48.86	23-Nov-98	5.91			42.95
	48.86	29-Jan-99	4.71			44.15
	48.86	26-Feb-99	4.76			44.10
	48.86	16-Mar-99	5.32			43.54
	48.86	29-Apr-99	5.41			43.45
	48.86	1-Jun-99	5.49			43.37
	48.86	30-Jul-99	6.98			41.88
	48.86	27-Aug-99	5.61			43.25
	48.86	27-Sep-99	10.64			38.22
	48.86	29-Oct-99	11.56			37.30
	48.86	29-Dec-99	9.90			38.96
	48.86	4-Feb-00	14.21			34.65
	48.86	25-Feb-00	8.86			40.00
	48.86	27-Mar-00	8.62			40.24
	48.86	7-Apr-00	8.15			40.71
	48.86	31-May-00	8.21			40.65

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-07	48.86	1-Jun-00	8.22			40.64
	48.86	28-Jul-00	8.29			40.57
	48.86	30-Aug-00	11.55			37.31
	48.86	19-Sep-00	12.65			36.21
	48.86	27-Oct-00	10.00			38.86
	48.86	21-Nov-00	9.46			39.40
	48.86	1-May-01	7.64			41.22
	48.86	1-Oct-01	8.00			40.86
	48.86	11-Mar-02	4.56			44.30
	48.86	23-Sep-02	4.69			44.17
	48.86	10-Mar-03	3.52			45.34
	48.86	23-Sep-03	4.70			44.16
	48.86	15-Mar-04	3.89			44.97
	48.86	13-Sep-04	9.04			39.82
	48.86	18-Jul-05	5.27			43.59
	48.86	4-Jan-06	9.91			38.95
	48.86	27-Jul-06	4.60			44.26
	48.86	23-Jan-07	3.46			45.40
	48.86	7-Mar-07	3.82			45.04
	48.86	27-Jul-07	4.94			43.92
	48.86	29-Jan-08	3.39			45.47
	48.86	16-Jul-08	7.94			40.92
	48.86	22-Jan-09	7.49			41.37
	48.86	24-Jul-09	NM			NM
	48.86	8-Jan-10	4.02			44.84
	48.86	12-Jul-10	4.72			44.14
MW-08	49.33	2-Sep-93	8.18			41.19
	49.33	21-Dec-93	5.02			44.35
	49.33	24-Mar-94	5.53			43.84
	49.33	22-Jun-94	6.38			42.99
	49.33	28-Sep-94	7.72			41.65
	49.33	13-Oct-94	8.43			40.94
	49.33	24-Jan-95	4.15			45.22
	49.33	11-Apr-95	4.02			45.35
	49.33	11-Jul-95	5.95			43.42
	49.33	23-Jan-96	7.20			42.17
	49.33	19-Jul-96	9.06			40.31
	49.33	17-Sep-96	9.51			39.86
	49.33	31-Oct-96	7.99			41.38
	49.33	22-Nov-96	9.98			39.39
	49.33	27-Dec-96	7.24			42.13
	49.33	22-Jan-97	5.25			44.12
	49.33	21-Feb-97	4.21			45.16
	49.33	25-Mar-97	4.48			44.89
	49.33	23-Apr-97	5.61			43.76
	49.33	24-Apr-97	5.76			43.61
	49.33	13-May-97	4.45			44.92
	49.33	20-Jun-97	6.09			43.28
	49.33	25-Jun-97	4.56			44.81
	49.33	1-Jul-97	5.06			44.31
	49.33	24-Jul-97	7.97			41.40
	49.33	16-Aug-97	8.05			41.32
	49.33	22-Aug-97	9.73			39.64
	49.33	25-Sep-97	7.57			41.80
	49.33	22-Oct-97	6.43			42.94
	49.33	25-Nov-97	6.48			42.89
	49.33	19-Dec-97	5.22			44.15
	49.33	20-Jan-98	4.70			44.67
	49.33	4-Mar-98	4.38			44.99

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-08	49.33	18-Mar-98	4.18			45.19
	49.33	24-Apr-98	8.00			41.37
	49.33	21-May-98	8.45			40.92
	49.33	30-Jul-98	9.33			40.04
	49.33	25-Aug-98	8.46			40.91
	49.33	21-Sep-98	6.31			43.06
	49.33	26-Oct-98	7.66			41.71
	49.33	23-Nov-98	5.96			43.41
	49.33	29-Jan-99	4.80			44.57
	49.33	26-Feb-99	4.89			44.48
	49.33	16-Mar-99	5.45			43.92
	49.33	29-Apr-99	5.66			43.71
	49.33	1-Jun-99	5.66			43.71
	49.33	30-Jul-99	7.20			42.17
	49.33	27-Aug-99	5.85			43.52
	49.33	27-Sep-99	10.78			38.59
	49.33	29-Oct-99	11.76			37.61
	49.33	29-Dec-99	11.03			38.34
	49.33	4-Feb-00	14.66			34.71
	49.33	25-Feb-00	10.33			39.04
	49.33	27-Mar-00	8.75			40.62
	49.33	7-Apr-00	8.37			41.00
	49.33	31-May-00	8.40			40.97
	49.33	1-Jun-00	8.36			41.01
	49.33	28-Jul-00	8.40			40.97
	49.33	30-Aug-00	11.29			38.08
	49.33	19-Sep-00	12.82			36.55
	49.33	27-Oct-00	12.63			36.74
	49.33	21-Nov-00	9.64			39.73
	49.33	1-May-01	7.83			41.54
	49.33	1-Oct-01	8.05			41.32
	49.33	11-Mar-02	4.75			44.62
	49.33	23-Sep-02	4.69			44.68
	49.33	10-Mar-03	3.84			45.49
	49.33	23-Sep-03	4.73			44.60
	49.33	15-Mar-04	4.31			45.02
	49.33	13-Sep-04	9.31			40.02
	49.33	18-Jul-05	5.32			44.01
	49.33	4-Jan-06	10.63			38.70
	49.33	27-Jul-06	4.79			44.54
	49.33	22-Jan-07	3.81			45.52
	49.33	7-Mar-07	3.96			45.37
	49.33	27-Jul-07	5.06			44.27
	49.33	29-Jan-08	3.71			45.62
	49.33	16-Jul-08	8.32			41.01
	49.33	22-Jan-09	7.71			41.62
	49.33	24-Jul-09	NM			NM
	49.33	8-Jan-10	4.17			45.16
	49.33	12-Jul-10	4.96			44.37
MW-09	49.26	2-Sep-93	7.43			41.86
	49.26	21-Dec-93	4.89			44.40
	49.26	24-Mar-94	4.92			44.37
	49.26	22-Jun-94	5.51			43.78
	49.26	28-Sep-94	6.90			42.39
	49.26	13-Oct-94	7.66			41.63
	49.26	24-Jan-95	4.10			45.19
	49.26	11-Apr-95	3.74			45.55
	49.26	11-Jul-95	5.08			44.21
	49.26	23-Jan-96	7.09			42.20

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-09	49.26	19-Jul-96	8.27			41.02
	49.26	17-Sep-96	8.58			40.71
	49.26	31-Oct-96	7.27			42.02
	49.26	22-Nov-96	9.17			40.12
	49.26	27-Dec-96	7.05			42.24
	49.26	22-Jan-97	5.42			43.87
	49.26	21-Feb-97	4.09			45.20
	49.26	25-Mar-97	4.17			45.12
	49.26	23-Apr-97	5.05			44.24
	49.26	24-Apr-97	5.21			44.08
	49.26	13-May-97	4.16			45.13
	49.26	20-Jun-97	5.32			43.97
	49.26	25-Jun-97	3.80			45.49
	49.26	1-Jul-97	4.57			44.72
	49.26	24-Jul-97	7.03			42.26
	49.26	16-Aug-97	8.26			41.03
	49.26	22-Aug-97	8.67			40.62
	49.26	25-Sep-97	6.99			42.30
	49.26	22-Oct-97	6.10			43.19
	49.26	25-Nov-97	6.12			43.17
	49.26	19-Dec-97	5.62			43.67
	49.26	20-Jan-98	4.60			44.69
	49.26	4-Mar-98	4.15			45.14
	49.26	18-Mar-98	4.02			45.27
	49.26	24-Apr-98	7.32			41.97
	49.26	21-May-98	8.10			41.19
	49.26	30-Jul-98	9.12			40.17
	49.26	25-Aug-98	8.41			40.88
	49.26	21-Sep-98	6.11			43.18
	49.26	26-Oct-98	7.61			41.68
	49.26	23-Nov-98	5.43			43.86
	49.26	29-Jan-99	4.60			44.69
	49.26	26-Feb-99	4.68			44.61
	49.26	16-Mar-99	5.46			43.83
	49.26	29-Apr-99	5.66			43.63
	49.26	1-Jun-99	5.66			43.63
	49.26	30-Jul-99	7.11			42.18
	49.26	27-Aug-99	5.86			43.43
	49.26	27-Sep-99	9.81			39.48
	49.26	29-Oct-99	10.63			38.66
	49.26	29-Dec-99	9.99			39.30
	49.26	4-Feb-00	12.44			36.85
	49.26	25-Feb-00	8.88			40.41
	49.26	27-Mar-00	8.22			41.07
	49.26	7-Apr-00	8.10			41.19
	49.26	31-May-00	8.15			41.14
	49.26	1-Jun-00	8.00			41.29
	49.26	28-Jul-00	8.11			41.18
	49.26	30-Aug-00	11.10			38.19
	49.26	19-Sep-00	11.91			37.38
	49.26	27-Oct-00	9.84			39.45
	49.26	21-Nov-00	8.89			40.40
	49.26	1-May-01	7.16			42.13
	49.26	1-Oct-01	7.39			41.90
	49.26	11-Mar-02	4.61			44.68
	49.26	23-Sep-02	4.45			44.84

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-09	49.26	10-Mar-03	3.59			45.67
	49.26	23-Sep-03	4.31			44.95
	49.26	15-Mar-04	4.18			45.08
	49.26	13-Sep-04	8.39			40.87
	49.26	18-Jul-05	5.53			43.73
	49.26	4-Jan-06	9.46			39.80
	49.26	27-Jul-06	4.85			44.41
	49.26	7-Mar-07	5.58			43.68
	49.26	27-Jul-07	3.78			45.48
	49.26	29-Jan-08	3.52			45.74
	49.26	15-Jul-08	7.04			42.22
	49.26	4-Feb-09	8.01			41.25
	49.26	24-Jul-09	8.34			40.92
	49.26	8-Jan-10	5.89			43.37
	49.26	12-Jul-10	4.32			44.94
MW-10A	49.86	28-Sep-94	8.69			41.21
	49.86	13-Oct-94	9.36			40.54
	49.86	24-Jan-95	4.62			45.28
	49.86	11-Apr-95	4.60			45.30
	49.86	11-Jul-95	7.00			42.90
	49.86	23-Jan-96	7.74			42.16
	49.86	19-Jul-96	9.98			39.92
	49.86	17-Sep-96	10.54			39.36
	49.86	31-Oct-96	7.94			41.96
	49.86	22-Nov-96	10.82			39.08
	49.86	27-Dec-96	7.81			42.09
	49.86	22-Jan-97	5.45			44.45
	49.86	21-Feb-97	4.63			45.27
	49.86	25-Mar-97	5.01			44.89
	49.86	23-Apr-97	6.39			43.51
	49.86	24-Apr-97	6.58			43.32
	49.86	13-May-97	4.93			44.97
	49.86	20-Jun-97	7.08			42.82
	49.86	25-Jun-97	4.58			45.32
	49.86	1-Jul-97	6.13			43.77
	49.86	24-Jul-97	9.11			40.79
	49.86	16-Aug-97	10.10			39.80
	49.86	22-Aug-97	10.81			39.09
	49.86	25-Sep-97	8.47			41.43
	49.86	22-Oct-97	7.02			42.88
	49.86	25-Nov-97	7.05			42.85
	49.86	19-Dec-97	6.89			43.01
	49.86	20-Jan-98	5.10			44.80
	49.86	3-Mar-98	4.87			45.03
	49.86	18-Mar-98	4.65			45.25
	49.86	24-Apr-98	8.84			41.06
	49.86	21-May-98	9.10			40.80
	49.86	30-Jul-98	10.23			39.67
	49.86	25-Aug-98	9.11			40.79
	49.86	21-Sep-98	6.82			43.08
	49.86	26-Oct-98	8.19			41.71
	49.86	23-Nov-98	6.12			43.78
	49.86	29-Jan-99	5.61			44.29
	49.86	26-Feb-99	5.69			44.21
	49.86	16-Mar-99	5.91			43.99
	49.86	29-Apr-99	6.11			43.79
	49.86	1-Jun-99	6.10			43.80
	49.86	30-Jul-99	7.70			42.20
	49.86	27-Aug-99	6.31			43.59

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-10A	49.86	27-Sep-99	11.73			38.17
	49.86	29-Oct-99	12.69			37.21
	49.86	29-Dec-99	12.00			37.90
	49.86	4-Feb-00	14.30			35.60
	49.86	25-Feb-00	11.44			38.46
	49.86	27-Mar-00	9.57			40.33
	49.86	7-Apr-00	9.27			40.63
	49.86	31-May-00	9.31			40.59
	49.86	1-Jun-00	9.10			40.80
	49.86	28-Jul-00	9.30			40.60
	49.86	30-Aug-00	12.09			37.81
	49.86	19-Sep-00	13.70			36.20
	49.86	27-Oct-00	10.69			39.21
	49.86	21-Nov-00	10.49			39.41
	49.86	1-May-01	8.64			41.26
	49.86	1-Oct-01	8.93			40.97
	49.86	11-Mar-02	5.30			44.60
	49.86	23-Sep-02	5.19			44.71
	49.86	10-Mar-03	4.43			45.43
	49.86	23-Sep-03	5.31			44.55
	49.86	15-Mar-04	4.69			45.17
	49.86	13-Sep-04	10.30			39.56
	49.86	18-Jul-05	5.57			44.29
	49.86	4-Jan-06	9.68			40.18
	49.86	27-Jul-06	5.01			44.85
	49.86	23-Jan-07	4.29			45.57
	49.86	7-Mar-07	4.13			45.73
	49.86	27-Jul-07	6.03			43.83
	49.86	28-Jan-08	4.22			45.64
	49.86	16-Jul-08	9.31			40.55
	49.86	22-Jan-09	8.27			41.59
	49.86	24-Jul-09	NM			NM
	49.86	8-Jan-10	4.64			45.22
	49.86	12-Jul-10	5.23			44.63
MW-10B	49.94	28-Sep-94	8.77			41.20
	49.94	13-Oct-94	9.45			40.52
	49.94	24-Jan-95	4.72			45.25
	49.94	11-Apr-95	4.72			45.25
	49.94	11-Jul-95	7.13			42.84
	49.94	23-Jan-96	7.84			42.13
	49.94	19-Jul-96	10.27			39.70
	49.94	17-Sep-96	10.64			39.33
	49.94	31-Oct-96	8.01			41.96
	49.94	22-Nov-96	10.93			39.04
	49.94	27-Dec-96	7.99			41.98
	49.94	22-Jan-97	5.72			44.25
	49.94	21-Feb-97	4.78			45.19
	49.94	25-Mar-97	5.13			44.84
	49.94	23-Apr-97	6.52			43.45
	49.94	24-Apr-97	6.71			43.26
	49.94	13-May-97	5.09			44.88
	49.94	20-Jun-97	7.21			42.76
	49.94	25-Jun-97	4.71			45.26
	49.94	1-Jul-97	6.27			43.70
	49.94	24-Jul-97	9.15			40.82
	49.94	16-Aug-97	10.19			39.78
	49.94	22-Aug-97	10.92			39.05
	49.94	25-Sep-97	8.69			41.28
	49.94	22-Oct-97	7.18			42.79

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-10B	49.94	25-Nov-97	7.21			42.76
	49.94	19-Dec-97	6.56			43.41
	49.94	20-Jan-98	5.25			44.72
	49.94	3-Mar-98	5.00			44.97
	49.94	18-Mar-98	4.79			45.18
	49.94	24-Apr-98	8.95			41.02
	49.94	21-May-98	9.30			40.67
	49.94	30-Jul-98	10.30			39.67
	49.94	25-Aug-98	9.20			40.77
	49.94	21-Sep-98	7.06			42.91
	49.94	26-Oct-98	8.31			41.66
	49.94	23-Nov-98	6.25			43.72
	49.94	29-Jan-99	5.71			44.26
	49.94	26-Feb-99	5.76			44.21
	49.94	16-Mar-99	6.05			43.92
	49.94	29-Apr-99	6.10			43.87
	49.94	1-Jun-99	6.10			43.87
	49.94	30-Jul-99	7.61			42.36
	49.94	27-Aug-99	6.33			43.64
	49.94	27-Sep-99	11.90			38.07
	49.94	29-Oct-99	12.60			37.37
	49.94	29-Dec-99	12.10			37.87
	49.94	4-Feb-00	14.29			35.68
	49.94	25-Feb-00	11.15			38.82
	49.94	27-Mar-00	9.67			40.30
	49.94	7-Apr-00	9.32			40.65
	49.94	31-May-00	9.38			40.59
	49.94	1-Jun-00	9.21			40.76
	49.94	28-Jul-00	9.33			40.64
	49.94	30-Aug-00	12.11			37.86
	49.94	19-Sep-00	13.77			36.20
	49.94	27-Oct-00	10.63			39.34
	49.94	21-Nov-00	10.64			39.33
	49.94	1-May-01	8.75			41.22
	49.94	1-Oct-01	9.12			40.85
	49.94	11-Mar-02	5.47			44.50
	49.94	23-Sep-02	5.40			44.57
	49.94	10-Mar-03	4.59			45.35
	49.94	23-Sep-03	5.58			44.36
	49.94	15-Mar-04	5.78			44.16
	49.94	13-Sep-04	10.41			39.53
	49.94	18-Jul-05	5.97			43.97
	49.94	4-Jan-06	10.75			39.19
	49.94	27-Jul-06	5.73			44.21
	49.94	23-Jan-07	4.45			45.49
	49.94	7-Mar-07	4.61			45.33
	49.94	27-Jul-07	6.15			43.79
	49.94	28-Jan-08	4.44			45.50
	49.94	16-Jul-08	9.42			40.52
	49.94	22-Jan-09	8.39			41.55
	49.94	24-Jul-09	NM			NM
	49.94	8-Jan-10	4.91			45.03
	49.94	12-Jul-10	5.33			44.61
MW-11A	50.05	28-Sep-94	8.66			41.38
	50.05	13-Oct-94	9.35			40.69
	50.05	24-Jan-95	4.88			45.16
	50.05	11-Apr-95	4.81			45.23
	50.05	11-Jul-95	6.67			43.37
	50.05	23-Jan-96	8.01			42.03

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-11A	50.05	19-Jul-96	10.09			39.95
	50.05	17-Sep-96	10.56			39.48
	50.05	31-Oct-96	8.16			41.88
	50.05	22-Nov-96	10.98			39.06
	50.05	27-Dec-96	8.21			41.83
	50.05	22-Jan-97	6.06			43.98
	50.05	21-Feb-97	4.98			45.06
	50.05	25-Mar-97	5.32			44.72
	50.05	23-Apr-97	6.59			43.45
	50.05	24-Apr-97	6.77			43.27
	50.05	13-May-97	5.31			44.73
	50.05	20-Jun-97	7.15			42.89
	50.05	25-Jun-97	4.88			45.16
	50.05	1-Jul-97	6.29			43.75
	50.05	24-Jul-97	9.12			40.92
	50.05	16-Aug-97	10.11			39.93
	50.05	22-Aug-97	10.82			39.22
	50.05	25-Sep-97	8.70			41.34
	50.05	22-Oct-97	7.40			42.64
	50.05	25-Nov-97	7.41			42.63
	50.05	19-Dec-97	6.10			43.94
	50.05	20-Jan-98	5.49			44.55
	50.05	3-Mar-98	5.16			44.88
	50.05	18-Mar-98	4.96			45.08
	50.05	24-Apr-98	8.98			41.06
	50.05	21-May-98	9.40			40.64
	50.05	30-Jul-98	10.56			39.48
	50.05	25-Aug-98	9.32			40.72
	50.05	21-Sep-98	7.28			42.76
	50.05	26-Oct-98	8.43			41.61
	50.05	23-Nov-98	6.41			43.63
	50.05	29-Jan-99	5.31			44.73
	50.05	26-Feb-99	5.39			44.65
	50.05	16-Mar-99	6.32			43.72
	50.05	29-Apr-99	6.51			43.53
	50.05	1-Jun-99	6.57			43.47
	50.05	30-Jul-99	8.00			42.04
	50.05	27-Aug-99	6.79			43.25
	50.05	27-Sep-99	11.73			38.31
	50.05	29-Oct-99	12.81			37.23
	50.05	29-Dec-99	12.11			37.93
	50.05	4-Feb-00	14.33			35.71
	50.05	25-Feb-00	11.10			38.94
	50.05	27-Mar-00	9.66			40.38
	50.05	7-Apr-00	9.40			40.64
	50.05	31-May-00	9.50			40.54
	50.05	1-Jun-00	9.30			40.74
	50.05	28-Jul-00	9.47			40.57
	50.05	30-Aug-00	12.44			37.60
	50.05	19-Sep-00	13.74			36.30
	50.05	27-Oct-00	11.01			39.03
	50.05	21-Nov-00	10.69			39.35
	50.05	1-May-01	8.78			41.26
	50.05	1-Oct-01	9.12			40.93
	50.05	11-Mar-02	5.59			44.45
	50.05	23-Sep-02	5.60			44.44

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-11A	50.05	10-Mar-03	4.66			45.39
	50.05	23-Sep-03	5.73			44.32
	50.05	15-Mar-04	4.99			45.06
	50.05	13-Sep-04	10.28			39.77
	50.05	18-Jul-05	6.66			43.39
	50.05	5-Jan-06	10.85			39.20
	50.05	27-Jul-06	5.02			45.03
	50.05	23-Jan-07	4.54			45.51
	50.05	7-Mar-07	4.26			45.79
	50.05	27-Jul-07	6.09			43.96
	50.05	28-Jan-08	4.46			45.59
	50.05	16-Jul-08	9.25			40.80
	50.05	22-Jan-09	8.57			41.48
	50.05	24-Jul-09	NM			NM
	50.05	8-Jan-10	4.97			45.08
	50.05	12-Jul-10	5.51			44.54
MW-11B	50.18	28-Sep-94	8.92			41.27
	50.18	13-Oct-94	9.59			40.60
	50.18	24-Jan-95	5.04			45.15
	50.18	11-Apr-95	5.01			45.18
	50.18	11-Jul-95	7.23			42.96
	50.18	23-Jan-96	8.20			41.99
	50.18	19-Jul-96	8.92			41.27
	50.18	17-Sep-96	10.83			39.36
	50.18	31-Oct-96	9.34			40.85
	50.18	22-Nov-96	11.23			38.96
	50.18	27-Dec-96	8.45			41.74
	50.18	22-Jan-97	6.28			43.91
	50.18	21-Feb-97	5.16			45.03
	50.18	25-Mar-97	5.51			44.68
	50.18	23-Apr-97	6.81			43.38
	50.18	24-Apr-97	6.99			43.20
	50.18	13-May-97	5.46			44.73
	50.18	20-Jun-97	7.40			42.79
	50.18	25-Jun-97	5.06			45.13
	50.18	1-Jul-97	6.52			43.67
	50.18	24-Jul-97	9.36			40.83
	50.18	16-Aug-97	10.36			39.83
	50.18	22-Aug-97	11.11			39.08
	50.18	25-Sep-97	8.96			41.23
	50.18	22-Oct-97	7.61			42.58
	50.18	25-Nov-97	7.63			42.56
	50.18	19-Dec-97	7.11			43.08
	50.18	20-Jan-98	5.70			44.49
	50.18	3-Mar-98	5.35			44.84
	50.18	18-Mar-98	5.14			45.05
	50.18	24-Apr-98	9.19			41.00
	50.18	21-May-98	9.61			40.58
	50.18	30-Jul-98	10.72			39.47
	50.18	25-Aug-98	9.48			40.71
	50.18	21-Sep-98	7.49			42.70
	50.18	26-Oct-98	8.57			41.62
	50.18	23-Nov-98	6.32			43.87
	50.18	26-Feb-99	5.32			44.87
	50.18	16-Mar-99	6.49			43.70
	50.18	29-Apr-99	6.66			43.53
	50.18	1-Jun-99	6.66			43.53
	50.18	30-Jul-99	8.12			42.07
	50.18	27-Aug-99	6.88			43.31

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-11B	50.18	27-Sep-99	12.04			38.15
	50.18	29-Oct-99	13.00			37.19
	50.18	29-Dec-99	12.33			37.86
	50.18	4-Feb-00	15.61			34.58
	50.18	25-Feb-00	11.49			38.70
	50.18	27-Mar-00	9.93			40.26
	50.18	7-Apr-00	9.54			40.65
	50.18	31-May-00	9.61			40.58
	50.18	1-Jun-00	9.51			40.68
	50.18	28-Jul-00	9.60			40.59
	50.18	30-Aug-00	12.76			37.43
	50.18	19-Sep-00	13.97			36.22
	50.18	27-Oct-00	11.23			38.96
	50.18	21-Nov-00	10.88			39.31
	50.18	1-May-01	5.97			44.22
	50.18	1-Oct-01	9.33			40.86
	50.18	11-Mar-02	5.80			44.39
	50.18	23-Sep-02	5.79			44.40
	50.18	10-Mar-03	4.85			45.33
	50.18	23-Sep-03	5.95			44.23
	50.18	15-Mar-04	5.16			45.02
	50.18	13-Sep-04	10.53			39.65
	50.18	18-Jul-05	5.45			44.73
	50.18	4-Jan-06	11.01			39.17
	50.18	27-Jul-06	5.26			44.92
	50.18	23-Jan-07	4.13			46.05
	50.18	7-Mar-07	4.42			45.76
	50.18	27-Jul-07	6.29			43.89
	50.18	28-Jan-08	4.69			45.49
	50.18	16-Jul-08	9.49			40.69
	50.18	22-Jan-09	8.72			41.46
	50.18	24-Jul-09	NM			NM
	50.18	8-Jan-10	5.15			45.03
	50.18	12-Jul-10	5.67			44.51
MW-12A	49.96	25-Mar-97	5.52			44.44
	49.96	23-Apr-97	6.51			43.45
	49.96	24-Apr-97	6.66			43.30
	49.96	13-May-97	5.47			44.49
	49.96	20-Jun-97	6.81			43.15
	49.96	25-Sep-97	8.08			41.88
	49.96	22-Oct-97	7.10			42.86
	49.96	25-Nov-97	7.12			42.84
	49.96	19-Dec-97	6.96			43.00
	49.96	20-Jan-98	5.69			44.27
	49.96	4-Mar-98	4.52			45.44
	49.96	18-Mar-98	5.28			44.68
	49.96	24-Apr-98	8.70			41.26
	49.96	21-May-98	9.10			40.86
	49.96	25-Aug-98	10.05			39.91
	49.96	21-Sep-98	7.11			42.85
	49.96	26-Oct-98	9.11			40.85
	49.96	23-Nov-98	6.01			43.95
	49.96	29-Jan-99	5.44			44.52
	49.96	26-Feb-99	5.52			44.44
	49.96	16-Mar-99	6.21			43.75
	49.96	29-Apr-99	6.38			43.58
	49.96	1-Jun-99	6.31			43.65
	49.96	30-Jul-99	7.88			42.08
	49.96	27-Aug-99	6.56			43.40

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-12A	49.96	27-Sep-99	11.61			38.35
	49.96	29-Oct-99	12.79			37.17
	49.96	18-Nov-99	13.18			36.78
	49.96	29-Dec-99	12.03			37.93
	49.96	4-Feb-00	15.43			34.53
	49.96	25-Feb-00	11.34			38.62
	49.96	27-Mar-00	9.22			40.74
	49.96	7-Apr-00	8.80			41.16
	49.96	31-May-00	8.84			41.12
	49.96	1-Jun-00	8.81			41.15
	49.96	28-Jul-00	8.87			41.09
	49.96	30-Aug-00	11.76			38.20
	49.96	19-Sep-00	13.22			36.74
	49.96	27-Oct-00	10.54			39.42
	49.96	21-Nov-00	10.16			39.80
	49.96	1-May-01	8.60			41.36
	49.96	1-Oct-01	8.73			41.23
	49.96	11-Mar-02	6.01			43.95
	49.96	23-Sep-02	5.87			44.09
	49.96	10-Mar-03	5.37			44.59
	49.96	23-Sep-03	5.96			44.00
	49.96	15-Mar-04	5.54			44.42
	49.96	13-Sep-04	10.30			39.66
	49.96	18-Jul-05	7.01			42.95
	49.96	4-Jan-06	10.57			39.39
	49.96	27-Jul-06	6.60			43.36
	49.96	7-Mar-07	6.94			43.02
	49.96	27-Jul-07	5.79			44.17
	49.96	30-Jan-08	5.29			44.67
	49.96	15-Jul-08	9.19			40.77
	49.96	4-Feb-09	8.81			41.15
	49.96	24-Jul-09	9.13			40.83
	49.96	8-Jan-10	5.47			44.49
	49.96	12-Jul-10	9.72			40.24
MW-12B	50.02	25-Mar-97	5.60			44.42
	50.02	23-Apr-97	6.64			43.38
	50.02	24-Apr-97	6.74			43.28
	50.02	13-May-97	5.55			44.47
	50.02	20-Jun-97	7.01			43.01
	50.02	25-Sep-97	8.32			41.70
	50.02	22-Oct-97	7.25			42.77
	50.02	25-Nov-97	7.29			42.73
	50.02	19-Dec-97	6.86			43.16
	50.02	20-Jan-98	5.88			44.14
	50.02	4-Mar-98	5.64	44.08	1.72	44.38
	50.02	18-Mar-98	5.38	44.07	1.73	44.64
	50.02	9-Apr-98	7.87		0.98	42.15
	50.02	16-Apr-98	8.31		1.35	41.71
	50.02	24-Apr-98	8.72	43.82	1.98	41.30
	50.02	8-May-98	NM		0.50	NM
	50.02	12-May-98	NM		0.50	NM
	50.02	21-May-98	10.48			39.54
	50.02	25-May-98	NM		1.00	NM
	50.02	9-Jun-98	NM		1.00	NM
	50.02	16-Jun-98	NM		1.20	NM
	50.02	26-Jun-98	NM		1.50	NM
	50.02	2-Jul-98	NM		1.50	NM
	50.02	10-Jul-98	NM		2.00	NM
	50.02	14-Jul-98	NM		2.00	NM

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-12B	50.02	23-Jul-98	NM		2.00	NM
	50.02	5-Aug-98	NM		2.00	NM
	50.02	13-Aug-98	NM		2.00	NM
	50.02	18-Aug-98	NM		2.00	NM
	50.02	25-Aug-98	10.22			39.80
	50.02	15-Sep-98	NM		2.00	NM
	50.02	21-Sep-98	7.73			42.29
	50.02	30-Sep-98	NM		4.00	NM
	50.02	8-Oct-98	NM		4.00	NM
	50.02	16-Oct-98	NM		4.00	NM
	50.02	26-Oct-98	8.88			41.14
	50.02	6-Nov-98	NM		4.00	NM
	50.02	13-Nov-98	NM		1.49	NM
	50.02	19-Nov-98	NM		4.00	NM
	50.02	23-Nov-98	6.11			43.91
	50.02	16-Dec-98	NM		4.00	NM
	50.02	7-Jan-99	NM		4.00	NM
	50.02	15-Jan-99	NM		4.00	NM
	50.02	22-Jan-99	NM		4.00	NM
	50.02	26-Jan-99	NM		4.00	NM
	50.02	29-Jan-99	5.70			44.32
	50.02	4-Feb-99	NM		4.00	NM
	50.02	9-Feb-99	NM		3.00	NM
	50.02	26-Feb-99	5.83	39.95	5.85	44.19
	50.02	16-Mar-99	6.30	43.60	2.20	43.72
	50.02	29-Apr-99	6.44	38.90	6.90	43.58
	50.02	21-May-99	7.40	36.90	8.90	42.62
	50.02	27-May-99	7.38	36.90	8.90	42.64
	50.02	1-Jun-99	6.40	37.90	7.90	43.62
	50.02	10-Jun-99	7.36	36.90	8.90	42.66
	50.02	30-Jul-99	7.98			42.04
	50.02	27-Aug-99	6.61	38.90	6.90	43.41
	50.02	27-Sep-99	11.71	42.34	3.46	38.31
	50.02	29-Oct-99	12.76	41.84	3.96	37.26
	50.02	18-Nov-99	13.22			36.80
	50.02	29-Dec-99	12.01	41.84	3.96	38.01
	50.02	4-Feb-00	13.22	41.84	3.96	36.80
	50.02	25-Feb-00	11.44	41.84	3.96	38.58
	50.02	27-Mar-00	NM			NM
	50.02	7-Apr-00	8.73	41.81	3.99	41.29
	50.02	31-May-00	8.77	41.81	3.99	41.25
	50.02	1-Jun-00	8.73	41.81	3.99	41.29
	50.02	28-Jul-00	8.77	41.89	3.91	41.25
	50.02	30-Aug-00	11.66	41.82	3.98	38.36
	50.02	19-Sep-00	13.33	40.89	4.91	36.69
	50.02	27-Oct-00	11.75	41.80	4.00	38.27
	50.02	21-Nov-00	10.64	43.48	2.32	39.38
	50.02	1-May-01	8.71	43.46	2.34	41.31
	50.02	1-Oct-01	8.37		15.00	41.65
	50.02	14-Mar-02	6.37	36.99	8.81	43.65
	50.02	23-Sep-02	6.10	40.03	5.77	43.92
	50.02	10-Mar-03	5.45			44.57
	50.02	24-Sep-03	6.29	39.85	5.95	43.73
	50.02	15-Mar-04	5.63			44.39
	50.02	13-Sep-04	10.44	38.72	7.08	39.58
	50.02	18-Jul-05	7.14	38.40	7.40	42.88

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-12B	50.02	4-Jan-06	10.75	35.98	9.82	39.27
	50.02	27-Jul-06	6.07	35.74	10.06	43.95
	50.02	7-Mar-07	6.96	34.60	11.20	43.06
	50.02	27-Jul-07	5.36	33.45	12.35	44.66
	50.02	31-Jan-08	5.75	33.34	12.46	44.27
	50.02	15-Jul-08	9.38	38.88	6.92	40.64
	50.02	4-Feb-09	8.89	38.14	7.66	41.13
	50.02	24-Jul-09	9.18	38.51	7.29	40.84
	50.02	8-Jan-10	6.81	37.46	8.34	43.21
	50.02	27-May-10	7.29	39.5	6.30	42.73
	50.02	28-Jun-10	7.39	44.1	1.70	42.63
	50.02	12-Jul-10	7.47	44.25	1.55	42.55
	50.02	31-Aug-10	7.26	45.42	0.38	42.76
MW-12C	50.14	13-May-97	39.34			10.80
	50.14	20-Jun-97	38.94			11.20
	50.14	25-Sep-97	36.70			13.44
	50.14	22-Oct-97	36.09			14.05
	50.14	25-Nov-97	36.13			14.01
	50.14	19-Dec-97	35.34			14.80
	50.14	20-Jan-98	32.60			17.54
	50.14	4-Mar-98	31.56			18.58
	50.14	18-Mar-98	31.64			18.50
	50.14	24-Apr-98	31.06			19.08
	50.14	21-May-98	38.20			11.94
	50.14	25-Aug-98	31.00			19.14
	50.14	21-Sep-98	29.86			20.28
	50.14	26-Oct-98	30.12			20.02
	50.14	23-Nov-98	28.38			21.76
	50.14	29-Jan-99	27.61			22.53
	50.14	26-Feb-99	27.69			22.45
	50.14	16-Mar-99	28.00			22.14
	50.14	29-Apr-99	28.21			21.93
	50.14	1-Jun-99	28.20			21.94
	50.14	30-Jul-99	29.80			20.34
	50.14	27-Aug-99	28.41			21.73
	50.14	27-Sep-99	29.20			20.94
	50.14	29-Oct-99	29.78			20.36
	50.14	18-Nov-99	30.17			19.97
	50.14	29-Dec-99	29.09			21.05
	50.14	4-Feb-00	29.66			20.48
	50.14	25-Feb-00	30.32			19.82
	50.14	27-Mar-00	28.91			21.23
	50.14	7-Apr-00	27.40			22.74
	50.14	31-May-00	27.44			22.70
	50.14	1-Jun-00	27.43			22.71
	50.14	28-Jul-00	27.45			22.69
	50.14	30-Aug-00	33.61			16.53
	50.14	19-Sep-00	30.03			20.11
	50.14	27-Oct-00	33.94			16.20
	50.14	21-Nov-00	29.12			21.02
	50.14	1-May-01	26.85			23.29
	50.14	1-Oct-01	26.85			23.29
	50.14	11-Mar-02	25.59			24.55
	50.14	23-Sep-02	26.57			23.57
	50.14	10-Mar-03	24.85			25.29
	50.14	23-Sep-03	26.06			24.08
	50.14	15-Mar-04	24.31			25.83
	50.14	13-Sep-04	26.15			23.99
	50.14	18-Jul-05	26.23			23.91
	50.14	4-Jan-06	22.26			27.88
	50.14	27-Jul-06	25.28			24.86
	50.14	7-Mar-07	23.78			26.36

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-12C	50.14	27-Jul-07	22.05			28.09
	50.14	30-Jan-08	22.69			27.45
	50.14	15-Jul-08	24.41			25.73
	50.14	4-Feb-09	24.59			25.55
	50.14	24-Jul-09	24.91			25.23
	50.14	8-Jan-10	23.03			27.11
	50.14	12-Jul-10	23.91			26.23
MW-13	50.65	25-Mar-97	9.43			41.22
	50.65	23-Apr-97	9.87			40.78
	50.65	24-Apr-97	9.92			40.73
	50.65	13-May-97	9.30			41.35
	50.65	20-Jun-97	10.11			40.54
	50.65	25-Sep-97	10.75			39.90
	50.65	22-Oct-97	10.09			40.56
	50.65	25-Nov-97	10.11			40.54
	50.65	19-Dec-97	10.01			40.64
	50.65	20-Jan-98	9.32			41.33
	50.65	4-Mar-98	9.23			41.42
	50.65	18-Mar-98	8.90			41.75
	50.65	24-Apr-98	10.74			39.82
	50.65	21-May-98	12.11			38.54
	50.65	25-Aug-98	12.00			38.56
	50.65	21-Sep-98	10.13			40.43
	50.65	26-Oct-98	11.15			39.41
	50.65	23-Nov-98	9.22			41.34
	50.65	29-Jan-99	8.00			42.65
	50.65	26-Feb-99	8.11			42.54
	50.65	16-Mar-99	9.51			41.14
	50.65	29-Apr-99	9.79			40.86
	50.65	1-Jun-99	9.70			40.95
	50.65	30-Jul-99	11.01			39.64
	50.65	27-Aug-99	9.96			40.69
	50.65	27-Sep-99	12.84			37.81
	50.65	29-Oct-99	13.88			36.77
	50.65	17-Nov-99	14.00			36.65
	50.65	29-Dec-99	13.08			37.57
	50.65	4-Feb-00	15.61			35.04
	50.65	25-Feb-00	12.17			38.48
	50.65	27-Mar-00	10.95			39.70
	50.65	7-Apr-00	10.51			40.14
	50.65	31-May-00	10.57			40.08
	50.65	1-Jun-00	10.51			40.14
	50.65	28-Jul-00	10.54			40.11
	50.65	30-Aug-00	13.63			37.02
	50.65	19-Sep-00	14.57			36.08
	50.65	27-Oct-00	11.11			39.54
	50.65	21-Nov-00	11.44			39.21
	50.65	1-May-01	10.70			39.95
	50.65	1-Oct-01	10.31			40.34
	50.65	11-Mar-02	9.62			41.03
	50.65	23-Sep-02	9.17			41.48
	50.65	10-Mar-03	9.17			41.48
	50.65	23-Sep-03	9.14			41.51
	50.65	15-Mar-04	9.30			41.35
	50.65	13-Sep-04	11.98			38.67
	50.65	18-Jul-05	10.25			40.40
	50.65	4-Jan-06	12.03			38.62
	50.65	27-Jul-06	8.82			41.83
	50.65	7-Mar-07	9.95			40.70

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-13	50.65	27-Jul-07	8.90			41.75
	50.65	30-Jan-08	8.85			41.80
	50.65	15-Jul-08	10.89			39.76
	50.65	4-Feb-09	10.59			40.06
	50.65	23-Jul-09	11.07			39.58
	50.65	8-Jan-10	9.22			41.43
	50.65	12-Jul-10	11.12			39.53
MW-14	50.66	25-Mar-97	7.71			42.95
	50.66	23-Apr-97	8.31			42.35
	50.66	24-Apr-97	8.34			42.32
	50.66	13-May-97	7.83			42.83
	50.66	20-Jun-97	8.64			42.02
	50.66	25-Sep-97	9.95			40.71
	50.66	22-Oct-97	8.89			41.77
	50.66	25-Nov-97	8.86			41.80
	50.66	19-Dec-97	8.62			42.04
	50.66	20-Jan-98	8.08			42.58
	50.66	4-Mar-98	7.72			42.94
	50.66	18-Mar-98	7.66			43.00
	50.66	24-Apr-98	9.75			40.91
	50.66	21-May-98	11.00			39.66
	50.66	25-Aug-98	12.00			38.66
	50.66	21-Sep-98	9.41			41.25
	50.66	26-Oct-98	11.10			39.56
	50.66	23-Nov-98	8.08			42.58
	50.66	29-Jan-99	7.10			43.56
	50.66	26-Feb-99	7.21			43.45
	50.66	16-Mar-99	8.74			41.92
	50.66	29-Apr-99	8.93			41.73
	50.66	1-Jun-99	8.92			41.74
	50.66	30-Jul-99	10.44			40.22
	50.66	27-Aug-99	9.21			41.45
	50.66	27-Sep-99	12.56			38.10
	50.66	29-Oct-99	13.56			37.10
	50.66	17-Nov-99	13.63			37.03
	50.66	29-Dec-99	12.88			37.78
	50.66	4-Feb-00	14.22			36.44
	50.66	25-Feb-00	11.73			38.93
	50.66	27-Mar-00	10.54			40.12
	50.66	7-Apr-00	10.14			40.52
	50.66	31-May-00	10.17			40.49
	50.66	1-Jun-00	10.13			40.53
	50.66	28-Jul-00	10.17			40.49
	50.66	30-Aug-00	13.22			37.44
	50.66	19-Sep-00	14.27			36.39
	50.66	27-Oct-00	11.56			39.10
	50.66	21-Nov-00	11.17			39.49
	50.66	1-May-01	9.71			40.95
	50.66	1-Oct-01	10.64			40.02
	50.66	11-Mar-02	8.45			42.21
	50.66	23-Sep-02	7.90			42.76
	50.66	10-Mar-03	8.59			42.07
	50.66	23-Sep-03	7.70			42.96
	50.66	15-Mar-04	7.96			42.70
	50.66	13-Sep-04	11.05			39.61
	50.66	18-Jul-05	9.55			41.11
	50.66	4-Jan-06	11.83			38.83
	50.66	27-Jul-06	7.80			42.86
	50.66	7-Mar-07	8.96			41.70

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-14	50.66	27-Jul-07	8.01			42.65
	50.66	30-Jan-08	7.66			43.00
	50.66	15-Jul-08	10.41			40.25
	50.66	4-Feb-09	10.27			40.39
	50.66	23-Jul-09	10.67			39.99
	50.66	8-Jan-10	8.24			42.42
	50.66	12-Jul-10	10.54			40.12
MW-15A	50.41	25-Mar-97	8.22			42.19
	50.41	23-Apr-97	8.28			42.13
	50.41	24-Apr-97	8.51			41.90
	50.41	13-May-97	8.06			42.35
	50.41	20-Jun-97	8.64			41.77
	50.41	25-Sep-97	9.75			40.66
	50.41	22-Oct-97	9.09			41.32
	50.41	25-Nov-97	9.13			41.28
	50.41	19-Dec-97	8.89			41.52
	50.41	20-Jan-98	8.35			42.06
	50.41	4-Mar-98	8.09			42.32
	50.41	18-Mar-98	7.98			42.43
	50.41	24-Apr-98	9.57			40.84
	50.41	21-May-98	11.10			39.31
	50.41	25-Aug-98	11.78			38.63
	50.41	21-Sep-98	9.59			40.82
	50.41	26-Oct-98	10.69			39.72
	50.41	23-Nov-98	8.46			41.95
	50.41	29-Jan-99	7.11			43.30
	50.41	26-Feb-99	7.23			43.18
	50.41	16-Mar-99	9.17			41.24
	50.41	29-Apr-99	9.29			41.12
	50.41	1-Jun-99	9.29			41.12
	50.41	30-Jul-99	10.83			39.58
	50.41	27-Aug-99	9.39			41.02
	50.41	27-Sep-99	12.02			38.39
	50.41	29-Oct-99	13.11			37.30
	50.41	17-Nov-99	13.44			36.97
	50.41	29-Dec-99	12.49			37.92
	50.41	4-Feb-00	15.71			34.70
	50.41	25-Feb-00	11.34			39.07
	50.41	27-Mar-00	10.66			39.75
	50.41	7-Apr-00	10.20			40.21
	50.41	31-May-00	10.23			40.18
	50.41	1-Jun-00	10.22			40.19
	50.41	28-Jul-00	10.23			40.18
	50.41	30-Aug-00	13.34			37.07
	50.41	19-Sep-00	14.01			36.40
	50.41	27-Oct-00	11.77			38.64
	50.41	21-Nov-00	11.09			39.32
	50.41	1-May-01	9.85			40.56
	50.41	1-Oct-01	9.73			40.68
	50.41	11-Mar-02	8.81			41.60
	50.41	23-Sep-02	8.21			42.20
	50.41	10-Mar-03	7.76			42.65
	50.41	23-Sep-03	7.87			42.54
	50.41	15-Mar-04	7.94			42.47
	50.41	13-Sep-04	10.72			39.69
	50.41	18-Jul-05	9.33			41.08
	50.41	4-Jan-06	11.66			38.75
	50.41	27-Jul-06	7.92			42.49
	50.41	7-Mar-07	9.19			41.22

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-15A	50.41	27-Jul-07	7.88			42.53
	50.41	30-Jan-08	8.02			42.39
	50.41	15-Jul-08	10.26			40.15
	50.41	4-Feb-09	10.59			39.82
	50.41	23-Jul-09	11.01			39.40
	50.41	8-Jan-10	8.64			41.77
	50.41	12-Jul-10	10.81			39.60
MW-15C	50.01	13-May-97	33.46			16.55
	50.01	20-Jun-97	34.18			15.83
	50.01	25-Sep-97	33.77			16.24
	50.01	22-Oct-97	32.89			17.12
	50.01	25-Nov-97	32.95			17.06
	50.01	19-Dec-97	32.01			18.00
	50.01	20-Jan-98	29.90			20.11
	50.01	4-Mar-98	28.56			21.45
	50.01	18-Mar-98	28.53			21.48
	50.01	24-Apr-98	28.46			21.55
	50.01	21-May-98	35.00			15.01
	50.01	25-Aug-98	29.30			20.71
	50.01	21-Sep-98	28.15			21.86
	50.01	26-Oct-98	28.11			21.90
	50.01	23-Nov-98	26.50			23.51
	50.01	29-Jan-99	25.44			24.57
	50.01	26-Feb-99	25.51			24.50
	50.01	16-Mar-99	26.11			23.90
	50.01	29-Apr-99	26.33			23.68
	50.01	1-Jun-99	26.39			23.62
	50.01	30-Jul-99	27.99			22.02
	50.01	27-Aug-99	26.51			23.50
	50.01	27-Sep-99	27.46			22.55
	50.01	29-Oct-99	28.26			21.75
	50.01	17-Nov-99	28.55			21.46
	50.01	29-Dec-99	27.61			22.40
	50.01	4-Feb-00	28.11			21.90
	50.01	25-Feb-00	28.23			21.78
	50.01	27-Mar-00	27.45			22.56
	50.01	7-Apr-00	26.11			23.90
	50.01	31-May-00	26.13			23.88
	50.01	1-Jun-00	26.03			23.98
	50.01	28-Jul-00	26.14			23.87
	50.01	30-Aug-00	29.11			20.90
	50.01	19-Sep-00	28.67			21.34
	50.01	27-Oct-00	27.64			22.37
	50.01	21-Nov-00	27.56			22.45
	50.01	1-May-01	25.24			24.77
	50.01	1-Oct-01	25.40			24.61
	50.01	11-Mar-02	24.17			25.84
	50.01	23-Sep-02	25.35			24.66
	50.01	10-Mar-03	23.52			26.49
	50.01	23-Sep-03	24.88			25.13
	50.01	15-Mar-04	22.97			27.04
	50.01	13-Sep-04	24.80			25.21
	50.01	18-Jul-05	25.17			24.84
	50.01	4-Jan-06	26.23			23.78
	50.01	27-Jul-06	24.31			25.70
	50.01	7-Mar-07	22.76			27.25
	50.01	27-Jul-07	21.03			28.98
	50.01	30-Jan-08	21.80			28.21
	50.01	15-Jul-08	23.63			26.38

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-15C	50.01	4-Feb-09	23.73			26.28
	50.01	23-Jul-09	23.96			26.05
	50.01	8-Jan-10	21.88			28.13
	50.01	12-Jul-10	23.08			26.93
MW-16	51.51	25-Mar-97	7.41			44.10
	51.51	23-Apr-97	8.44			43.07
	51.51	24-Apr-97	8.52			42.99
	51.51	13-May-97	8.29			43.22
	51.51	20-Jun-97	8.41			43.10
	51.51	25-Sep-97	10.71			40.80
	51.51	22-Oct-97	9.53			41.98
	51.51	25-Nov-97	9.55			41.96
	51.51	19-Dec-97	9.10			42.41
	51.51	20-Jan-98	8.60			42.91
	51.51	4-Mar-98	8.13			43.38
	51.51	18-Mar-98	8.59			42.92
	51.51	24-Apr-98	9.96			41.55
	51.51	21-May-98	11.43			40.08
	51.51	30-Jul-98	12.56			38.95
	51.51	25-Aug-98	11.53			39.98
	51.51	21-Sep-98	9.81			41.70
	51.51	26-Oct-98	10.44			41.07
	51.51	23-Nov-98	8.98			42.53
	51.51	29-Jan-99	7.12			44.39
	51.51	26-Feb-99	7.23			44.28
	51.51	16-Mar-99	10.06			41.45
	51.51	29-Apr-99	10.16			41.35
	51.51	1-Jun-99	10.16			41.35
	51.51	30-Jul-99	11.76			39.75
	51.51	27-Aug-99	10.33			41.18
	51.51	27-Sep-99	11.79			39.72
	51.51	29-Oct-99	12.93			38.58
	51.51	17-Nov-99	13.71			37.80
	51.51	29-Dec-99	12.20			39.31
	51.51	4-Feb-00	15.11			36.40
	51.51	25-Feb-00	11.10			40.41
	51.51	27-Mar-00	11.48			40.03
	51.51	7-Apr-00	11.09			40.42
	51.51	31-May-00	11.11			40.40
	51.51	1-Jun-00	11.00			40.51
	51.51	28-Jul-00	11.11			40.40
	51.51	30-Aug-00	13.10			38.41
	51.51	19-Sep-00	14.83			36.68
	51.51	27-Oct-00	11.66			39.85
	51.51	21-Nov-00	11.29			40.22
	51.51	1-May-01	9.92			41.59
	51.51	1-Oct-01	9.93			41.58
	51.51	11-Mar-02	9.12			42.39
	51.51	23-Sep-02	8.65			42.86
	51.51	10-Mar-03	7.74			43.77
	51.51	23-Sep-03	8.48			43.03
	51.51	15-Mar-04	8.09			43.42
	51.51	13-Sep-04	10.38			41.13
	51.51	18-Jul-05	10.42			41.09
	51.51	4-Jan-06	12.48			39.03
	51.51	27-Jul-06	9.37			42.14
	51.51	7-Mar-07	9.66			41.85
	51.51	27-Jul-07	7.85			43.66
	51.51	31-Jan-08	8.42	25.40	3.40	43.09

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW16	51.51	15-Jul-08	10.16			41.35
	51.51	5-Feb-09	11.93			39.58
	51.51	23-Jul-09	12.67			38.84
	51.51	8-Jan-10	8.66			42.85
	51.51	12-Jul-10	10.31			41.20
MW-17	50.92	25-Mar-97	9.97			40.95
	50.92	23-Apr-97	10.41			40.51
	50.92	24-Apr-97	10.51			40.41
	50.92	13-May-97	10.32			40.60
	50.92	20-Jun-97	11.07			39.85
	50.92	25-Sep-97	12.39			38.53
	50.92	22-Oct-97	11.19			39.73
	50.92	25-Nov-97	11.21			39.71
	50.92	19-Dec-97	11.01			39.91
	50.92	20-Jan-98	10.25			40.67
	50.92	4-Mar-98	9.93			40.99
	50.92	18-Mar-98	9.94			40.98
	50.92	9-Apr-98	11.32			39.60
	50.92	16-Apr-98	11.52			39.40
	50.92	24-Apr-98	11.80			39.12
	50.92	8-May-98	NM			NM
	50.92	12-May-98	NM			NM
	50.92	21-May-98	13.30			37.62
	50.92	25-May-98	NM			NM
	50.92	9-Jun-98	NM			NM
	50.92	16-Jun-98	NM			NM
	50.92	26-Jun-98	NM			NM
	50.92	2-Jul-98	NM			NM
	50.92	10-Jul-98	NM			NM
	50.92	14-Jul-98	NM			NM
	50.92	23-Jul-98	NM			NM
	50.92	5-Aug-98	NM			NM
	50.92	13-Aug-98	NM			NM
	50.92	25-Aug-98	13.78			37.14
	50.92	15-Sep-98	NM			NM
	50.92	21-Sep-98	11.49			39.43
	50.92	30-Sep-98	NM			NM
	50.92	8-Oct-98	NM			NM
	50.92	16-Oct-98	NM			NM
	50.92	26-Oct-98	12.22			38.70
	50.92	6-Nov-98	NM			NM
	50.92	13-Nov-98	NM			NM
	50.92	19-Nov-98	NM			NM
	50.92	23-Nov-98	10.21			40.71
	50.92	16-Dec-98	NM			NM
	50.92	7-Jan-99	NM			NM
	50.92	15-Jan-99	NM			NM
	50.92	22-Jan-99	NM			NM
	50.92	26-Jan-99	NM			NM
	50.92	29-Jan-99	10.88			40.04
	50.92	4-Feb-99	NM			NM
	50.92	9-Feb-99	NM			NM
	50.92	26-Feb-99	10.93			39.99
	50.92	16-Mar-99	11.18			39.74
	50.92	29-Apr-99	11.00			39.92
	50.92	21-May-99	11.25			39.67
	50.92	27-May-99	11.31			39.61
	50.92	1-Jun-99	11.07			39.85
	50.92	10-Jun-99	11.28			39.64

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-17	50.92	30-Jul-99	12.67			38.25
	50.92	27-Aug-99	11.27			39.65
	50.92	27-Sep-99	14.67			36.25
	50.92	29-Oct-99	15.11			35.81
	50.92	17-Nov-99	16.08			34.84
	50.92	29-Dec-99	14.43			36.49
	50.92	4-Feb-00	17.21			33.71
	50.92	25-Feb-00	13.63			37.29
	50.92	27-Mar-00	13.08	32.60	0.70	37.84
	50.92	7-Apr-00	12.63	32.30	1.00	38.29
	50.92	31-May-00	12.67	32.30	1.00	38.25
	50.92	1-Jun-00	12.61	32.30	1.00	38.31
	50.92	28-Jul-00	12.69	32.30	1.00	38.23
	50.92	30-Aug-00	15.56			35.36
	50.92	19-Sep-00	16.24	32.20	1.10	34.68
	50.92	27-Oct-00	14.10			36.82
	50.92	21-Nov-00	13.12			37.80
	50.92	1-May-01	11.82	32.44	0.86	39.10
	50.92	1-Oct-01	12.55	32.30	1.00	38.37
	50.92	14-Mar-02	10.91	31.79	1.51	40.01
	50.92	23-Sep-02	10.48			40.44
	50.92	10-Mar-03	9.76			41.16
	50.92	24-Sep-03	10.59	32.85	0.45	40.33
	50.92	15-Mar-04	10.15			40.77
	50.92	13-Sep-04	13.09			37.83
	50.92	18-Jul-05	12.06	32.90	0.40	38.86
	50.92	4-Jan-06	13.90	32.90	0.40	37.02
	50.92	27-Jul-06	10.71	33.28	0.02	40.21
	50.92	7-Mar-07	10.91	33.00	0.30	40.01
	50.92	27-Jul-07	9.33	33.02	0.28	41.59
	50.92	31-Jan-08	10.00	31.17	2.13	40.92
	50.92	15-Jul-08	12.95	33.08	0.23	37.97
	50.92	4-Feb-09	12.64	Trace	Trace	38.28
	50.92	12-Jul-10	12.96			37.96
	50.92	8-Jan-10	10.62			40.30
	50.92	12-Jul-10	12.96			37.96
MW-17C	50.17	15-Mar-04	22.75			27.42
	50.17	13-Sep-04	24.56			25.61
	50.17	18-Jul-05	25.02			25.15
	50.17	4-Jan-06	26.07			24.10
	50.17	27-Jul-06	24.15			26.02
	50.17	7-Mar-07	22.51			27.66
	50.17	27-Jul-07	20.93			29.24
	50.17	30-Jan-08	21.74			28.43
	50.17	15-Jul-08	23.65			26.52
	50.17	4-Feb-09	23.72			26.45
	50.17	23-Jul-09	24.08			26.09
	50.17	8-Jan-10	21.98			28.19
	50.17	12-Jul-10	23.03			27.14
MW-18A	51.57	25-Mar-97	15.41			36.16
	51.57	23-Apr-97	15.80			35.77
	51.57	13-May-97	14.92			36.65
	51.57	20-Jun-97	16.02			35.55
	51.57	25-Sep-97	15.15			36.42
	51.57	22-Oct-97	16.38			35.19
	51.57	25-Nov-97	16.37			35.20
	51.57	19-Dec-97	16.11			35.46
	51.57	20-Jan-98	15.49			36.08
	51.57	4-Mar-98	15.19			36.38

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
	51.57	18-Mar-98	14.28			37.29
	51.57	24-Apr-98	17.53			34.04
	51.57	21-May-98	18.41			33.16
	51.57	30-Jul-98	18.59			32.98
	51.57	25-Aug-98	16.95			34.62
	51.57	21-Sep-98	16.39			35.18
	51.57	26-Oct-98	15.77			35.80
	51.57	23-Nov-98	16.26			35.31
	51.57	29-Jan-99	17.02			34.55
	51.57	26-Feb-99	17.11			34.46
	51.57	29-Apr-99	16.01			35.56
	51.57	1-Jun-99	16.11			35.46
	51.57	30-Jul-99	17.55			34.02
	51.57	27-Aug-99	16.39			35.18
	51.57	27-Sep-99	19.13			32.44
	51.57	29-Oct-99	20.50			31.07
	51.57	17-Nov-99	21.63			29.94
	51.57	29-Dec-99	19.83			31.74
	51.57	4-Feb-00	23.71			27.86
	51.57	25-Feb-00	18.80			32.77
	51.57	27-Mar-00	17.98			33.59
	51.57	7-Apr-00	17.61			33.96
	51.57	31-May-00	17.65			33.92
	51.57	1-Jun-00	17.60			33.97
	51.57	28-Jul-00	17.67			33.90
	51.57	30-Aug-00	20.30			31.27
	51.57	19-Sep-00	19.54			32.03
	51.57	27-Oct-00	18.75			32.82
	51.57	21-Nov-00	16.52			35.05
	51.57	1-May-01	17.91	27.85	7.94	33.66
	51.57	1-Oct-01	17.47			34.10
	51.57	11-Mar-02	16.68			34.89
	51.57	23-Sep-02	15.30			36.27
	51.57	10-Mar-03	15.77			35.80
	51.57	23-Sep-03	25.08			26.49
	51.57	15-Mar-04	15.58			35.99
	51.57	13-Sep-04	18.32			33.25
	51.57	18-Jul-05	14.88			36.69
	51.57	4-Jan-06	17.96			33.61
	51.57	27-Jul-06	14.15			37.42
	51.57	7-Mar-07	17.32			34.25
	51.57	27-Jul-07	15.22			36.35
	51.57	30-Jan-08	15.63			35.94
	51.57	15-Jul-08	17.43			34.14
	51.57	5-Feb-09	18.67			32.90
	51.57	23-Jul-09	19.03			32.54
	51.57	8-Jan-10	16.51			35.06
	51.57	12-Jul-10	18.11			33.46
MW-18C	51.47	13-May-97	29.45			22.02
	51.47	20-Jun-97	30.37			21.10
	51.47	25-Sep-97	31.53			19.94
	51.47	22-Oct-97	30.71			20.76
	51.47	25-Nov-97	30.75			20.72
	51.47	19-Dec-97	30.10			21.37
	51.47	20-Jan-98	28.30			23.17
	51.47	4-Mar-98	27.03			24.44
	51.47	18-Mar-98	26.81			24.66
	51.47	9-Apr-98	27.04			24.43
	51.47	16-Apr-98	27.03			24.44

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
	51.47	24-Apr-98	27.25			24.22
	51.47	8-May-98	NM			NM
	51.47	12-May-98	NM			NM
	51.47	21-May-98	27.68			23.79
	51.47	25-May-98	NM			NM
	51.47	9-Jun-98	NM			NM
	51.47	16-Jun-98	NM			NM
	51.47	26-Jun-98	NM			NM
	51.47	2-Jul-98	NM			NM
	51.47	10-Jul-98	NM			NM
	51.47	14-Jul-98	NM			NM
	51.47	23-Jul-98	NM			NM
	51.47	30-Jul-98	28.40			23.07
	51.47	5-Aug-98	NM			NM
	51.47	13-Aug-98	NM			NM
	51.47	25-Aug-98	28.88			22.59
	51.47	15-Sep-98	NM			NM
	51.47	21-Sep-98	27.94			23.53
	51.47	30-Sep-98	NM			NM
	51.47	8-Oct-98	NM			NM
	51.47	16-Oct-98	NM			NM
	51.47	26-Oct-98	27.62			23.85
	51.47	6-Nov-98	NM			NM
	51.47	11-Nov-98	26.85		0.67	24.62
	51.47	19-Nov-98	NM			NM
	51.47	23-Nov-98	26.21			25.26
	51.47	16-Dec-98	NM			NM
	51.47	7-Jan-99	NM			NM
	51.47	15-Jan-99	NM			NM
	51.47	22-Jan-99	NM			NM
	51.47	26-Jan-99	NM			NM
	51.47	29-Jan-99	25.36			26.11
	51.47	4-Feb-99	NM			NM
	51.47	9-Feb-99	NM			NM
	51.47	26-Feb-99	25.41			26.06
	51.47	29-Apr-99	26.33			25.14
	51.47	21-May-99	25.75			25.72
	51.47	27-May-99	25.76			25.71
	51.47	1-Jun-99	26.38			25.09
	51.47	10-Jun-99	25.68			25.79
	51.47	30-Jul-99	25.61			25.86
	51.47	27-Aug-99	26.51			24.96
	51.47	27-Sep-99	27.28			24.19
	51.47	29-Oct-99	27.95			23.52
	51.47	17-Nov-99	28.42			23.05
	51.47	29-Dec-99	27.26			24.21
	51.47	4-Feb-00	27.84			23.63
	51.47	25-Feb-00	27.83			23.64
	51.47	27-Mar-00	27.48			23.99
	51.47	7-Apr-00	25.80			25.67
	51.47	31-May-00	25.83			25.64
	51.47	1-Jun-00	25.81			25.66
	51.47	28-Jul-00	25.86			25.61
	51.47	30-Aug-00	28.42			23.05
	51.47	19-Sep-00	28.77	80.44	0.97	22.70
	51.47	27-Oct-00	28.69			22.78
	51.47	21-Nov-00	27.67			23.80
	51.47	1-May-01	25.20			26.27
	51.47	1-Oct-01	25.59			25.80

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-18C	51.47	14-Mar-02	24.35			27.12
	51.47	25-Sep-02	25.45			26.02
	51.47	10-Mar-03	23.60			27.87
	51.47	24-Sep-03	25.15			26.32
	51.47	15-Mar-04	24.23			27.24
	51.47	13-Sep-04	25.12	78.22	1.70	26.35
	51.47	18-Jul-05	25.50	66.20	0.30	25.97
	51.47	4-Jan-06	26.71			24.76
	51.47	27-Jul-06	24.80			26.67
	51.47	7-Mar-07	23.11			28.36
	51.47	27-Jul-07	24.80			26.67
	51.47	30-Jan-08	22.64			28.83
	51.47	15-Jul-08	24.43			27.04
	51.47	5-Feb-09	24.34			27.13
	51.47	23-Jul-09	24.61			26.86
	51.47	8-Jan-10	22.56			28.91
	51.47	12-Jul-10	23.77			27.70
MW-19C	53.05	23-Nov-98	28.84			24.21
	53.05	29-Jan-99	28.21			24.84
	53.05	26-Feb-99	28.28			24.77
	53.05	16-Mar-99	28.31			24.74
	53.05	29-Apr-99	28.56			24.49
	53.05	1-Jun-99	28.48			24.57
	53.05	30-Jul-99	30.00			23.05
	53.05	27-Aug-99	28.61			24.44
	53.05	27-Sep-99	29.72			23.33
	53.05	29-Oct-99	30.46			22.59
	53.05	17-Nov-99	30.76			22.29
	53.05	29-Dec-99	29.44			23.61
	53.05	4-Feb-00	30.22			22.83
	53.05	25-Feb-00	29.93			23.12
	53.05	27-Mar-00	29.80			23.25
	53.05	7-Apr-00	28.40			24.65
	53.05	31-May-00	28.44			24.61
	53.05	1-Jun-00	28.33			24.72
	53.05	28-Jul-00	28.37			24.68
	53.05	30-Aug-00	29.99			23.06
	53.05	19-Sep-00	30.97			22.08
	53.05	27-Oct-00	28.49			24.56
	53.05	21-Nov-00	29.88			23.17
	53.05	1-May-01	27.61	71.55	3.56	25.44
	53.05	1-Oct-01	27.84			25.21
	53.05	11-Mar-02	26.68			26.37
	53.05	23-Sep-02	27.66			25.39
	53.05	10-Mar-03	25.77			27.28
	53.05	23-Sep-03	27.21			25.84
	53.05	15-Mar-04	25.36			27.69
	53.05	13-Sep-04	27.20			25.85
	53.05	18-Jul-05	27.71			25.34
	53.05	4-Jan-06	28.78			24.27
	53.05	27-Jul-06	26.91			26.14
	53.05	7-Mar-07	25.22			27.83
	53.05	27-Jul-07	23.71			29.34
	53.05	31-Jan-08	24.57			28.48
	53.05	15-Jul-08	26.38			26.67
	53.05	4-Feb-09	26.44			26.61
	53.05	23-Jul-09	26.81			26.24
	53.05	9-Jan-10	24.47			28.58
	53.05	12-Jul-10	25.67			27.38

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-20A	50.43	23-Nov-98	8.31			42.12
	50.43	29-Jan-99	8.70			41.73
	50.43	26-Feb-99	8.81			41.62
	50.43	16-Mar-99	9.26			41.17
	50.43	29-Apr-99	9.33			41.10
	50.43	1-Jun-99	9.30			41.13
	50.43	30-Jul-99	10.91			39.52
	50.43	27-Aug-99	9.56			40.87
	50.43	27-Sep-99	10.79			39.64
	50.43	29-Oct-99	11.96			38.47
	50.43	17-Nov-99	13.06			37.37
	50.43	29-Dec-99	11.11			39.32
	50.43	4-Feb-00	14.89			35.54
	50.43	25-Feb-00	10.33			40.10
	50.43	27-Mar-00	10.79			39.64
	50.43	7-Apr-00	10.41			40.02
	50.43	31-May-00	10.46			39.97
	50.43	1-Jun-00	10.41			40.02
	50.43	28-Jul-00	10.47			39.96
	50.43	30-Aug-00	12.56			37.87
	50.43	19-Sep-00	13.68			36.75
	50.43	27-Oct-00	11.01			39.42
	50.43	21-Nov-00	10.64			39.79
	50.43	1-May-01	9.40			41.03
	50.43	1-Oct-01	10.42			40.01
	50.43	11-Mar-02	8.59			41.84
	50.43	23-Sep-02	8.51			41.92
	50.43	10-Mar-03	7.42			43.01
	50.43	23-Sep-03	7.95			42.48
	50.43	15-Mar-04	7.72			42.71
	50.43	13-Sep-04	10.22			40.21
	50.43	18-Jul-05	9.88			40.55
	50.43	4-Jan-06	11.72			38.71
	50.43	27-Jul-06	8.59			41.84
	50.43	7-Mar-07	8.91			41.52
	50.43	27-Jul-07	7.63			42.80
	50.43	30-Jan-08	7.91			42.52
	50.43	15-Jul-08	10.05			40.38
	50.43	4-Feb-09	10.18			40.25
	50.43	23-Jul-09	10.47			39.96
	50.43	9-Jan-10	8.23			42.20
	50.43	12-Jul-10	10.62			39.81
MW-21C	49.05	23-Nov-98	27.83			21.22
	49.05	29-Jan-99	27.11			21.94
	49.05	26-Feb-99	27.26			21.79
	49.05	16-Mar-99	27.42			21.63
	49.05	29-Apr-99	27.99			21.06
	49.05	1-Jun-99	27.80			21.25
	49.05	30-Jul-99	29.00			20.05
	49.05	27-Aug-99	27.99			21.06
	49.05	27-Sep-99	28.43			20.62
	49.05	29-Oct-99	29.12			19.93
	49.05	18-Nov-99	29.25			19.80
	49.05	29-Dec-99	10.89			38.16
	49.05	4-Feb-00	28.94			20.11
	49.05	25-Feb-00	11.43			37.62
	49.05	27-Mar-00	28.13			20.92
	49.05	7-Apr-00	26.79			22.26
	49.05	31-May-00	26.83			22.22

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-21C	49.05	1-Jun-00	26.83			22.22
	49.05	28-Jul-00	26.88			22.17
	49.05	30-Aug-00	29.91			19.14
	49.05	19-Sep-00	29.15			19.90
	49.05	27-Oct-00	30.21			18.84
	49.05	21-Nov-00	28.33			20.72
	49.05	1-May-01	26.01			23.04
	49.05	1-Oct-01	26.05			23.00
	49.05	11-Mar-02	24.80			24.25
	49.05	23-Sep-02	25.50			23.55
	49.05	10-Mar-03	23.82			25.23
	49.05	23-Sep-03	25.08			23.97
	49.05	15-Mar-04	23.48			25.57
	49.05	13-Sep-04	25.44			23.61
	49.05	18-Jul-05	25.33			23.72
	49.05	4-Jan-06	26.44			22.61
	49.05	27-Jul-06	24.55			24.50
	49.05	7-Mar-07	22.91			26.14
	49.05	27-Jul-07	21.29			27.76
	49.05	29-Jan-08	22.09			26.96
	49.05	15-Jul-08	23.31			25.74
	49.05	4-Feb-09	24.03			25.02
	49.05	24-Jul-09	24.29			24.76
	49.05	9-Jan-10	21.89			27.16
	49.05	12-Jul-10	23.01			26.04
MW-22A	46.07	23-Nov-98	NM			NM
	46.07	29-Jan-99	2.10			43.97
	46.07	26-Feb-99	2.21			43.86
	46.07	16-Mar-99	2.65			43.42
	46.07	29-Apr-99	2.71			43.36
	46.07	1-Jun-99	2.68			43.39
	46.07	30-Jul-99	4.12			41.95
	46.07	27-Aug-99	2.81			43.26
	46.07	27-Sep-99	8.53			37.54
	46.07	29-Oct-99	10.23			35.84
	46.07	18-Nov-99	9.92			36.15
	46.07	29-Dec-99	9.56			36.51
	46.07	4-Feb-00	12.31			33.76
	46.07	25-Feb-00	8.72			37.35
	46.07	27-Mar-00	6.30			39.77
	46.07	7-Apr-00	6.03			40.04
	46.07	31-May-00	6.12			39.95
	46.07	1-Jun-00	6.00			40.07
	46.07	28-Jul-00	6.13			39.94
	46.07	30-Aug-00	9.09			36.98
	46.07	19-Sep-00	10.12			35.95
	46.07	27-Oct-00	8.64			37.43
	46.07	21-Nov-00	7.69			38.38
	46.07	1-May-01	5.15			40.92
	46.07	1-Oct-01	5.49			40.58
	46.07	11-Mar-02	2.34			43.73
	46.07	23-Sep-02	2.11			43.96
	46.07	10-Mar-03	1.68			44.39
	46.07	23-Sep-03	2.30			43.77
	46.07	15-Mar-04	2.05			44.02
	46.07	14-Sep-04	6.89			39.18
	46.07	18-Jul-05	3.65			42.42
	46.07	6-Jan-06	7.29			38.78
	46.07	27-Jul-06	1.65			44.42

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-22A	46.07	7-Mar-07	NM			NM
	46.07	27-Jul-07	2.84			43.23
	46.07	29-Jan-08	1.05			45.02
	46.07	14-Jul-08	5.33			40.74
	46.07	3-Feb-09	5.24			40.83
	46.07	23-Jul-09	5.91			40.16
	46.07	9-Jan-10	1.32			44.75
	46.07	12-Jul-10	6.52			39.55
MW-22B	45.86	23-Nov-98	2.25			43.61
	45.86	29-Jan-99	2.28			43.58
	45.86	26-Feb-99	2.34			43.52
	45.86	16-Mar-99	2.42			43.44
	45.86	29-Apr-99	2.56			43.30
	45.86	1-Jun-99	2.60			43.26
	45.86	30-Jul-99	4.31			41.55
	45.86	27-Aug-99	2.83			43.03
	45.86	27-Sep-99	8.45			37.41
	45.86	29-Oct-99	10.11			35.75
	45.86	18-Nov-99	9.75			36.11
	45.86	29-Dec-99	9.43			36.43
	45.86	4-Feb-00	12.56			33.30
	45.86	25-Feb-00	8.63			37.23
	45.86	27-Mar-00	6.00			39.86
	45.86	7-Apr-00	5.64			40.22
	45.86	31-May-00	5.69			40.17
	45.86	1-Jun-00	5.61			40.25
	45.86	28-Jul-00	5.67			40.19
	45.86	30-Aug-00	8.57			37.29
	45.86	19-Sep-00	9.94			35.92
	45.86	27-Oct-00	7.03			38.83
	45.86	21-Nov-00	7.63			38.23
	45.86	1-May-01	4.93			40.93
	45.86	1-Oct-01	5.40			40.46
	45.86	11-Mar-02	1.75			44.11
	45.86	23-Sep-02	2.11			43.75
	45.86	10-Mar-03	1.02			44.84
	45.86	23-Sep-03	2.99			42.87
	45.86	15-Mar-04	1.20			44.66
	45.86	14-Sep-04	NM			NM
	45.86	18-Jul-05	NM			NM
	45.86	6-Jan-06	7.05			38.81
	45.86	27-Jul-06	1.58			44.28
	45.86	7-Mar-07	NM			NM
	45.86	27-Jul-07	2.85			43.01
	45.86	29-Jan-08	0.85			45.01
	45.86	14-Jul-08	5.45			40.41
	45.86	3-Feb-09	4.78			41.08
	45.86	23-Jul-09	5.39			40.47
	45.86	9-Jan-10	3.27			42.59
	45.86	12-Jul-10	6.21			39.65
MW-23C	51.91	23-Nov-98	27.41			24.50
	51.91	29-Jan-99	26.80			25.11
	51.91	26-Feb-99	26.88			25.03
	51.91	16-Mar-99	26.93			24.98
	51.91	29-Apr-99	27.09			24.82
	51.91	1-Jun-99	27.00			24.91
	51.91	30-Jul-99	29.55			22.36
	51.91	27-Aug-99	27.29			24.62
	51.91	27-Sep-99	28.40			23.51

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-23C	51.91	29-Oct-99	29.11			22.80
	51.91	17-Nov-99	29.49			22.42
	51.91	29-Dec-99	28.46			23.45
	51.91	4-Feb-00	28.96			22.95
	51.91	25-Feb-00	28.96			22.95
	51.91	27-Mar-00	28.61			23.30
	51.91	7-Apr-00	27.10			24.81
	51.91	31-May-00	27.15			24.76
	51.91	1-Jun-00	27.11			24.80
	51.91	28-Jul-00	27.15			24.76
	51.91	30-Aug-00	29.96			21.95
	51.91	19-Sep-00	29.77			22.14
	51.91	27-Oct-00	28.44			23.47
	51.91	21-Nov-00	28.61			23.30
	51.91	1-May-01	26.26			25.65
	51.91	1-Oct-01	26.50		0.60	25.41
	51.91	11-Mar-02	25.33			26.58
	51.91	23-Sep-02	26.43			25.48
	51.91	10-Mar-03	24.53			27.38
	51.91	23-Sep-03	25.95			25.96
	51.91	15-Mar-04	24.15			27.76
	51.91	13-Sep-04	25.97			25.94
	51.91	18-Jul-05	26.46			25.45
	51.91	4-Jan-06	27.53			24.38
	51.91	7-Mar-07	23.96			27.95
	51.91	27-Jul-07	22.41			29.50
	51.91	31-Jan-08	23.22	75.98	1.71	28.69
	48.89[1]	4-Feb-09	22.11	72.05	1.47	26.78
	48.89[1]	23-Jul-09	22.93	73.01	0.51	25.96
	48.89[1]	9-Jan-10	20.29	71.8	1.72	28.60
	48.89[1]	27-May-10	22.81	71.5	2.02	26.08
	48.89[1]	28-Jun-10	22.93	72.15	1.37	25.96
	48.89[1]	12-Jul-10	21.41	72.4	1.12	27.48
	48.89[1]	31-Aug-10	21.61	72.65	0.87	27.28
MW-24A	45.79	27-Mar-00	7.87			37.92
	45.79	7-Apr-00	7.63			38.16
	45.79	31-May-00	7.65			38.14
	45.79	1-Jun-00	7.43			38.36
	45.79	28-Jul-00	7.60			38.19
	45.79	30-Aug-00	10.44			35.35
	45.79	19-Sep-00	10.57			35.22
	45.79	27-Oct-00	NM			NM
	45.79	21-Nov-00	7.09			38.70
	45.79	1-May-01	6.72			39.07
	45.79	1-Oct-01	7.81			37.98
	45.79	11-Mar-02	3.91			41.88
	45.79	23-Sep-02	5.04			40.75
	45.79	10-Mar-03	2.76			43.03
	45.79	23-Sep-03	4.66			41.13
	45.79	15-Mar-04	3.10			42.69
	45.79	14-Sep-04	8.24			37.55
	45.79	18-Jul-05	6.03			39.76
	45.79	6-Jan-06	8.93			36.86
	45.79	27-Jul-06	4.21			41.58
	45.79	7-Mar-07	3.86			41.93
	45.79	30-Jan-08	NM			NM
MW-24AR	45.65	5-Feb-09	5.18			40.47
	45.65	23-Jul-09	7.36			38.29
	45.65	9-Jan-10	3.72			41.93
	45.65	12-Jul-10	4.29			41.36

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-24B	46.06	27-Mar-00	11.91			34.15
	46.06	7-Apr-00	11.60			34.46
	46.06	31-May-00	11.63			34.43
	46.06	1-Jun-00	11.51			34.55
	46.06	28-Jul-00	11.69			34.37
	46.06	30-Aug-00	13.91			32.15
	46.06	19-Sep-00	14.72			31.34
	46.06	27-Oct-00	12.44			33.62
	46.06	21-Nov-00	11.38			34.68
	46.06	1-May-01	10.71			35.35
	46.06	1-Oct-01	11.75			34.31
	46.06	11-Mar-02	9.01			37.05
	46.06	23-Sep-02	9.69			36.37
	46.06	10-Mar-03	7.83			38.23
	46.06	23-Sep-03	8.98			37.08
	46.06	15-Mar-04	7.33			38.73
	46.06	14-Sep-04	9.24			36.82
	46.06	18-Jul-05	9.54			36.52
	46.06	6-Jan-06	11.86			34.20
	46.06	27-Jul-06	10.50			35.56
	46.06	7-Mar-07	8.88			37.18
	46.06	27-Jul-07	9.85			36.21
	46.06	28-Jan-08	7.37			38.69
	46.06	14-Jul-08	11.41			34.65
	46.06	3-Feb-09	11.18			34.88
	46.06	23-Jul-09	12.26			33.80
	46.06	9-Jan-10	9.89			36.17
	46.06	12-Jul-10	12.82			33.24
MW-24C	46.05	27-Mar-00	25.77			20.28
	46.05	7-Apr-00	24.27			21.78
	46.05	31-May-00	24.30			21.75
	46.05	1-Jun-00	24.22			21.83
	46.05	28-Jul-00	24.26			21.79
	46.05	30-Aug-00	27.34			18.71
	46.05	19-Sep-00	26.59			19.46
	46.05	27-Oct-00	27.64			18.41
	46.05	21-Nov-00	25.43			20.62
	46.05	1-May-01	23.90			22.15
	46.05	1-Oct-01	23.71			22.34
	46.05	11-Mar-02	22.40			23.65
	46.05	23-Sep-02	23.04			23.01
	46.05	10-Mar-03	21.71			24.34
	46.05	23-Sep-03	23.04			23.01
	46.05	15-Mar-04	21.45			24.60
	46.05	14-Sep-04	22.45			23.60
	46.05	18-Jul-05	22.19			23.86
	46.05	6-Jan-06	23.57			22.48
	46.05	27-Jul-06	22.61			23.44
	46.05	7-Mar-07	21.07			24.98
	46.05	27-Jul-07	19.62			26.43
	46.05	28-Jan-08	19.43			26.62
	46.05	14-Jul-08	20.63			25.42
	46.05	3-Feb-09	21.68			24.37
	46.05	23-Jul-09	23.07			22.98
	46.05	9-Jan-10	20.46			25.59
	46.05	12-Jul-10	20.44			25.61

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-25A	44.65	27-Mar-00	9.15			35.50
	44.65	7-Apr-00	8.79			35.86
	44.65	31-May-00	8.81			35.84
	44.65	1-Jun-00	8.86			35.79
	44.65	28-Jul-00	8.84			35.81
	44.65	30-Aug-00	11.43			33.22
	44.65	19-Sep-00	11.12			33.53
	44.65	27-Oct-00	10.09			34.56
	44.65	21-Nov-00	8.10			36.55
	44.65	1-May-01	8.94			35.71
	44.65	1-Oct-01	8.81			35.84
	44.65	11-Mar-02	7.23			37.42
	44.65	23-Sep-02	5.65			39.00
	44.65	10-Mar-03	5.84			38.81
	44.65	23-Sep-03	5.35			39.30
	44.65	15-Mar-04	5.75			38.90
	44.65	14-Sep-04	7.00			37.65
MW-25A	44.65	18-Jul-05	6.42			38.23
	44.65	6-Jan-06	9.29			35.36
	44.65	27-Jul-06	5.10			39.55
	44.65	7-Mar-07	4.76			39.89
	44.65	27-Jul-07	4.22			40.43
	44.65	28-Jan-08	4.25			40.40
	44.65	14-Jul-08	8.59			36.06
	44.65	3-Feb-09	8.90			35.75
	44.65	23-Jul-09	8.71			35.94
	44.65	9-Jan-10	6.84			37.81
	44.65	12-Jul-10	7.78			36.87
MW-25C	44.49	27-Mar-00	19.92			24.57
	44.49	7-Apr-00	19.50			24.99
	44.49	31-May-00	19.56			24.93
	44.49	1-Jun-00	19.51			24.98
	44.49	28-Jul-00	19.54			24.95
	44.49	30-Aug-00	22.14			22.35
	44.49	19-Sep-00	21.30	66.73	0.90	23.19
	44.49	27-Oct-00	20.63			23.86
	44.49	21-Nov-00	27.63			16.86
	44.49	1-May-01	18.14			26.35
	44.49	1-Oct-01	18.29		0.40	26.20
	44.49	14-Mar-02	17.39	64.32	4.13	27.10
	44.49	23-Sep-02	17.81	61.41	6.00	26.68
	44.49	10-Mar-03	16.73			27.76
	44.49	23-Sep-03	22.35			22.14
	44.49	15-Mar-04	16.15			28.34
	44.49	14-Sep-04	17.00	60.14	2.56	27.49
	44.49	18-Jul-05	15.57			28.92
	44.49	6-Jan-06	18.49			26.00
	44.49	27-Jul-06	15.32	60.64	2.03	29.17
	44.49	7-Mar-07	15.87	59.82	2.18	28.62
	44.49	27-Jul-07	14.25	60.61	1.04	30.24
	44.49	28-Jan-08	14.91	60.88	0.67	29.58
	44.49	14-Jul-08	17.24	60.95	0.60	27.25
	44.49	3-Feb-09	15.97	TRACE	TRACE	28.52
	44.49	23-Jul-09	16.39			28.10
	44.49	9-Jan-10	13.68	61.45	0.65	30.81
	44.49	27-May-10	16.09			28.40
	44.49	28-Jun-10	16.26			28.23
	44.49	12-Jul-10	16.05			28.44
	44.49	31-Aug-10	16.21			28.28

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-26A	44.62	27-Mar-00	7.40			37.22
	44.62	7-Apr-00	6.99			37.63
	44.62	31-May-00	7.10			37.52
	44.62	1-Jun-00	7.00			37.62
	44.62	28-Jul-00	7.11			37.51
	44.62	30-Aug-00	9.69			34.93
	44.62	19-Sep-00	11.43			33.19
	44.62	27-Oct-00	8.11			36.51
	44.62	21-Nov-00	8.24			36.38
	44.62	1-May-01	6.01			38.61
	44.62	1-Oct-01	6.34			38.28
	44.62	11-Mar-02	4.05			40.57
	44.62	23-Sep-02	4.29			40.33
	44.62	10-Mar-03	2.84			41.78
	44.62	23-Sep-03	4.84			39.78
	44.62	15-Mar-04	3.30			41.32
	44.62	14-Sep-04	6.80			37.82
	44.62	18-Jul-05	6.72			37.90
	44.62	6-Jan-06	9.34			35.28
	44.62	27-Jul-06	4.42			40.20
	44.62	7-Mar-07	4.70			39.92
	44.62	27-Jul-07	3.98			40.64
	44.62	29-Jan-08	2.37			42.25
MW-26A	44.62	14-Jul-08	7.87			36.75
	44.62	3-Feb-09	6.89			37.73
	44.62	23-Jul-09	7.88			36.74
	44.62	9-Jan-10	4.31			40.31
	44.62	12-Jul-10	8.12			36.50
MW-27A	44.90	1-May-01	6.41			38.49
	44.90	1-Oct-01	5.31			39.59
	44.90	11-Mar-02	4.21			40.69
	44.90	23-Sep-02	3.31			41.59
	44.90	10-Mar-03	4.05			40.85
	44.90	23-Sep-03	3.24			41.66
	44.90	15-Mar-04	2.99			41.91
	44.90	14-Sep-04	5.09			39.81
	44.90	18-Jul-05	4.45			40.45
	44.90	6-Jan-06	4.55			40.35
	44.90	27-Jul-06	4.26			40.64
	44.90	7-Mar-07	3.01			41.89
	45.04	27-Jul-07	2.12			42.92
	45.04	28-Jan-08	1.88			43.16
	45.04	14-Jul-08	4.57			40.47
	45.04	3-Feb-09	4.27			40.77
	45.04	23-Jul-09	4.36			40.68
	45.04	9-Jan-10	3.69			41.35
	45.04	12-Jul-10	5.31			39.73
MW-27C	45.04	1-May-01	17.82			27.22
	45.04	1-Oct-01	17.82			27.22
	45.04	11-Mar-02	16.36			28.68
	45.04	23-Sep-02	16.49			28.55
	45.04	10-Mar-03	18.68			26.36
	45.04	23-Sep-03	16.89			28.15
	45.04	15-Mar-04	14.35			30.69
	45.04	14-Sep-04	14.49			30.55
	45.04	18-Jul-05	16.12			28.92
	45.04	6-Jan-06	18.07			26.97
	45.04	27-Jul-06	17.13			27.91
	45.04	7-Mar-07	15.47			29.57

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-27C	44.90	27-Jul-07	14.85			30.05
	45.04	28-Jan-08	14.31			30.73
	45.04	14-Jul-08	17.51			27.53
	45.04	3-Feb-09	15.76			29.28
	45.04	23-Jul-09	16.38			28.66
	45.04	9-Jan-10	14.82			30.22
	45.04	12-Jul-10	16.12			28.92
MW-28A	43.86	1-May-01	7.45			36.41
	43.86	1-Oct-01	8.26			35.60
	43.86	11-Mar-02	4.90			38.96
	43.86	23-Sep-02	5.71			38.15
	43.86	10-Mar-03	3.11			40.75
	43.86	23-Sep-03	5.81			38.05
	43.86	14-Sep-04	9.34			34.52
	43.86	18-Jul-05	7.52			36.34
	43.86	6-Jan-06	9.32			34.54
	43.86	27-Jul-06	5.54			38.32
	43.86	7-Mar-07	5.06			38.80
	43.86	27-Jul-07	2.86			41.00
	43.86	29-Jan-08	2.61			41.25
	43.86	14-Jul-08	8.74			35.12
	43.86	3-Feb-09	8.36			35.50
	43.86	23-Jul-09	8.94			34.92
	43.86	9-Jan-10	4.54			39.32
	43.86	12-Jul-10	8.66			35.20
MW-28C	43.96	1-May-01	17.14			26.82
	43.96	1-Oct-01	17.51			26.45
	43.96	11-Mar-02	16.29			27.67
	43.96	23-Sep-02	17.75			26.21
	43.96	10-Mar-03	15.84			28.12
	43.96	23-Sep-03	17.48			26.48
	43.96	15-Mar-04	15.56			28.40
	43.96	14-Sep-04	17.20			26.76
	43.96	18-Jul-05	16.60			27.36
	43.96	6-Jan-06	17.61			26.35
	43.96	27-Jul-06	17.73			26.23
	43.96	7-Mar-07	15.59			28.37
	43.96	27-Jul-07	12.90			31.06
	43.96	29-Jan-08	14.35			29.61
	43.96	14-Jul-08	16.26			27.70
	43.96	3-Feb-09	16.03			27.93
	43.96	23-Jul-09	16.53			27.43
	43.96	9-Jan-10	14.89			29.07
	43.96	12-Jul-10	15.89			28.07
MW-29A	46.59	1-May-01	5.01			41.58
	46.59	1-Oct-01	5.38			41.21
	46.59	11-Mar-02	1.51			45.08
	46.59	23-Sep-02	1.65			44.94
	46.59	10-Mar-03	1.42			45.17
	46.59	23-Sep-03	1.50			45.09
	46.59	15-Mar-04	1.85			44.74
	46.59	14-Sep-04	6.35			40.24
	46.59	18-Jul-05	3.12			43.47
	46.59	6-Jan-06	6.57			40.02
	46.59	27-Jul-06	1.44			45.15
	46.59	7-Mar-07	1.95			44.64
	46.59	27-Jul-07	2.49			44.10
	46.59	28-Jan-08	1.28			45.31
	46.59	14-Jul-08	4.14			42.45

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-29A	46.59	3-Feb-09	3.50			43.09
	46.59	23-Jul-09	4.09			42.50
	46.59	9-Jan-10	1.76			44.83
	46.59	12-Jul-10	3.62			42.97
MW-29B	46.26	1-May-01	19.01			27.25
	46.26	1-Oct-01	19.41			26.85
	46.26	11-Mar-02	18.04			28.22
	46.26	23-Sep-02	18.82			27.44
	46.26	10-Mar-03	17.21			29.05
	46.26	23-Sep-03	18.09			28.17
	46.26	15-Mar-04	17.10			29.16
	46.26	14-Sep-04	17.76			28.50
	46.26	18-Jul-05	18.11			28.15
	46.26	6-Jan-06	18.83			27.43
	46.26	27-Jul-06	18.41			27.85
	46.26	7-Mar-07	17.21			29.05
	46.26	27-Jul-07	15.49			30.77
	46.26	28-Jan-08	15.32			30.94
	46.26	14-Jul-08	18.23			28.03
	46.26	3-Feb-09	17.72			28.54
	46.26	23-Jul-09	16.19			30.07
	46.26	9-Jan-10	16.02			30.24
	46.26	12-Jul-10	19.29			26.97
MW-29C	46.46	1-May-01	25.51			20.95
	46.46	1-Oct-01	25.04			21.42
	46.46	11-Mar-02	23.51			22.95
	46.46	23-Sep-02	24.10			22.36
	46.46	10-Mar-03	22.71			23.75
	46.46	23-Sep-03	23.48			22.98
	46.46	15-Mar-04	22.24			24.22
	46.46	14-Sep-04	24.12			22.34
	46.46	18-Jul-05	23.75			22.71
	46.46	6-Jan-06	25.12			21.34
	46.46	27-Jul-06	23.35			23.11
	46.46	7-Mar-07	22.38			24.08
	46.46	27-Jul-07	20.42			26.04
	46.46	28-Jan-08	21.08			25.38
	46.46	14-Jul-08	22.38			24.08
	46.46	3-Feb-09	22.86			23.60
	46.46	23-Jul-09	22.81			23.65
	46.46	9-Jan-10	20.71			25.75
	46.46	12-Jul-10	21.32			25.14
MW-30A	50.45	15-Mar-04	9.71			40.74
	50.45	13-Sep-04	12.76			37.69
	50.45	18-Jul-05	11.80			38.65
	50.45	4-Jan-06	13.52			36.93
	50.45	27-Jul-06	10.45			40.00
	50.45	7-Mar-07	10.98			39.47
	50.45	27-Jul-07	9.49			40.96
	50.45	30-Jan-08	9.62			40.83
	50.45	15-Jul-08	12.52			37.93
	50.45	4-Feb-09	13.01			37.44
	50.45	23-Jul-09	13.71			36.74
	50.45	9-Jan-10	10.87			39.58
	50.45	12-Jul-10	12.61			37.84

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-31A	52.08	15-Mar-04	10.97			41.11
	52.08	13-Sep-04	13.00			39.08
	52.08	18-Jul-05	13.05			39.03
	52.08	4-Jan-06	14.77			37.31
	52.08	27-Jul-06	11.83			40.25
	52.08	7-Mar-07	12.43			39.65
	52.08	27-Jul-07	10.83			41.25
	52.08	31-Jan-08	10.99			41.09
	52.08	15-Jul-08	13.68			38.40
	52.08	4-Feb-09	14.23			37.85
	52.08	23-Jul-09	14.73			37.35
	52.08	9-Jan-10	12.31			39.77
	52.08	12-Jul-10	14.06			38.02
MW-32A	43.77	15-Mar-04	1.00			42.77
	43.77	14-Sep-04	6.03	29.00	3.48	37.74
	43.77	18-Jul-05	5.82	26.56	5.92	37.95
	43.77	6-Jan-06	6.93	24.92	7.57	36.84
	43.77	27-Jul-06	12.96	25.71	6.74	30.81
	43.77	7-Mar-07	4.03	25.26	7.19	39.74
	43.77	27-Jul-07	1.95	30.76	1.70	41.82
	43.77	28-Jan-08	2.18			41.59
	43.77	14-Jul-08	6.14	26.25	6.20	37.63
	43.77	3-Feb-09	5.71	26.29	6.16	38.06
	43.77	23-Jul-09	6.29	26.51	5.94	37.48
	43.77	9-Jan-10	3.55	25.41	7.04	40.22
	43.77	27-May-10	5.86	26.2	6.25	37.91
	43.77	28-Jun-10	6.02	29.1	3.35	37.75
	43.77	12-Jul-10	6.12	29.45	3.00	37.65
	43.77	31-Aug-10	5.43	30.67	1.78	38.34
MW-33A	44.25	15-Mar-04	3.90			40.35
	44.25	14-Sep-04	7.85			36.40
	44.25	18-Jul-05	6.35			37.90
	44.25	6-Jan-06	8.00			36.25
	44.25	27-Jul-06	4.73			39.52
	44.25	7-Mar-07	5.22			39.03
	44.25	27-Jul-07	3.48			40.77
	44.25	29-Jan-08	3.34			40.91
	44.25	14-Jul-08	7.42	25.19	0.03	36.83
	44.25	3-Feb-09	7.28			36.97
	44.25	23-Jul-09	7.63			36.62
	44.25	9-Jan-10	4.79			39.46
	44.25	12-Jul-10	7.61			36.64
MW-33B	44.25	7-Mar-07	4.21			40.04
	44.25	27-Jul-07	3.72			40.53
	44.25	29-Jan-08	2.37	39.12	3.37	41.88
	44.25	14-Jul-08	5.74	37.44	5.05	38.51
	44.25	3-Feb-09	9.28	36.91	5.58	34.97
	44.25	23-Jul-09	NM			NM
	44.25	9-Jan-10	4.61	35.21	7.28	39.64
	44.25	27-May-10	6.82			37.43
	44.25	28-Jun-10	6.91			37.34
	44.25	12-Jul-10	7.02			37.23
	44.25	31-Aug-10	7.22			37.03

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-34C	45.31	15-Mar-04	17.40			27.91
	45.31	14-Sep-04	18.82			26.49
	45.31	18-Jul-05	19.41	65.29	7.19	25.90
	45.31	6-Jan-06	20.54	65.27	8.38	24.77
	45.31	27-Jul-06	18.55	63.84	8.61	26.76
	45.31	9-Apr-07	16.34	62.06	10.39	28.97
	45.31	27-Jul-07	NM			NM
	45.31	29-Jan-08	16.32			28.99
	45.31	15-Jul-08	18.13	43.49	29.01	27.18
	45.31	5-Feb-09	18.08	61.79	10.71	27.23
	45.31	23-Jul-09	NM			NM
	45.31	9-Jan-10	16.41	69.20	3.30	28.90
	45.31	12-Jul-10	NM			NM
MW-35A	45.31	7-Mar-07	3.49			41.82
	45.31	27-Jul-07	3.05			42.26
	45.31	29-Jan-08	1.82			43.49
	45.31	14-Jul-08	6.21			39.10
	45.31	3-Feb-09	5.54			39.77
	45.31	23-Jul-09	5.76			39.55
	45.31	9-Jan-10	4.14			41.17
	45.31	12-Jul-10	6.04			39.27
MW-35B	44.83	7-Mar-07	3.31			41.52
	44.83	27-Jul-07	3.29			41.54
	44.83	29-Jan-08	1.95			42.88
	44.83	14-Jul-08	6.40			38.43
	44.83	3-Feb-09	5.79			39.04
	44.83	23-Jul-09	6.42			38.41
	44.83	9-Jan-10	3.51			41.32
	44.83	12-Jul-10	6.39			38.44
MW-36A	46.39	7-Mar-07	8.71			37.68
	46.39	27-Jul-07	6.54			39.85
	46.39	29-Jan-08	5.59			40.80
	46.39	14-Jul-08	9.33			37.06
	46.39	3-Feb-09	10.69			35.70
	46.39	23-Jul-09	12.03			34.36
	46.39	9-Jan-10	9.23			37.16
	46.39	12-Jul-10	9.14			37.25
MW-36B	44.07	12-Jul-10	1.32			42.75
MW-36D	44.33	12-Jul-10	85.39			-41.06

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-38A	46.39	7-Mar-07	3.26			43.13
	46.39	27-Jul-07	3.08			43.31
	46.39	29-Jan-08	1.85			44.54
	46.39	14-Jul-08	5.84			40.55
	46.39	3-Feb-09	5.15			41.24
	46.39	23-Jul-09	5.06			41.33
	46.39	9-Jan-10	2.27			44.12
	46.39	12-Jul-10	6.42			39.97
MW-38B	45.51	15-Mar-04	1.07			44.44
	45.51	14-Sep-04	6.10			39.41
	45.51	18-Jul-05	2.41			43.10
	45.51	6-Jan-06	6.33			39.18
	45.51	27-Jul-06	1.27			44.24
	45.51	7-Mar-07	2.38			43.13
	45.51	27-Jul-07	2.25			43.26
	45.51	29-Jan-08	0.61			44.90
	45.51	14-Jul-08	4.86			40.65
	45.51	3-Feb-09	4.33			41.18
	45.51	23-Jul-09	4.47			41.04
	45.51	9-Jan-10	1.44			44.07
	45.51	12-Jul-10	5.72			39.79
MW-39B	49.58	15-Mar-04	5.48			44.10
	49.58	13-Sep-04	10.02			39.56
	49.58	18-Jul-05	7.21			42.37
	49.58	4-Jan-06	10.37			39.21
	49.58	27-Jul-06	6.08			43.50
	49.58	7-Mar-07	6.91			42.67
	49.58	27-Jul-07	5.74			43.84
	49.58	30-Jan-08	6.34			43.24
	49.58	15-Jul-08	8.96			40.62
	49.58	4-Feb-09	8.60			40.98
	49.58	24-Jul-09	9.13			40.45
	49.58	8-Jan-10	5.61			43.97
	49.58	12-Jul-10	9.31			40.27

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-40B	49.59	15-Mar-04	5.46			44.13
	49.59	13-Sep-04	9.72			39.87
	49.59	18-Jul-05	7.19			42.40
	49.59	4-Jan-06	10.25			39.34
	49.59	27-Jul-06	6.18			43.41
	49.59	7-Mar-07	6.81			42.78
	49.59	27-Jul-07	5.00			44.59
	49.59	30-Jan-08	5.23			44.36
	49.59	15-Jul-08	8.76			40.83
	49.59	4-Feb-09	8.57			41.02
	49.59	24-Jul-09	9.06			40.53
	49.59	8-Jan-10	5.37			44.22
	49.59	12-Jul-10	9.17			40.42
MW-41B	49.37	15-Mar-04	4.66			44.71
	49.37	13-Sep-04	9.76	35.01	9.80	39.61
	49.37	18-Jul-05	5.96	32.23	12.58	43.41
	49.37	4-Jan-06	10.03	32.21	12.60	39.34
	49.37	27-Jul-06	5.65	29.55	15.26	43.72
	49.37	7-Mar-07	4.41	29.13	15.68	44.96
	49.37	27-Jul-07	5.27	12.00	32.81	44.10
	49.37	22-Feb-08	5.04	25.14	19.67	44.70
	49.37	15-Jul-08	8.87	25.09	19.72	40.50
	49.37	4-Feb-09	8.93	23.79	21.02	40.44
	49.37	24-Jul-09	9.46	23.91	20.90	39.91
	49.37	8-Jan-10	5.92	23.65	21.16	43.45
	49.37	27-May-10	6.13	25.45	19.36	43.24
	49.37	28-Jun-10	6.21	38.2	6.61	43.16
	49.37	12-Jul-10	6.32	38.45	6.36	43.05
	49.37	31-Aug-10	6.26	39.22	5.59	43.11
MW-42B	50.52	7-Mar-07	7.31			43.21
	50.52	27-Jul-07	5.74			44.78
	50.52	30-Jan-08	6.62			43.90
	50.52	15-Jul-08	8.73			41.79
	50.52	4-Feb-09	9.32			41.20
	50.52	24-Jul-09	9.61			40.91
	50.52	8-Jan-10	6.02			44.50
	50.52	12-Jul-10	7.13			43.39
MW-44A	45.11	7-Mar-07	10.86			34.25
	45.11	27-Jul-07	7.46			37.65
	45.11	30-Jan-08	8.44			36.67
	45.11	14-Jul-08	10.75			34.36
	45.11	3-Feb-09	12.55			32.56
	45.11	23-Jul-09	12.76			32.35
	45.11	9-Jan-10	10.23			34.88
	45.11	12-Jul-10	11.24			33.87
MW-44C	45.03	15-Mar-04	17.54			27.49
	45.03	14-Sep-04	18.35			26.68
	45.03	18-Jul-05	18.90	64.77	5.35	26.13
	45.03	6-Jan-06	20.03	66.50	5.37	25.00
	45.03	27-Jul-06	18.47	63.35	6.75	26.56
	45.03	7-Mar-07	16.02	62.30	7.75	29.01
	45.03	27-Jul-07	14.83	65.45	5.50	30.20
	45.03	29-Jan-08	15.95			29.08
	45.03	14-Jul-08	17.91	64.95	6.18	27.12
	45.03	3-Feb-09	16.72	64.15	6.98	28.31
	45.03	23-Jul-09	17.12	64.05	6.75	27.91
	45.03	9-Jan-10	15.57	63.81	6.99	29.46
	45.03	27-May-10	16.67	64.7	6.10	28.36
	45.03	28-Jun-10	16.77	67.85	2.95	28.26
	45.03	12-Jul-10	16.91	70.35	0.45	28.12
	45.03	31-Aug-10	16.89	70.63	0.17	28.14

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-45C	44.73	15-Mar-04	17.15			27.58
	44.73	14-Sep-04	17.82	61.66	9.02	26.91
	44.73	18-Jul-05	18.38	60.76	9.89	26.35
	44.73	6-Jan-06	19.51	62.87	8.87	25.22
	44.73	27-Jul-06	17.92	61.64	8.94	26.81
	44.73	7-Mar-07	15.95	60.81	9.79	28.78
	44.73	27-Jul-07	14.38			30.35
	44.73	29-Jan-08	14.86	61.39	9.46	29.87
	44.73	14-Jul-08	17.22	61.25	9.88	27.51
	44.73	3-Feb-09	17.00	61.24	9.61	27.73
	44.73	23-Jul-09	17.46	61.30	9.55	27.27
	44.73	9-Jan-10	14.98	61.56	9.29	29.75
	44.73	27-May-10	16.31	61.1	9.75	28.42
	44.73	28-Jun-10	16.42	63.45	7.40	28.31
	44.73	12-Jul-10	16.61	68.8	2.05	28.12
	44.73	31-Aug-10	16.46	69.62	1.23	28.27
MW-46C	44.94	15-Mar-04	16.16	NM	NM	28.78
	44.94	14-Sep-04	17.97	NM	NM	26.97
	44.94	18-Jul-05	18.50	69.05	3.78	26.44
	44.94	13-Jan-06	19.66	70.20	3.22	25.28
	44.94	27-Jul-06	17.96	68.89	3.90	26.98
	44.94	7-Mar-07	16.01	69.32	3.43	28.93
	44.94	27-Jul-07	14.54	69.31	3.59	30.40
	44.94	30-Jan-08	15.68	70.81	2.00	29.26
	44.94	14-Jul-08	17.38	69.97	2.84	27.56
	44.94	3-Feb-09	16.78	69.28	3.53	28.16
	44.94	23-Jul-09	17.59	69.35	3.55	27.35
	44.94	9-Jan-10	14.53	68.74	4.16	30.41
	44.94	27-May-10	16.26	69.4	3.50	28.68
	44.94	28-Jun-10	16.39	70.85	2.05	28.55
	44.94	12-Jul-10	16.29	72.25	0.65	28.65
	44.94	31-Aug-10	16.13	72.46	0.44	28.81
MW-47C	45.61	27-Jul-07	16.62			28.99
	45.61	29-Jan-08	16.04			29.57
	45.61	14-Jul-08	18.15			27.46
	45.61	4-Feb-09	18.39			27.22
	45.61	23-Jul-09	18.61			27.00
	45.61	9-Jan-10	16.46			29.15
	45.61	12-Jul-10	18.33			27.28
MW-48C	44.68	15-Mar-04	17.31			27.37
	44.68	14-Sep-04	18.60			26.08
	44.68	18-Jul-05	19.17			25.51
	44.68	6-Jan-06	20.33			24.35
	44.68	27-Jul-06	18.73			25.95
	44.68	7-Mar-07	16.52			28.16
	44.68	27-Jul-07	15.22			29.46
	44.68	29-Jan-08	16.32			28.36
MW-48C	44.68	14-Jul-08	17.63			27.05
	44.68	4-Feb-09	17.97			26.71
	44.68	24-Jul-09	18.39			26.29
	44.68	9-Jan-10	15.81			28.87
	44.68	12-Jul-10	17.42			27.26
MW-49A	46.18	7-Mar-07	12.91			33.27
	46.18	27-Jul-07	8.86			37.32
	46.18	31-Jan-08	12.02			34.16
	46.18	15-Jul-08	12.99			33.19
	46.18	4-Feb-09	13.29			32.89
	46.18	24-Jul-09	13.71			32.47
	46.18	9-Jan-10	11.07			35.11
	46.18	12-Jul-10	11.62			34.56

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-49B	46.22	4-Feb-09	11.65			34.57
	46.22	24-Jul-09	11.93			34.29
	46.22	9-Jan-10	9.73			36.49
	46.22	12-Jul-10	11.36			34.86
MW-50A	46.96	7-Mar-07	8.16			38.80
	46.96	27-Jul-07	4.70			42.26
	46.96	31-Jan-08	5.68			41.28
	46.96	16-Jul-08	7.99			38.97
	46.96	4-Feb-09	9.31			37.65
	46.96	24-Jul-09	9.49			37.47
	46.96	9-Jan-10	7.02			39.94
	46.96	12-Jul-10	8.74			38.22
MW-51A	47.80	7-Mar-07	6.96			40.84
	47.80	27-Jul-07	5.45			42.35
	47.80	31-Jan-08	5.92			41.88
	47.80	15-Jul-08				47.80
	47.80	4-Feb-09	9.98			37.82
	47.80	24-Jul-09	10.34			37.46
	47.80	9-Jan-10	7.83			39.97
	47.80	12-Jul-10	9.16			38.64
MW-52A	51.91	7-Mar-07	13.66			38.25
	51.91	27-Jul-07	11.76			40.15
	51.91	31-Jan-08	12.60			39.31
	51.91	15-Jul-08	14.42			37.49
	51.91	5-Feb-09	15.52			36.39
	51.91	23-Jul-09	16.39			35.52
	51.91	9-Jan-10	12.57			39.34
	51.91	12-Jul-10	14.19			37.72
MW-53C	45.49	7-Mar-07	16.12			29.37
	45.49	27-Jul-07	14.55			30.94
	45.49	29-Jan-08	15.12			30.37
	45.49	14-Jul-08	16.86			28.63
	45.49	3-Feb-09	16.69			28.80
	45.49	23-Jul-09	17.62			27.87
	45.49	9-Jan-10	15.19			30.30
	45.49	12-Jul-10	15.71			29.78
MW-54C	44.99	7-Mar-07	15.74			29.25
	44.99	27-Jul-07	14.63			30.36
	44.99	28-Jan-08	15.28			29.71
	44.99	14-Jul-08	16.68			28.31
	44.99	3-Feb-09	16.87			28.12
	44.99	23-Jul-09	17.84			27.15
	44.99	9-Jan-10	15.46			29.53
	44.99	12-Jul-10	16.49			28.50
MW-55A	52.01	4-Feb-09	13.79			38.22
	52.01	23-Jul-09	14.06			37.95
	52.01	9-Jan-10	10.83			41.18
	52.01	12-Jul-10	12.72			39.29
MW-57A	47.72	5-Feb-09	12.73			34.99
	47.72	23-Jul-09	12.91			34.81
	47.72	9-Jan-10	9.78			37.94
	47.72	12-Jul-10	8.56	24.55	2.55	39.16
MW-58A	47.76	5-Feb-09	14.55			33.21
MW-58A	47.76	23-Jul-09	14.04			33.72
	47.76	9-Jan-10	12.29			35.47
	47.76	12-Jul-10	14.03			33.73

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
MW-59A	44.18	5-Feb-09	10.71			33.47
	44.18	23-Jul-09	9.96			34.22
	44.18	9-Jan-10	8.62			35.56
	44.18	12-Jul-10	9.97			34.21
MW-59B	44.36	12-Jul-10	7.43			36.93
MW-59D	44.22	5-Feb-09	84.17			-39.95
	44.22	23-Jul-09	83.53			-39.31
	44.22	9-Jan-10	81.73			-37.51
	44.22	12-Jul-10	82.16			-37.94
MW-60A	46.79	4-Feb-09	9.56			37.23
	46.79	23-Jul-09	9.71			37.08
	46.79	9-Jan-10	7.72			39.07
	46.79	12-Jul-10	8.61			38.18
MW-61A	44.67	3-Feb-09	8.35			36.32
	44.67	23-Jul-09	8.47			36.20
	44.67	9-Jan-10	6.49			38.18
	44.67	12-Jul-10	8.09			36.58
MW-62B	48.16	4-Feb-09	6.99			41.17
	48.16	24-Jul-09	7.39			40.77
	48.16	8-Jan-10	5.13			43.03
	48.16	12-Jul-10	5.79			42.37
MW-63B	44.48	5-Feb-09	31.54			12.94
	44.48	23-Jul-09	9.52			34.96
	44.48	9-Jan-10	1.34			43.14
	44.48	12-Jul-10	5.71			38.77
MW-64A	48.31	4-Feb-09	9.02			39.29
	48.31	24-Jul-09	9.13			39.18
	48.31	9-Jan-10	6.52			41.79
	48.31	12-Jul-10	6.82			41.49
MW-65D	44.55	5-Feb-09	86.72			-42.17
	44.55	23-Jul-09	86.47			-41.92
	44.55	9-Jan-10	84.39			-39.84
	44.55	12-Jul-10	84.39			-39.84
MW-66D	46.51	5-Feb-09	86.18			-39.67
	46.51	23-Jul-09	85.82			-39.31
	46.51	9-Jan-10	84.02			-37.51
	46.51	12-Jul-10	84.86			-38.35
MW-67B	43.93	12-Jul-10	5.76			38.17
MW-68C	44.80	12-Jul-10	16.52			28.28
MW-69A	45.71	12-Jul-10	11.81			33.90
P-10	47.69	2-Sep-93	6.87			40.85
	47.69	21-Dec-93	3.32			44.40
	47.69	24-Mar-94	3.88			43.84
	47.69	22-Jun-94	4.98			42.74
	47.69	28-Sep-94	6.38			41.34
	47.69	13-Oct-94	7.07			40.65
	47.69	24-Jan-95	2.67			45.05
	47.69	11-Apr-95	2.59			45.13
	47.69	11-Jul-95	4.69			43.03
	47.69	23-Jan-96	5.84			41.88
P-10	47.69	19-Jul-96	10.04			37.68
	47.69	17-Sep-96	8.34			39.38
	47.69	31-Oct-96	6.97			40.75
	47.69	22-Nov-96	8.84			38.88
	47.69	27-Dec-96	6.20			41.52
	47.69	22-Jan-97	4.10			43.62
	47.69	21-Feb-97	2.86			44.86
	47.69	25-Mar-97	3.19			44.53
	47.69	23-Apr-97	4.42			43.30
	47.69	24-Apr-97	4.57			43.15

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
P-10	47.69	13-May-97	3.14			44.58
	47.69	20-Jun-97	4.94			42.78
	47.69	25-Jun-97	2.74			44.98
	47.69	1-Jul-97	4.13			43.59
	47.69	24-Jul-97	7.91			39.81
	47.69	16-Aug-97	7.86			39.86
	47.69	22-Aug-97	8.67			39.05
	47.69	25-Sep-97	6.54			41.18
	47.69	22-Oct-97	5.36			42.36
	47.69	25-Nov-97	5.36			42.36
	47.69	19-Dec-97	4.72			43.00
	47.69	20-Jan-98	3.40			44.32
	47.69	29-Jan-98	3.11			44.61
	47.69	18-Mar-98	2.84			44.88
	47.69	24-Apr-98	6.80			40.92
	47.69	21-May-98	7.35			40.37
	47.69	30-Jul-98	8.23			39.49
	47.69	25-Aug-98	7.34			40.38
	47.69	21-Sep-98	5.25			42.47
	47.69	26-Oct-98	6.11			41.61
	47.69	23-Nov-98	4.10			43.62
	47.69	26-Feb-99	3.21			44.51
	47.69	16-Mar-99	4.21			43.51
	47.69	29-Apr-99	4.53			43.19
	47.69	1-Jun-99	4.53			43.19
	47.69	30-Jul-99	6.00			41.72
	47.69	27-Aug-99	4.72			43.00
	47.69	27-Sep-99	9.58			38.14
	47.69	29-Oct-99	10.61			37.11
	47.69	29-Dec-99	11.55			36.17
	47.69	4-Feb-00	13.71			34.01
	47.69	25-Feb-00	10.44			37.28
	47.69	27-Mar-00	7.53			40.19
	47.69	7-Apr-00	7.09			40.63
	47.69	31-May-00	7.14			40.58
	47.69	1-Jun-00	7.11			40.61
	47.69	28-Jul-00	7.15			40.57
	47.69	30-Aug-00	10.15			37.57
	47.69	19-Sep-00	11.56			36.16
	47.69	27-Oct-00	8.66			39.06
	47.69	21-Nov-00	9.64			38.08
	47.69	1-May-01	6.52			41.20
	47.69	1-Oct-01	6.85			40.87
	47.69	11-Mar-02	3.41			44.31
	47.69	23-Sep-02	3.54			44.18
	47.69	10-Mar-03	2.43			45.26
	47.69	23-Sep-03	1.61			46.08
	47.69	15-Mar-04	2.85			44.84
	47.69	13-Sep-04	7.99			39.70
	47.69	18-Jul-05	4.20			43.49
	47.69	4-Jan-06	8.58			39.11
	47.69	27-Jul-06	3.46			44.23
	47.69	23-Jan-07	2.36			45.33
	47.69	7-Mar-07	NM			NM
	47.69	27-Jul-07	3.75			43.94
	47.69	29-Jan-08	2.30			45.39
	47.69	16-Jul-08	6.91			40.78
	47.69	22-Jan-09	6.35			41.34
	47.69	23-Jul-09	NM			NM
	47.69	8-Jan-10	4.06			43.63
	47.69	12-Jul-10	2.06			45.63

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
P-11	48.98	2-Sep-93	7.87			41.15
	48.98	21-Dec-93	4.57			44.45
	48.98	24-Mar-94	5.04			43.98
	48.98	22-Jun-94	6.19			42.83
	48.98	28-Sep-94	7.40			41.62
	48.98	13-Oct-94	8.14			40.88
	48.98	24-Jan-95	3.90			45.12
	48.98	11-Apr-95	3.77			45.25
	48.98	11-Jul-95	5.69			43.33
	48.98	23-Jan-96	6.81			42.21
	48.98	19-Jul-96	7.81			41.21
	48.98	17-Sep-96	9.15			39.87
	48.98	31-Oct-96	7.52			41.50
	48.98	22-Nov-96	9.46			39.56
	48.98	27-Dec-96	6.64			42.38
	48.98	22-Jan-97	4.70			44.32
	48.98	21-Feb-97	3.88			45.14
	48.98	25-Mar-97	4.09			44.93
	48.98	23-Apr-97	5.27			43.75
	48.98	24-Apr-97	5.41			43.61
	48.98	13-May-97	4.12			44.90
	48.98	20-Jun-97	5.79			43.23
	48.98	25-Jun-97	3.83			45.19
	48.98	1-Jul-97	5.01			44.01
	48.98	24-Jul-97	7.56			41.46
	48.98	16-Aug-97	8.74			40.28
	48.98	22-Aug-97	9.37			39.65
	48.98	25-Sep-97	7.24			41.78
	48.98	22-Oct-97	5.98			43.04
	48.98	25-Nov-97	6.00			43.02
	48.98	19-Dec-97	5.52			43.50
	48.98	20-Jan-98	4.30			44.72
	48.98	4-Mar-98	4.08			44.94
	48.98	18-Mar-98	3.92			45.10
	48.98	24-Apr-98	7.61			41.41
	48.98	21-May-98	8.10			40.92
	48.98	30-Jul-98	9.21			39.81
	48.98	25-Aug-98	8.44			40.58
	48.98	21-Sep-98	5.91			43.11
	48.98	26-Oct-98	7.59			41.43
	48.98	23-Nov-98	5.41			43.61
	48.98	29-Jan-99	4.11			44.91
	48.98	26-Feb-99	4.22			44.80
	48.98	16-Mar-99	4.96			44.06
	48.98	29-Apr-99	5.15			43.87
	48.98	1-Jun-99	5.15			43.87
	48.98	30-Jul-99	6.66			42.36
	48.98	27-Aug-99	5.23			43.79
	48.98	27-Sep-99	10.49			38.53
	48.98	29-Oct-99	11.91			37.11
	48.98	29-Dec-99	11.12			37.90
	48.98	4-Feb-00	12.13			36.89
	48.98	25-Feb-00	10.46			38.56
	48.98	27-Mar-00	8.32			40.70
	48.98	7-Apr-00	7.91			41.11
	48.98	31-May-00	7.96			41.06
	48.98	1-Jun-00	7.93			41.09
	48.98	28-Jul-00	7.97			41.05
	48.98	30-Aug-00	10.88			38.14
	48.98	19-Sep-00	12.32			36.70
	48.98	27-Oct-00	10.94			38.08
	48.98	21-Nov-00	9.77			39.25

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
P-11	48.98	1-May-01	7.48			41.54
	48.98	1-Oct-01	7.74			41.28
	48.98	11-Mar-02	4.51			44.51
	48.98	23-Sep-02	4.46			44.56
	48.98	10-Mar-03	3.69			45.29
	48.98	23-Sep-03	4.54			44.44
	48.98	15-Mar-04	4.51			44.47
	48.98	13-Sep-04	9.14			39.84
	48.98	18-Jul-05	5.27			43.71
	48.98	4-Jan-06	9.56			39.42
	48.98	27-Jul-06	4.54			44.44
	48.98	7-Mar-07	NM			NM
	48.98	27-Jul-07	4.61			44.37
	48.98	30-Jan-08	2.71			46.27
	48.98	15-Jul-08	7.93			41.05
P-11	48.98	4-Feb-09	7.82			41.16
	48.98	24-Jul-09	7.74			41.24
	48.98	8-Jan-10	5.67			43.31
	48.98	12-Jul-10	6.78			42.20
P-12	48.78	2-Sep-93	7.02			41.80
	48.78	21-Dec-93	4.30			44.52
	48.78	24-Mar-94	4.45			44.37
	48.78	22-Jun-94	5.06			43.76
	48.78	28-Sep-94	6.46			42.36
	48.78	13-Oct-94	7.19			41.63
	48.78	24-Jan-95	3.63			45.19
	48.78	11-Apr-95	3.25			45.57
	48.78	11-Jul-95	4.62			44.20
	48.78	23-Jan-96	6.62			42.20
	48.78	19-Jul-96	8.64			40.18
	48.78	17-Sep-96	8.12			40.70
	48.78	31-Oct-96	6.81			42.01
	48.78	22-Nov-96	8.70			40.12
	48.78	27-Dec-96	6.57			42.25
	48.78	22-Jan-97	4.93			43.89
	48.78	21-Feb-97	3.61			45.21
	48.78	25-Mar-97	3.70			45.12
	48.78	23-Apr-97	4.58			44.24
	48.78	24-Apr-97	4.74			44.08
	48.78	13-May-97	3.69			45.13
	48.78	20-Jun-97	4.86			43.96
	48.78	25-Jun-97	3.35			45.47
	48.78	1-Jul-97	4.11			44.71
	48.78	24-Jul-97	6.58			42.24
	48.78	16-Aug-97	7.80			41.02
	48.78	22-Aug-97	8.22			40.60
	48.78	25-Sep-97	6.54			42.28
	48.78	22-Oct-97	5.66			43.16
	48.78	25-Nov-97	5.70			43.12
	48.78	19-Dec-97	5.13			43.69
	48.78	20-Jan-98	4.15			44.67
	48.78	4-Mar-98	3.78			45.04
	48.78	18-Mar-98	3.61			45.21
	48.78	24-Apr-98	6.90			41.92
	48.78	21-May-98	7.80			41.02
	48.78	30-Jul-98	8.15			40.67
	48.78	25-Aug-98	8.31			40.51
	48.78	21-Sep-98	5.64			43.18
	48.78	26-Oct-98	7.66			41.16
	48.78	23-Nov-98	5.65			43.17
	48.78	29-Jan-99	4.20			44.62
	48.78	26-Feb-99	4.31			44.51

Table 5D
GROUNDWATER MEASUREMENTS
UPRR Houston Wood Preserving Works

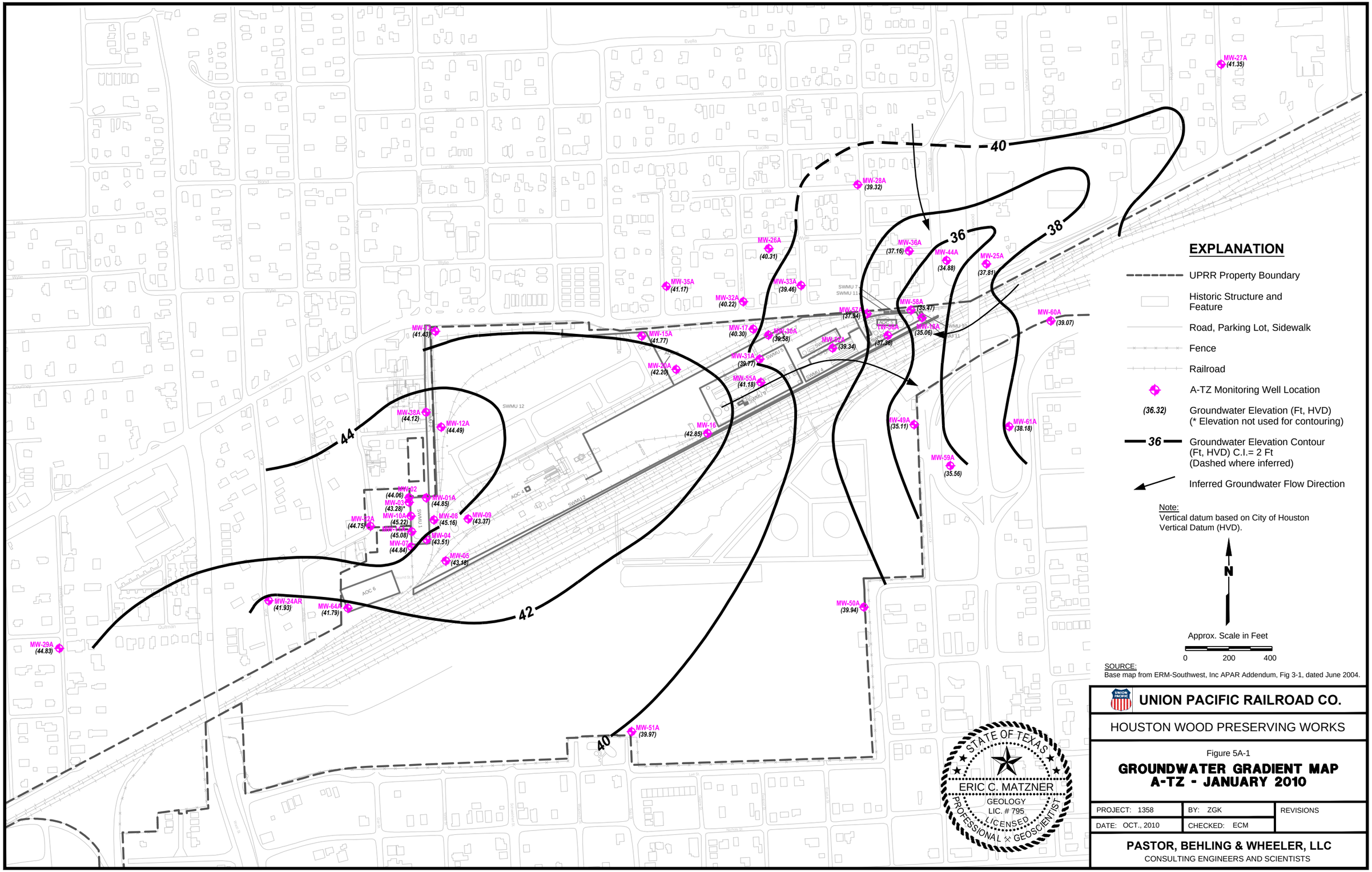
Well ID	TOC Elevation (ft)	Date	Depth to Water (ft)	Depth to DNAPL (ft BTOC)	DNAPL Thickness (ft)	GW Elevation (ft)
P-12	48.78	16-Mar-99	4.99			43.83
	48.78	29-Apr-99	5.10			43.72
	48.78	1-Jun-99	5.10			43.72
	48.78	30-Jul-99	6.75			42.07
	48.78	27-Aug-99	5.34			43.48
	48.78	27-Sep-99	9.36			39.46
	48.78	29-Oct-99	10.11			38.71
	48.78	29-Dec-99	9.44			39.38
	48.78	4-Feb-00	12.10			36.72
	48.78	25-Feb-00	8.63			40.19
	48.78	27-Mar-00	7.76			41.06
	48.78	7-Apr-00	7.35			41.47
	48.78	31-May-00	7.39			41.43
	48.78	1-Jun-00	7.34			41.48
	48.78	28-Jul-00	7.37			41.45
	48.78	30-Aug-00	10.66			38.16
	48.78	19-Sep-00	11.45			37.37
	48.78	27-Oct-00	10.94			37.88
	48.78	21-Nov-00	8.93			39.89
	48.78	1-May-01	6.70			42.12
	48.78	1-Oct-01	6.93			41.89
	48.78	11-Mar-02	4.15			44.67
	48.78	23-Sep-02	3.90			44.92
	48.78	10-Mar-03	3.13			45.65
	48.78	23-Sep-03	3.86			44.92
	48.78	15-Mar-04	NM			NM
	48.78	13-Sep-04	7.93			40.85
	48.78	18-Jul-05	5.06			43.72
	48.78	4-Jan-06	8.98			39.80
	48.78	27-Jul-06	4.35			44.43
	48.78	22-Jan-07	3.19			45.59
	48.78	7-Mar-07	NM			NM
	48.78	27-Jul-07	4.22			44.56
	48.78	29-Jan-08	3.03			45.75
	48.78	16-Jul-08	6.78			42.00
	48.78	22-Jan-09	6.99			41.79
	48.78	24-Jul-09	NM			NM
	48.78	8-Jan-10	4.13			44.65
	48.78	12-Jul-10	3.93			44.85
TW-01		27-Jul-07	8.45			
		31-Jan-08	8.17			
		23-Jul-09	12.16			
		8-Jan-10	10.03			
		12-Jul-10	NM			
TW-02		27-Jul-07	11.64	10.04[2]	1.57[2]	
		31-Jan-08	10.96	9.81[2]	1.15[2]	
		15-Jul-08	11.42			
		4-Feb-09	12.31			
		24-Jul-09	NM			
		8-Jan-10	NM			
		12-Jul-10	NM			
TW-41B	49.67	4-Feb-09	8.44			41.23
	49.67	24-Jul-09	8.34			41.33
	49.67	8-Jan-10	4.86			44.81
	49.67	12-Jul-10	6.12			43.55
TW-56A	51.89	5-Feb-09	17.48			34.41
	51.89	23-Jul-09	17.17			34.72
	51.89	8-Jan-10	14.53			37.36
	51.89	12-Jul-10	15.78			36.11

Notes:
1. The surface completion for MW-23C was repaired and resurveyed in January/February 2009
2. LNAPL measuered in TW-02, no DNAPL
3. NM = Not Measured

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

5.0 Figures



UNION PACIFIC RAILROAD CO.

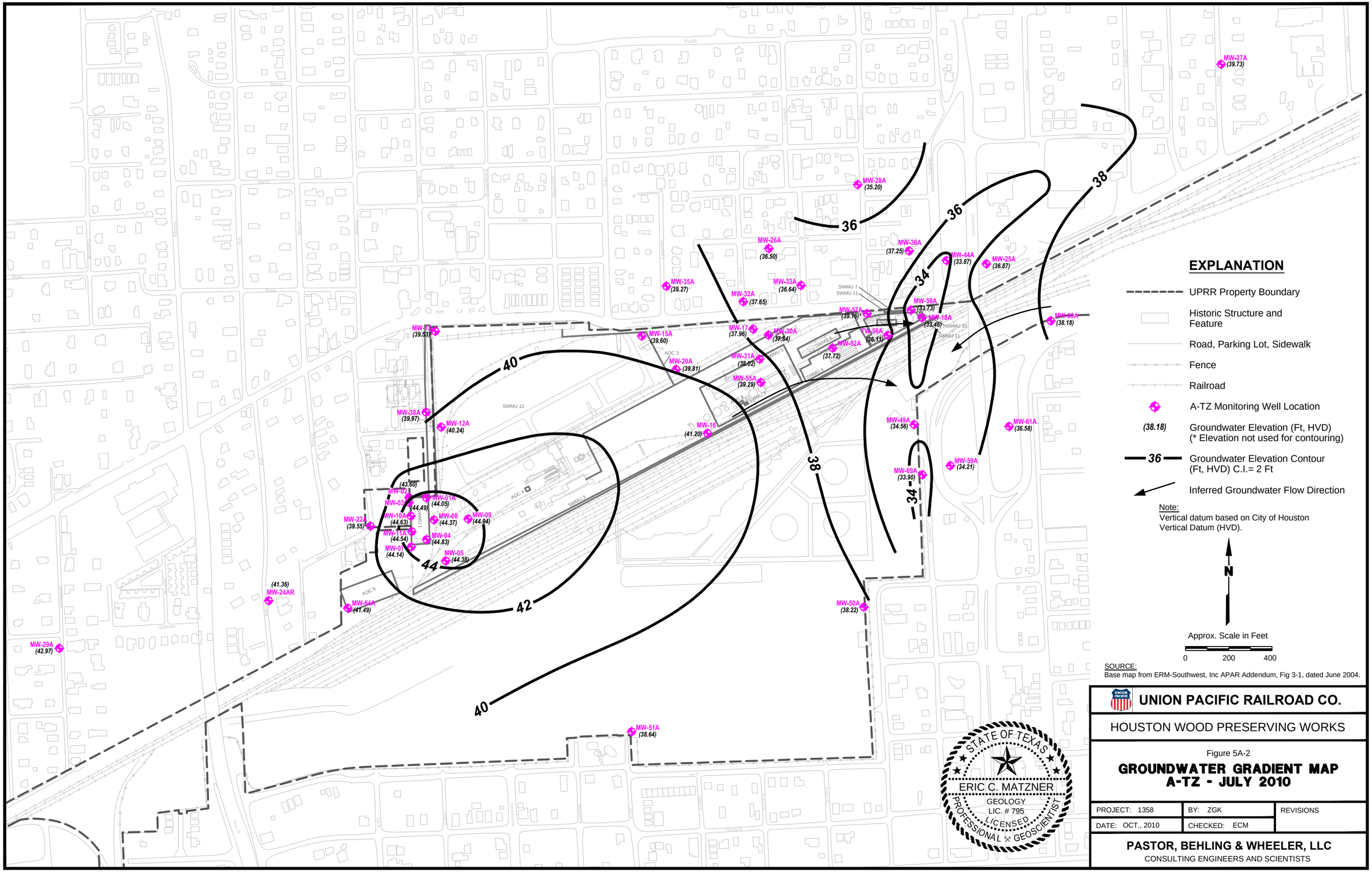
HOUSTON WOOD PRESERVING WORKS

Figure 5A-1

GROUNDWATER GRADIENT MAP A-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- (38.18) Groundwater Elevation (Ft, HVD) (* Elevation not used for contouring)
- 36 Groundwater Elevation Contour (Ft, HVD) C.I.= 2 Ft
- Inferred Groundwater Flow Direction

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST

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HOUSTON WOOD PRESERVING WORKS

Figure 5A-2

GROUNDWATER GRADIENT MAP A-TZ - JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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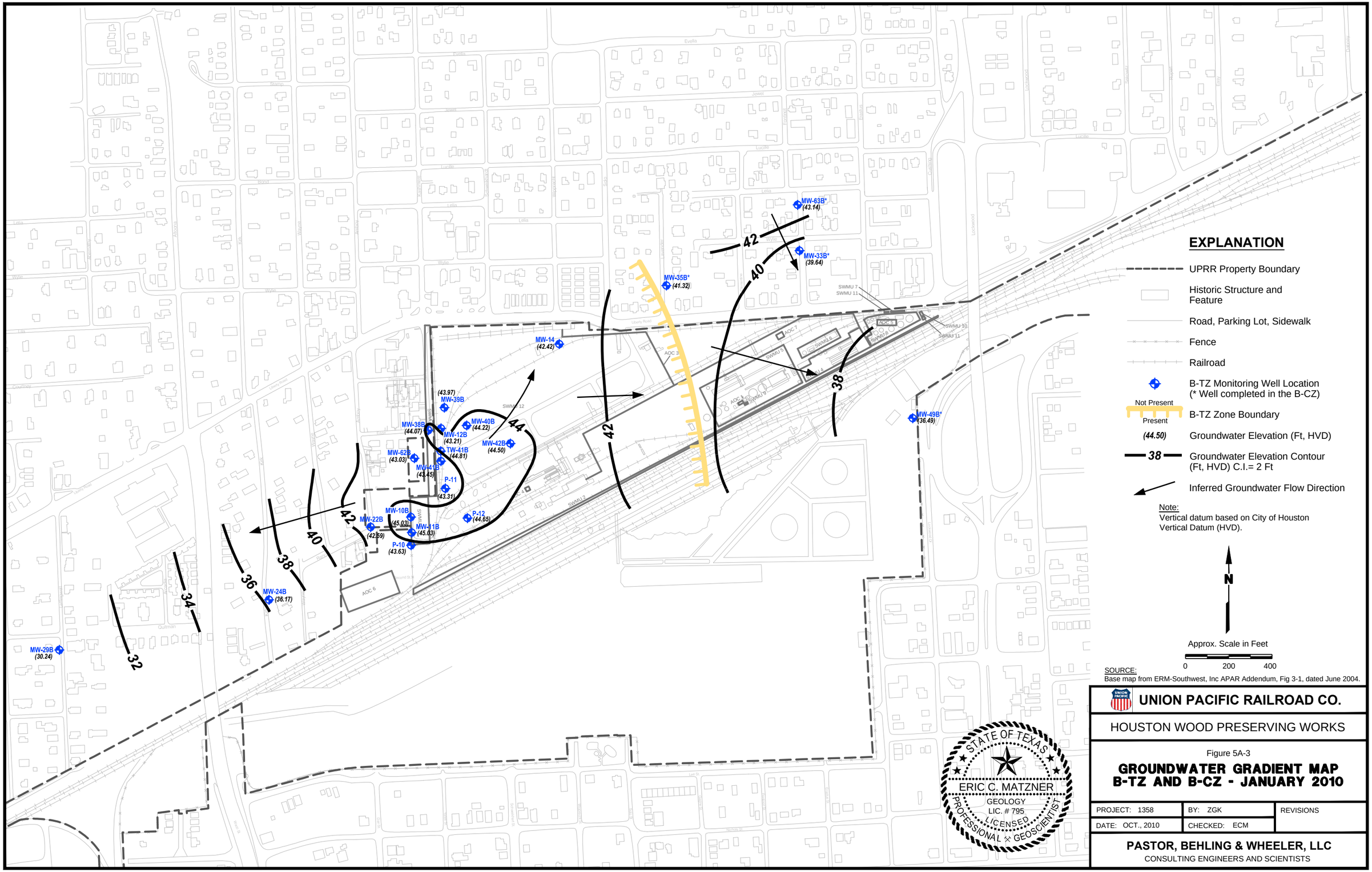

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- B-TZ Monitoring Well Location (* Well completed in the B-CZ)
- B-TZ Zone Boundary (Not Present / Present)
- (44.50) Groundwater Elevation (Ft, HVD)
- 38 Groundwater Elevation Contour (Ft, HVD) C.I.= 2 Ft
- Inferred Groundwater Flow Direction

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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Figure 5A-3

GROUNDWATER GRADIENT MAP B-TZ AND B-CZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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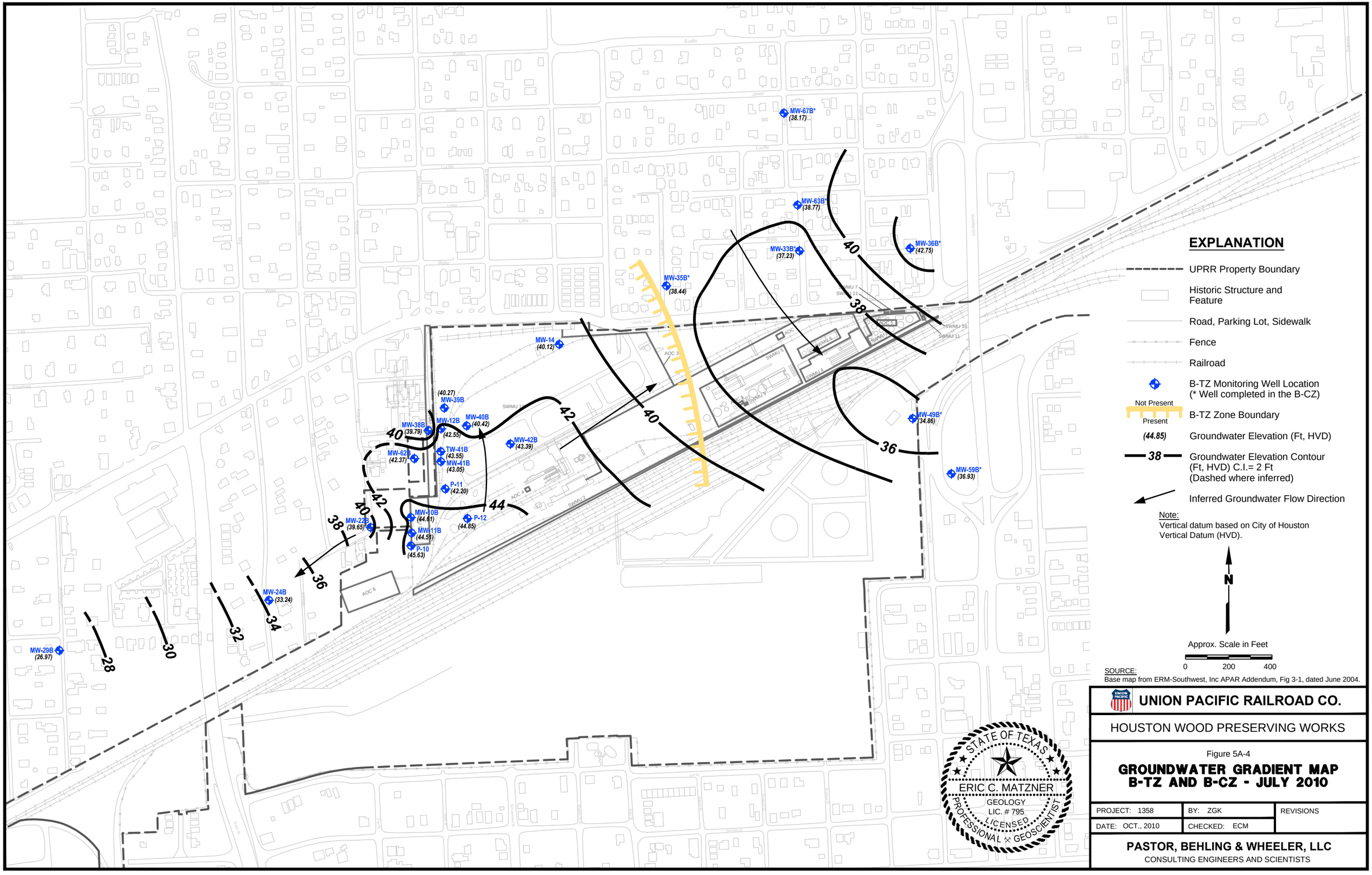

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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Figure 5A-4

GROUNDWATER GRADIENT MAP B-TZ AND B-CZ - JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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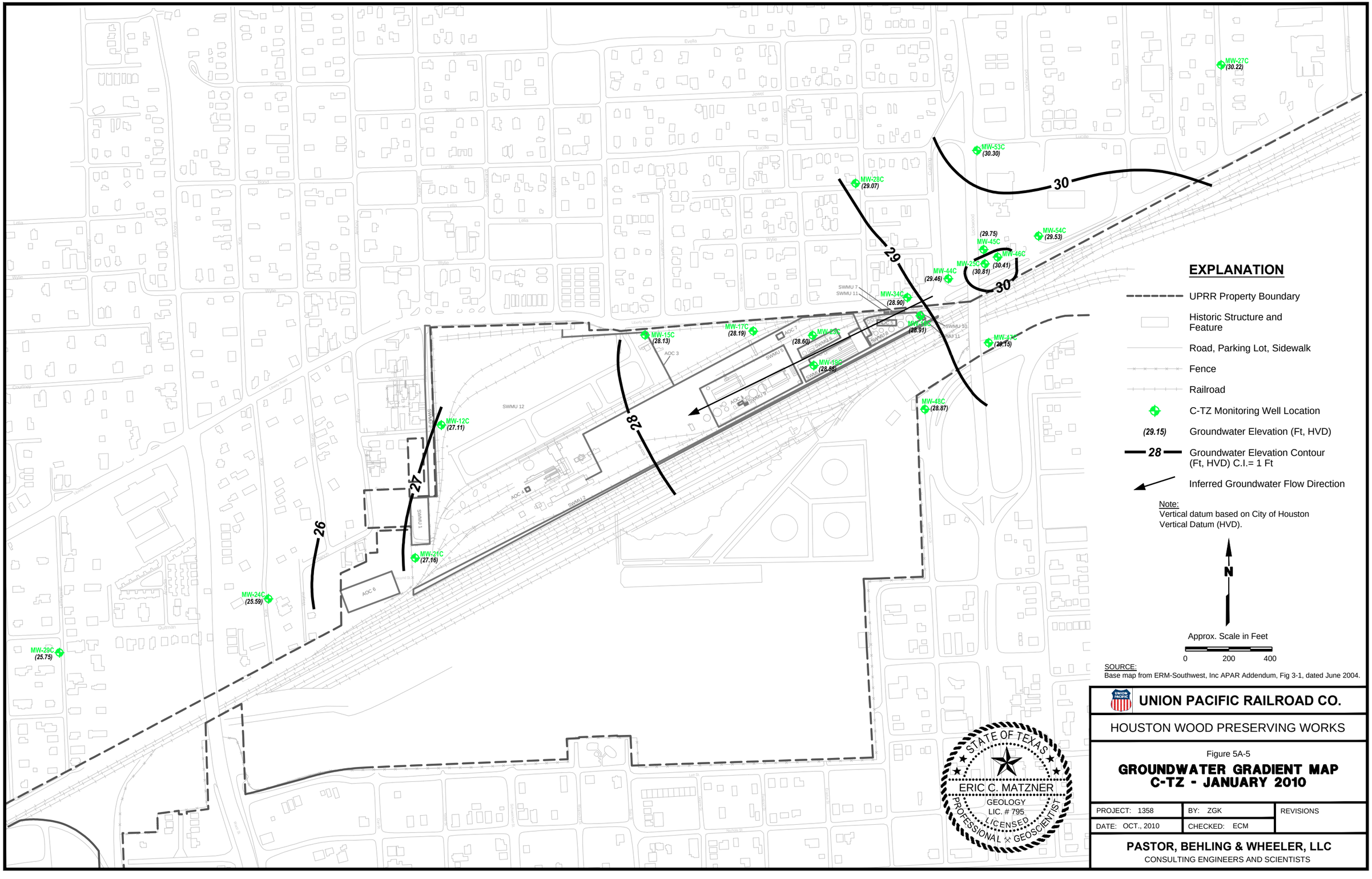

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- (29.15) Groundwater Elevation (Ft, HVD)
- 28 Groundwater Elevation Contour (Ft, HVD) C.I.= 1 Ft
- Inferred Groundwater Flow Direction

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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Figure 5A-5

GROUNDWATER GRADIENT MAP C-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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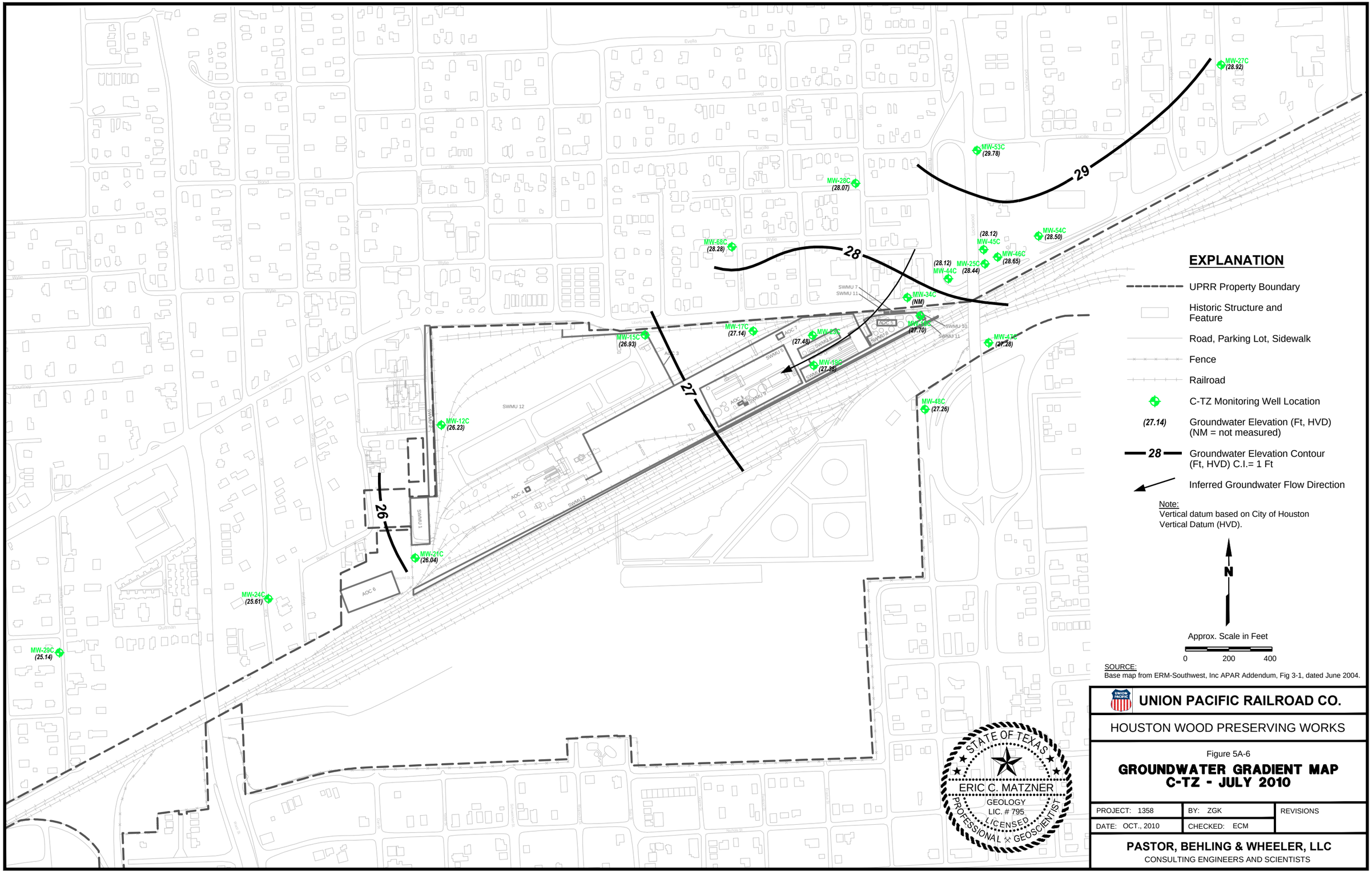

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- *(27.14)* Groundwater Elevation (Ft, HVD) (NM = not measured)
- *28* Groundwater Elevation Contour (Ft, HVD) C.I.= 1 Ft
- Inferred Groundwater Flow Direction

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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Figure 5A-6

GROUNDWATER GRADIENT MAP C-TZ - JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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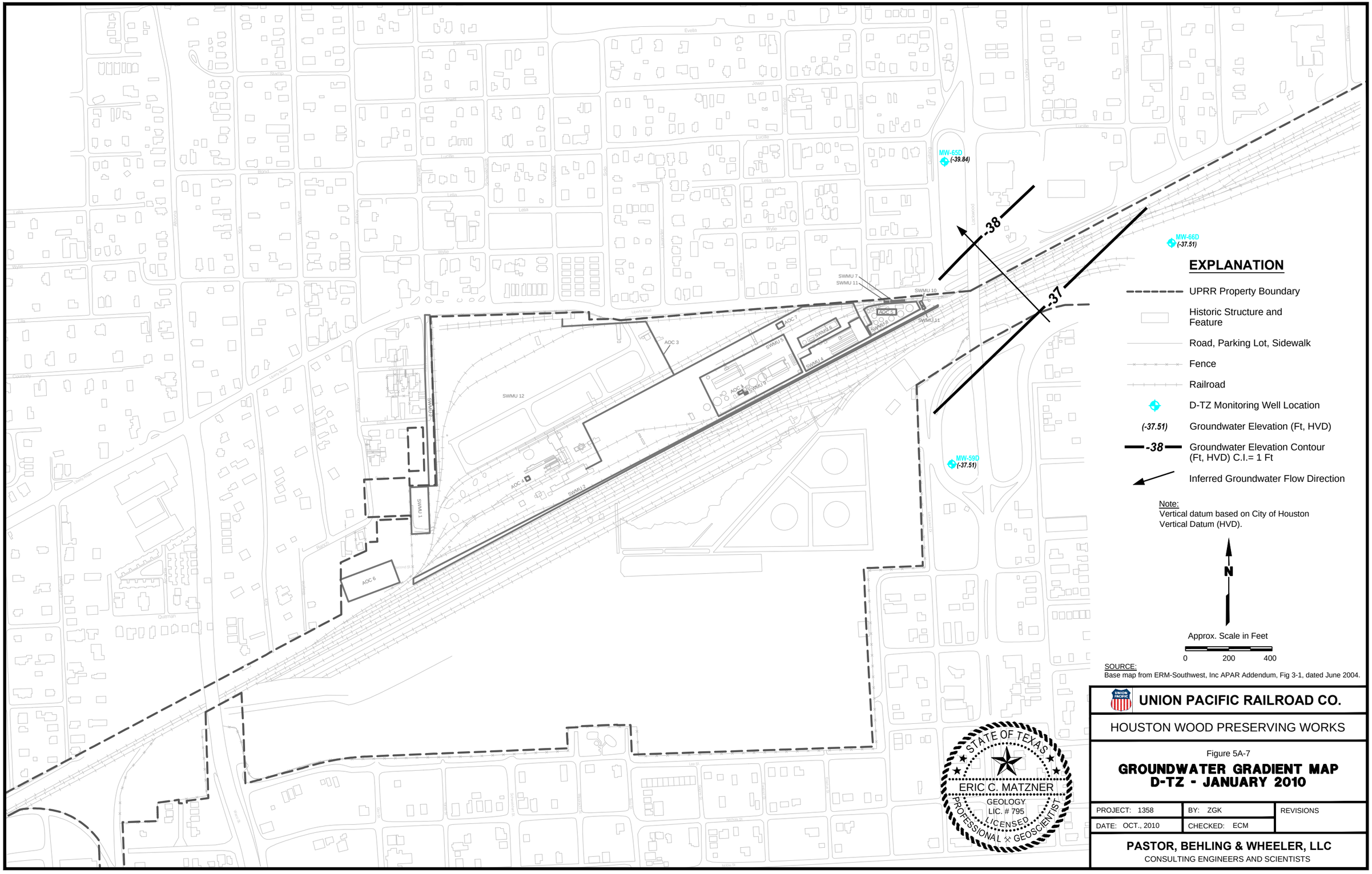


UNION PACIFIC RAILROAD CO.

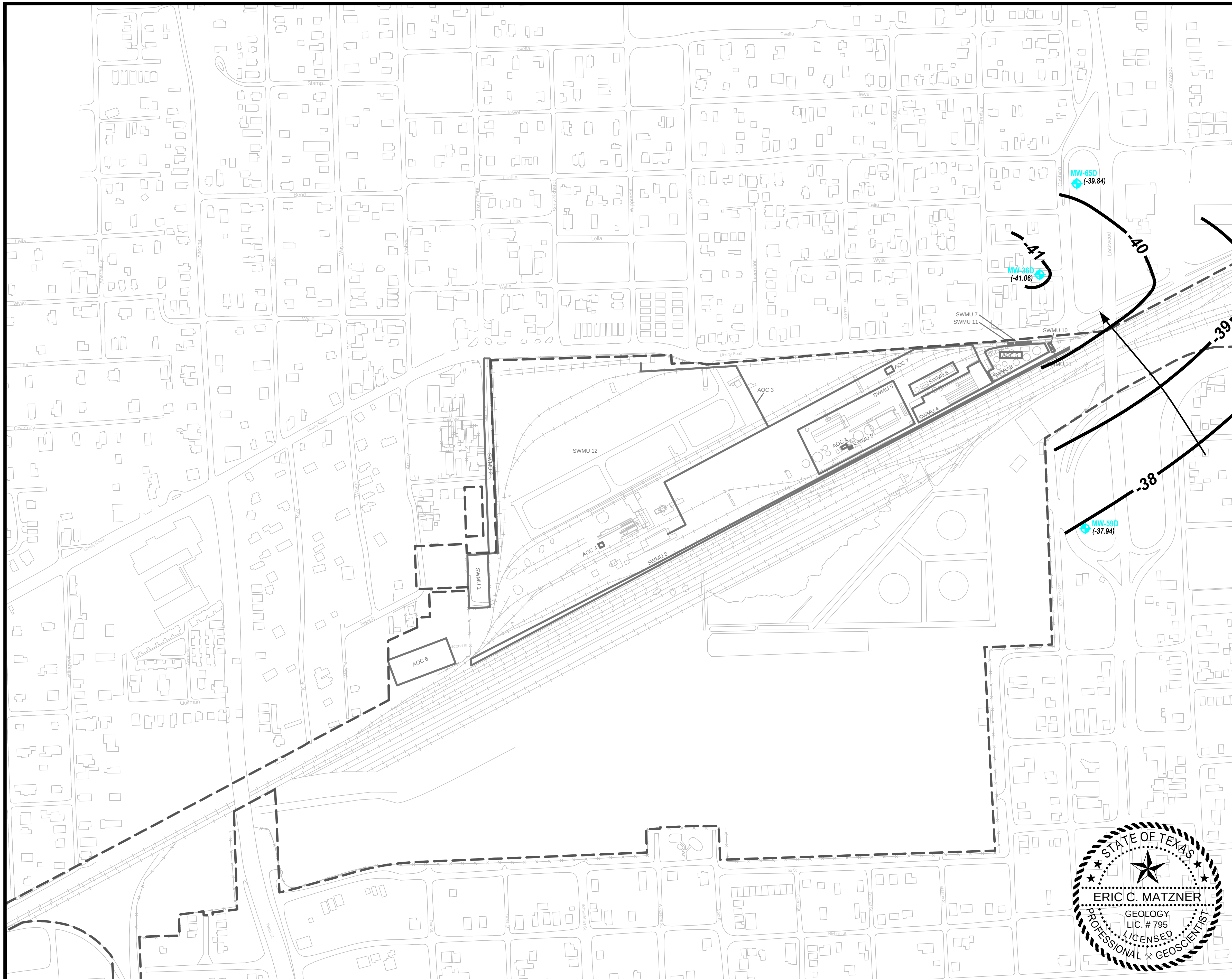
HOUSTON WOOD PRESERVING WORKS

Figure 5A-7

GROUNDWATER GRADIENT MAP D-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

UPRR Property Boundary

Historic Structure and Feature

Road, Parking Lot, Sidewalk

Fence

Railroad

D-TZ Monitoring Well Location

(-38.35) Groundwater Elevation (Ft, HVD)

-38 Groundwater Elevation Contour (Ft, HVD) C.I.= 1 Ft

Inferred Groundwater Flow Direction

Note:
Vertical datum based on City of Houston Vertical Datum (HVD).

N

Approx. Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 5A-8

GROUNDWATER GRADIENT MAP
D-TZ - JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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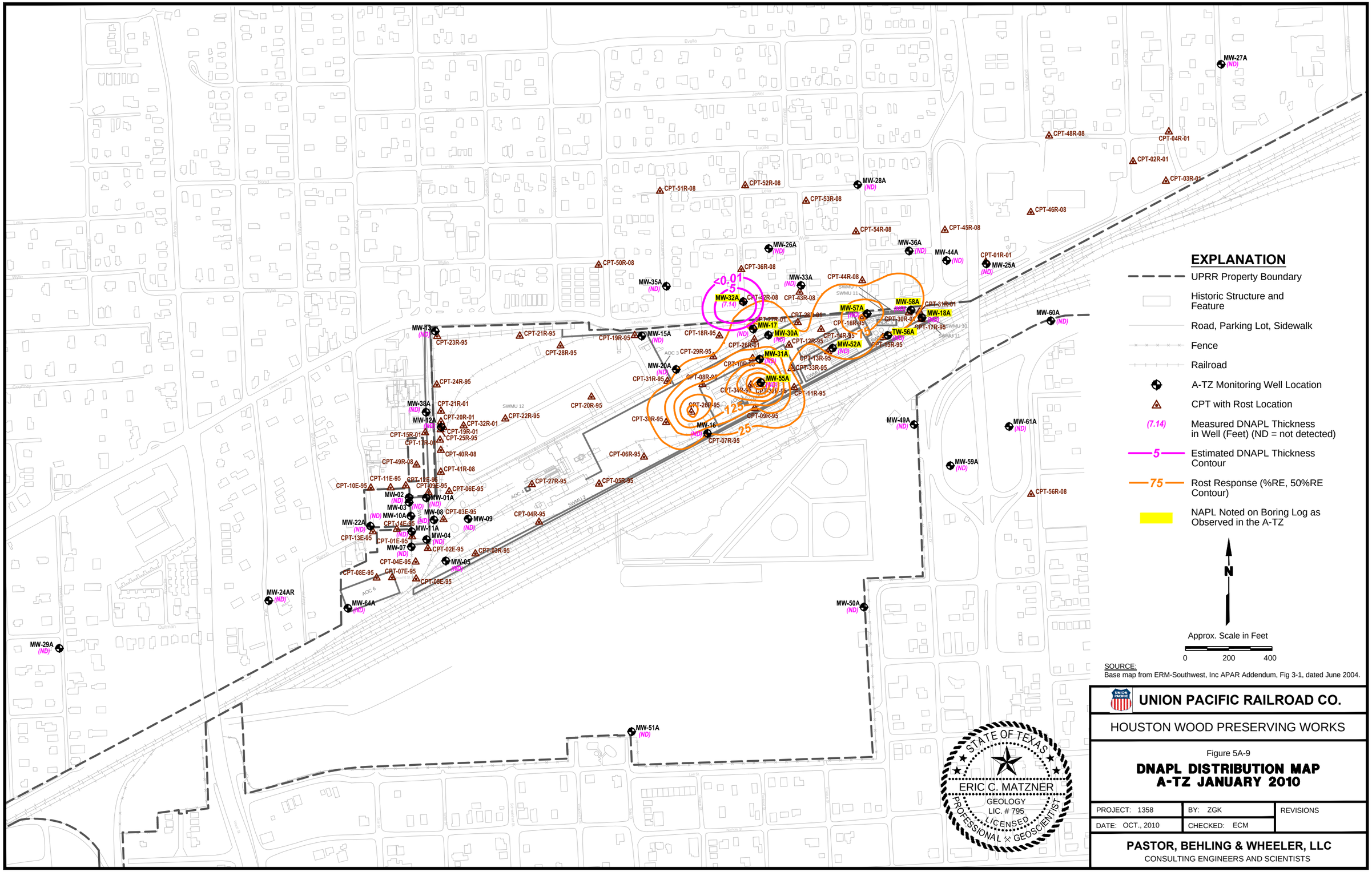

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 5A-9

DNAPL DISTRIBUTION MAP A-TZ JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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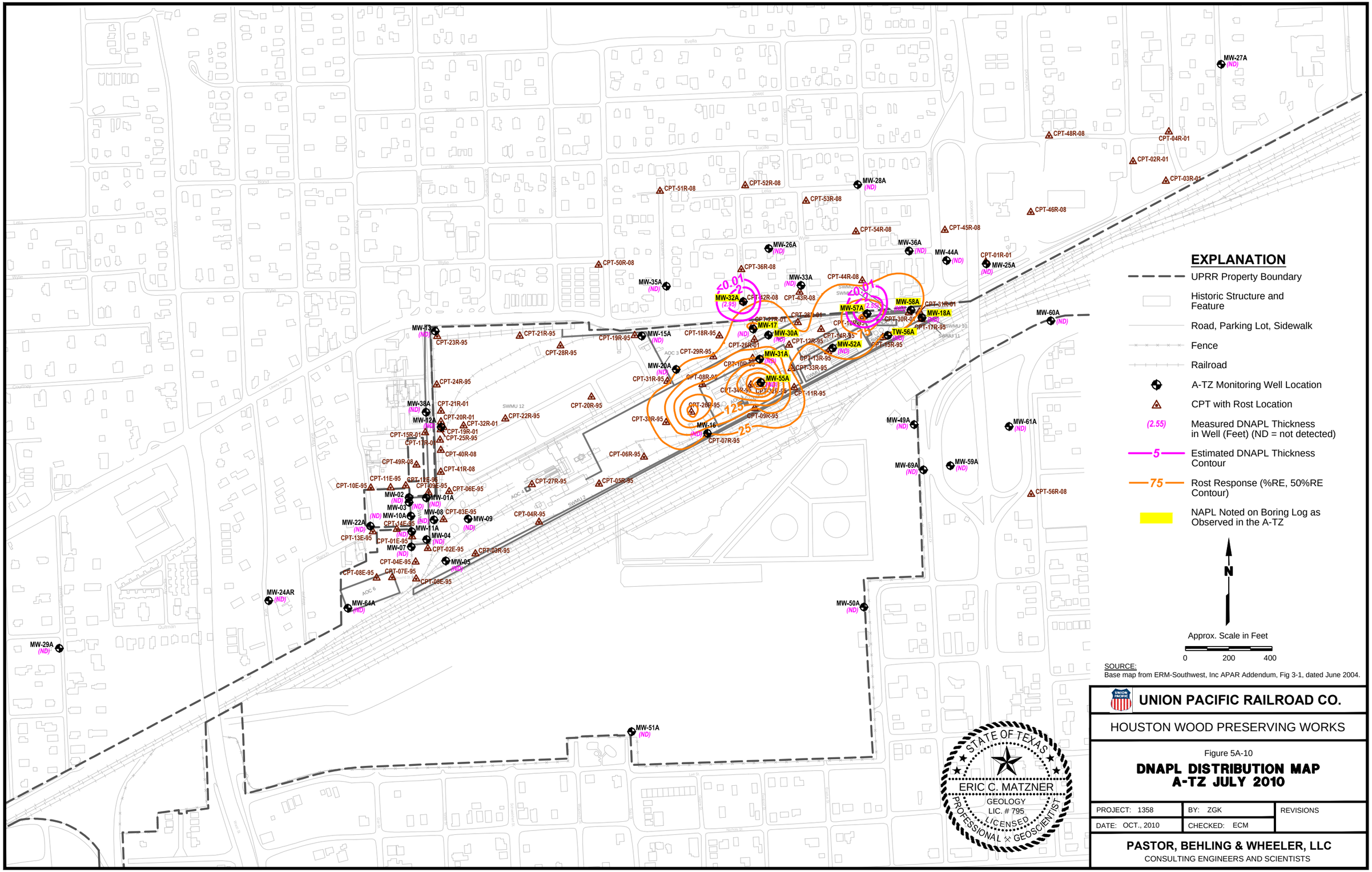

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5A-10

DNAPL DISTRIBUTION MAP A-TZ JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

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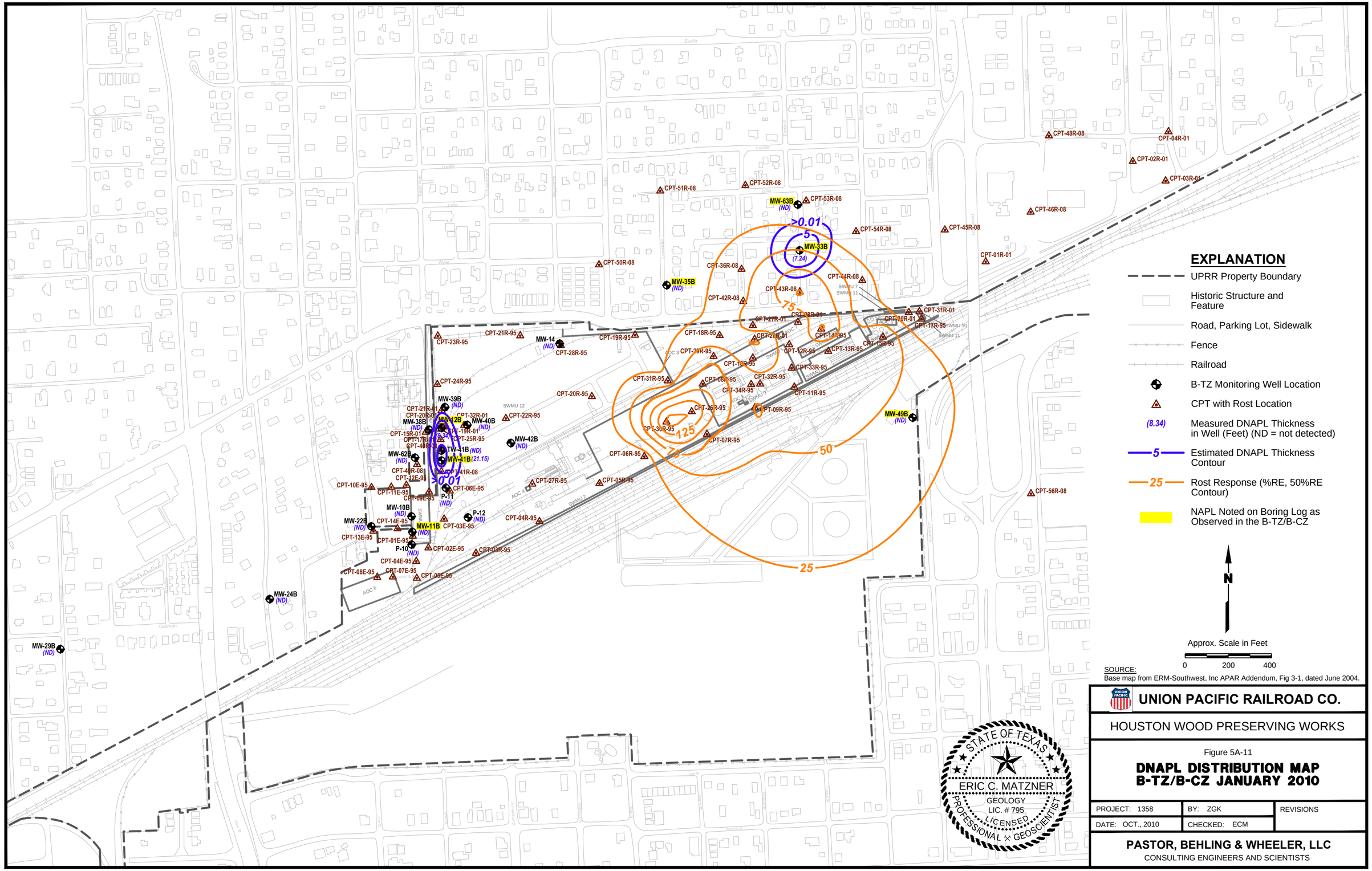
>0.01
5
MW-33B
(7.24)
75
125
50
25
MW-63B
(ND)
MW-35B
(ND)
MW-14
(ND)
MW-39B
(ND)
MW-12B
(ND)
MW-38B
(ND)
MW-40B
(ND)
MW-62B
(ND)
MW-41B
(21.15)
MW-42B
(ND)
MW-22B
(ND)
MW-10B
(ND)
MW-11B
(ND)
P-11
(ND)
P-12
(ND)
P-10
(ND)
MW-24B
(ND)
MW-29B
(ND)
MW-49B
(ND)
EXPLANATION
UPRR Property Boundary
Historic Structure and Feature
Road, Parking Lot, Sidewalk
Fence
Railroad
B-TZ Monitoring Well Location
CPT with Rost Location
(8.34) Measured DNAPL Thickness in Well (Feet) (ND = not detected)
5 Estimated DNAPL Thickness Contour
25 Rost Response (%RE, 50%RE Contour)
NAPL Noted on Boring Log as Observed in the B-TZ/B-CZ
N
Approx. Scale in Feet
0
200
400
SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.
STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
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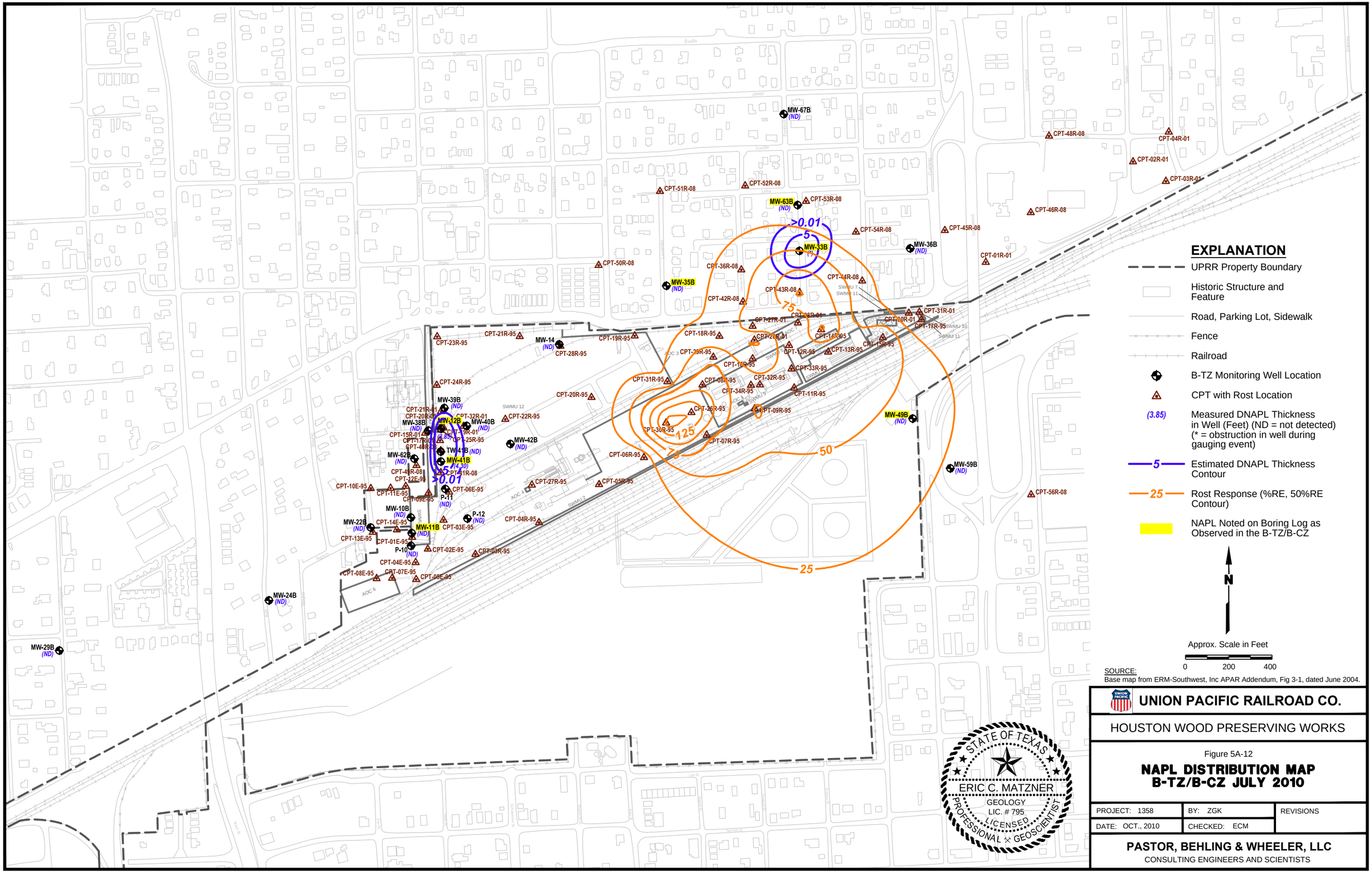
PROFESSIONAL GEOSCIENTIST
UNION PACIFIC RAILROAD CO.
HOUSTON WOOD PRESERVING WORKS
Figure 5A-11
DNAPL DISTRIBUTION MAP
B-TZ/B-CZ JANUARY 2010
PROJECT: 1358
BY: ZGK
REVISIONS
DATE: OCT., 2010
CHECKED: ECM
PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- B-TZ Monitoring Well Location
- CPT with Rost Location
- (3.85) Measured DNAPL Thickness in Well (Feet) (ND = not detected) (* = obstruction in well during gauging event)
- 5 Estimated DNAPL Thickness Contour
- 25 Rost Response (%RE, 50%RE Contour)
- NAPL Noted on Boring Log as Observed in the B-TZ/B-CZ

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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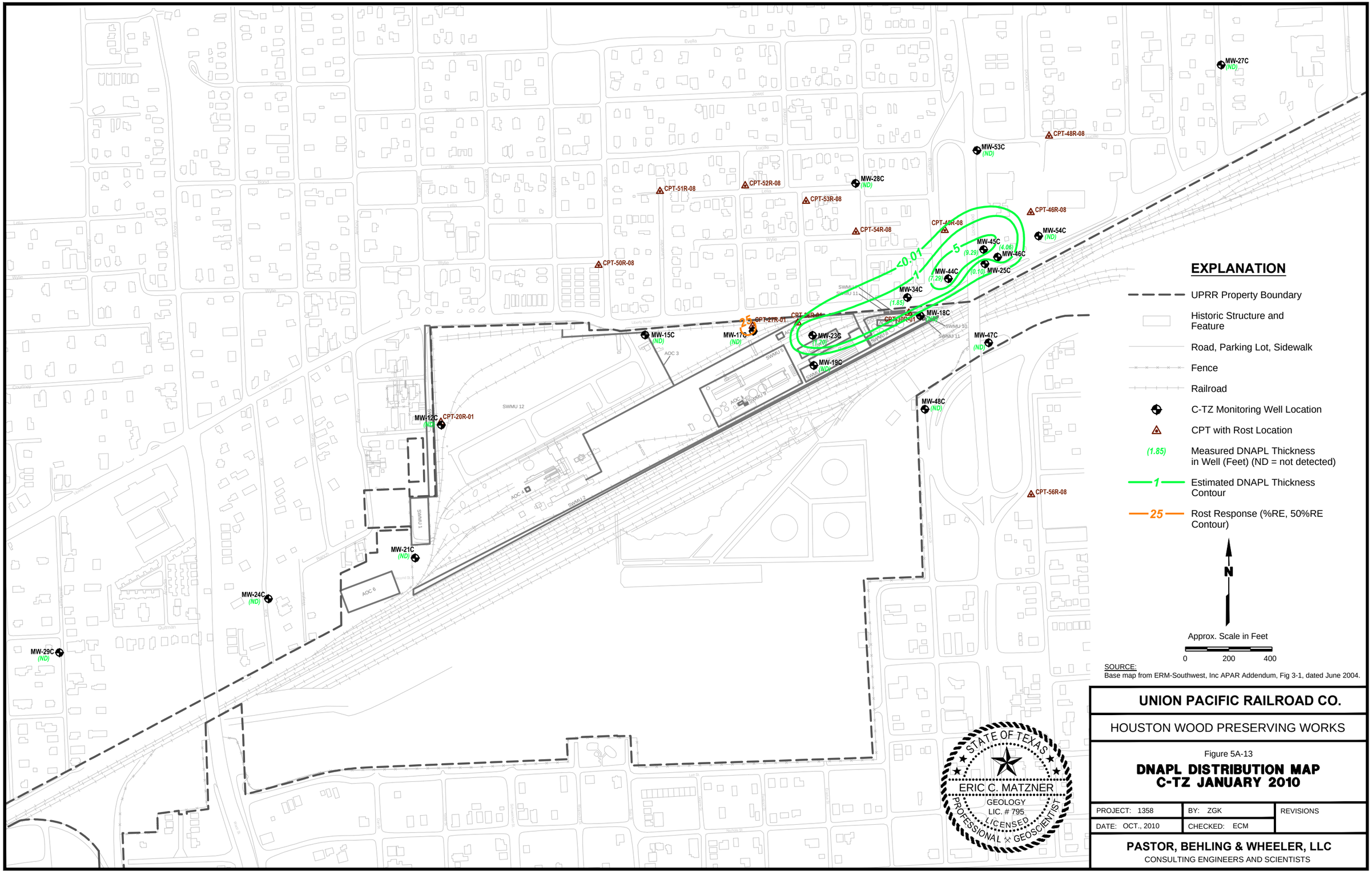
HOUSTON WOOD PRESERVING WORKS

Figure 5A-12

NAPL DISTRIBUTION MAP B-TZ/B-CZ JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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HOUSTON WOOD PRESERVING WORKS

Figure 5A-13

DNAPL DISTRIBUTION MAP C-TZ JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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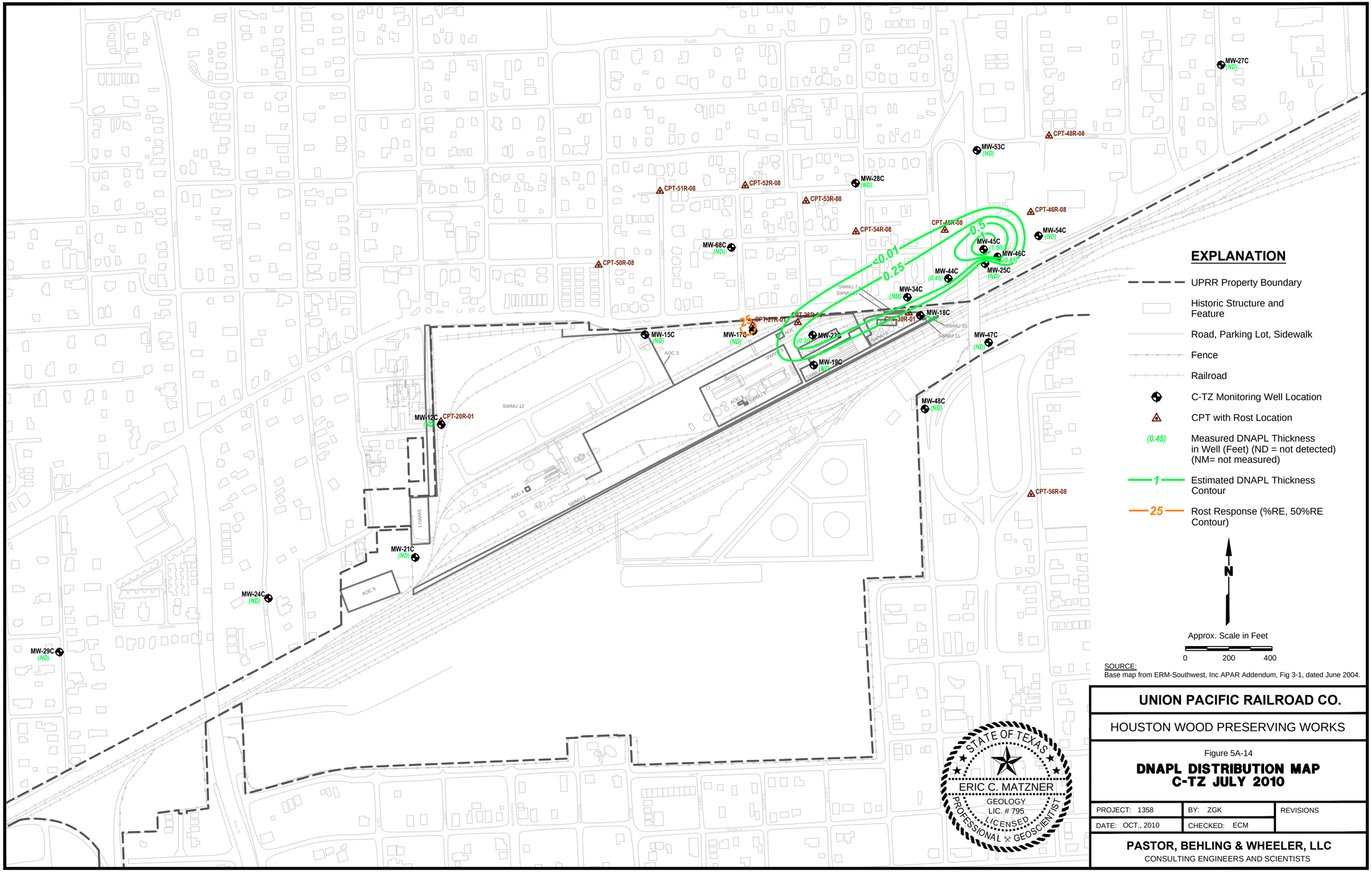

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- CPT with Rost Location
- (0.45) Measured DNAPL Thickness in Well (Feet) (ND = not detected) (NM= not measured)
- 1 Estimated DNAPL Thickness Contour
- 25 Rost Response (%RE, 50%RE Contour)

N

Approx. Scale in Feet

0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

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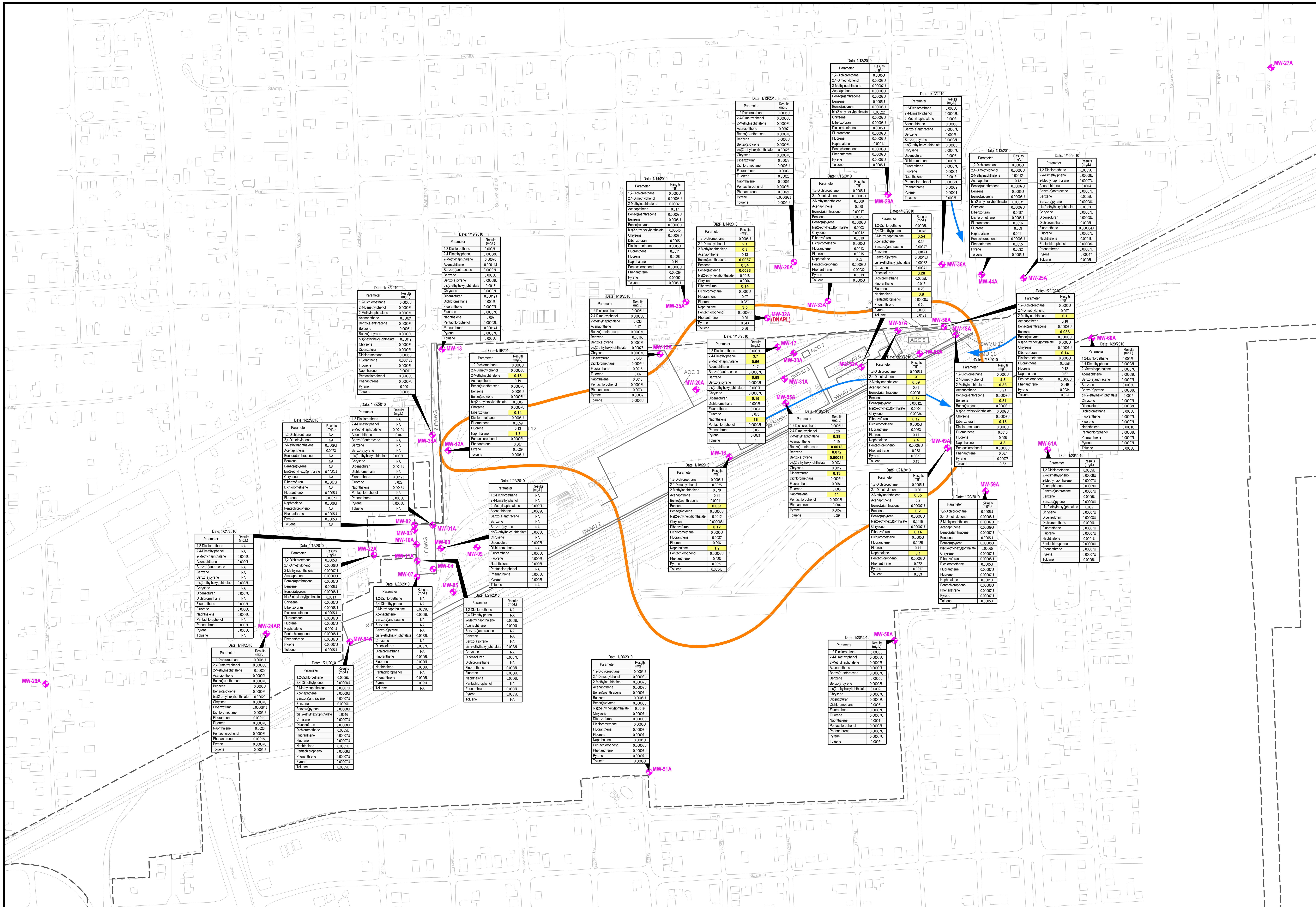
HOUSTON WOOD PRESERVING WORKS

Figure 5A-14

DNAPL DISTRIBUTION MAP C-TZ JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00022
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001J
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.0097
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00026
Chrysene	0.00007U
Dibenzofuran	0.00078
Dichloromethane	0.0005U
Fluoranthene	0.0003
Fluorene	0.00028
Naphthalene	0.00051
Pentachlorophenol	0.00008U
Phenanthrene	0.00021
Pyrene	0.000092J
Toluene	0.0005U

Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.0003
Acenaphthene	0.00036
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00033
Chrysene	0.00007U
Dibenzofuran	0.0003
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00024
Naphthalene	0.0013
Pentachlorophenol	0.00008U
Phenanthrene	0.00039
Pyrene	0.00021
Toluene	0.0005U

Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00012J
Acenaphthene	0.13
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00031
Chrysene	0.00007U
Dibenzofuran	0.0087
Dichloromethane	0.0005U
Fluoranthene	0.0056
Fluorene	0.069
Naphthalene	0.0011
Pentachlorophenol	0.00008U
Phenanthrene	0.0055
Pyrene	0.0032
Toluene	0.0005U

Date: 1/15/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.0014
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.000084J
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00047
Toluene	0.0005U

Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00061
Acenaphthene	0.017
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00045
Chrysene	0.00007U
Dibenzofuran	0.0005
Dichloromethane	0.0005U
Fluoranthene	0.0011
Fluorene	0.0028
Naphthalene	0.19
Pentachlorophenol	0.00008U
Phenanthrene	0.00039
Pyrene	0.00092
Toluene	0.0005U

Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.0009
Acenaphthene	0.028
Benzo(a)anthracene	0.00017J
Benzene	0.0025J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0003
Chrysene	0.00012J
Dibenzofuran	0.0019
Dichloromethane	0.0005U
Fluoranthene	0.0013
Fluorene	0.0015
Naphthalene	0.02
Pentachlorophenol	0.00008U
Phenanthrene	0.00032
Pyrene	0.0019
Toluene	0.0005U

Date: 1/19/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00076
Acenaphthene	0.00011J
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0016
Chrysene	0.00007U
Dibenzofuran	0.00019J
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.007
Pentachlorophenol	0.00008U
Phenanthrene	0.00014J
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**2.1**
2-Methylnaphthalene	**0.3**
Acenaphthene	0.13
Benzo(a)anthracene	**0.0067**
Benzene	**0.34**
Benzo(a)pyrene	**0.0023**
bis(2-ethylhexyl)phthalate	0.0018
Chrysene	0.0064
Dibenzofuran	**0.14**
Dichloromethane	0.0005U
Fluoranthene	0.07
Fluorene	0.087
Naphthalene	**3.5**
Pentachlorophenol	0.00008U
Phenanthrene	0.25
Pyrene	0.043
Toluene	0.36

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0046
2-Methylnaphthalene	**0.54**
Acenaphthene	0.36
Benzo(a)anthracene	0.00047
Benzene	0.0047J
Benzo(a)pyrene	0.00013J
bis(2-ethylhexyl)phthalate	0.00032
Chrysene	0.00041
Dibenzofuran	**0.28**
Dichloromethane	0.0005U
Fluoranthene	0.015
Fluorene	0.23
Naphthalene	**3.9**
Pentachlorophenol	0.00008U
Phenanthrene	0.24
Pyrene	0.0066
Toluene	0.012J

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.097
2-Methylnaphthalene	**0.1**
Acenaphthene	0.18
Benzo(a)anthracene	0.00007U
Benzene	**0.038**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	**0.14**
Dichloromethane	0.0005U
Fluoranthene	0.0058
Fluorene	0.12
Naphthalene	0.67
Pentachlorophenol	0.00008U
Phenanthrene	0.049
Pyrene	0.0034
Toluene	0.02J

Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00024
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00049
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00012J
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.0001J
Toluene	0.0005U

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.033
Acenaphthene	0.17
Benzo(a)anthracene	0.00007U
Benzene	0.0016J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00073
Chrysene	0.00007U
Dibenzofuran	0.043
Dichloromethane	0.0005U
Fluoranthene	0.0015
Fluorene	0.06
Naphthalene	0.0018
Pentachlorophenol	0.00008U
Phenanthrene	0.0074
Pyrene	0.00062
Toluene	0.0005U

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**3.7**
2-Methylnaphthalene	**0.56**
Acenaphthene	0.17
Benzo(a)anthracene	0.00007U
Benzene	**0.59**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	**0.15**
Dichloromethane	0.0005U
Fluoranthene	0.0037
Fluorene	0.076
Naphthalene	**16**
Pentachlorophenol	0.00008U
Phenanthrene	0.06
Pyrene	0.0021
Toluene	1

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**3**
2-Methylnaphthalene	**0.89**
Acenaphthene	0.31
Benzo(a)anthracene	0.00051
Benzene	**0.17**
Benzo(a)pyrene	0.00012J
bis(2-ethylhexyl)phthalate	0.0004
Chrysene	0.00034
Dibenzofuran	**0.17**
Dichloromethane	0.0005U
Fluoranthene	0.0063
Fluorene	0.11
Naphthalene	**7.4**
Pentachlorophenol	0.00008U
Phenanthrene	0.088
Pyrene	0.0037
Toluene	0.13

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**4.5**
2-Methylnaphthalene	**0.36**
Acenaphthene	0.23
Benzo(a)anthracene	0.00007U
Benzene	**0.51**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	**0.15**
Dichloromethane	0.0005U
Fluoranthene	0.0013
Fluorene	0.096
Naphthalene	**4.3**
Pentachlorophenol	0.00008U
Phenanthrene	0.067
Pyrene	0.00075
Toluene	0.32

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0025
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/19/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	**0.15**
Acenaphthene	0.19
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0006
Chrysene	0.00007U
Dibenzofuran	**0.14**
Dichloromethane	0.0005U
Fluoranthene	0.0059
Fluorene	0.13
Naphthalene	**1.7**
Pentachlorophenol	0.00008U
Phenanthrene	0.087
Pyrene	0.0029
Toluene	0.0005U

Date: 1/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0019J
Acenaphthene	0.04
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0016J
Dichloromethane	NA
Fluoranthene	0.0017J
Fluorene	0.022
Naphthalene	0.0043J
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0073
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0037J
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.28
2-Methylnaphthalene	**0.39**
Acenaphthene	0.19
Benzo(a)anthracene	**0.0018**
Benzene	**0.072**
Benzo(a)pyrene	**0.00081**
bis(2-ethylhexyl)phthalate	0.0031
Chrysene	0.0017
Dibenzofuran	**0.13**
Dichloromethane	0.0005U
Fluoranthene	0.0081
Fluorene	0.083
Naphthalene	**11**
Pentachlorophenol	0.00008U
Phenanthrene	0.084
Pyrene	0.0052
Toluene	0.29

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.002
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0025
2-Methylnaphthalene	0.079
Acenaphthene	0.21
Benzo(a)anthracene	0.00011J
Benzene	**0.031**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0012
Chrysene	0.000088J
Dibenzofuran	**0.12**
Dichloromethane	0.0005U
Fluoranthene	0.0037
Fluorene	0.096
Naphthalene	**1.9**
Pentachlorophenol	0.00008U
Phenanthrene	0.038
Pyrene	0.0027
Toluene	0.0034J

Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.86
2-Methylnaphthalene	**0.35**
Acenaphthene	0.2
Benzo(a)anthracene	0.00007U
Benzene	**0.2**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0015
Chrysene	0.00007U
Dibenzofuran	**0.14**
Dichloromethane	0.0005U
Fluoranthene	0.0025
Fluorene	0.11
Naphthalene	**5.1**
Pentachlorophenol	0.00008U
Phenanthrene	0.072
Pyrene	0.0017
Toluene	0.083

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00065
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/15/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0013
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00023
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00029
Chrysene	0.00007U
Dibenzofuran	0.000084J
Dichloromethane	0.0005U
Fluoranthene	0.00011J
Fluorene	0.00007U
Naphthalene	0.0023
Pentachlorophenol	0.00008U
Phenanthrene	0.00018J
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0016
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0019
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (Jan. 2010).

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
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N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

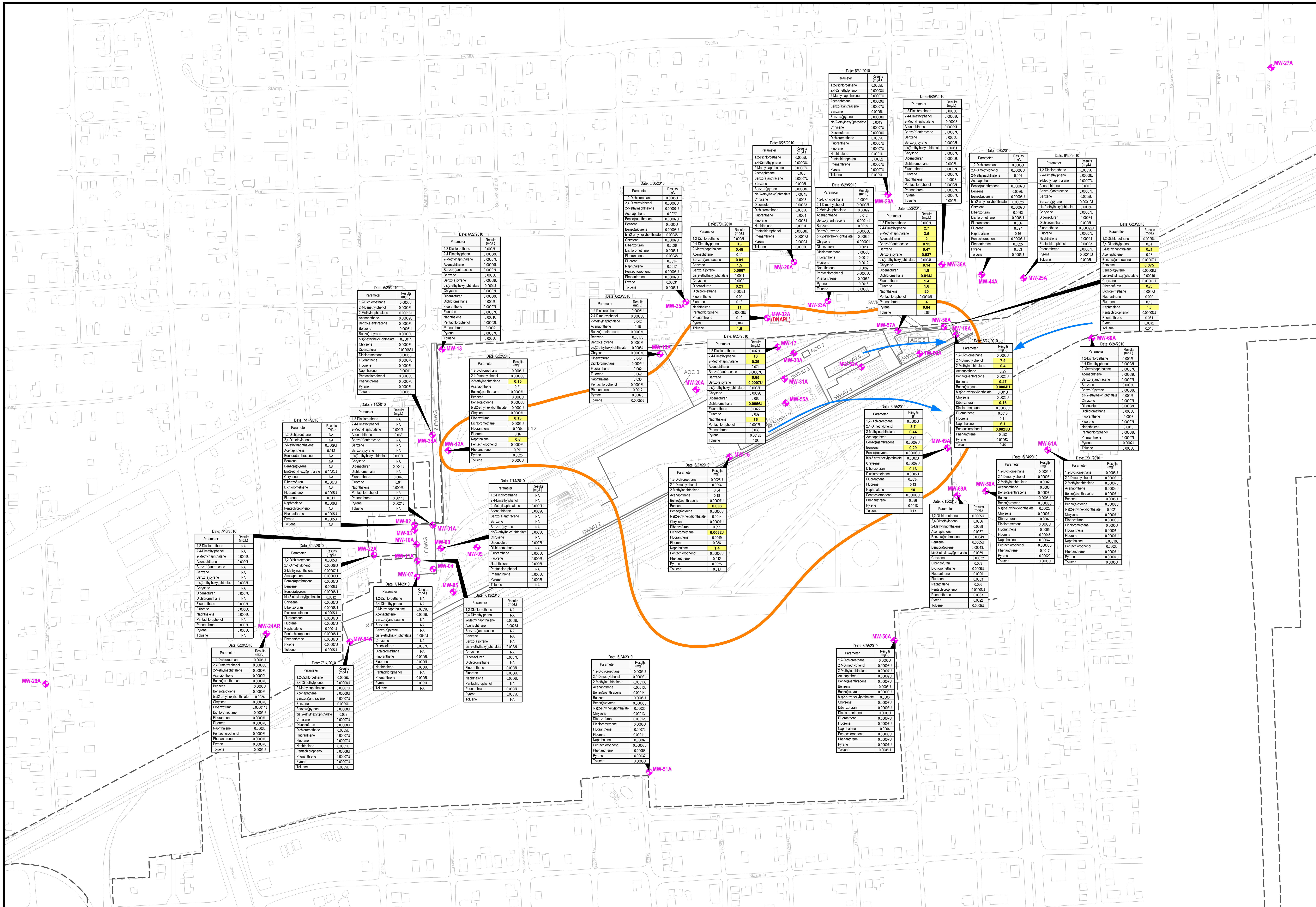
HOUSTON WOOD PRESERVING WORKS

Figure 5B-1

GROUNDWATER COC CONCENTRATION MAP A-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



Date: 6/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00044
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.0002
Pyrene	0.00007U
Toluene	0.0005U

Date: 6/29/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00016J
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00044
Chrysene	0.00007U
Dibenzofuran	0.000083J
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 6/22/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	**0.15**
Acenaphthene	0.21
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	**0.18**
Dichloromethane	0.0005U
Fluoranthene	0.0064
Fluorene	0.16
Naphthalene	**0.6**
Pentachlorophenol	0.00008U
Phenanthrene	0.091
Pyrene	0.0025
Toluene	0.0005U

Date: 6/30/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.0077
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00048
Chrysene	0.00007U
Dibenzofuran	0.0026
Dichloromethane	0.0005U
Fluoranthene	0.00048
Fluorene	0.0014
Naphthalene	0.0017
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00031
Toluene	0.0005U

Date: 6/23/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.042
Acenaphthene	0.16
Benzo(a)anthracene	0.00007U
Benzene	0.0017J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00084
Chrysene	0.00007U
Dibenzofuran	0.048
Dichloromethane	0.0005U
Fluoranthene	0.002
Fluorene	0.062
Naphthalene	0.036
Pentachlorophenol	0.00008U
Phenanthrene	0.0012
Pyrene	0.00076
Toluene	0.00055J

Date: 7/01/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**15**
2-Methylnaphthalene	**0.48**
Acenaphthene	0.19
Benzo(a)anthracene	**0.01**
Benzene	**1.5**
Benzo(a)pyrene	**0.0067**
bis(2-ethylhexyl)phthalate	0.0041
Chrysene	0.0099
Dibenzofuran	**0.21**
Dichloromethane	0.0032J
Fluoranthene	0.09
Fluorene	0.13
Naphthalene	**11**
Pentachlorophenol	0.00008U
Phenanthrene	0.19
Pyrene	0.047
Toluene	**1.5**

Date: 6/25/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.005
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00045
Chrysene	0.0003
Dibenzofuran	0.00033
Dichloromethane	0.0005U
Fluoranthene	0.0004
Fluorene	0.00034
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00017J
Pyrene	0.0002J
Toluene	0.0005U

Date: 6/30/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0019
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00032
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 6/29/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00092
Acenaphthene	0.012
Benzo(a)anthracene	0.00014J
Benzene	0.0018J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00035
Chrysene	0.00009J
Dibenzofuran	0.0014
Dichloromethane	0.0005U
Fluoranthene	0.0012
Fluorene	0.0012
Naphthalene	0.0082
Pentachlorophenol	0.00008U
Phenanthrene	0.00065
Pyrene	0.0016
Toluene	0.0005U

Date: 6/29/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00023
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00061
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0023
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 6/23/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**2.7**
2-Methylnaphthalene	**3.5**
Acenaphthene	**2**
Benzo(a)anthracene	**0.15**
Benzene	**0.47**
Benzo(a)pyrene	**0.037**
bis(2-ethylhexyl)phthalate	0.0004U
Chrysene	**0.14**
Dibenzofuran	**1.9**
Dichloromethane	**0.014J**
Fluoranthene	**1.4**
Fluorene	**1.6**
Naphthalene	**20**
Pentachlorophenol	0.00045U
Phenanthrene	**4**
Pyrene	**0.84**
Toluene	0.86

Date: 6/30/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.004
Acenaphthene	0.2
Benzo(a)anthracene	0.00007U
Benzene	0.0026J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00028
Chrysene	0.00007U
Dibenzofuran	0.0043
Dichloromethane	0.0005U
Fluoranthene	0.006
Fluorene	0.097
Naphthalene	0.16
Pentachlorophenol	0.00008U
Phenanthrene	0.0025
Pyrene	0.003
Toluene	0.0005U

Date: 6/30/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.0012
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00012J
bis(2-ethylhexyl)phthalate	0.00056
Chrysene	0.00007U
Dibenzofuran	0.00034
Dichloromethane	0.0005U
Fluoranthene	0.000092J
Fluorene	0.00007U
Naphthalene	0.00024
Pentachlorophenol	0.00033
Phenanthrene	0.00007U
Pyrene	0.00015J
Toluene	0.0005U

Date: 6/23/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0025U
2,4-Dimethylphenol	0.61
2-Methylnaphthalene	0.21
Acenaphthene	0.28
Benzo(a)anthracene	0.00007U
Benzene	**0.075**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00046
Chrysene	0.00007U
Dibenzofuran	0.23
Dichloromethane	0.0048J
Fluoranthene	0.009
Fluorene	0.16
Naphthalene	1.5
Pentachlorophenol	0.00008U
Phenanthrene	0.061
Pyrene	0.0042
Toluene	0.045

Date: 6/23/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0025U
2,4-Dimethylphenol	**13**
2-Methylnaphthalene	**0.39**
Acenaphthene	0.071
Benzo(a)anthracene	0.00007U
Benzene	**0.65**
Benzo(a)pyrene	**0.0007U**
bis(2-ethylhexyl)phthalate	0.0008U
Chrysene	0.0009U
Dibenzofuran	0.065
Dichloromethane	**0.0056J**
Fluoranthene	0.0022
Fluorene	0.039
Naphthalene	**15**
Pentachlorophenol	0.0007U
Phenanthrene	0.033
Pyrene	0.0012J
Toluene	0.88

Date: 6/24/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**7.9**
2-Methylnaphthalene	**0.4**
Acenaphthene	0.25
Benzo(a)anthracene	0.0025U
Benzene	**0.47**
Benzo(a)pyrene	**0.0004U**
bis(2-ethylhexyl)phthalate	0.001U
Chrysene	0.0025U
Dibenzofuran	**0.16**
Dichloromethane	0.00035U
Fluoranthene	0.0013
Fluorene	0.11
Naphthalene	**6.1**
Pentachlorophenol	**0.0025U**
Phenanthrene	0.082
Pyrene	0.00063J
Toluene	0.45

Date: 6/24/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.0003
Fluorene	0.00007U
Naphthalene	0.0015
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.0002J
Toluene	0.0005U

Date: 6/25/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	**3.7**
2-Methylnaphthalene	**0.44**
Acenaphthene	0.21
Benzo(a)anthracene	0.00007U
Benzene	**0.29**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	**0.16**
Dichloromethane	0.0005U
Fluoranthene	0.0034
Fluorene	0.13
Naphthalene	**10**
Pentachlorophenol	0.00008U
Phenanthrene	0.086
Pyrene	0.0018
Toluene	0.13

Date: 6/23/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0025U
2,4-Dimethylphenol	0.0054
2-Methylnaphthalene	0.04
Acenaphthene	0.18
Benzo(a)anthracene	0.00007U
Benzene	**0.058**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0014
Chrysene	0.00007U
Dibenzofuran	0.091
Dichloromethane	**0.0062J**
Fluoranthene	0.0049
Fluorene	0.086
Naphthalene	**1.4**
Pentachlorophenol	0.00008U
Phenanthrene	0.042
Pyrene	0.0025
Toluene	0.01J

Date: 6/24/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.0002
Acenaphthene	0.0003
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00023
Chrysene	0.00007U
Dibenzofuran	0.0007
Dichloromethane	0.0005U
Fluoranthene	0.0005
Fluorene	0.00045
Naphthalene	0.00047
Pentachlorophenol	0.00008U
Phenanthrene	0.0017
Pyrene	0.00029
Toluene	0.0005U

Date: 7/01/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0021
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.00018J
Pentachlorophenol	0.00032
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 7/15/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0036
2-Methylnaphthalene	0.0038
Acenaphthene	0.0037
Benzo(a)anthracene	0.00049
Benzene	0.0005U
Benzo(a)pyrene	0.00013J
bis(2-ethylhexyl)phthalate	0.0059
Chrysene	0.00032
Dibenzofuran	0.003
Dichloromethane	0.0005U
Fluoranthene	0.0025
Fluorene	0.0033
Naphthalene	0.026
Pentachlorophenol	0.00008U
Phenanthrene	0.0083
Pyrene	0.0022
Toluene	0.0005U

Date: 6/25/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0003
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0004
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 6/24/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00013J
Acenaphthene	0.00013J
Benzo(a)anthracene	0.00014J
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00035
Chrysene	0.00013J
Dibenzofuran	0.00012J
Dichloromethane	0.0005U
Fluoranthene	0.00072
Fluorene	0.00011J
Naphthalene	0.00087
Pentachlorophenol	0.00008U
Phenanthrene	0.00068
Pyrene	0.00037
Toluene	0.0005U

Date: 7/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 7/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0028J
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 7/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.018
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.011
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 7/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.068
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0044J
Dichloromethane	NA
Fluoranthene	0.004J
Fluorene	0.04
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0011J
Pyrene	0.0021J
Toluene	NA

Date: 7/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0033U
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 6/29/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0012
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 7/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	NA
2,4-Dimethylphenol	NA
2-Methylnaphthalene	0.0009U
Acenaphthene	0.0009U
Benzo(a)anthracene	NA
Benzene	NA
Benzo(a)pyrene	NA
bis(2-ethylhexyl)phthalate	0.0049J
Chrysene	NA
Dibenzofuran	0.0007U
Dichloromethane	NA
Fluoranthene	0.0005U
Fluorene	0.0006U
Naphthalene	0.0006U
Pentachlorophenol	NA
Phenanthrene	0.0005U
Pyrene	0.0005U
Toluene	NA

Date: 6/29/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0024
Chrysene	0.00007U
Dibenzofuran	0.000011J
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.00036
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

Date: 7/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.002
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (June 2010).

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

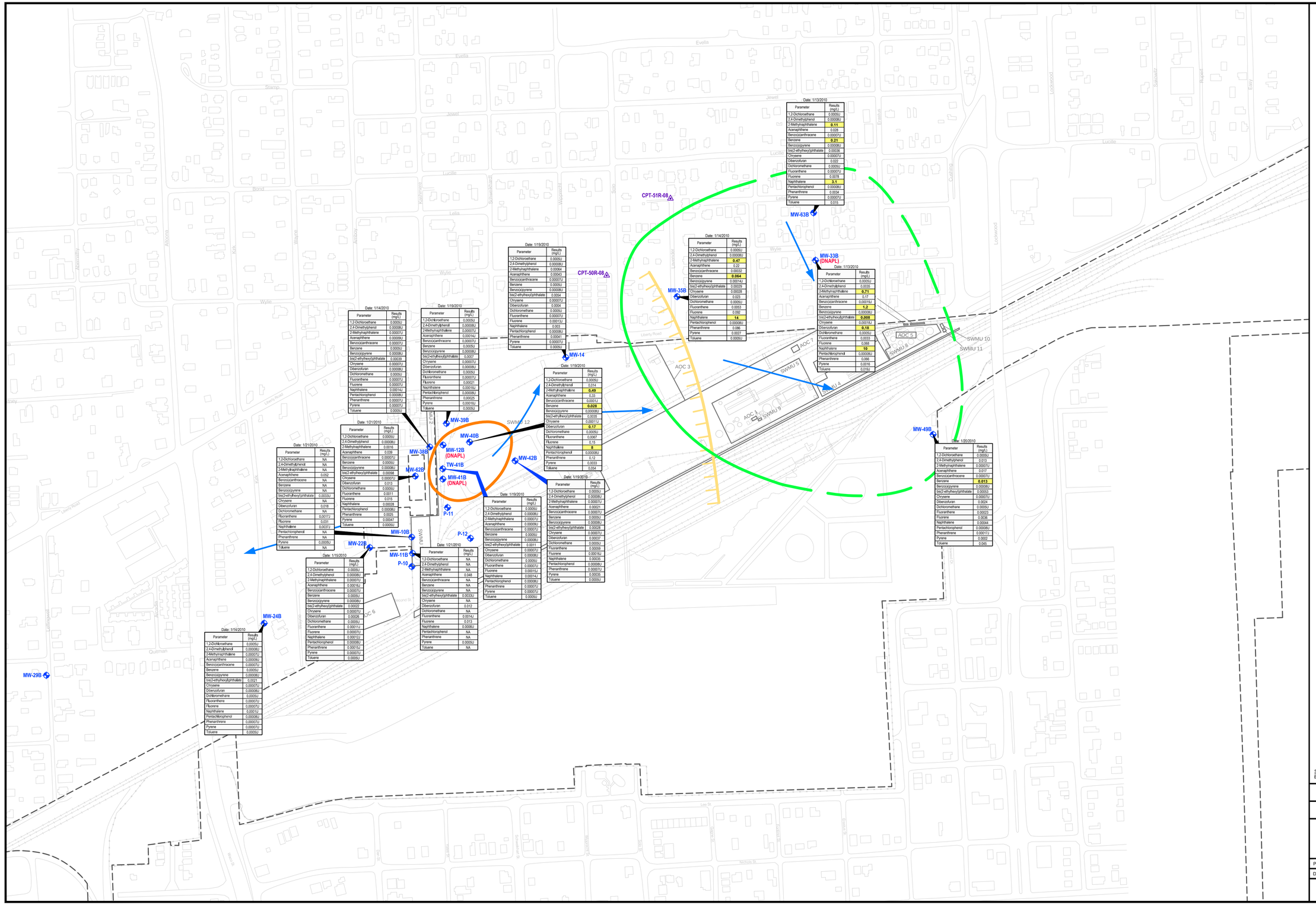
UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-2
GROUNDWATER COC CONCENTRATION MAP A-TZ - JUNE/JULY 2010

PROJECT: 1358 | BY: ZGK | REVISIONS
DATE: OCT., 2010 | CHECKED: ECM

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- B-TZ/B-CZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone - B-CZ
- Affected Property/PCLE Zone - B-TZ
- B-TZ Zone Boundary (Not Present / Present)

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (Jan. 2010).

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
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PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

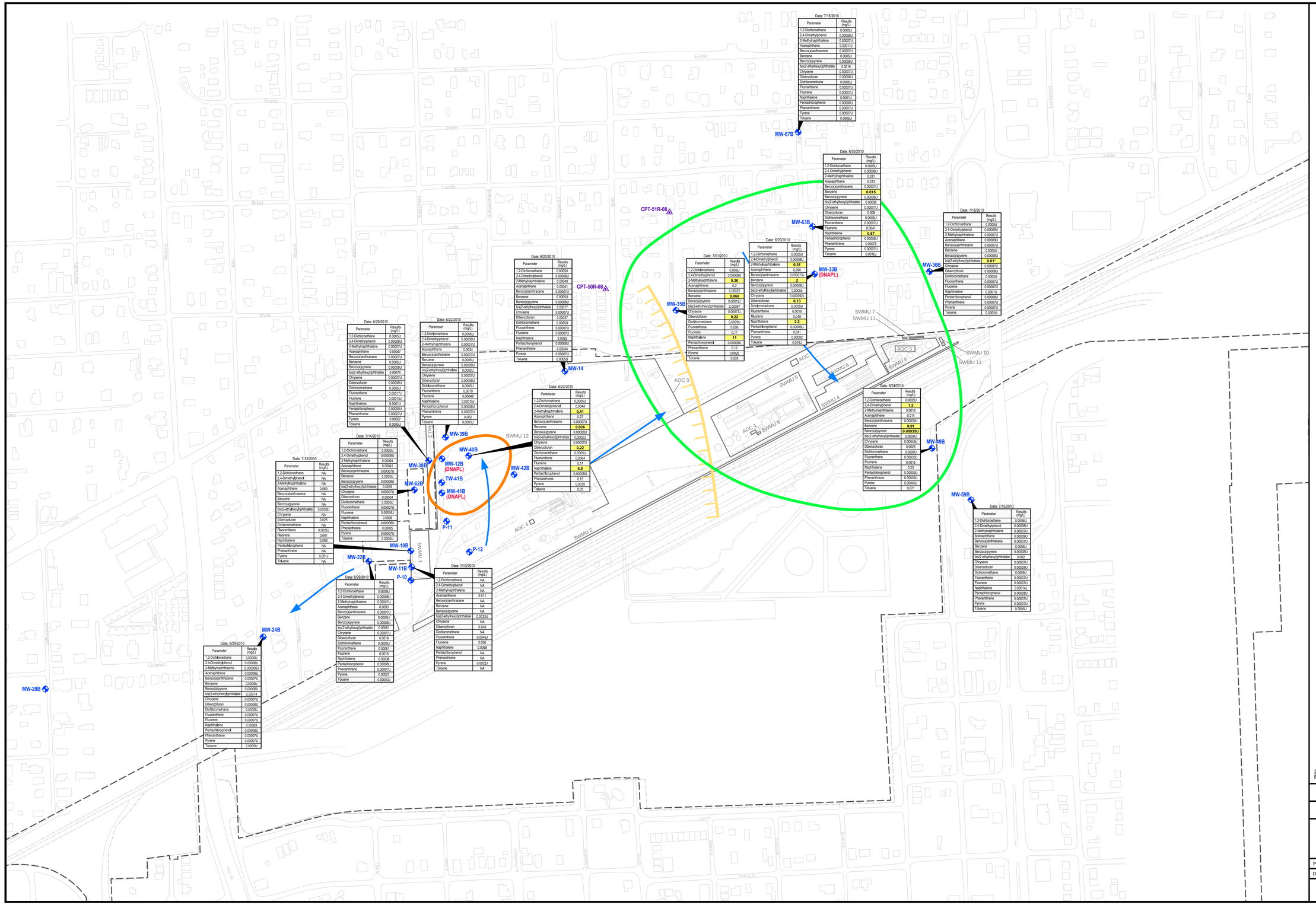
HOUSTON WOOD PRESERVING WORKS

Figure 5B-3

GROUNDWATER COC CONCENTRATION MAP B-TZ AND B-CZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- B-TZ/B-CZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone - B-CZ
- Affected Property/PCLE Zone - B-TZ
- Not Present / Present — B-TZ Zone Boundary

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (Jan. 2010).
* Possible laboratory contaminant.

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS — ERIC C. MATZNER — GEOLOGY — LIC. # 795 — LICENSED PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

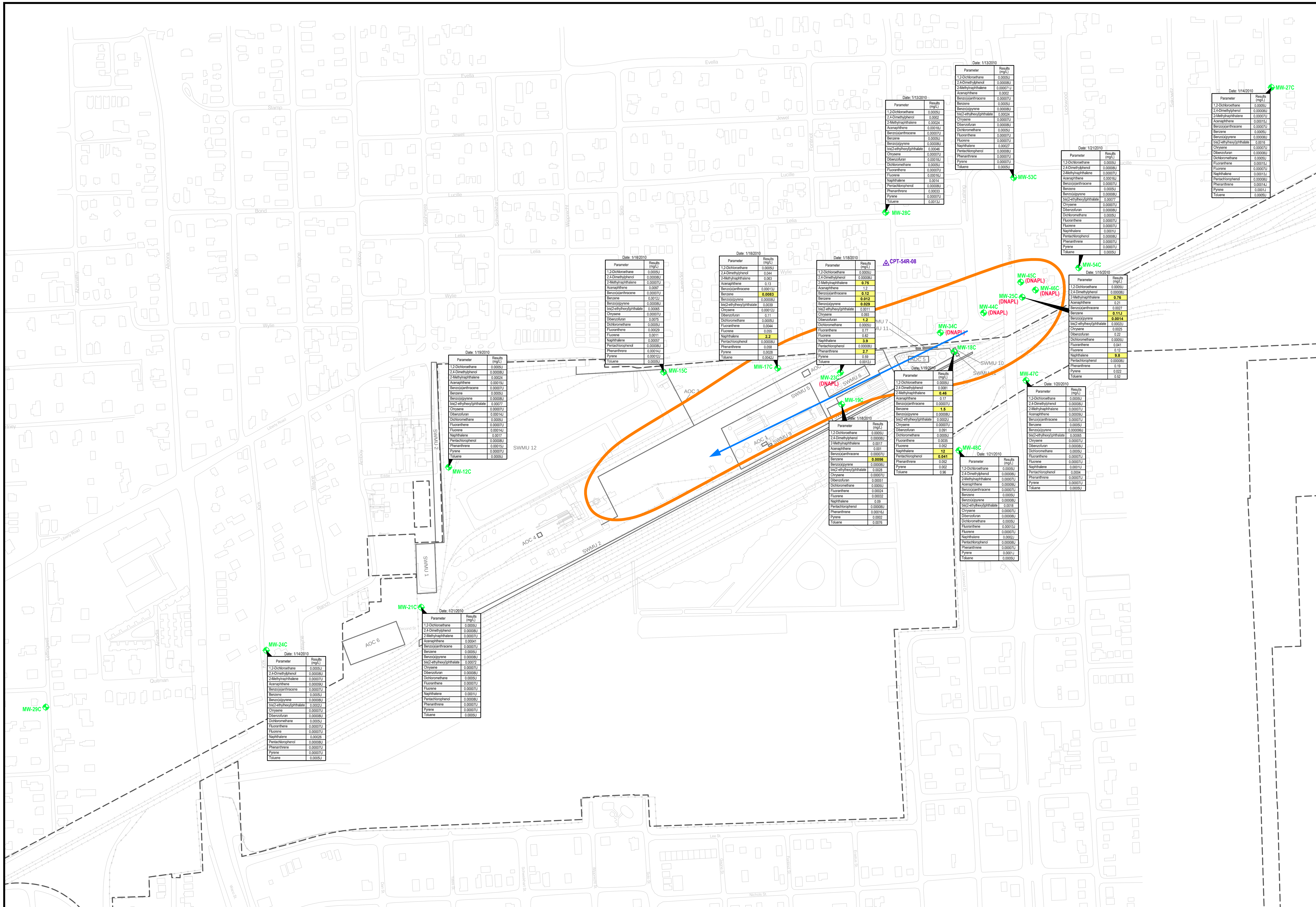
HOUSTON WOOD PRESERVING WORKS

Figure 5B-4

GROUNDWATER COC CONCENTRATION MAP B-TZ AND B-CZ - JUNE/JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



MW-12C — Date: 1/19/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00024
Acenaphthene	0.00019J
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00077
Chrysene	0.00007U
Dibenzofuran	0.00014J
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00014J
Naphthalene	0.0017
Pentachlorophenol	0.00008U
Phenanthrene	0.00015J
Pyrene	0.00007U
Toluene	0.0005U

MW-15C — Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.0097
Benzo(a)anthracene	0.00007U
Benzene	0.0012J
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00065
Chrysene	0.00007U
Dibenzofuran	0.0075
Dichloromethane	0.0005U
Fluoranthene	0.00029
Fluorene	0.0011
Naphthalene	0.00057
Pentachlorophenol	0.00008U
Phenanthrene	0.00014J
Pyrene	0.00012J
Toluene	0.0005U

MW-17C — Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.044
2-Methylnaphthalene	0.063
Acenaphthene	0.13
Benzo(a)anthracene	0.00013J
Benzene	**0.0083**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0039
Chrysene	0.00012J
Dibenzofuran	0.11
Dichloromethane	0.0005U
Fluoranthene	0.0044
Fluorene	0.055
Naphthalene	**2.2**
Pentachlorophenol	0.00008U
Phenanthrene	0.058
Pyrene	0.0028
Toluene	0.0042J

MW-23C — Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	**0.75**
Acenaphthene	1.2
Benzo(a)anthracene	**0.12**
Benzene	**0.012**
Benzo(a)pyrene	**0.029**
bis(2-ethylhexyl)phthalate	0.0011
Chrysene	0.093
Dibenzofuran	**1.2**
Dichloromethane	0.0005U
Fluoranthene	0.77
Fluorene	0.82
Naphthalene	**3.9**
Pentachlorophenol	0.00008U
Phenanthrene	**2.7**
Pyrene	0.59
Toluene	0.0012J

MW-28C — Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0002
2-Methylnaphthalene	0.00024
Acenaphthene	0.00018J
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00046
Chrysene	0.00007U
Dibenzofuran	0.00018J
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00016J
Naphthalene	0.0014
Pentachlorophenol	0.00008U
Phenanthrene	0.00033
Pyrene	0.00007U
Toluene	0.0013J

MW-53C — Date: 1/13/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.000071J
Acenaphthene	0.0002
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00024
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.00027
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

MW-54C — Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00016J
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00077
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

MW-25C — Date: 1/15/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	**0.76**
Acenaphthene	0.21
Benzo(a)anthracene	0.0027
Benzene	**0.11J**
Benzo(a)pyrene	**0.0014**
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.0025
Dibenzofuran	0.22
Dichloromethane	0.0005U
Fluoranthene	0.041
Fluorene	0.12
Naphthalene	**9.8**
Pentachlorophenol	0.00008U
Phenanthrene	0.19
Pyrene	0.022
Toluene	0.52

MW-27C — Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00015J
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0016
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00015J
Fluorene	0.00007U
Naphthalene	0.00013J
Pentachlorophenol	0.00008U
Phenanthrene	0.00014J
Pyrene	0.0001J
Toluene	0.0005U

MW-18C — Date: 1/19/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.0081
2-Methylnaphthalene	**0.46**
Acenaphthene	0.17
Benzo(a)anthracene	0.00007U
Benzene	**1.5**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	0.091
Dichloromethane	0.0005U
Fluoranthene	0.0035
Fluorene	0.052
Naphthalene	**12**
Pentachlorophenol	**0.041**
Phenanthrene	0.052
Pyrene	0.002
Toluene	0.96

MW-19C — Date: 1/18/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.0017
Acenaphthene	0.001
Benzo(a)anthracene	0.00007U
Benzene	**0.0056**
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0028
Chrysene	0.00007U
Dibenzofuran	0.00051
Dichloromethane	0.0005U
Fluoranthene	0.00024
Fluorene	0.00032
Naphthalene	0.09
Pentachlorophenol	0.00008U
Phenanthrene	0.00016J
Pyrene	0.0002
Toluene	0.0076

MW-47C — Date: 1/20/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.000099J
bis(2-ethylhexyl)phthalate	0.00065
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.0004
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

MW-48C — Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0018
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00013J
Fluorene	0.00007U
Naphthalene	0.0002J
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.0001J
Toluene	0.0005U

MW-21C — Date: 1/21/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00041
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.00072
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.0001U
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

MW-24C — Date: 1/14/2010

Parameter	Results (mg/L)
1,2-Dichloroethane	0.0005U
2,4-Dimethylphenol	0.00008U
2-Methylnaphthalene	0.00007U
Acenaphthene	0.00009U
Benzo(a)anthracene	0.00007U
Benzene	0.0005U
Benzo(a)pyrene	0.00008U
bis(2-ethylhexyl)phthalate	0.0002U
Chrysene	0.00007U
Dibenzofuran	0.00008U
Dichloromethane	0.0005U
Fluoranthene	0.00007U
Fluorene	0.00007U
Naphthalene	0.00026
Pentachlorophenol	0.00008U
Phenanthrene	0.00007U
Pyrene	0.00007U
Toluene	0.0005U

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (Jan. 2010).

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
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Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

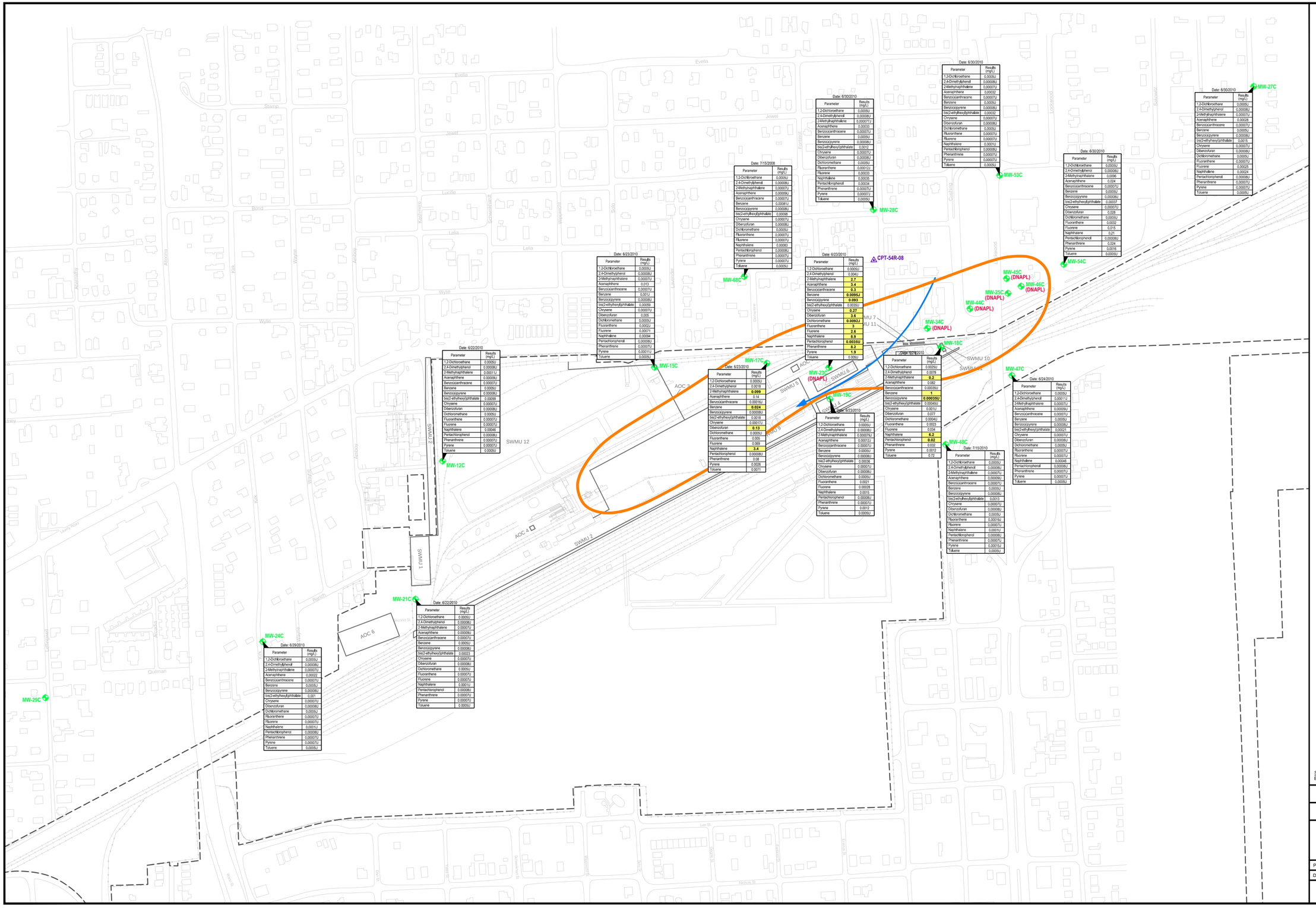
HOUSTON WOOD PRESERVING WORKS

Figure 5B-5

GROUNDWATER COC CONCENTRATION MAP C-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
NA = Not analyzed.
Highlighted and bolded concentrations exceed Residential Assessment Level (RALs).
DNAPL = Dense non-aqueous phase liquids detected in monitoring well (Jan. 2010).

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

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Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

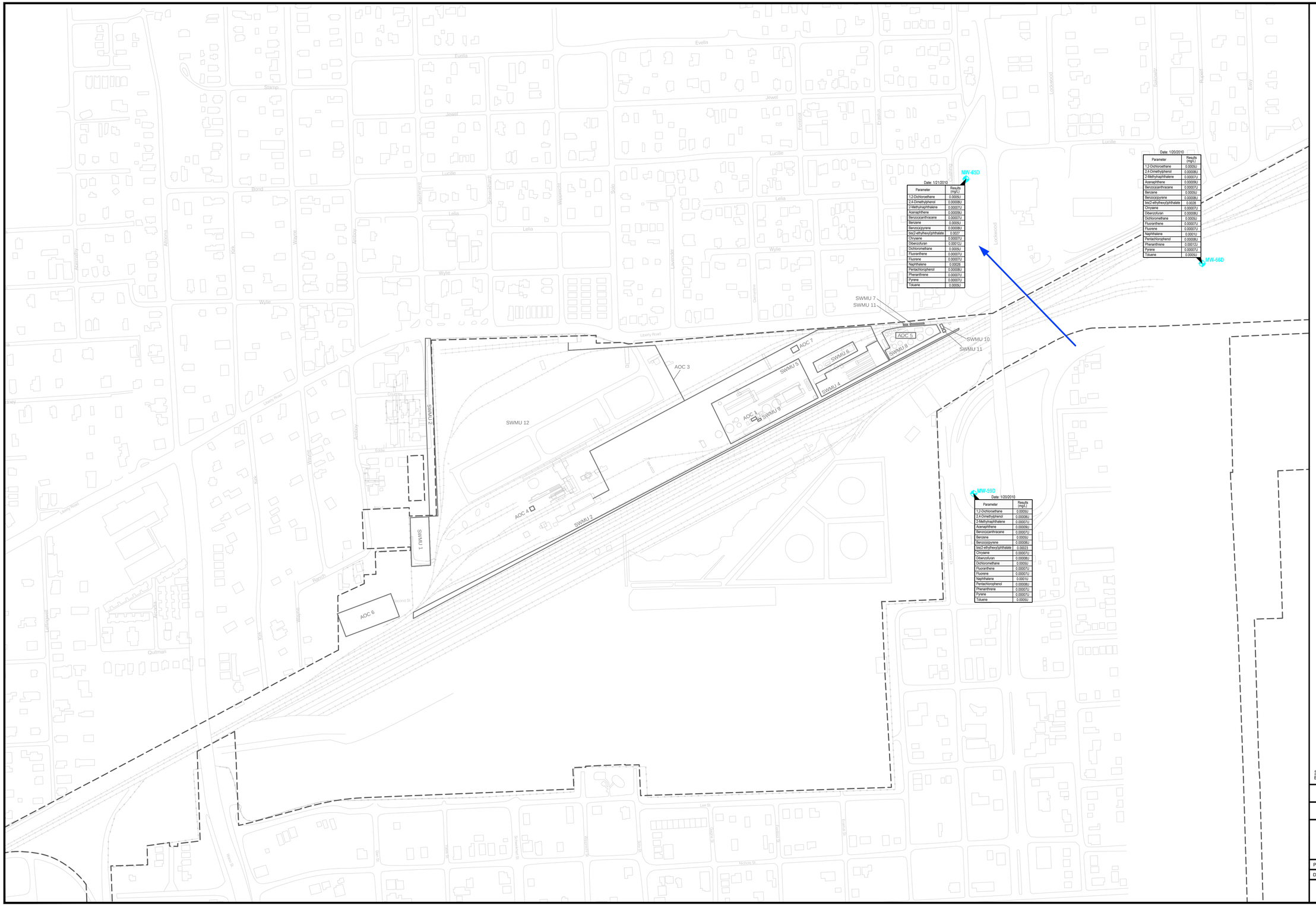
UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-6
GROUNDWATER COC CONCENTRATION MAP C-TZ - JUNE/JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- D-TZ Monitoring Well Location
- Inferred Groundwater Flow Direction

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
* Possible laboratory contaminant.

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
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PROFESSIONAL GEOSCIENTIST

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Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-7

GROUNDWATER COC CONCENTRATION MAP D-TZ - JANUARY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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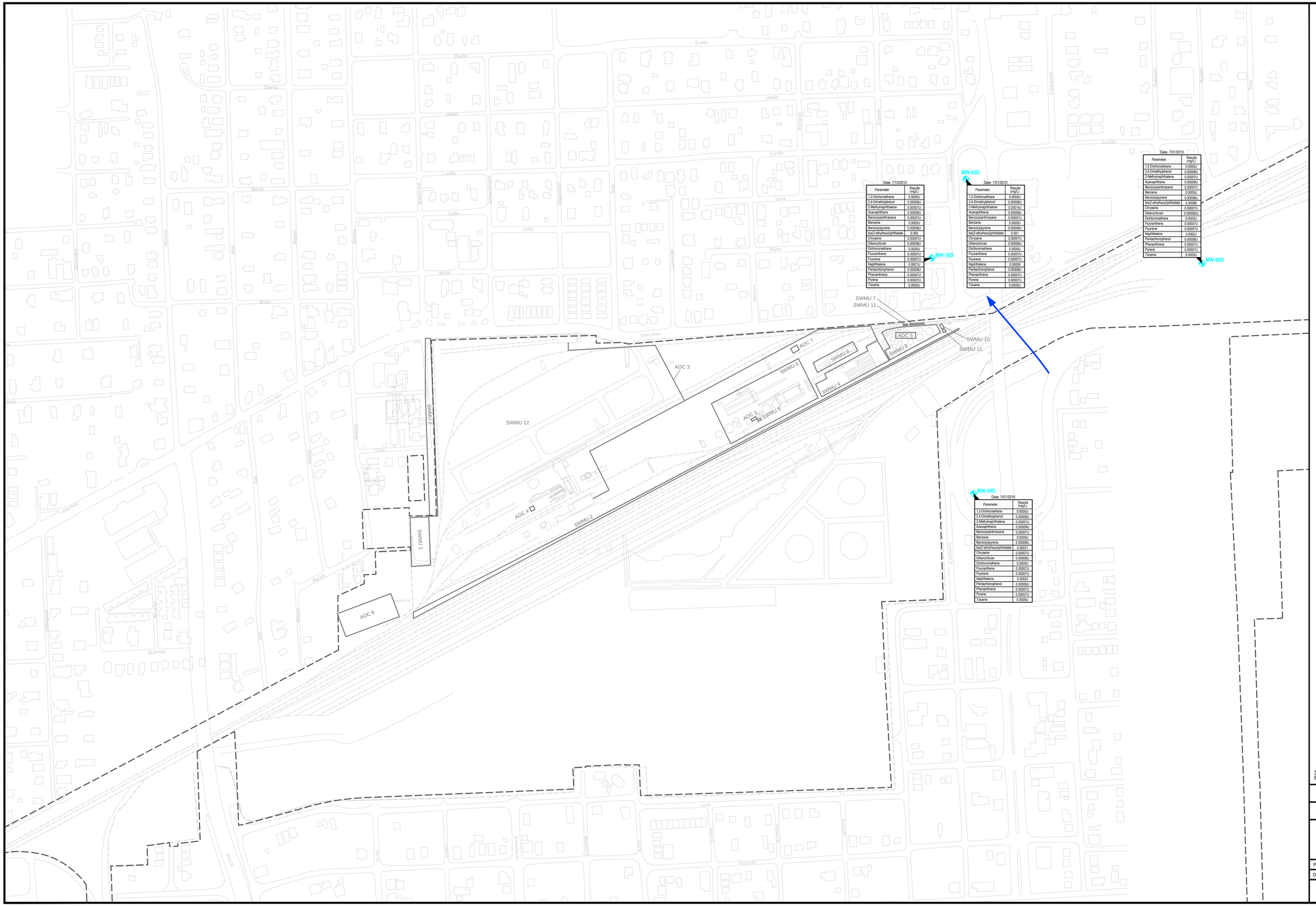

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- D-TZ Monitoring Well Location
- Inferred Groundwater Flow Direction

Notes:
All concentrations are in mg/L.
J = Estimated value between SQL and MDL.
U = Not detected (RL/SQL reported).
* Possible laboratory contaminant.

Protective Concentration Levels (PCLs)

Parameter	RAL (mg/L)
1,2-Dichloroethane	0.005
2,4-Dimethylphenol	0.49
2-Methylnaphthalene	0.098
Acenaphthene	1.5
Benzo(a)anthracene	0.0013
Benzene	0.005
Benzo(a)pyrene	0.0002
bis(2-ethylhexyl)phthalate	0.006
Chrysene	0.13
Dibenzofuran	0.098
Dichloromethane	0.005
Fluoranthene	0.98
Fluorene	0.98
Naphthalene	0.49
Pentachlorophenol	0.001
Phenanthrene	0.73
Pyrene	0.73
Toluene	1

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

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Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-8

GROUNDWATER COC CONCENTRATION MAP D-TZ - JUNE/JULY 2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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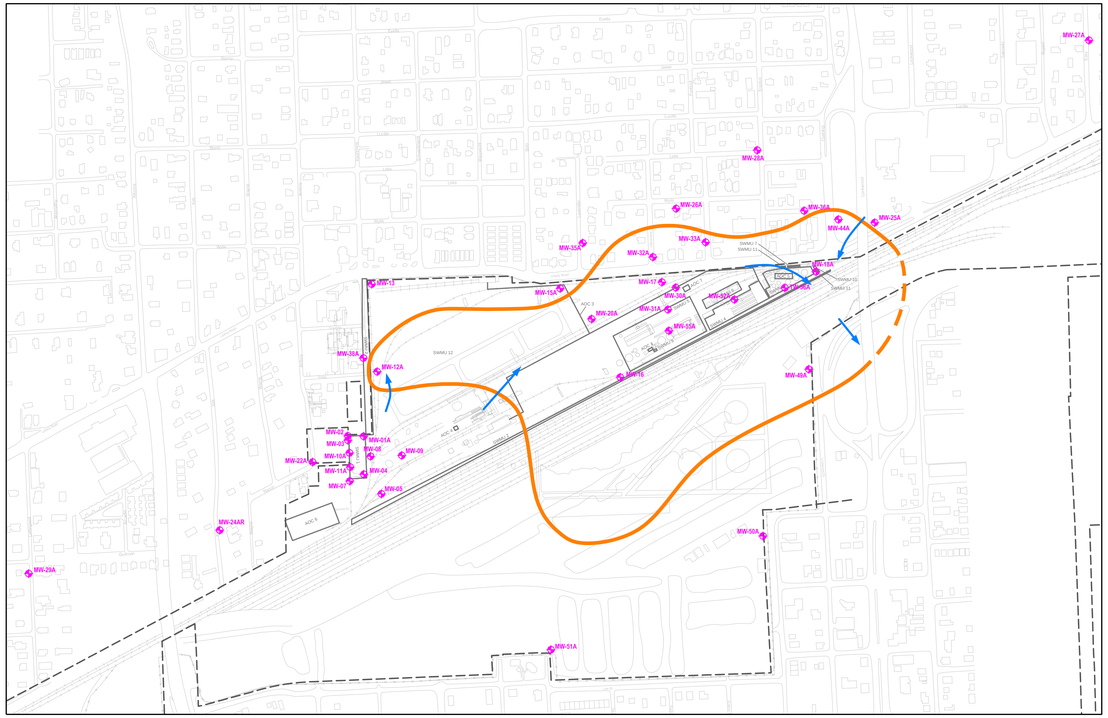
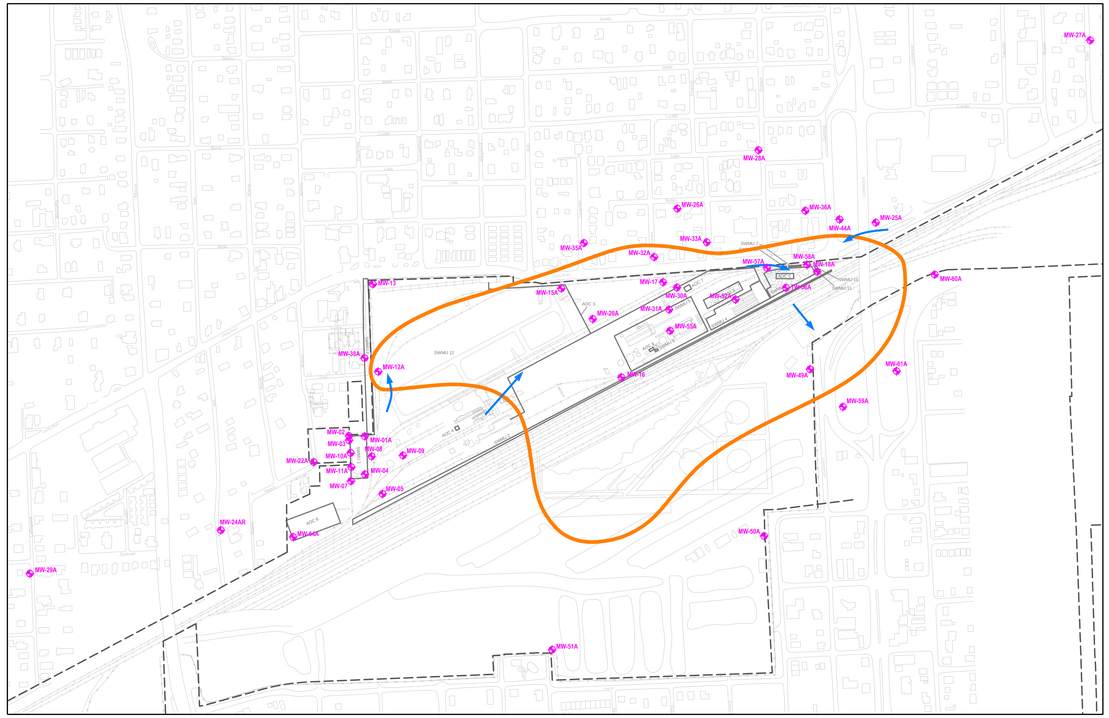
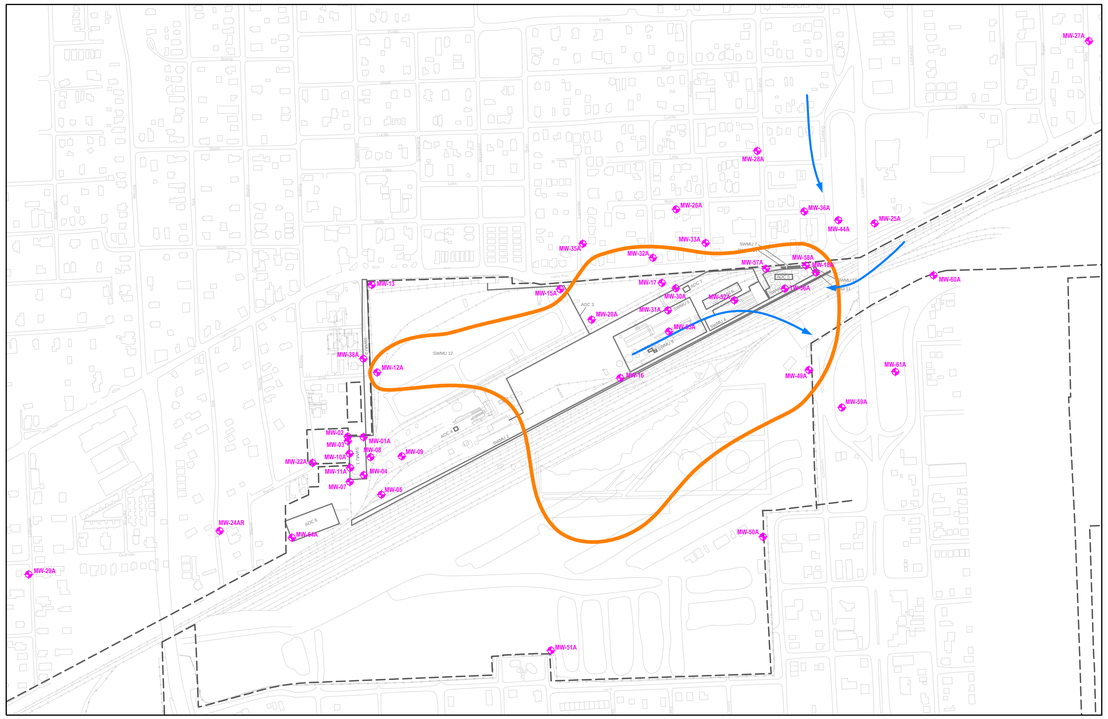


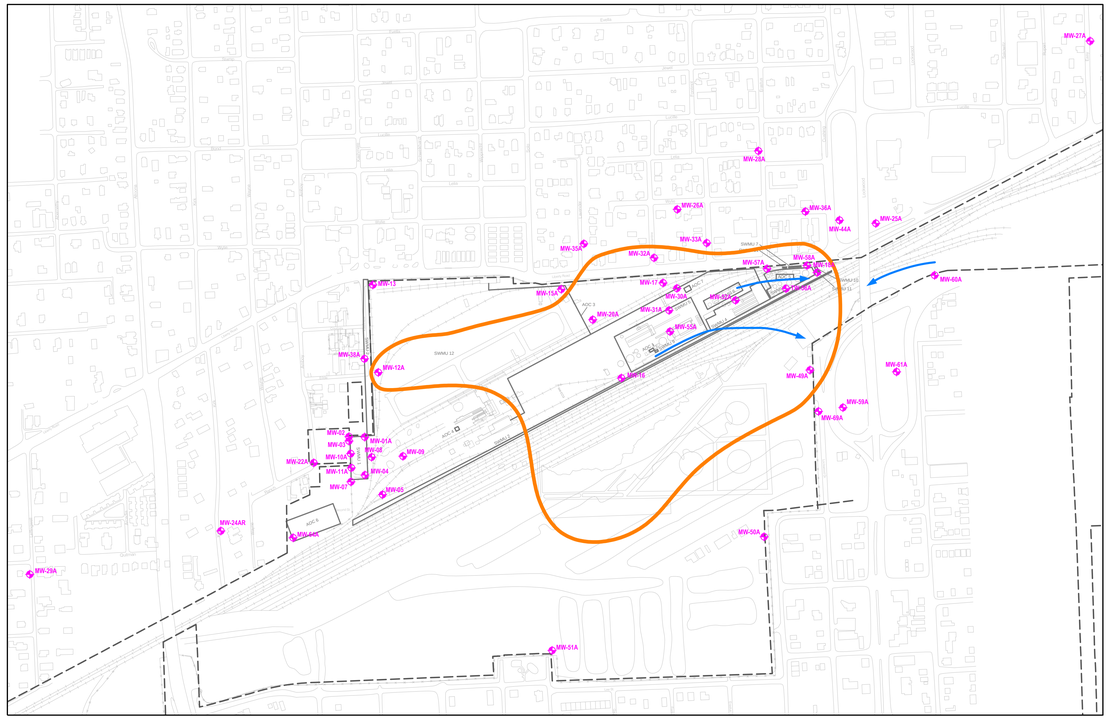
JANUARY 2008



FEBRUARY 2009



JANUARY 2010



JUNE/JULY 2010

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
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GEOLOGY
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N

Scale in Feet
0 300 600

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-9

A-TZ GROUNDWATER PLUME MAP 2008-2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
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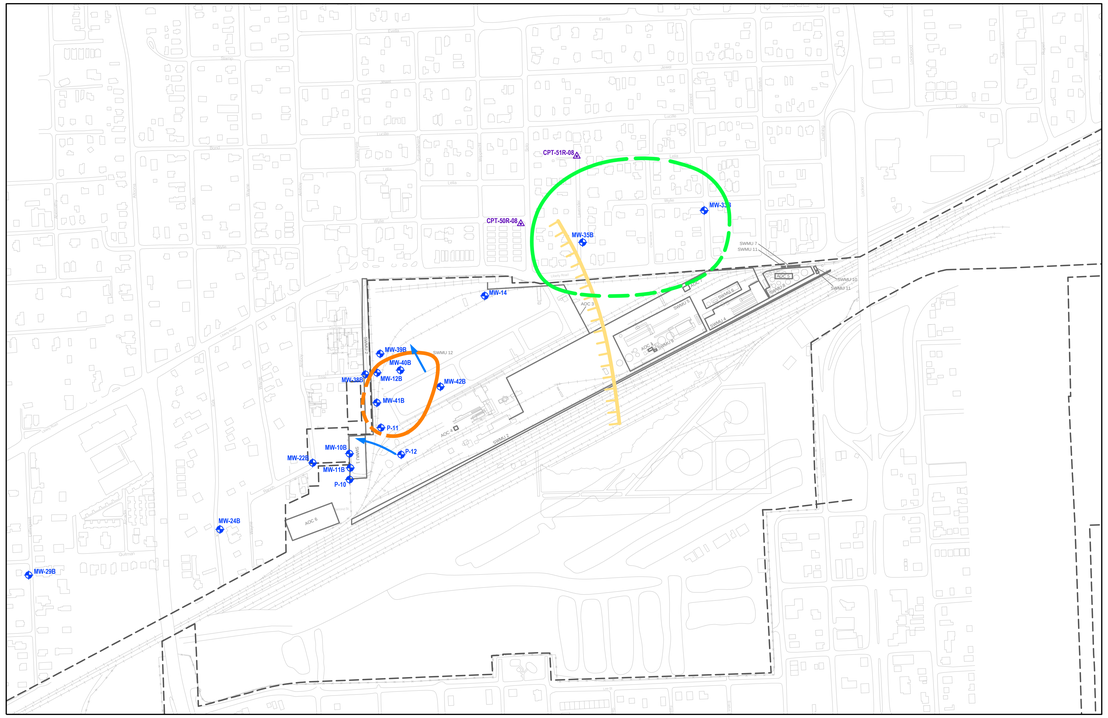
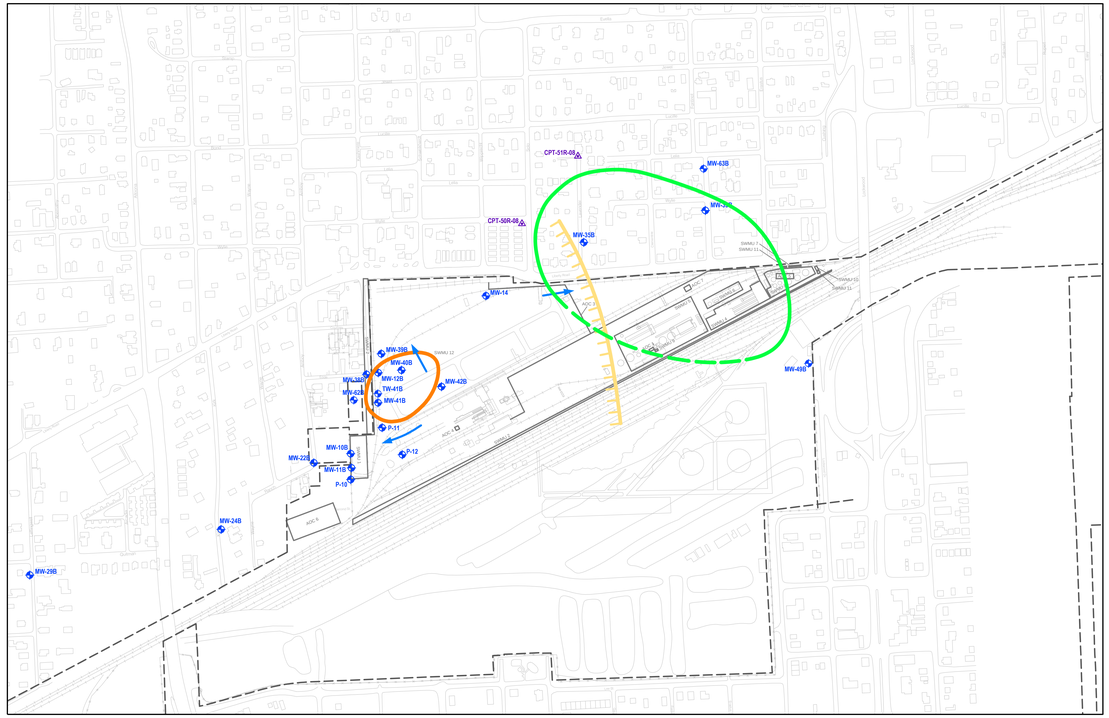
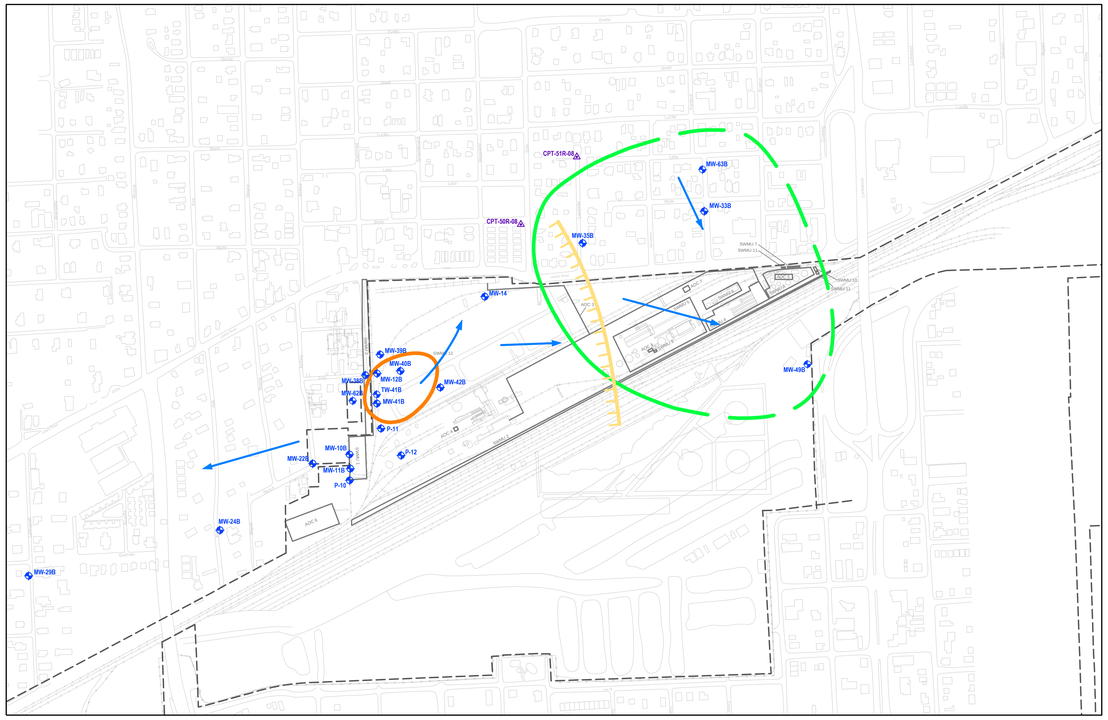


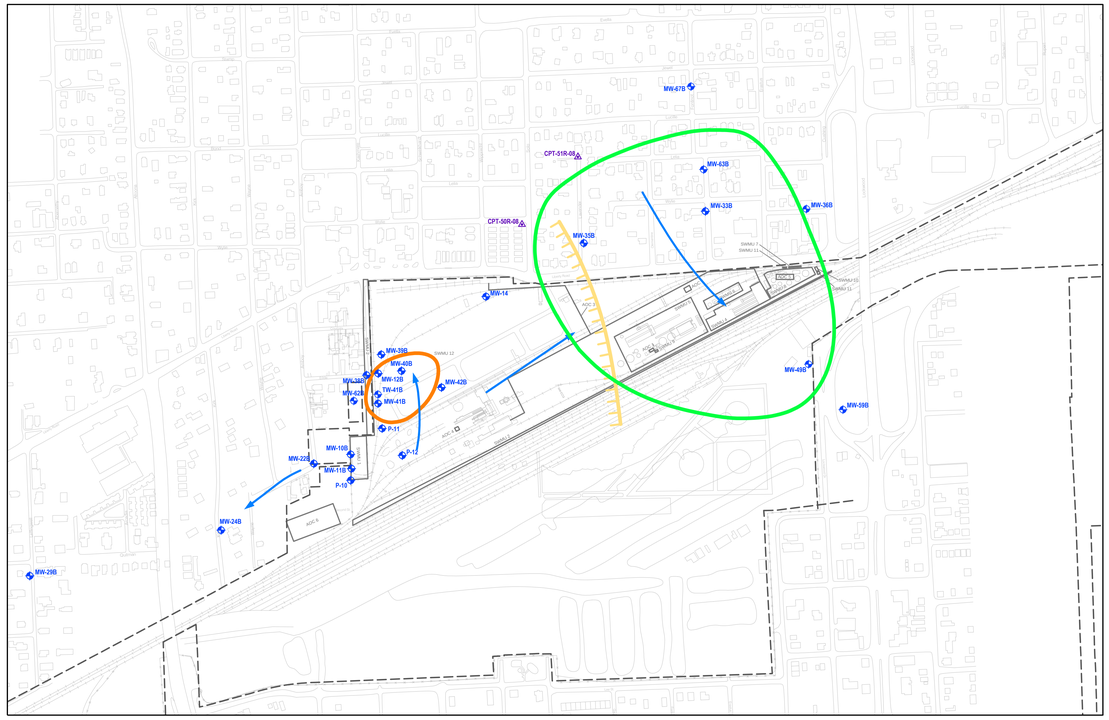
JANUARY 2008



FEBRUARY 2009



JANUARY 2010



JUNE/JULY 2010

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- B-TZ/B-CZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone - B-CZ
- Affected Property/PCLE Zone - B-TZ
- B-TZ Zone Boundary (Not Present / Present)

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
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N

Scale in Feet
0 300 600

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

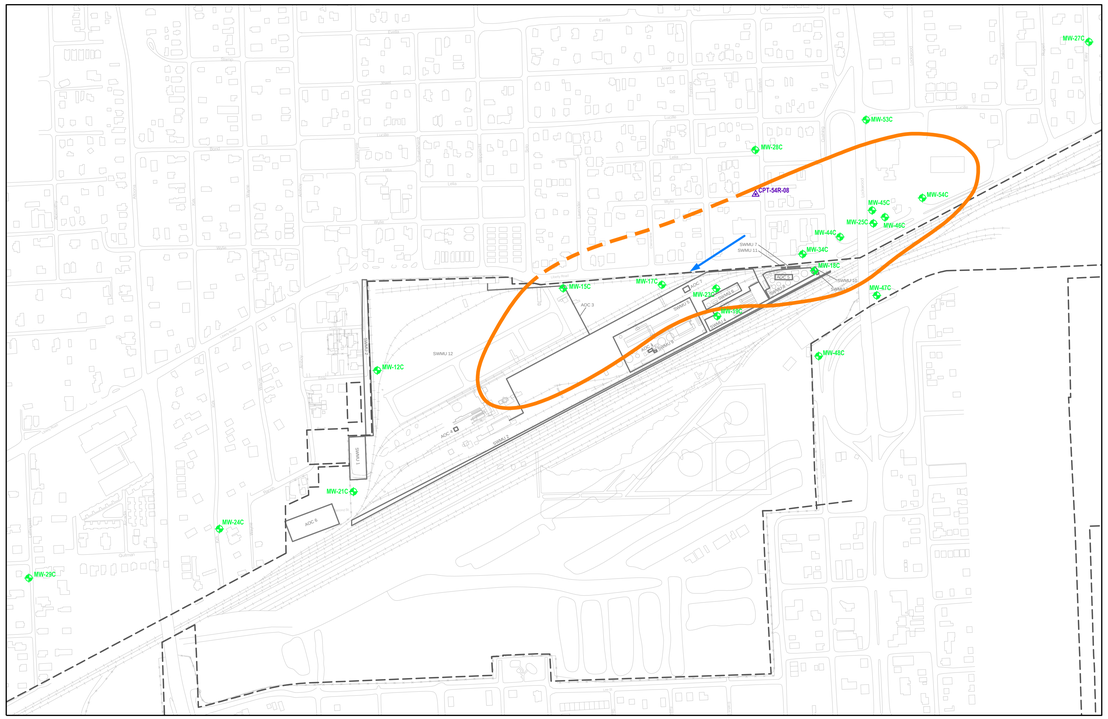
HOUSTON WOOD PRESERVING WORKS

Figure 5B-10

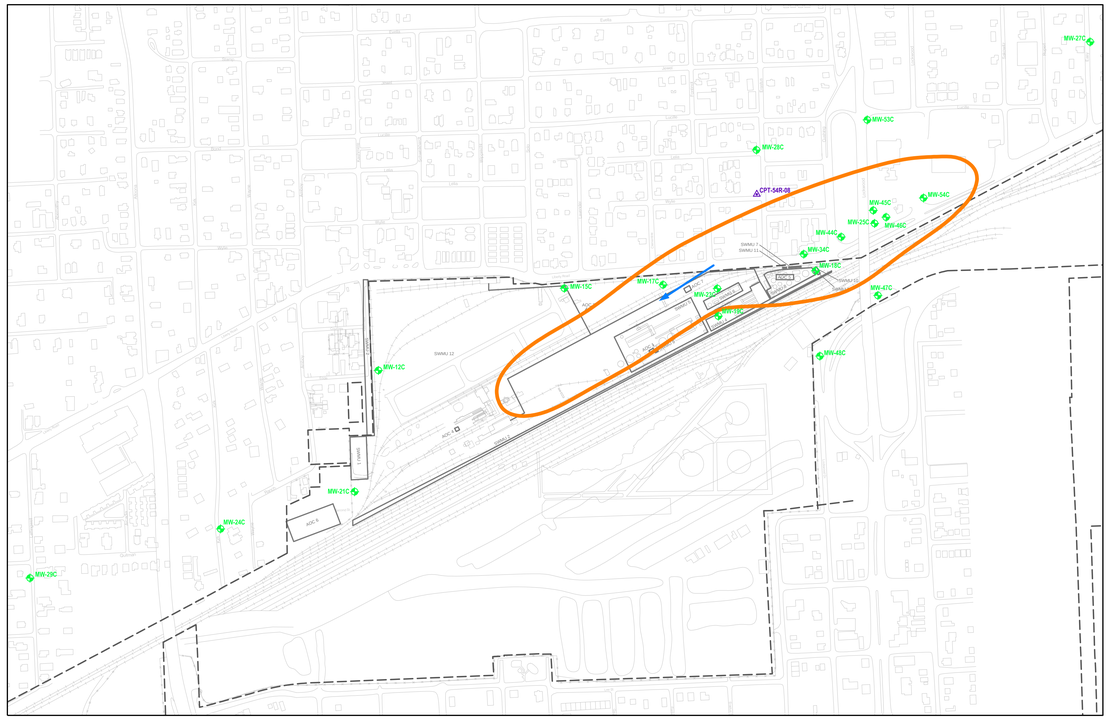
B-TZ/B-CZ GROUNDWATER PLUME MAP 2008-2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

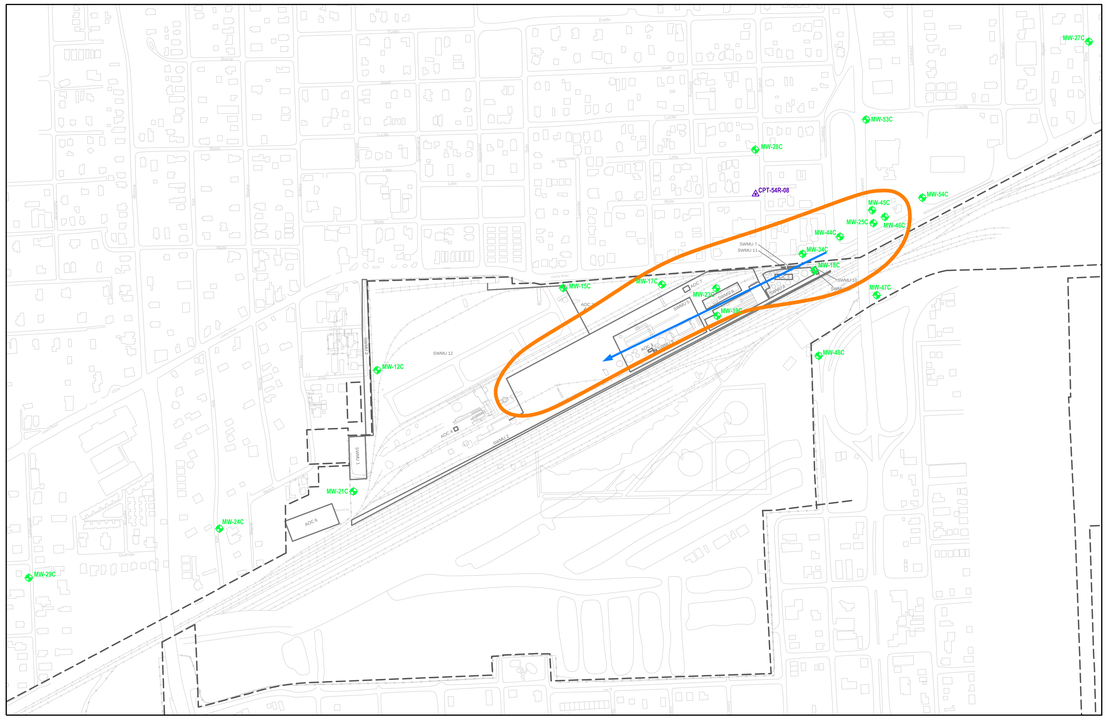
PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



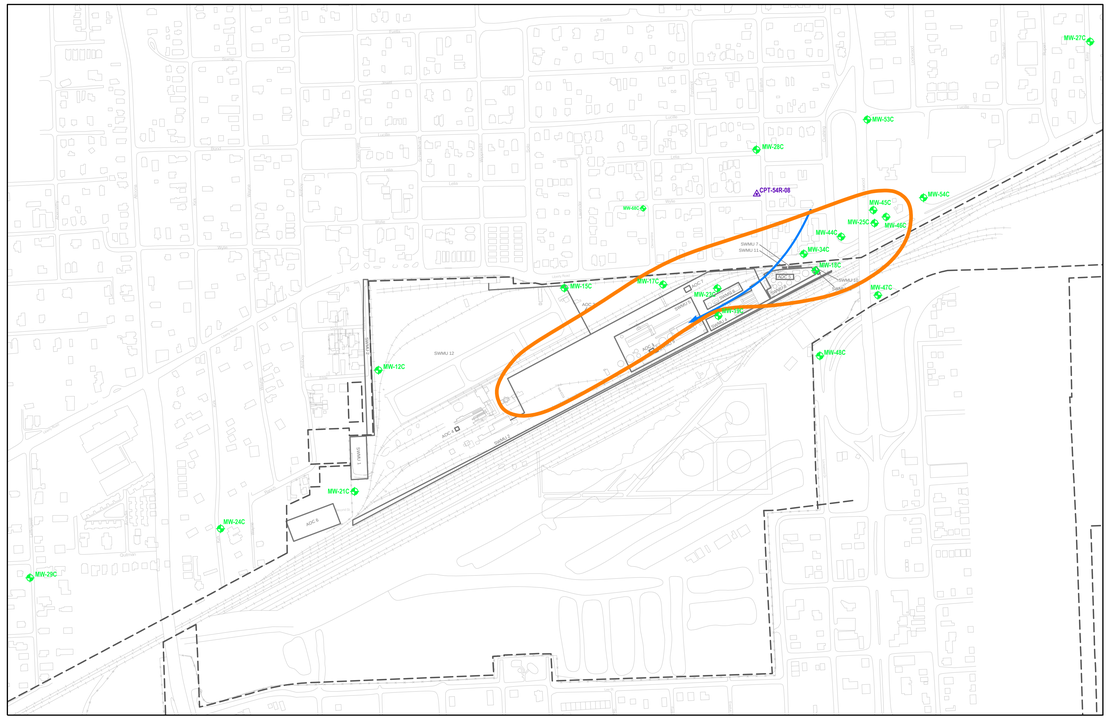
JANUARY 2008



FEBRUARY 2009



JANUARY 2010



JUNE/JULY 2010

EXPLANATION

- UPRR Property
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- C-TZ Monitoring Well Location
- CPT with Rost (Hydropunch Sample)
- Inferred Groundwater Flow Direction
- Affected Property/PCLE Zone

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED PROFESSIONAL GEOLOGIST

N

Scale in Feet

0 300 600

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 5B-11

C-TZ GROUNDWATER PLUME MAP 2008-2010

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

FIGURE 5E-1
In-Well DNAPL Thickness - A-TZ Wells, 2001 through 2010
UPRR Houston Wood Presrving Works

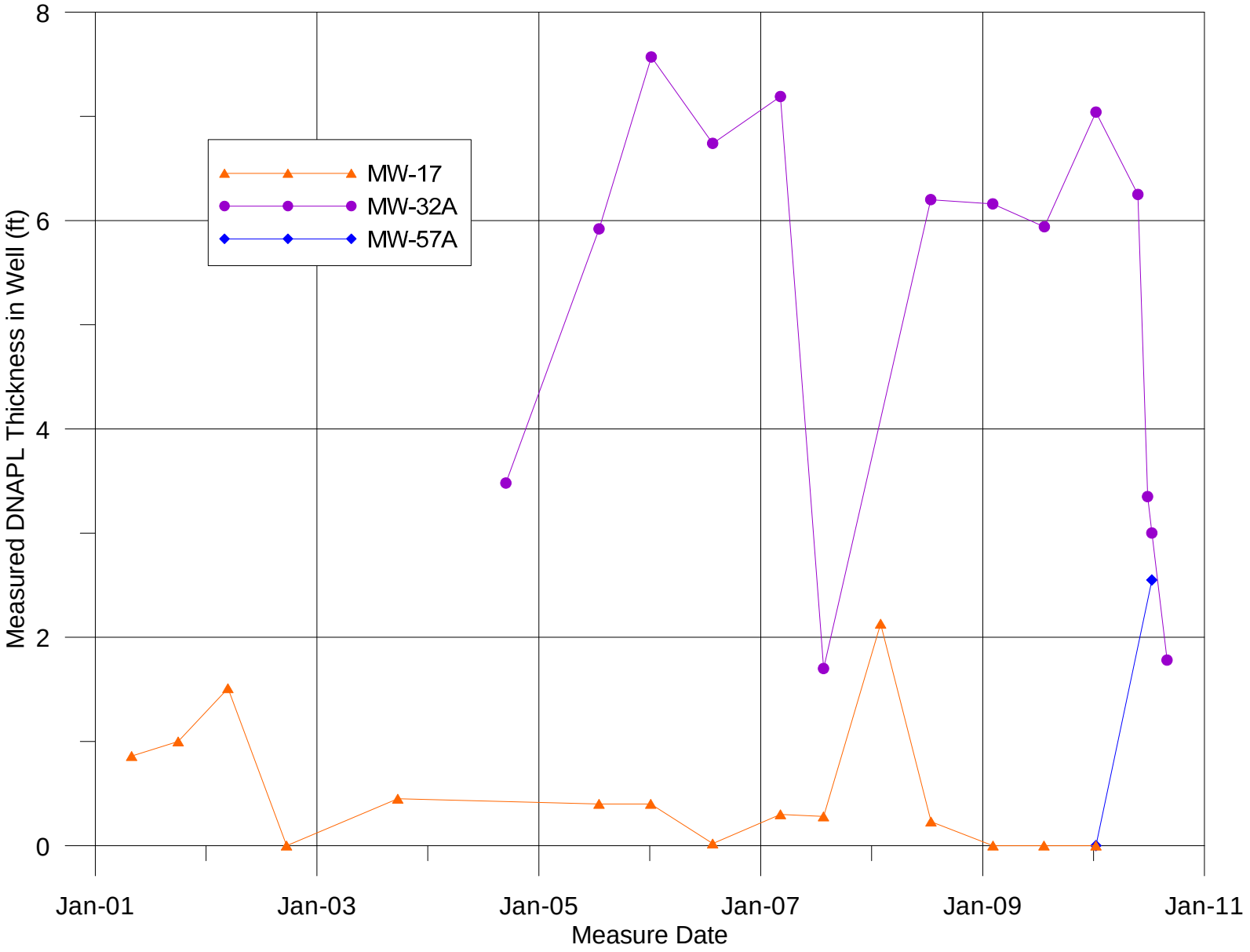


FIGURE 5E-2
In-Well DNAPL Thickness - B-TZ/B-CZ Wells, 2001 through 2010
UPRR Houston Wood Preserving Works

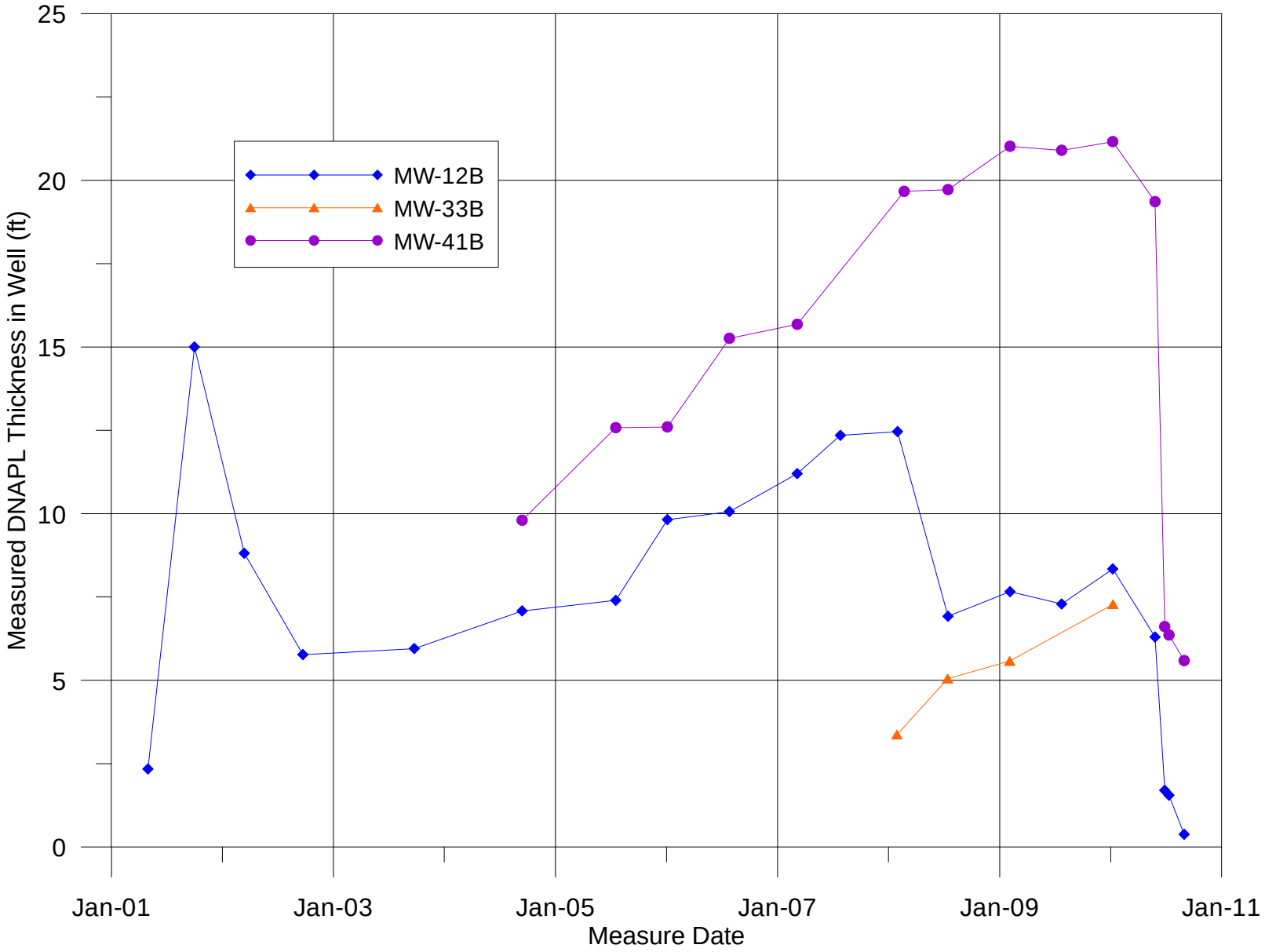
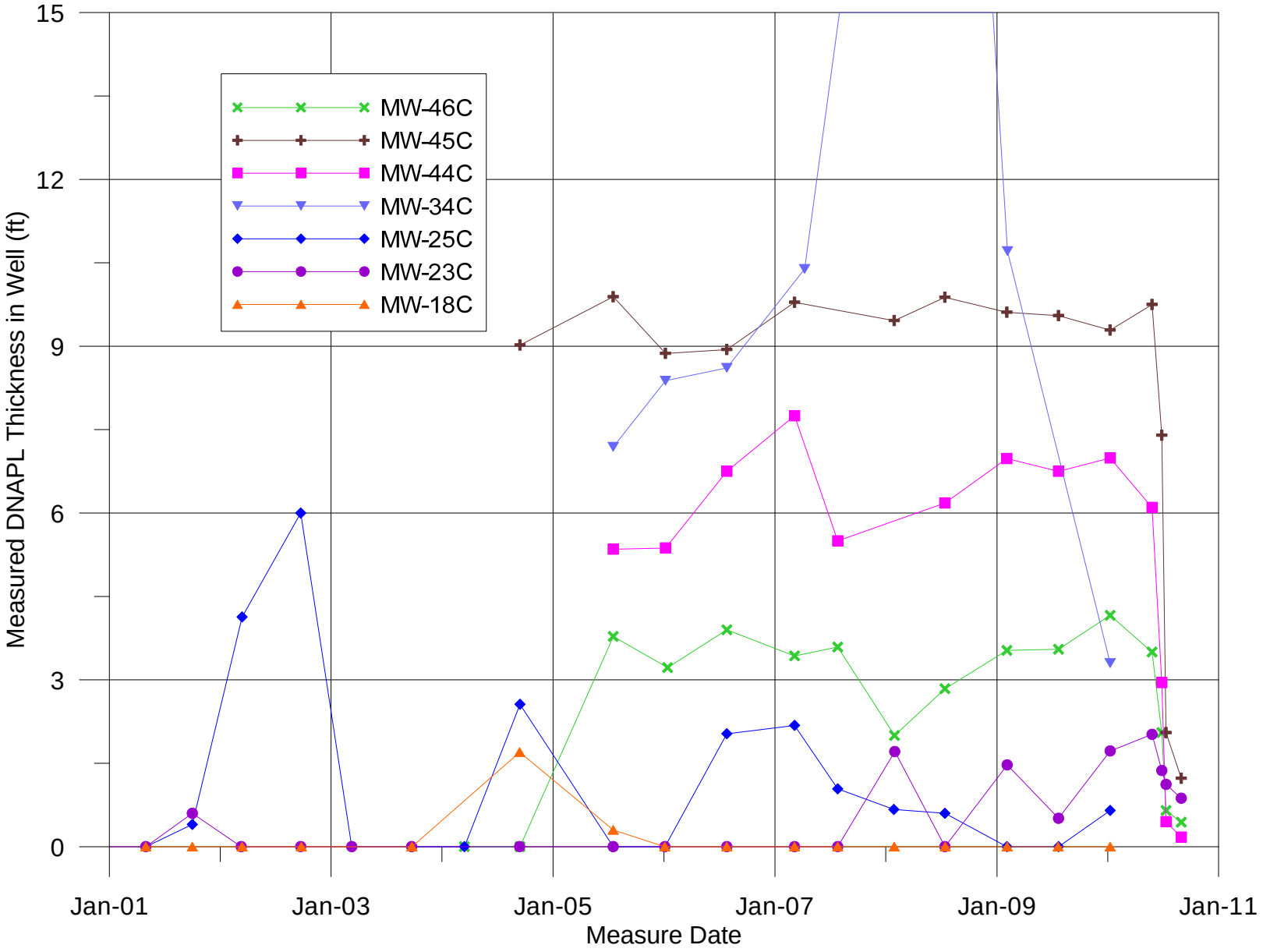


FIGURE 5E-3
In-Well DNAPL Thickness - C-TZ Wells, 2001 through 2010
UPRR Houston Wood Preserving Works



Updated APAR Addendum
October 2010

SECTION 10.0 COC SCREENING

COC screening of the sampled media collected prior to 2004 was detailed in the Revised APAR (Appendix F, ERM, 2004). The COC list for the Site consists of 34 site-specific COCs established in the RFI Work Plan (IC, 1994). However, in response to the presence of LNAPL in the A-TZ well TW-02 in 2007 that was sampled in 2009, groundwater samples from monitoring wells in and around the AST Area (SWMU No. 8) were sampled in January 2010 and analyzed for the comprehensive list of constituents by EPA Methods 8260 for VOCs in addition to the site-specific COCs.

For the purposes of screening COCs, the 34 site-specific COCs were retained for PCL development. An additional 28 VOCs (a total of 64 COCs) were evaluated in groundwater samples collected in January 2010 from wells MW-18A, MW-57A, MW-58A, and TW-56A near SWMU No. 8. As shown on Table 10A, 27 of the 28 additional VOCs were screened from further PCL development because the COCs were not detected or were detected in at least one sample and the detected concentrations and reporting limits or sample detection limits (SDLs) were less than the RALs for that COC in the medium and all other sampled media. The only VOC that is not on the site-specific list that was detected in groundwater above the applicable RAL was vinyl chloride in MW-18A. Since this is the first, unverified detection of vinyl chloride in groundwater at the Site, vinyl chloride will be resampled from these four A-TZ wells during the next scheduled groundwater monitoring event to verify the PCL exceedance.

SVOCs were detected in the groundwater sample from TW-02 collected in 2007, as discussed in the APAR Addendum (PBW, 2009). SVOCs benzo(b)fluoranthene, benzo(k)fluoranthene, carbazole, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected in the groundwater sample at concentrations greater than RALs; however, the sample was collected below the LNAPL in the well. The SVOCs detections are likely a result of LNAPL entrained in the groundwater sample from the well and not from a dissolved plume in the A-TZ. Therefore, these COCs were screened from further PCL evaluation.

A discussion of COCs screened from further PCL evaluation is provided in the following sections.

Section 10.1 Frequency of Detection

No COCs were removed from PCL evaluation based on the frequency of detection.

Section 10.2 Lab Contaminant or Blank Contaminant

Of the site-specific COCs evaluated, bis(2-ethylhexyl)phthalate concentrations detected at the Site are not a result of current or historical industrial activities conducted at the Site, but rather a result of sampling bias or lab contaminant. Bis(2-ethylhexyl)phthalate is the most commonly used of a group of related chemicals called phthalates or phthalic acid esters (EPA, 2006). This chemical is used as a plasticizer for polyvinylchloride (PVC) and other polymers including rubber, cellulose and styrene. Bis(2-ethylhexyl)phthalate is also a common laboratory contaminant as detailed in 30 TAC§350.71(k)(2)(B) and TCEQ TRRP-13 Guidance Document.

Section 10.3 COC Not Sourced On-Site

No COCs were screened from further PCL development as a result of COCs not sourced on-site.

Section 10.4 Appropriate Sample Detection Limits

The reporting limits, or SDLs, for the COCs that were screened from further PCL evaluation were evaluated to ensure the SDL for non-detected COCs were less than the RAL or critical PCL. For VOCs that are not listed as site-specific COCs, none of the sample results where COCs were non-detect had SDLs for those COCs were greater than RALs.

Section 10.5 Screened COCs Expected to be Present Dropped from Future Sampling

At this time, no screened COCs that are expected to be present at the Site will be removed from the COC list for future sampling activities.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

10.0 Tables

TABLE 10A
COC SCREENING SUMMARY TABLE
UPRR Houston Wood Preserving Works

1	2	3	4	5	6	7	8	9	10
Chemical of Concern	All detected concentrations and SQLs < residential assessment level in all sampled media §350.71(k)(1)	Frequency of detects <5% of the >20 samples in this medium §350.71(k)(2) (A)(i) through (iii)	Common lab contaminant §350.71(k)(2)(B)	Blank contaminant §350.71(k)(2)(C)	Max conc < background §350.71(k)(2)(D)	COC not sourced on-site §350.71(k)(2)(E)	COC anticipated but not detected in any sample in the medium §350.71(k)(3)	COC not anticipated and not detected in any sample in the medium §350.71(k)(4)	Notes
Additional Potential COCs									
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane								GW, Soil 0-15 ft, Soil >15 ft	
1,1,2,2-Tetrachloroethane								GW, Soil 0-15 ft, Soil >15 ft	
1,1,2-Trichloroethane								GW, Soil 0-15 ft, Soil >15 ft	
1,1-Dichloroethane								GW, Soil 0-15 ft, Soil >15 ft	
1,1-Dichloroethene								GW, Soil 0-15 ft, Soil >15 ft	
1,2-Dichloroethene (total)								GW, Soil 0-15 ft, Soil >15 ft	
1,2-Dichloropropane								GW, Soil 0-15 ft, Soil >15 ft	
1,4-Dichlorobenzene								GW, Soil 0-15 ft, Soil >15 ft	
2-Butanone								GW, Soil 0-15 ft, Soil >15 ft	
2-Hexanone								GW, Soil 0-15 ft, Soil >15 ft	
4-Methyl-2-pentanone (MIBK)								GW, Soil 0-15 ft, Soil >15 ft	
Acetone	Yes - GW, Soil 0-5 ft, Soil >5 ft								
Bromodichloromethane								GW, Soil 0-15 ft, Soil >15 ft	
Bromoform								GW, Soil 0-15 ft, Soil >15 ft	
Bromomethane								GW, Soil 0-15 ft, Soil >15 ft	
Carbon Disulfide								GW, Soil 0-15 ft, Soil >15 ft	
Carbon Tetrachloride								GW, Soil 0-15 ft, Soil >15 ft	
Chloroethane								GW, Soil 0-15 ft, Soil >15 ft	
Chloroform								GW, Soil 0-15 ft, Soil >15 ft	
Chloromethane								GW, Soil 0-15 ft, Soil >15 ft	
cis-1,2-Dichloroethene								GW, Soil 0-15 ft, Soil >15 ft	
cis-1,3-Dichloropropene								GW, Soil 0-15 ft, Soil >15 ft	
Dibromochloromethane								GW, Soil 0-15 ft, Soil >15 ft	
Dichloromethane								GW, Soil 0-15 ft, Soil >15 ft	
Styrene	Yes - Soil >15 ft							GW, Soil 0-15 ft	
Tetrachloroethene								GW, Soil 0-15 ft, Soil >15 ft	
trans-1,2-Dichloroethene								GW, Soil 0-15 ft, Soil >15 ft	
trans-1,3-Dichloropropene								GW, Soil 0-15 ft, Soil >15 ft	
Trichloroethene								GW, Soil 0-15 ft, Soil >15 ft	
Vinyl Chloride	No - GW (MW-18A, Jan 2010)							Soil 0-15 ft, Soil >15 ft	

TABLE 10A
COC SCREENING SUMMARY TABLE
UPRR Houston Wood Preserving Works

1	2	3	4	5	6	7	8	9	10
Chemical of Concern	All detected concentrations and SQLs < residential assessment level in all sampled media §350.71(k)(1)	Frequency of detects <5% of the >20 samples in this medium §350.71(k)(2) (A)(i) through (iii)	Common lab contaminant §350.71(k)(2)(B)	Blank contaminant §350.71(k)(2)(C)	Max conc < background §350.71(k)(2)(D)	COC not sourced on-site §350.71(k)(2)(E)	COC anticipated but not detected in any sample in the medium §350.71(k)(3)	COC not anticipated and not detected in any sample in the medium §350.71(k)(4)	Notes
Semi-Volatile Organic Compounds (SVOCs)									
1,2,4-Trichlorobenzene								GW, Soil 0-15 ft, Soil >15 ft	
2,4,6-Trichlorophenol	Yes - Soil 0-15 ft, Soil >15 ft							GW	
2-Nitroaniline	Yes - Soil 0-15 ft, Soil >15 ft							GW	
4-Nitroaniline	Yes - Soil 0-15 ft, Soil >15 ft							GW	
Benzo(b)fluoranthene	No - GW; Yes - Soil 0-15 ft, Soil >15 ft								TW-02
Benzo(g,h,i)perylene	Yes - GW, Soil >15 ft						Soil 0-15 ft		
Benzo(k)fluoranthene	No - GW; Yes - Soil 0-15 ft, Soil >15 ft								TW-02
bis(2-Chloroethyl)ether	No - Soil 0-15 ft, Soil >15 ft							GW	Used applicable method
bis(2-Chloroisopropyl)ether	Yes - Soil 0-15 ft, Soil >15 ft							GW	
Carbazole	No - GW; Yes - Soil >15 ft						Soil 0-15ft		TW-02
Dibenzo(a,h)anthracene	No - GW; Yes - Soil 0-15 ft, Soil >15 ft								TW-02
Di-n-octylphthalate	Yes - Soil 0-15 ft							Soil >15 ft	
Hexachlorobutadiene	Yes - Soil 0-15 ft, Soil >15 ft							GW	
Indeno(1,2,3-cd)pyrene	No - GW; Yes - Soil >15 ft						Soil 0-15 ft		TW-02

SECTION 11.0 SOIL CRITICAL PCL DEVELOPMENT

The current land use of the Site is commercial/industrial, and will likely remain commercial/industrial land use for the foreseeable future. The off-site adjacent properties consist of residential and commercial/industrial. Therefore, the critical PCL evaluation was conducted using the TCEQ Commercial/Industrial PCLs for both soil and groundwater pathways on site and Residential PCLs for pathways off site. Below is a discussion of the soil critical PCL development.

Section 11.1 Tier 2 or 3 PCL Development and Non-Default Parameters

Tier 2 and 3 Development

Tier 2 ^{GW}Soil PCLs were calculated for COCs in soils in accordance with the Soil-to-Groundwater PCL equations presented in Figure 30 TAC §350.75(b)(1). Tier 2 PCL equations consider the soil leachate to groundwater as the exposure pathway, surface and subsurface soils as the source medium, and groundwater as the exposure medium. Site-specific data (i.e., total fraction organic carbon (foc), bulk density, volumetric water content, volumetric air content, and pH) were collected from soil boring MW-14(5) as discussed in the Revised APAR (ERM, 2004) to evaluate the site-specific soil attenuation model and develop Tier 2 PCLs. The Revised APAR included Tier 2 calculations; however, the site-specific data used for the calculations (i.e. fraction organic carbon) included soil samples collected below the GWBUs. The Tier 2 calculations in this APAR Addendum use only site-specific data collected from the unsaturated zone rather than data collected from or below the saturated zone.

Soil sample MW-14(5) that was analyzed for geochemical parameters was collected from 5 to 7 feet bgs. This interval is part of the clay unit described as the A-CZ, which was encountered between the overlying fill material and the underlying GWBU A-TZ. The A-CZ was encountered in every boring that was advanced through to the A-TZ across the Site. The boring log describes the soil as silty clay, consistent with the description for the A-CZ across the Site (Section 1.3 of the APAR Addendum, PBW, 2010) below the fill material. Therefore, the one sample is representative of the vadose zone lithology for evaluating attenuation of COCs in soils.

The thickness of affected soil (L1) and depth from top of affected soil to groundwater (L2) were conservatively assumed to be the same value given the depth of the COCs that exceeded PCLs were detected in some soil samples near the top of the saturated zone. Tier 2 ^{GW}Soil PCLs were developed for 42 COCs detected in soils at the Site. It is important to note that even though Tier 2 ^{GW}Soil PCLs were developed for

the 33 of the 34 site-specific COCs, all 34 COCs are continued to be evaluated in groundwater in the Site monitoring wells for each transmissive zone. If groundwater concentrations for a given site-specific COC show increasing trends over time, the soil to groundwater pathway ^{GW}Soil PCL will be re-evaluated to ensure that the Tier 2 ^{GW}Soil PCLs developed in this Updated APAR Addendum are protective of Class 2 groundwater. Details on the non-default parameters, default parameters, and Tier 2 PCL calculations used to develop the soil to groundwater PCLs are provided in Appendix 9.

Section 11.2 Soil PCL Adjustments

Soil PCL adjustments in accordance with 30 TAC §350.71(k) were evaluated in the Revised APAR (ERM, 2004). Based on that evaluation, no Soil PCL adjustments were necessary for the COCs identified.

Section 11.3 Soil Critical PCLs

The soil critical PCLs were established for the Site by using the lower commercial/industrial PCLs for on-site soils and residential PCLs for off-site soils for the following pathways:

- $^{Tot}Soil_{Comb}$;
- $^{Air}Soil_{Inh\text{-}V}$ (Tier 1); and
- $^{GW}Soil_{Ing}$ (Tier 1 or 2).

Comparing the maximum surface and subsurface soil analytical data to the critical commercial/industrial PCLs for on-site and residential PCLs for off-site, concentrations of the following COCs exceeded their respective critical PCLs (with the figure showing the distribution of the COC):

On-Site

Surface Soils
- 1,2-Diphenylhydrazine (Figure 4A-1)
- 2,4-Dinitrotoluene (Figure 4A-2)
- 2-Methylnaphthalene (Figure 4A-3)
- Benzene (Figure 4A-4)
- Benzo(a)anthracene (Figure 4A-5)
- Benzo(a)pyrene (Figure 4A-6)
- Dibenzofuran (Figure 4A-7)
- Naphthalene (Figure 4A-9)
- Pentachlorophenol (Figure 4A-10)

Subsurface Soils
- 2-Methylnaphthalene (Figure 4B-2)
- Benzene (Figure 4B-3)
- Naphthalene (Figure 4B-6)
- Pentachlorophenol (Figure 4B-7)

Off-Site

Surface Soils
- Benzo(a)anthracene (Figure 4A-5)
- Benzo(a)pyrene (Figure 4A-6)

Subsurface Soils
- None

Tables 11A-1 and 11A-2 summarize the critical PCL evaluation for surface soils on-site and off-site, respectfully, and Tables 11B-1 and 11B-2 summarize the critical PCL evaluation for subsurface soils on-site and off-site, respectfully. Figures 11A and 11B presents the spatial distribution of the PCLE zone for surface and subsurface soils, respectively. Surface/subsurface soil cross sections (A-A' through H-H') were prepared showing the PCLE zones (Figures 11C-1) for surface and subsurface soils. Figures showing the individual COC PCLE Zones are indicated next to each COC listed above.

The surface soil PCLE zone extends across the Original Process Area (SWMU No. 5) and Recent Process Area (SWMU No. 4), down the SDD (SWMU No. 2), and across the Former Inactive Wastewater Lagoon (AOC No. 6) (Figure 11A). The PCLE zone includes the COCs listed above, with benzo(a)anthracene (Figure 4A-5), benzo(a)pyrene (Figure 4A-6), naphthalene (Figure 4A-9), and pentachlorophenol (Figure 4A-10) being the primary COCs defining the surface soil PCLE zone. Additional soil sampling conducted in 2010 indicates that surface soil COCs (benzo(a)anthracene, benzo(a)pyrene, and pentachlorophenol) are delineated along the northeast side of the Site (Figure 4A-12). Benzo(a)pyrene was detected above the critical PCL (0.56 mg/Kg) at surface soil sample SB-60(0-0.5) at 0.733 mg/Kg; however, with the additional surface soil sampling near SB-60 (SB-140 and SB-141), the PCL exceedance at that location appears to be isolated and likely from other sources (i.e., asphalting activities on Liberty Road).

For subsurface soils, the PCLE zones for 2-methylnaphthalene, naphthalene (more mobile COCs in soils), and pentachlorophenol were extrapolated using available subsurface soil data and applying the surface PCLE zone for those two COCs to the subsurface. By using the surface PCLE zone, this assumes the PCLE zone extends from the surface to the top of the uppermost GWBU (i.e. A-TZ). However, for pentachlorophenol, none of the groundwater samples from A-TZ wells collected during the 2010 groundwater monitoring events had detected pentachlorophenol concentrations above the RAL, suggesting the concentrations in surface and subsurface soils are protective of groundwater.

The subsurface PCLE zone is confined to the area around the Original and Recent Process Areas (Figure 11B). Prior to any potential response action, additional subsurface samples may be collected to refine the PCLE zone at the Site.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

11.0 Tables

TABLE 11A-1

SURFACE SOIL CRITICAL PCLS - ON-SITE
UPRR HOUSTON WOOD PRESERVING WORKS

On-Site Surface Soil Critical PCLs
Land use for purpose of critical PCL development: Commercial/industrial
Date of the Tier 1 PCL tables used in the determination of PCLs: March 2010

COC	CAS No.	Source area size (acres)	$^{Tot}Soil_{comb}$ PCL[1]		$^{GW}Soil_{Ing}$ PCL[2]		Ecological PCL		MQL (mg/kg)	Texas-specific Background	SWSoil (mg/Kg)	SedSoil (mg/Kg)	Concentration		Remedy or NFA
			mg/Kg	Tier	(mg/kg)	Tier	0-0.5 ft (mg/Kg)	0.5-5.0 ft (mg/Kg)					Max (mg/Kg)	Rep	
1,2-Diphenylhydrazine	122-66-7	30	2.0E+01	1	5.1E-01	2	NA	NA		NA	NA	NA	1.84	NA	Remedy
2,4-Dinitrophenol	51-28-5	30	1.4E+03	1	1.3E-01	2	NA	NA		NA	NA	NA	<0.0678U	NA	NFA
2,4-Dinitrotoluene	121-14-2	30	2.1E+01	1	4.9E-02	2	NA	NA		NA	NA	NA	0.162	NA	Remedy
2-Methylnaphthalene	91-57-6	30	2.5E+03	1	3.8E+02	2	NA	NA		NA	NA	NA	1300	NA	Remedy
Benzene	71-43-2	30	1.1E+02	1	1.0E-01	2	NA	NA		NA	NA	NA	0.206	NA	Remedy
Benzo(a)anthracene	56-55-3	30	2.4E+01	1	3.0E+02	2	NA	NA		NA	NA	NA	401	NA	Remedy
Benzo(a)pyrene	50-32-8	30	2.4E+00	1	5.7E+01	2	NA	NA		NA	NA	NA	70.62	NA	Remedy
bis(2-Ethylhexyl)phthalate	117-81-7	30	5.6E+02	1	1.2E+03	2	NA	NA		NA	NA	NA	<165U	NA	NFA
Dibenzofuran	132-64-9	30	2.7E+03	1	7.4E+02	2	NA	NA		NA	NA	NA	1100	NA	Remedy
Fluoranthene	206-44-0	30	2.5E+04	1	4.3E+04	2	NA	NA		NA	NA	NA	2990	NA	NFA
Naphthalene	91-20-3	30	1.9E+02	1	6.8E+02	2	NA	NA		NA	NA	NA	3900	NA	Remedy
Pentachlorophenol	87-86-5	30	1.1E+02	1	1.2E-01	2	NA	NA		NA	NA	NA	3.13	NA	Remedy
Phenanthrene	85-01-8	30	1.9E+04	1	9.3E+03	2	NA	NA		NA	NA	NA	4100	NA	NFA

Notes:
1. Critical PCL =
2. Maximum surface soil concentration exceeding critical PCL =
3. No affected off-site surface soil.
4. NFA = No further action. NA = Not applicable.
5. Surface soil is defined under TRRP as 0-5 ft bgs for industrial land use.

TABLE 11A-2

SURFACE SOIL CRITICAL PCLS - OFF-SITE
UPRR HOUSTON WOOD PRESERVING WORKS

Off-Site Surface Soil Critical PCLs
Land use for purpose of critical PCL development: Residential
Date of the Tier 1 PCL tables used in the determination of PCLs: March 2010

COC	CAS No.	Source area size (acres)	$^{Tot}Soil_{comb}$ PCL(1)		$^{GW}Soil_{ing}$ PCL(2)		Ecological PCL		MQL (mg/kg)	Texas-specific Background	SWSoil (mg/Kg)	SedSoil (mg/Kg)	Concentration		Remedy or NFA
			mg/Kg	Tier	(mg/kg)	Tier	0-0.5 ft (mg/Kg)	0.5-5.0 ft (mg/Kg)					Max (mg/Kg)	Rep	
Benzo(a)anthracene	56-55-3	30	5.6E+00	1	1.3E+02	2	NA	NA		NA	NA	NA	15.3	NA	Remedy
Benzo(a)pyrene	50-32-8	30	5.6E-01	1	5.7E+01	2	NA	NA		NA	NA	NA	23.2	NA	Remedy
Pentachlorophenol	87-86-5	30	2.4E+00	1	1.2E-01	2	NA	NA		NA	NA	NA	0.037	NA	NFA

Notes:
1. Critical PCL =
2. Maximum surface soil concentration exceeding critical PCL =
3. No affected off-site surface soil.
4. NFA = No further action. NA = Not applicable.
5. Surface soil is defined under TRRP as 0-15 ft bgs for residential land use.

TABLE 11B-1

SUBSURFACE SOIL CRITICAL PCLS - ON-SITE
UPRR HOUSTON PRESERVING WORKS, HOUSTON, TEXAS

On-Site Subsurface Soil Critical PCLs

Land use for purpose of critical PCL development: Commercial/industrial

Date of the Tier 1 PCL tables used in the determination of PCLs: March 2010

Chemical of Concern	CAS No.	$^{Air}Soil_{Inh-V}$ PCL (mg/kg)	Tier	Source area size (acres)	$^{GW}SOIL_{Ing}$ PCL (mg/kg)	Tier	Source area size (acres)	Laboratory MQL (mg/kg)	Texas-specific Background (mg/kg)	Maximum Concentration (mg/kg)	Remedy or NFA
2,4-Dimethylphenol	105-67-9	3.6E+03	1	30	5.3E+01	2	30		NA	25	NFA
2-Methylnaphthalene	91-57-6	---	1	30	3.8E+02	2	30		NA	1,700	Remedy
Benzene	71-43-2	1.4E+02	1	30	1.0E-01	2	30		NA	1.1	Remedy
Benzo(a)pyrene	50-32-8	7.3E+02	1	30	5.7E+01	2	30		NA	6.27	NFA
Dibenzofuran	132-64-9	---	1	30	7.4E+02	2	30		NA	270	NFA
Naphthalene	91-20-3	1.9E+02	1	30	6.8E+02	2	30		NA	17,000	Remedy
Pentachlorophenol	87-86-5	2.3E+02	1	30	1.2E-01	2	30		NA	0.25	Remedy

Notes:

1. Critical PCL =
2. Maximum subsurface soil concentration exceeding critical PCL =
3. No affected off-site subsurface soil.
4. NFA = No further action. NA = Not applicable.
5. Subsurface soil is defined under TRRP as >5 ft bgs to the top of the uppermost water-bearing unit (A-TZ).

TABLE 11B-2

SUBSURFACE SOIL CRITICAL PCLS - OFF-SITE
UPRR HOUSTON PRESERVING WORKS, HOUSTON, TEXAS

Off-Site Subsurface Soil Critical PCLs

Land use for purpose of critical PCL development: Residential

Date of the Tier 1 PCL tables used in the determination of PCLs: March 2010

Chemical of Concern	CAS No.	$^{Air}Soil_{Inh-V}$ PCL (mg/kg)	Tier	Source area size (acres)	$^{GW}SOIL_{Ing}$ PCL (mg/kg)	Tier	Source area size (acres)	Laboratory MQL (mg/kg)	Texas-specific Background (mg/kg)	Maximum Concentration (mg/kg)	Remedy or NFA
2,4-Dimethylphenol	105-67-9	2.6E+03	1	30	5.3E+01	2	30	0.031	NA	<0.031U	NFA
2-Methylnaphthalene	91-57-6	---	1	30	3.8E+02	2	30	0.022	NA	<0.022U	NFA
Benzene	71-43-2	8.4E+01	1	30	1.0E-01	2	30	0.006	NA	<0.006	NFA
Benzo(a)pyrene	50-32-8	4.4E+02	1	30	5.7E+01	2	30	0.009	NA	<0.009U	NFA
Dibenzofuran	132-64-9	---	1	30	7.4E+02	2	30	0.019	NA	<0.019U	NFA
Naphthalene	91-20-3	1.4E+02	1	30	6.8E+02	2	30	0.002	NA	0.0252	NFA

Notes:

1. Critical PCL =
2. Maximum subsurface soil concentration exceeding critical PCL =
3. No affected off-site subsurface soil.
4. NFA = No further action. NA = Not applicable.
5. Subsurface soil is defined under TRRP as >15 ft bgs to the top of the uppermost water-bearing unit (A-TZ).

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

11.0 Figures

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- B-TZ Monitoring Well Location
- C-TZ Monitoring Well Location
- D-TZ Monitoring Well Location
- A-TZ Temporary Monitoring Well Location
- CPT with Rost Location
- CPT Location
- Hydropunch Sample Location
- Soil Boring Location
- A A' Soil Cross Section Location (Figures 11C-1 and 11C-2)
- Surface Affected Property
- Surface PCLE Zone

Note:
* Soil analytical data rejected by validator.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED
PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 11A

SURFACE SOIL COC PCLE ZONE MAP

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- B-TZ Monitoring Well Location
- C-TZ Monitoring Well Location
- D-TZ Monitoring Well Location
- A-TZ Temporary Monitoring Well Location
- CPT with Rost Location
- CPT Location
- Hydropunch Sample Location
- Soil Boring Location
- A A' Soil Cross Section Location (Figures 11C-1 and 11C-2)
- Subsurface Affected Property
- Subsurface PCLE Zone

Note:
* Soil analytical data rejected by validator.

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

Note:
Locations of SWMU-9 and AOCs 1, 3, 5 and 7 area approximate.

STATE OF TEXAS
ERIC C. MATZNER
GEOLOGY
LIC. # 795
LICENSED PROFESSIONAL GEOSCIENTIST

N

Scale in Feet
0 200 400

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

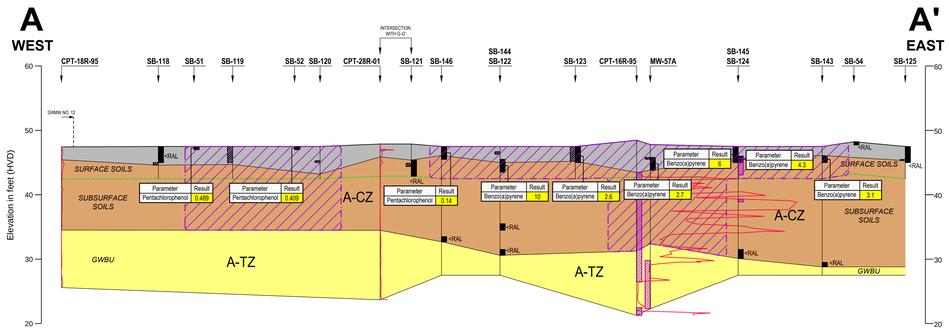
HOUSTON WOOD PRESERVING WORKS

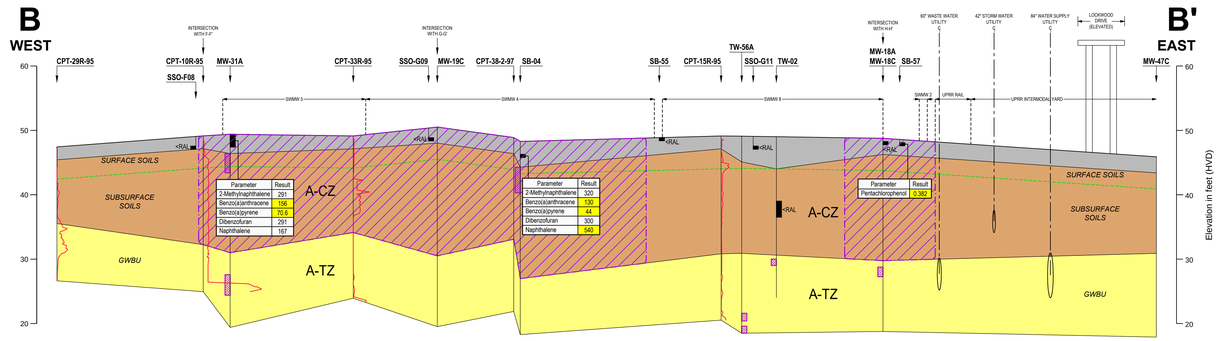
Figure 11B

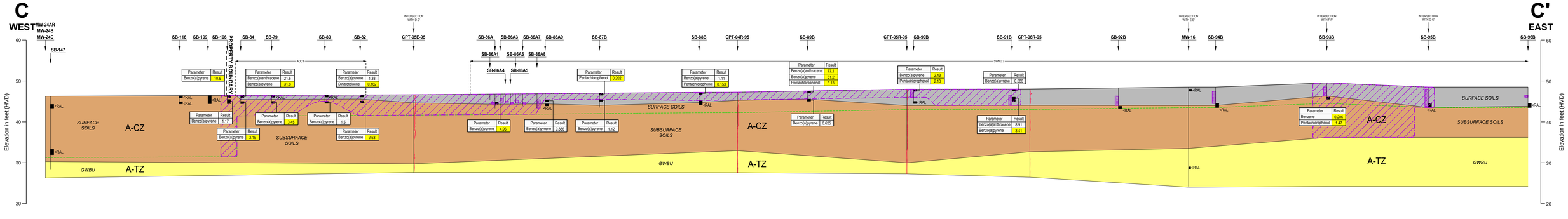
SUBSURFACE SOIL COC PCLE ZONE MAP

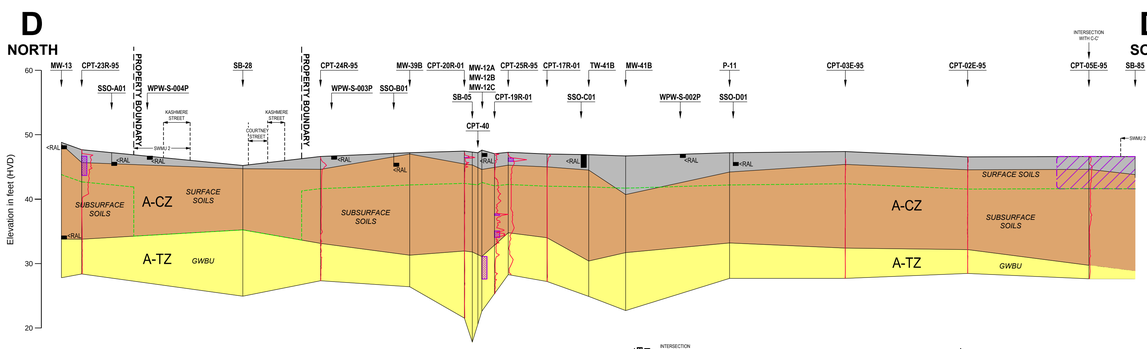
PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

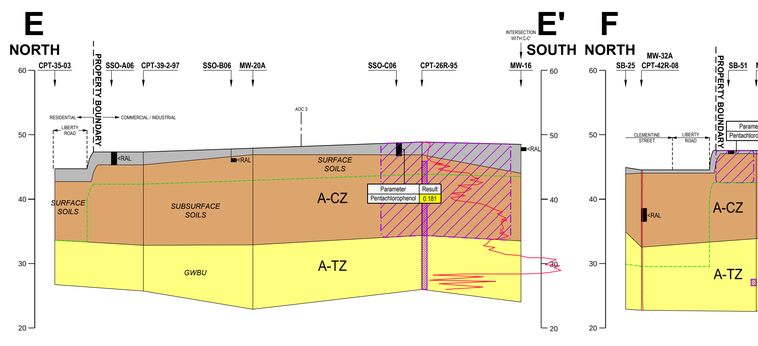
PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

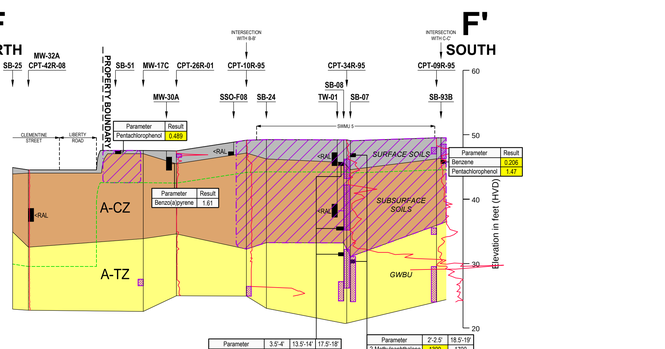






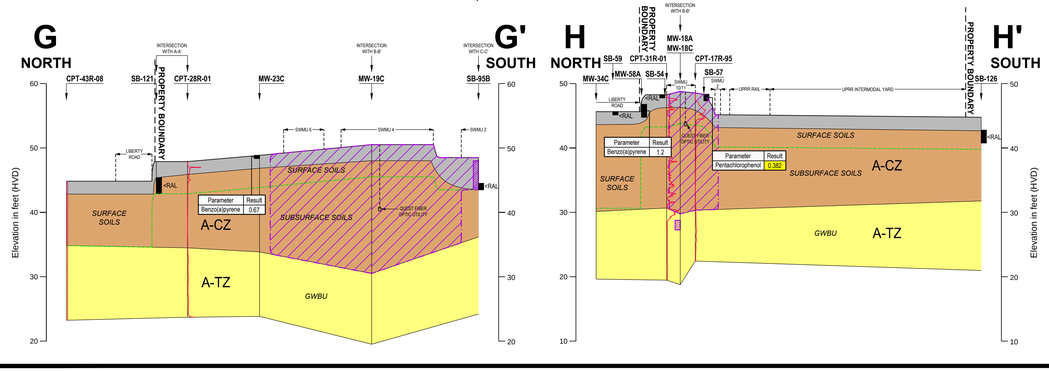






Parameter	3.5'-4'	13.5'-14'	17.5'-18'
2,4-Dimethylphenol	<RAL	<RAL	25
2-Methylnaphthalene	420	360	400
Benzene	<RAL	<RAL	1.1
Benzo(a)anthracene	560	<RAL	<RAL
Benzo(a)pyrene	62	<RAL	<RAL
Dibenzofuran	600	<RAL	270
Naphthalene	970	4600	17000

Parameter	7'-7.5'	18.5'-19'
2-Methylnaphthalene	1300	1700
Benzene	<RAL	0.23
Benzo(a)anthracene	130	<RAL
Benzo(a)pyrene	27	<RAL
Dibenzofuran	1100	360
Fluoranthene	2900	<RAL
Naphthalene	3900	7600
Phenanthrene	4100	<RAL



EXPLANATION

Fill: Sand, Silt, Clay & Gravel, wood fragments, bricks, scrap metal

Transmissive Zone (TZ): Sand & Silty Sand

Cohesive Zone (CZ): Clay, Silty Clay & Silt

Surface and Subsurface Soils PCLE Zone

Line Denotes Surface (0-5 Ft on-site, 0-15 Ft off-site) /Subsurface (>5 Ft on-site, >15 Ft off-site) Soil Boundary

Sample Interval

Visual Indication of NAPL or ROST Result >25% RE

Notes:
1. Topography is estimated.
2. See Figure 11A and 11B for cross section location.
3. Concentration are in mg/Kg.
4. Highlighted concentrations exceed cPCLs for on-site or off-site.
5. Utility locations based on drawings provided by the City of Houston Department of Public Works & Engineering.
6. Vertical datum based on City of Houston Monument System (HVD), Ft HVD.

Surface Soil PCLs

Parameter	RAL & Off-Site cPCL (mg/Kg)	On-Site cPCL (CI) (mg/Kg)
1,2-Dichloroethane	0.105	0.105
2,4-Dimethylphenol	0.022	0.049
2-Methylnaphthalene	127	378
Benzene	0.105	0.105
Benzo(a)anthracene	0.645	23.6
Benzo(a)pyrene	0.564	2.368
Dibenzofuran	249	744
Naphthalene	124	190
Pentachlorophenol	0.124	0.124
Phenanthrene	1705	9282

Subsurface Soil PCLs

Parameter	RAL & Off-Site cPCL (mg/Kg)	On-Site cPCL (CI) (mg/Kg)
2,4-Dimethylphenol	17.7	52.7
2-Methylnaphthalene	126.65	378
Benzene	0.105	0.105
Benzo(a)pyrene	57.3	57.3
Dibenzofuran	249	744
Naphthalene	138	193

SWMU/AOC AREAS

No.	Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Northern and Southern Drainage Ditches
SWMU 4	Recent Process Area
SWMU 5	Original Process Area
SWMU 6	Water Treatment and Boiler System
SWMU 7	Tank Car Storage Area
SWMU 8	Aboveground Storage Tank Area
SWMU 9	Location of Former UST No. 44-023-05
SWMU 10	Location of Former Sap Water Treatment Tank
SWMU 11	Oil/Water Separators
SWMU 12	Railroad Tie Storage Area
AOC 1	Diesel Storage Tank
AOC 3	Contaminated Portion of City Water Line
AOC 4	Location of Former Incinerator
AOC 5	City Storm Sewer
AOC 6	Inactive Wastewater Lagoon
AOC 7	Location of Former UST No. 44-023-21

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GEOLOGY
LIC. # 795
LICENSED PROFESSIONAL GEOLOGIST

Vertical Exaggeration 8X

80 0 80 80

scale in feet

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 11C-1

SURFACE/SUBSURFACE SOIL CROSS SECTIONS A-A' THROUGH H-H'

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

SECTION 12.0 GROUNDWATER CRITICAL PCL DEVELOPMENT

The land use for the Site is and will likely remain commercial/industrial for the foreseeable future. However, with residential properties around the Site and apparent groundwater impacts above PCLs off-site, the critical PCL evaluation was conducted using the more conservative TCEQ Residential PCLs for groundwater pathways. Response actions, which will be detailed in the RAP, will be designed to address PCLE zones based on land use (i.e., commercial/industrial PCLs for on-site PCLE zone). A discussion of the groundwater critical PCL development is presented below.

Section 12.1 Tier 2 or 3 PCL Development and Non-Default Parameters

No Tier 2 or 3 PCLs were developed for groundwater at this Site, and no non-default affected property parameters were used for the groundwater evaluation of this Site.

Section 12.2 Groundwater PCL Adjustments

Using the January 2010 and June/July 2010 groundwater data, 21 groundwater COCs that were not screened from further PCL evaluation (detailed in Section 10.0) were detected above RALs. These RAL exceedances included 10 noncarcinogenic COCs, 3 carcinogenic COCs, and 8 COCs with EPA Maximum Contaminant Levels (MCLs) (Table 12A). In accordance with 30 TAC §350.72(b)(1), COCs with MCLs are excluded from the cumulative evaluation. Therefore, since less than 10 noncarcinogenic and 10 carcinogenic COCs were detected above RALs, no cumulative adjustment is necessary for PCL development for groundwater pathways.

Section 12.3 Groundwater Critical PCLs

Groundwater analytical data were compared to the TCEQ TRRP Residential Groundwater PCLs, dated March 2010, assuming the source area greater than 0.5 acre in size (30-acre source area). Critical PCLs were established as the lesser value between residential $^{GW}GW_{Ing}$ and $^{Air}GW_{Inh\text{-}V}$ PCLs. The January and June/July 2010 groundwater analytical data were evaluated for establishing the groundwater PCLE zone. These analytical data are the most representative groundwater data for the Site. Of the site-specific COCs analyzed

in groundwater, concentrations of 21 target COCs exceeded their respective critical PCLs (cPCLs):

VOCs
- 1,2-Dichloroethane
- Benzene
- Dichloromethane
- Toluene
- Vinyl Chloride*

SVOCs
- 1,2-Diphenylhydrazine*
- 2,4-Dimethylphenol
- 2-Methylnaphthalene
- Acenaphthene
- Benz(a)anthracene
- Benzo(a)pyrene
- Bis(2-ethylhexyl)phthalate
- Chrysene
- Dibenzofuran
- Fluoranthene
- Fluorene
- Naphthalene
- Pentachlorophenol
- Phenanthrene
- Phenol
- Pyrene

* - first time PCL exceedance, will be resampled and verified.

The list of COCs that exceed their respective critical PCLs is provided on Table 12A. None of the COCs exceeding the critical PCLs that were not screened out (Section 10) were detected in D-TZ above the critical PCLs. The spatial distribution of the PCLE zones in A-TZ, B-TZ, C-TZ, and D-TZ based on the January and June/July 2010 sampling data are presented on Figures 5B-1 through 5B-8, respectively, and cross sections showing the PCLE zones are provided on Figures 4C-1 through 4C-4, respectively. The PCLE zone for each transmissive zone is discussed below.

Transmissive Zone A-TZ

Site-related COCs that exceed cPCLs in the A-TZ are defined by monitoring wells MW-13 and MW-38A to the west; MW-13, MW-15A, MW-35A, MW-26A, MW-33A, MW-36A, MW-44A, and MW-25A to the north (off-site); MW-59A, MW-60A, MW-61A, and MW-69A to the east (off-site); and MW-50A, MW-51A and MW-69A to the south (Figures 5B-1 and 5B-2). The primary COCs in the A-TZ that define the PCLE zone include 2,4-dimethylphenol, benzene, PAHs (naphthalene, 2-methylnaphthalene), and dibenzofuran. Other COCs are present within the PCLE zone, but not as prevalent as those listed. The highest COC concentrations are generally near the Original Process Area (SWMU No. 5) and Recent Process Area (SWMU No. 4), as well as the AST Area (SWMU No. 8).

The PCLE zone extends off site to the north at MW-32A, where DNAPL is present. This well may be completed across the thin fracture zone or carbonate nodule zone within the B-CZ, where MW-33B and MW-35B are completed. Seven additional A-TZ monitoring wells located in the residential area north of the Site show COC concentrations below RALs and cPCLs. The PCLE zone extends downgradient to the Lockwood Street overpass on the east end of the Site. COCs do not appear to extend beyond the City of Houston ROW for Lockwood Street (Figure 5B-1).

The PCLE zone in the A-TZ has been relatively stable over time based on groundwater data collected from 2008 through 2010. As presented on Figure 5B-9, the overall geometry of the PCLE zone has been consistent with no indication of migration or overall increasing COC concentrations in groundwater.

There are no RAL exceedances near the SWMU No. 1 in the A-TZ. Downgradient monitoring wells MW-22A, MW-64A, and MW-24AR had COC concentrations less than RALs, indicating that previous contamination observed near SWMU No. 1 has attenuated to levels less than TRRP Remedy Standard A Tier 1 PCLs.

Transmissive Zone B-TZ/Cohesive Zone B-CZ

There are two PCLE zones within the B-TZ and B-CZ (Figure 5B-3 and 5B-4): 1) one near the west end of the Site within the B-TZ centered around monitoring wells MW-12B, MW-40B, and MW-41B, and defined by MW-14, MW-38B, MW-39B, and P-11; and 2) a PCLE zone within the B-CZ around wells MW-33B, MW-35B, MW-49B, and MW-63B. With the addition of B-CZ monitoring wells MW-36B, MW-59B, and MW-67B in June 2010; the B-CZ PCLE Zone is delineated to the east, south, and north, respectively (Figure 5B-4). As previously discussed, the B-CZ where monitoring wells MW-33B, MW-36B, MW-49B, MW-59B, MW-63B, and MW-67B are installed in the clay unit with a hydraulic conductivity at or less than 1 x 10^{-7} cm/sec (falls under the criteria of saturated soils per TRRP-8 Guidance).

The B-TZ PCLE zone appears to be a result of the DNAPL in and around MW-12B and MW-41B. However, dissolved-phase COCs from the DNAPL attenuates within 50 to 100 feet of wells containing DNAPL. As a result of the highly viscous character of the DNAPL in these two wells (discussed in the APAR Addendum, PBW, 2009), the potential for migration of the DNAPL is not likely.

The PCLE zone within the B-CZ is conservatively based on $^{GW}GW_{Ing}$ PCLs for Class 2 groundwater. As shown on Figure 5B-2, the highest concentrations in the B-CZ are centered around off-site monitoring well MW-33B where DNAPL was encountered. COCs detected in these wells are similar to the wells completed

in the transmissive zones, with 2-methylnaphthalene, benzene, dibenzofuran, and naphthalene being the main COCs exceeding cPCLs. Concentrations observed in these wells do not exceed the $^{Air}GW_{Inh\text{-}V}$ pathway; therefore, with the clay unit not considered a usable source of groundwater, there is no complete pathway to this PCLE zone. Concentrations of bis(2-ethylhexyl)phthalate were detected in the sample collected at MW-36B above critical PCLs; however, bis(2-ethylhexyl)phthalate is a common laboratory contaminant and not other COCs were detected above MQLs in the sample indicating the groundwater is not impacted by COCs related to the Site.

The PCLE zone in the B-TZ has been relatively stable over time based on groundwater data collected from 2008 through 2010. As presented on Figure 5B-10, the overall geometry of the PCLE zone in the B-TZ has been consistent with no indication of migration. The groundwater plume in the B-CZ was delineated with the additional wells that were installed in June 2010; however, additional data will need to be collected to establish any trends in the COC data.

Transmissive Zone C-TZ

Using the 2010 groundwater monitoring data, the C-TZ PCLE zone extends off-site northeast of MW-46C to the southwest on site at MW-17C; and is defined by wells MW-54C upgradient, MW-28C, MW-53C and MW-68C (installed in June 2010) to the north, MW-19C (in June/July 2010), MW-47C and MW-48C to the south, and MW-12C, MW-15C, and MW-21C downgradient to the southwest (Figures 5B-5 and 5B-6). The highest COC concentrations detected in the C-TZ are at MW-18C and MW-23C. DNAPL was measured in MW-23C, as well as off-site wells MW-25C, MW-44C, MW-45C, and MW-46C present during the February 2010 sampling events.

The PCLE zone in the C-TZ has been relatively stable over time based on groundwater data collected from 2008 through 2010. As presented on Figure 5B-11, the overall geometry of the PCLE zone has been consistent with no indication of migration or overall increasing COC concentrations in groundwater.

Transmissive Zone D-TZ

Groundwater data collected from the three D-TZ wells in January 2010, and the four D-TZ wells in June/July 2010 indicated that none of the site-specific COCs were detected at concentrations that exceeded cPCLs. During the January 2009 sampling event discussed in the APAR Addendum (PBW, 2009), bis(2-ethylhexyl)phthalate was detected in MW-66D above PCLs. However, the two sampling events conducted in 2010 showed that the initial detection was not verified.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

12.0 Tables

TABLE 12A
GROUNDWATER CRITICAL PCLS - FULL PLUME POE
UPRR Houston Wood Preserving Works, Houston, TX

Land use for purpose of critical PCL development: Residential
Date of the Tier 1 PCL tables used in the determination of PCLs: March 2010

Chemical of Concern	CAS No.	$^{GW}GW_{Ing}$ PCL (mg/L)	Tier	$^{Air}GW_{Inh-V}$ PCL (mg/L)	Tier	Ecological PCL for Groundwater (mg/L)	Tier	Laboratory MQL (mg/L)	Background (mg/L)	Maximum Concentration (mg/L)	Remedy or NFA
1,2-Dichloroethane	107-06-2	5.0E-03	1	4.3E+00	**1**	NA	NA	0.0005	NA	0.023	Remedy**
1,2-Diphenylhydrazine	122-66-7	1.1E-03	1	4.9E+02	**1**	NA	NA	0.0001	NA	0.012	Remedy**
2,4-Dimethylphenol	105-67-9	4.9E-01	1	2.1E+04	1	NA	NA	0.00008	NA	15	Remedy
2-Methylnaphthalene	91-57-6	9.8E-02	1	---	---	NA	NA	0.00007	NA	3.5	Remedy
Acenaphthene	83-32-9	1.5E+00	1	---	---	NA	NA	0.00009	NA	3.4	Remedy
Benz(a)anthracene	56-55-3	1.3E-03	1	2.6E+02	1	NA	NA	0.00007	NA	0.3	Remedy
Benzene	71-43-2	5.0E-03	1	2.3E+01	1	NA	NA	0.0005	NA	2	Remedy
Benzo(a)pyrene	50-32-8	2.0E-04	1	5.0E+01	1	NA	NA	0.00008	NA	0.093	Remedy
Bis(2-ethylhexyl)phthalate	117-81-7	6.0E-03	1	---	---	NA	NA	0.0002	NA	0.01*	NFA
Chrysene	218-01-9	1.3E-01	1	7.5E+04	1	NA	NA	0.00007	NA	0.27	Remedy
Dibenzofuran	132-64-9	9.8E-02	1	---	---	NA	NA	0.00008	NA	3.6	Remedy
Dichloromethane	75-09-2	5.0E-03	1	1.6E+02	1	NA	NA	0.0005	NA	0.014	Remedy
Fluoranthene	206-44-0	9.8E-01	1	---	---	NA	NA	0.00007	NA	3	Remedy
Fluorene	86-73-7	9.8E-01	1	---	---	NA	NA	0.00007	NA	2.6	Remedy
Naphthalene	91-20-3	4.9E-01	1	4.1E+01	1	NA	NA	0.0001	NA	20	Remedy
Pentachlorophenol	87-86-5	1.0E-03	1	1.7E+03	1	NA	NA	0.00008	NA	0.041	Remedy
Phenanthrene	85-01-8	7.3E-01	1	---	---	NA	NA	0.00007	NA	8.2	Remedy
Phenol	108-95-2	7.3E+00	1	3.6E+04	1	NA	NA	0.00007	NA	19	Remedy
Pyrene	129-00-0	7.3E-01	1	---	---	NA	NA	0.00007	NA	1.9	Remedy
Toluene	108-88-3	1.0E+00	1	8.2E+03	1	NA	NA	0.0005	NA	1.5	Remedy
Vinyl chloride	75-01-4	2.0E-03	1	4.9E-01	1	NA	NA	0.0005	NA	0.059	Remedy**

Notes:
1. Critical PCL =
2. Maximum groundwater concentration exceeding critical PCL =
3. NFA = No further action. NA = Not applicable.
4. * - Suspected laboratory contaminant
5. ** - With only one exceedance, COC will be re-evaluated with subsequent sampling

SECTION 13.0 NOTIFICATIONS

With the additional groundwater and soil data collected in 2010 being submitted to the TCEQ in this Updated APAR Addendum, property owners identified where the groundwater PCLE Zone extends off-site and the City of Houston will be notified within 60 days of submitting this updated APAR Addendum of the availability of information on the Affected Property. The list of off-site property owners that will be notified is provided on Table 13A, and shown on Figure 13A.

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

13.0 Tables

TABLE 13A
SUMMARY OF OFF-SITE PROPERTY NOTIFICATION LETTERS
UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON, TEXAS

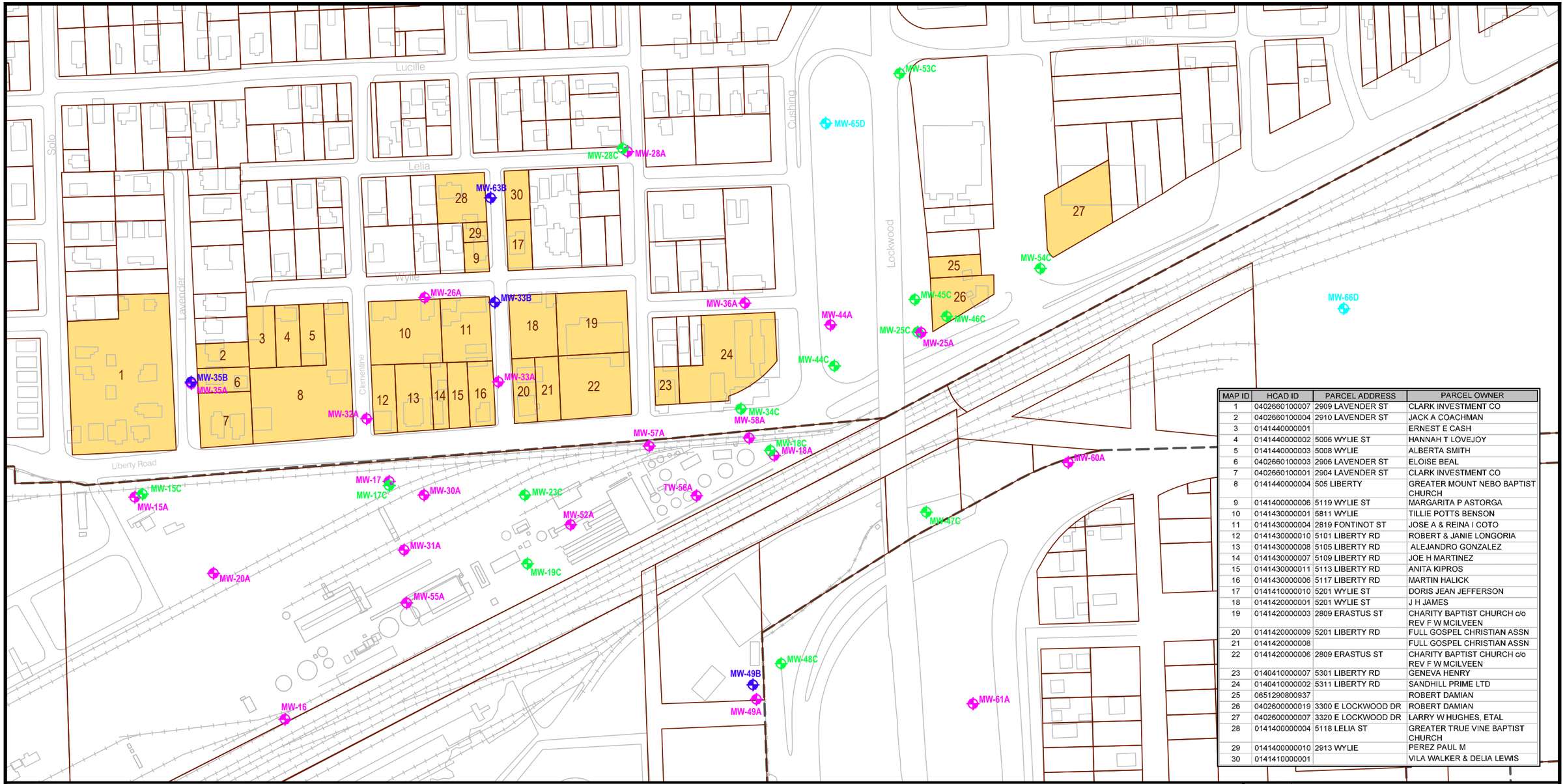
WELL[1]	MAP ID[2]	HCAD ID[3]	PARCEL ADDRESS	PARCEL OWNER	OWNER MAILING ADDRESS
MW-35B	1	0402660100007	2909 LAVENDER ST	CLARK INVESTMENT CO	4901 LIBERTY RD HOUSTON, TX 77026-5263
MW-35B	2	0402660100004	2910 LAVENDER ST	JACK A COACHMAN	3815 KNOTTY OAKS TRL HOUSTON, TX 77045-4416
MW-35B	3	0141440000001		ERNEST E CASH	2825 CUTTING BLVD RICHMOND, CA 94804-2923
MW-35B	4	0141440000002	5006 WYLIE ST	HANNAH T LOVEJOY	721 HERKIMER ST HOUSTON, TX 77007-1430
MW-35B	5	0141440000003	5008 WYLIE	ALBERTA SMITH	5010 WYLIE ST HOUSTON, TX 77026-5226
MW-35B	6	0402660100003	2906 LAVENDER ST	ELOISE BEAL	2906 LAVENDER ST HOUSTON, TX 77026-5212
MW-35B	7	0402660100001	2904 LAVENDER ST	CLARK INVESTMENT CO	4901 LIBERTY RD HOUSTON, TX 77026-5263
MW-32A	8	0141440000004	505 LIBERTY	GREATER MOUNT NEBO BAPTIST CHURCH	4511 EDDIE ST HOUSTON, TX 77026-7610
MW-33B	9	0141400000006	5119 WYLIE ST	MARGARITA P ASTORGA	5119 WYLIE ST HOUSTON, TX 77026-5227
MW-35B	10	0141430000001	5811 WYLIE	TILLIE POTTS BENSON	2820 CLEMENTINE ST HOUSTON, TX 77026-5202
MW-33B	11	0141430000004	2819 FONTINOT ST	JOSE A & REINA I COTO	2819 FONTINOT ST HOUSTON, TX 77026-5205
MW-32A	12	0141430000010	5101 LIBERTY RD	ROBERT & JANIE LONGORIA	512 E 11TH ST HOUSTON, TX 77008-7004
MW-32A	13	0141430000008	5105 LIBERTY RD	ALEJANDRO GONZALEZ	5105 LIBERTY RD HOUSTON, TX 77026-5218
MW-32A	14	0141430000007	5109 LIBERTY RD	JOE H MARTINEZ	5109 LIBERTY RD HOUSTON, TX 77026-5218
MW-33B	15	0141430000011	5113 LIBERTY RD	ANITA KIPROS	2717 RALSTON ST HOUSTON, TX 77026-6568
MW-33B	16	0141430000006	5117 LIBERTY RD	MARTIN HALICK	2701 LOUISIANA ST HOUSTON, TX 77006-3521
MW-33B	17	0141410000010	5201 WYLIE ST	DORIS JEAN JEFFERSON	PO BOX 23611 HOUSTON, TX 77228-3611
MW-33B	18	0141420000001	5201 WYLIE ST	J H JAMES	9223 SEEKER ST HOUSTON, TX 77028-1109
MW-33B	19	0141420000003	2809 ERASTUS ST	CHARITY BAPTIST CHURCH c/o REV F W MCILVEEN	2809 ERASTUS ST HOUSTON, TX 77026-5303
MW-33B	20	0141420000009	5201 LIBERTY RD	FULL GOSPEL CHRISTIAN ASSN	5201 LIBERTY RD HOUSTON, TX 77026-5313
MW-33B	21	0141420000008		FULL GOSPEL CHRISTIAN ASSN	5201 LIBERTY RD HOUSTON, TX 77026-5313
MW-33B	22	0141420000006	2809 ERASTUS ST	CHARITY BAPTIST CHURCH c/o REV F W MCILVEEN	2809 ERASTUS ST HOUSTON, TX 77026-5303
MW-34C	23	0140410000007	5301 LIBERTY RD	GENEVA HENRY	5301 LIBERTY RD HOUSTON, TX 77026-5314
MW-34C	24	0140410000002	5311 LIBERTY RD	SANDHILL PRIME LTD	PO BOX 291589 KERRVILLE TX 78029-1589
MW-45C	25	0651290800937		ROBERT DAMIAN	3300 E LOCKWOOD DR HOUSTON, TX 77026-1811
MW-45C	26	0402600000019	3300 E LOCKWOOD DR	ROBERT DAMIAN	7938 CAPITOL ST HOUSTON, TX 77012-1649
MW-54C	27	0402600000007	3320 E LOCKWOOD DR	LARRY W HUGHES, ETAL	12708 FM 830 RD WILLIS, TX 77318-5551
MW-63B	28	0141400000004	5118 LELIA ST	GREATER TRUE VINE BAPTIST CHURCH	3010 FONTINOT ST
MW-63B	29	0141400000010	2913 WYLIE	PEREZ PAUL M	2913 FONTINOT ST
MW-63B	30	0141410000001		VILA WALKER+DELIA LEWIS	3315 REEVES ST APT 2

Notes:
1 - Monitoring well with COC protective concentration level (PCL) exceedances closest to off-site property
2 - MAP ID: Corresponds with identification numbers posted on Figure 13A
3 - HCAD ID: Harris County Appraisal District identification number
Information gathered from the HCAD website: www.hcad.org, January 2010

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

13.0 Figures



MAP ID	HCAD ID	PARCEL ADDRESS	PARCEL OWNER
1	0402660100007	2909 LAVENDER ST	CLARK INVESTMENT CO
2	0402660100004	2910 LAVENDER ST	JACK A COACHMAN
3	0141440000001		ERNEST E CASH
4	0141440000002	5006 WYLIE ST	HANNAH T LOVEJOY
5	0141440000003	5008 WYLIE	ALBERTA SMITH
6	0402660100003	2906 LAVENDER ST	ELOISE BEAL
7	0402660100001	2904 LAVENDER ST	CLARK INVESTMENT CO
8	0141440000004	505 LIBERTY	GREATER MOUNT NEBO BAPTIST CHURCH
9	0141400000006	5119 WYLIE ST	MARGARITA P ASTORGA
10	0141430000001	5811 WYLIE	TILLIE POTTS BENSON
11	0141430000004	2819 FONTINOT ST	JOSE A & REINA I COTO
12	0141430000010	5101 LIBERTY RD	ROBERT & JANIE LONGORIA
13	0141430000008	5105 LIBERTY RD	ALEJANDRO GONZALEZ
14	0141430000007	5109 LIBERTY RD	JOE H MARTINEZ
15	0141430000011	5113 LIBERTY RD	ANITA KIPROS
16	0141430000006	5117 LIBERTY RD	MARTIN HALICK
17	0141410000010	5201 WYLIE ST	DORIS JEAN JEFFERSON
18	0141420000001	5201 WYLIE ST	J H JAMES
19	0141420000003	2809 ERASTUS ST	CHARITY BAPTIST CHURCH c/o REV F W MCILVEEN
20	0141420000009	5201 LIBERTY RD	FULL GOSPEL CHRISTIAN ASSN
21	0141420000008		FULL GOSPEL CHRISTIAN ASSN
22	0141420000006	2809 ERASTUS ST	CHARITY BAPTIST CHURCH c/o REV F W MCILVEEN
23	0140410000007	5301 LIBERTY RD	GENEVA HENRY
24	0140410000002	5311 LIBERTY RD	SANDHILL PRIME LTD
25	0651290800937		ROBERT DAMIAN
26	0402600000019	3300 E LOCKWOOD DR	ROBERT DAMIAN
27	0402600000007	3320 E LOCKWOOD DR	LARRY W HUGHES, ETAL
28	0141400000004	5118 LELIA ST	GREATER TRUE VINE BAPTIST CHURCH
29	0141400000010	2913 WYLIE	PEREZ PAUL M
30	0141410000001		VILA WALKER & DELIA LEWIS

EXPLANATION

- UPRR Property Boundary
- Historic Structure and Feature
- Road, Parking Lot, Sidewalk
- Fence
- Railroad
- A-TZ Monitoring Well Location
- B-TZ Monitoring Well Location
- C-TZ Monitoring Well Location
- D-TZ Monitoring Well Location
- Off-Site Notification Properties

N

Scale in Feet

0 100 200

SOURCE:
Base map from ERM-Southwest, Inc APAR Addendum, Fig 3-1, dated June 2004.

UNION PACIFIC RAILROAD CO.

HOUSTON WOOD PRESERVING WORKS

Figure 13A

OFF-SITE NOTIFICATION PROPERTIES

PROJECT: 1358	BY: ZGK	REVISIONS
DATE: OCT., 2010	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Updated Affected Property
Assessment Report Addendum
Union Pacific Railroad Company
Houston Wood Preserving Works
TCEQ SWR No. 31547
Houston, Texas
Volume 2 of 2
October 2010

PBW

Updated Affected Property Assessment Report Addendum Union Pacific Railroad Company Houston Wood Preserving Works TCEQ SWR No. 31547 Houston, Texas

Volume 2 of 2

October 2010

Prepared for:
Union Pacific Railroad Company

24125 Aldine Westfield Road
Spring, Texas 77373

Pastor, Behling & Wheeler, LLC
consulting engineers and scientists

APPENDICES

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

Appendices

APPENDIX 2
BORING LOGS AND MONITORING WELL COMPLETION DETAILS

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

APPENDIX 2
TABLE 1
SUMMARY OF GROUNDWATER MONITORING WELLS
UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON, TX

WELL NO.	DATE INSTALLED	NORTHING	EASTING	TOP OF CASING ELEVATION (FT HVD)	TOTAL DEPTH (FT BGS)	Top Screen Interval (FT BGS)	Bottom Screen Interval (FT BGS)	Zone
SWMU No. 1 Monitoring Wells								
MW-01A[1]	1/0/1900	728,006	3,165,936	47.92	19	8.5	18.5	A-TZ
MW-02[1]	4/17/1984	728,007	3,165,857	47.97	18.5	8.5	18.5	A-TZ
MW-07[1]	3/27/1991	727,779	3,165,867	48.86	23	14.1	19.1	A-TZ
MW-08[1]	3/27/1991	727,903	3,165,972	49.33	24	14.2	19.2	A-TZ
MW-10A[1]	9/13/1994	727,921	3,165,866	49.86	23	11	20.5	A-TZ
MW-10B[1]	9/14/1994	727,916	3,165,866	49.94	46	27.1	41.6	B-TZ
MW-11A[1]	9/15/1994	727,849	3,165,869	50.05	22	10	19.3	A-TZ
MW-11B[1]	9/19/1994	727,845	3,165,869	50.18	44	27.5	41.2	B-TZ
P-10[1]	3/26/1991	727,786	3,165,866	47.69	50	36.2	38.2	B-TZ
P-12[1]	3/27/1991	727,912	3,166,127	48.78	50	36.3	38.3	B-TZ
Site-Wide Monitoring Wells								
MW-03	4/17/1984	727,985	3,165,857	48.34	18.5	8.5	18.5	A-TZ
MW-04	4/18/1984	727,813	3,165,938	49.85	21	11	21	A-TZ
MW-05	1/0/1900	727,715	3,166,026	49.24	26	10	25	A-TZ
MW-09	3/26/1991	727,908	3,166,130	49.26	24	14.8	19.8	A-TZ
MW-12A	2/27/1997	728,333	3,166,004	49.96	30	17.5	27.5	A-TZ
MW-12B	2/27/1997	728,328	3,166,004	50.02	45	32.5	42.5	B-TZ
MW-12C	4/21/1997	728,345	3,166,005	50.14	75.3	69	73.5	C-TZ
MW-13	2/25/1997	728,777	3,165,977	50.65	25	9	22.5	A-TZ
MW-14	2/27/1997	728,718	3,166,550	50.66	45	28	42.5	B-TZ
MW-15A	2/25/1997	728,755	3,166,931	50.41	30	12	26.1	A-TZ
MW-15C	4/25/1997	728,761	3,166,947	50.01	75	64	73.5	C-TZ
MW-16	2/26/1997	728,305	3,167,235	51.51	30	12.5	27	A-TZ
MW-17	3/25/1997	728,787	3,167,447	50.92	35	18	32.5	A-TZ
MW-17C	12/10/2003	728,779	3,167,446	50.17	70	59.5	69.5	C-TZ
MW-18A	2/26/1997	728,839	3,168,227	51.57	35	18	32.5	A-TZ
MW-18C	4/25/1997	728,849	3,168,219	51.47	80.2	62	76.5	C-TZ
MW-19C	10/15/1998	728,620	3,167,727	53.05	73	63	73	C-TZ
MW-20A	9/28/1998	728,600	3,167,091	50.43	30	15	25	A-TZ
MW-21C	10/26/1998	727,730	3,165,884	49.05	72.5	62.5	72.5	C-TZ
MW-22A	10/1/1998	727,876	3,165,677	46.07	25	10	20	A-TZ
MW-22B	10/27/1998	727,871	3,165,678	45.86	38	27.5	37.5	B-TZ
MW-23C	10/14/1998	728,759	3,167,721	51.91	72.5	62.5	72.5	C-TZ
MW-24AR	1/27/2009	727,531	3,165,207	45.65	21	11	21	A-TZ
MW-24B	3/7/2000	727,534	3,165,208	46.06	50	38.5	48.5	B-TZ
MW-24C	3/8/2000	727,542	3,165,206	46.05	74	63	73	C-TZ
MW-25A	3/7/2000	729,089	3,168,524	44.65	29	18.5	28.5	A-TZ
MW-25C	3/7/2000	729,089	3,168,518	44.49	74	58	68	C-TZ
MW-26A	3/7/2000	729,159	3,167,519	44.62	26	14.5	24.5	A-TZ
MW-27A	3/26/2001	730,002	3,169,610	44.90	30	17	27	A-TZ
MW-27C	4/16/2001	730,009	3,169,610	45.04	73.5	60.5	70.5	C-TZ
MW-28A	3/26/2001	729,462	3,167,926	43.86	28	16	26	A-TZ
MW-28C	4/12/2001	729,461	3,167,920	43.96	88	75	85	C-TZ
MW-29A	4/19/2001	727,310	3,164,239	46.59	23	9	19	A-TZ
MW-29B	4/12/2001	727,303	3,164,239	46.26	57	44	54	B-TZ
MW-29C	4/27/2001	727,293	3,164,240	46.46	75	62.5	72.5	C-TZ
MW-30A	12/8/2003	728,759	3,167,517	50.45	31	19.5	29.5	A-TZ
MW-31A	12/8/2003	728,648	3,167,477	52.08	33	21.5	31.5	A-TZ
MW-32A	12/29/2003	728,914	3,167,401	43.77	32	20.5	30.5	A-TZ
MW-33A	12/30/2003	728,989	3,167,668	44.25	25	13	23	A-TZ
MW-33B	2/23/2007	729,150	3,167,661	44.35	42	32	42	B-CZ
MW-34C	1/13/2004	728,934	3,168,160	45.31	72	60	70	C-TZ
MW-35A	2/21/2007	728,985	3,167,045	44.75	28	13	28	A-TZ
MW-35B	2/26/2007	728,988	3,167,045	44.83	42	32	42	B-CZ
MW-36A	2/22/2007	729,148	3,168,167	44.53	28	18	28	A-TZ
MW-36B	6/24/2010	729,161	3,168,172	44.07	43	38	43	B-CZ
MW-36D	6/23/2010	729,162	3,168,180	44.33	110	100	110	D-TZ
MW-38A	2/21/2007	728,402	3,165,934	46.39	22	12	22	A-TZ
MW-38B	12/31/2003	728,319	3,165,945	45.51	37	25.5	35.5	B-TZ
MW-39B	12/16/2003	728,424	3,166,019	49.58	40	29.5	39.5	B-TZ
MW-40B	12/15/2004	728,341	3,166,122	49.59	40	29.5	39.5	B-TZ
MW-41B	1/7/2003	728,176	3,166,003	49.37	40	29.5	39.5	B-TZ
MW-42B	8/24/2006	728,257	3,166,324	50.52	42	30	40	B-TZ
MW-44A	2/22/2007	729,021	3,168,349	45.11	28	18	28	A-TZ
MW-44C	1/16/2004	729,021	3,168,349	45.03	70	57.5	67.5	C-TZ
MW-45C	1/20/2004	729,155	3,168,512	44.73	70	58	68	C-TZ
MW-46C	1/9/2004	729,121	3,168,576	44.94	72	60	70	C-TZ
MW-47C	3/16/2007	728,725	3,168,535	45.61	71	61	71	C-TZ
MW-48C	2/2/2004	728,417	3,168,241	44.68	72	60	70	C-TZ
MW-49A	2/28/2007	728,345	3,168,191	46.18	30	20	30	A-TZ
MW-49B	1/24/2009	728,375	3,168,184	46.43	35	30	35	B-CZ
MW-50A	3/1/2007	727,501	3,167,958	46.96	25	15	25	A-TZ
MW-51A	2/28/2007	726,925	3,166,885	47.80	25	15	25	A-TZ
MW-52A	2/27/2007	728,699	3,167,814	51.91	30	20	30	A-TZ

APPENDIX 2
TABLE 1
SUMMARY OF GROUNDWATER MONITORING WELLS
UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON, TX

WELL NO.	DATE INSTALLED	NORTHING	EASTING	TOP OF CASING ELEVATION (FT HVD)	TOTAL DEPTH (FT BGS)	Top Screen Interval (FT BGS)	Bottom Screen Interval (FT BGS)	Zone
MW-53C	8/15/2006	729,613	3,168,481	45.49	72	60	70	C-TZ
MW-54C	8/15/2006	729,218	3,168,766	44.99	72	60	70	C-TZ
MW-55A	1/12/2009	728,540	3,167,482	52.01	25	10	25	A-TZ
MW-57A	1/22/2009	728,858	3,167,974	47.72	27	12	27	A-TZ
MW-58A	1/23/2009	728,875	3,168,176	47.76	29	14	29	A-TZ
MW-59A	1/28/2009	728,155	3,168,358	44.18	21	11	21	A-TZ
MW-59B	6/26/2010	728,145	3,168,358	44.36	33	28	33	B-CZ
MW-59D	1/27/2009	728,114	3,168,365	44.22	118	108	118	D-TZ
MW-60A	1/26/2009	728,825	3,168,823	46.79	28.5	18.5	28.5	A-TZ
MW-61A	1/26/2009	728,336	3,168,630	44.67	22	12	22	A-TZ
MW-62B	1/21/2009	728,190	3,165,880	48.16	35	25	35	B-TZ
MW-63B	1/28/2009	729,361	3,167,652	44.48	36	31	36	B-CZ
MW-64A	1/26/2009	727,496	3,165,573	44.55	19.5	14.5	19.5	A-TZ
MW-65D	1/17/2009	729,512	3,168,331	44.55	110	100	110	D-TZ
MW-66D	1/20/2009	729,137	3,169,381	46.51	103	93	103	D-TZ
MW-67B	6/26/2010	729,782	3,167,588	43.93	40	35	40	B-CZ
MW-68C	6/25/2010	729,164	3,167,346	44.8	70	60	70	C-TZ
MW-69A	6/23/2010	728,136	3,168,234	45.71	18.5	8.5	18.5	A-TZ
P-11	3/25/1991	728,049	3,166,025	48.98	50	36.2	38.2	B-TZ
TW-41B	1/22/2009	728,222	3,166,002	49.67	40	30	40	B-TZ
TW-56A	1/23/2009	728,758	3,168,070	51.89	31	21	31	A-TZ

Notes:
1 - Point of Compliance Wells for SWMU No. 1
BGS=Below Ground Surface
HVD = Elevations relative to Houston Vertical Datum, Houston Monument System
Northing/Easting = Coordinates based on NAD 1927 Texas State Plane, South Central Zone, US Survey Feet

ERM Environmental Resources Management

MW-42B DRILLING LOG

Proj. No. 0014419 Boring/Well ID MW-42B Date Drilled 8/24/2006

Project Houston Wood Preserving Works Owner Union Pacific Railroad Company

Location Houston, TX Boring T.D. 42' Boring Diam. 14"

N. Coord. 728258.42' E. Coord. 3166322.89' Surface Elevation 0' Ft. MSL Datum

Screen: Type stainless steel Diam. 2" Length 10' Slot Size 0.01"

Casing: Type stainless steel Diam. 2" Length 30' Sump Length 2'

Top of Casing Elevation 0' Stickup 3'

Depth to Water: 1. Ft. 0 ( ) 2. Ft. 0 ( )

Drilling Company Fugro Geosciences, Inc. Driller Doug Isenhart

Drilling Method Geoprobe/Mud Rotary Log By Emmanuel Mkandawire

SEAL OF TEXAS — CHRISTOPHER M. YOUNG — GEOLOGY — 3342 — LICENSED PROFESSIONAL GEOSCIENTIST

NOTES

pp = pocket penetrometer.
tsf = tons per square foot.
Isolation casing set at 23.5' and monitoring well installed using mud rotary.
0'-41' log from geoprobe boring.

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
0	0					0-42	0-2	FILL: concrete and fill material approximately 2 ft thick, moist, gravel pieces 2mm-10mm diameter, angular
							2-3	SILTY CLAY: silty clay, very dark gray (5YR 3/1), moist, pp=1, very plastic, traces of brown concretions, less than 1mm
							3-5	NO RECOVERY
-5	5						5-7	SILTY CLAY: silty clay, gray (5 YR 5/1), moist, pp=2.0tsf, very plastic, few strong brown mottling (1.5 YR 5/6)
							7-10	CLAY: clay, gray (5 YR 5/1), moist, pp=3.5tsf, very plastic, few strong brown mottling (1.5 YR 5/6), calcarious nodules white (<2mm diameter), increasing content with depth
-10	10						10-11.5	CLAY: clay, gray (5 YR 5/1), moist, white calcarious nodules increasing with depth <2mm diameter, black specks and stains
							11.5-13.6	CLAYEY SILTY SAND: clayey silty sand, poorly sorted, very fine to medium-grained, gray (5 YR 6/1), moist, pp=2.0tsf, slight plastic
							13.6-15	NO RECOVERY
-15	15							

ERM Environmental Resources Management

MW-42B DRILLING LOG

Proj. No. 0014419 Boring/Well ID MW-42B Date Drilled 8/24/2006

Project Houston Wood Preserving Works Owner Union Pacific Railroad Company

Location Houston, TX Boring T.D. 42' Boring Diam. 14"

N. Coord. 728258.42' E. Coord. 3166322.89' Surface Elevation 0' Ft. MSL Datum

Screen: Type stainless steel Diam. 2" Length 10' Slot Size 0.01"

Casing: Type stainless steel Diam. 2" Length 30' Sump Length 2'

Top of Casing Elevation 0' Stickup 3'

Depth to Water: 1. Ft. 0 ( ) 2. Ft. 0 ( )

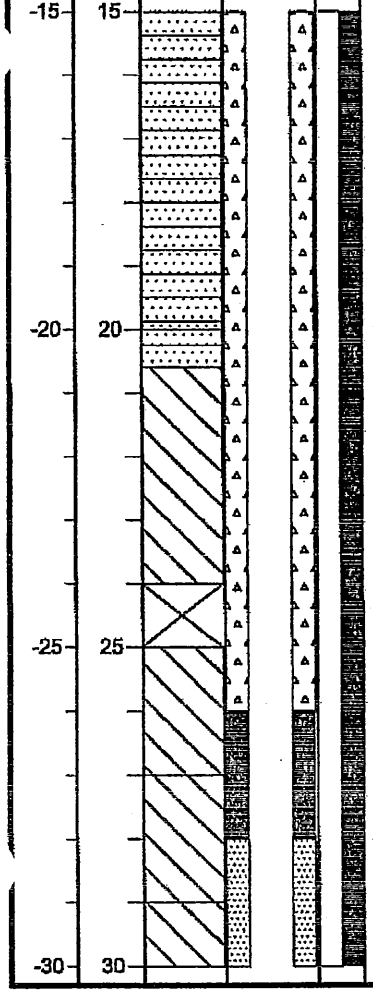
Drilling Company Fugro Geosciences, Inc. Driller Doug Isenhart

Drilling Method Geoprobe/Mud Rotary Log By Emmanuel Mkandawire

SKETCH MAP

NOTES

pp = pocket penetrometer, tsf = tons per square foot.
Isolation casing set at 23.5' and monitoring well installed using mud rotary.
0'-41' log from geoprobe boring.



Elevation (Feet)	Depth (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
-15	15	15-20	SILTY SAND: silty sand, gray (5 YR 6/2), saturated, poorly sorted, medium to fine-grained, subangular
-20	20	20-20.6	SILTY SAND: silty sand, gray (5 YR 6/2), saturated, poorly sorted, medium to fine-grained, subangular
		20.6-24	CLAY: clay, gray (5 YR 6/1) with few strong brown mottled (7.5 YR 5/8), moist, pp=3.0tsf, very plastic
		24-25	NO RECOVERY: NOTE: stopped on 8/24/2006, continued on 8/25/2006
-25	25	25-27	CLAY: clay, gray (7.5 YR 5/1), strong brown (7.5 YR 5/6) mottling, moist, pp=>4.5tsf, plastic, traces of slicken sides
		27-29	CLAY: clay, gray (7.5 YR 5/1), strong brown (7.5 YR 5/6) mottling, moist, pp=>4.5tsf, plastic, traces of slicken sides
-30	30	29-30	CLAY: clay light gray (2.5 Y 7/1) mottled with strong brown (7.5 YR 5/6), moist, pp=2.5tsf, very plastic

ERM Environmental Resources Management

MW-42B DRILLING LOG

Proj. No. 0014419 Boring/Well ID MW-42B Date Drilled 8/24/2006

Project Houston Wood Preserving Works Owner Union Pacific Railroad Company

Location Houston, TX Boring T.D. 42' Boring Diam. 14"

N. Coord. 728258.42' E. Coord. 3166322.89' Surface Elevation 0' Ft. MSL Datum

Screen: Type stainless steel Diam. 2" Length 10' Slot Size 0.01"

Casing: Type stainless steel Diam. 2" Length 30' Sump Length 2'

Top of Casing Elevation 0' Stickup 3'

Depth to Water: 1. Ft. 0 (_____) 2. Ft. 0 (_____)

Drilling Company Fugro Geosciences, Inc. Driller Doug Isenhart

Drilling Method Geoprobe/Mud Rotary Log By Emmanuel Mkandawire

SKETCH MAP

NOTES

pp = pocket penetrometer.
tsf = tons per square foot.
Isolation casing set at 23.5' and monitoring well installed using mud rotary.
0'-41' log from geoprobe boring.

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	OVM (ppm)	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
-30	30						30-31	SILTY CLAY: silty clay, strong brown (7.5 YR 5/6), moist, pp=>4.5tsf, crumbly, black stain, traces of white calcareous nodules (1mm diameter)
							31-32	SILTY CLAY: silty clay, strong brown (7.5 YR 5/6), moist, pp=>4.5tsf, crumbly, black stain, white calcareous nodules (30mm diameter)
							32-33	NO RECOVERY
							33-34.3	SILTY CLAY: silty clay, strong brown (7.5 YR 5/6), moist, pp=>4.5tsf, crumbly, black stain, @33.4ft, white calcareous zone 1-inch thick
							34.3-35	NO RECOVERY
-35	35						35-35.8	SANDY SILT: sandy silt, strong brown (7.5 YR 5/6), with few light gray (7.5 YR 7/1) mottling, moist, pp=2.0tsf, crumbly, traces of white calcareous nodules, <2mm diameter, fine-grained
							35.8-37	NO RECOVERY
							37-38.6	SILTY SAND: silty sand, strong brown (7.5 YR 5/6), wet to saturated, very fine to fine sand, poorly sorted, crumbly, traces of greenish gray (1 Gley 5/10GY)
							38.6-39	NO RECOVERY
							39-41	CLAY: clay, strong brown (7.5 YR 5/6), very few light gray (7.5 YR 7/1) mottles, moist, pp=4.0tsf, white calcareous nodules, 5mm diameter
-40	40				0			
					2		41-42	NOT SAMPLED
					NM			T.D. = 42'
-45	45							

Union Pacific Railroad

Log of Boring: MW-36B

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/24/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	43
Driller's License:	4885	Northing:	729161.08
Field Supervisor:	Chris Moore	Easting:	3168172.38
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.58

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0			DO	PAV	Asphalt Pavement Gravel Base Material CLAY, CH, light gray, moist, firm to hard.
5		--		CH	CLAY, CH, dark gray, moist, firm, some banded orange staining, 8.2-13: silty/sandy.
10		0 0 0	9.0/10.0		
15		0 0			SAND, SP, yellowish brown, wet, soft, very fine grained, trace clayey lenses.
20		0 0	10.0/10.0	SP	
25		0 0			CLAY, CH, reddish brown, moist, firm to hard, some gray mottling,
30		0 0	10.0/10.0		
35		0 0		CH	CLAY, CH, light brown, moist, firm to hard, some sand to gravel size calcaroues nodules, 39.5-39.8: wet sand lens.
40		0 0	8.0/8.0		CLAY, CH, mottled reddish brown and gray, moist, hard.

PBW
Pastor, Behling & Wheeler, LLC
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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.

Initial Fluid Level (7/12/10)
▼ Depth to water: 1.32 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 34.0) Portland/Bentonite Grout
(34.0 - 36.0) Bentonite Chips
(36.0 - 43.0) 16/30 Silica Sand

Well Materials
(0 - 38.0) Casing, 2" Sch 40 FJT PVC
(38.0 - 43.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.07

Union Pacific Railroad

Log of Boring: MW-36D

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	110
Driller's License:	4885	Northing:	729161.54
Field Supervisor:	Chris Moore	Easting:	3168179.5
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.53

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0			DO	PAV	Asphalt Pavement Gravel Base Material CLAY, CH, light gray, moist, firm to hard.
5		--		CH	CLAY, CH, dark gray, moist, firm, some banded orange staining, 8.5-13: silty/sandy.
		0			
10		0	10.0/10.0		
		0			
15		0			SAND, SP, yellowish brown, wet, soft, very fine grained, trace clayey lenses.
		0			
20		0	9.5/10.0	SP	
		0			
25		0			
		0			CLAY, CH, reddish brown, moist, firm to hard, some gray mottling,
30		0	10.0/10.0		
		0			
35		0			CLAY, CH, light brown, moist, firm to hard, some sand to gravel size calcaroues nodules, 39.5-39.6 and 39.8-39.9: wet sand lens.
		0			
40		0	10.0/10.0		
		0		CH	CLAY, CH, mottled reddish brown and gray, moist, hard, some slickensided fractures, reddish brown below 47.
45		0			
		0			
50			10.0/10.0		

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.
Sonic isolation casing advanced to 75' then removed during grouting.

Initial Fluid Level (7/12/10)
▼ Depth to water: 85.39 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 96.0) Portland/Bentonite Grout
(96.0 - 98.0) Bentonite Chips
(98.0 - 110.0) 16/30 Silica Sand

Well Materials
(0 - 100.0) Casing, 2" Sch 40 FJT PVC
(100.0 - 110.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.33

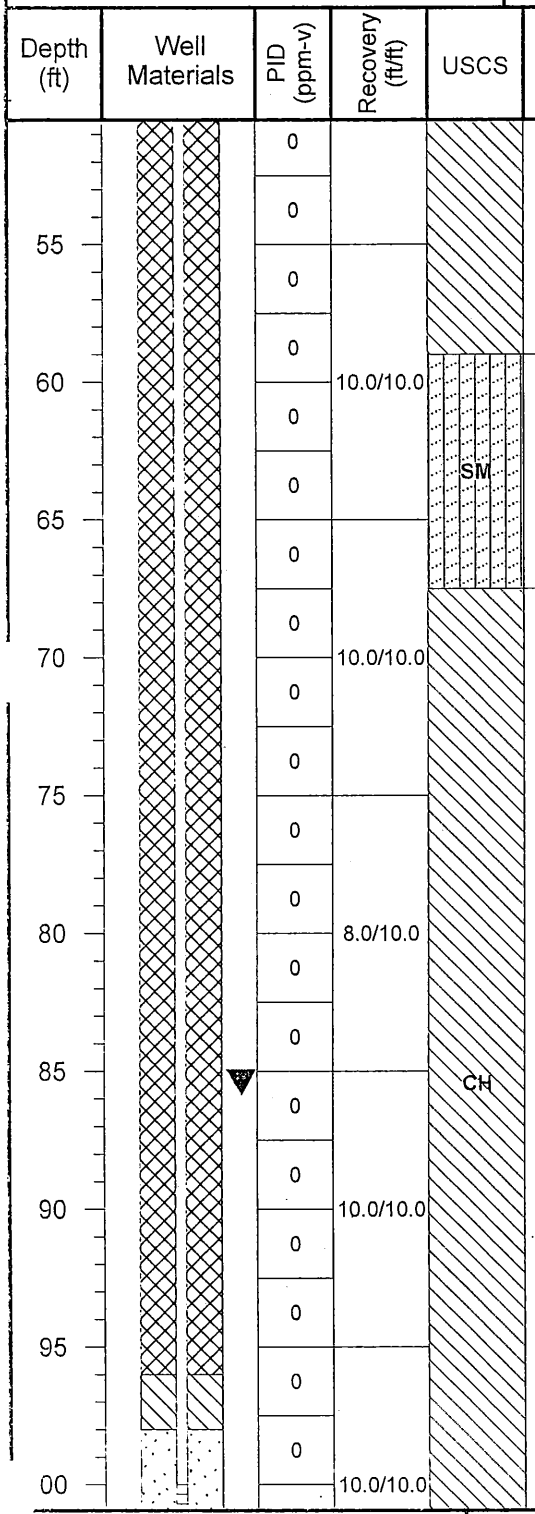
Union Pacific Railroad

Log of Boring: MW-36D

PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	110
Driller's License:	4885	Northing:	729161.54
Field Supervisor:	Chris Moore	Easting:	3168179.5
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.53



Lithologic Description

SILTY SAND, SM, reddish brown, wet, soft, very fine grained, some clayey lenses.

CLAY, CH, reddish brown, moist, firm to hard, trace gray silty lenses, 78-79: sand size calcareous nodules, 80-83: gray.

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.
Sonic isolation casing advanced to 75' then removed during grouting.

Initial Fluid Level (7/12/10)
Depth to water: 85.39 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 96.0) Portland/Bentonite Grout
(96.0 - 98.0) Bentonite Chips
(98.0 - 110.0) 16/30 Silica Sand

Well Materials
(0 - 100.0) Casing, 2" Sch 40 FJT PVC
(100.0 - 110.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.33

Union Pacific Railroad

Log of Boring: MW-36D

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	110
Driller's License:	4885	Northing:	729161.54
Field Supervisor:	Chris Moore	Easting:	3168179.5
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.53

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
		0			
		0		SP/SM	SAND/SILTY SAND, SP/SM, reddish brown, wet, soft, very fine grained.
105		0	5.0/5.0	CH	CLAY, CH, reddish brown, moist, firm to hard, trace gray silty lenses, 78-79: sand size calcareous nodules, 80-83: gray.
110		0		CL	SILTY CLAY, CL, light gray, moist, firm, with sand.

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.
Sonic isolation casing advanced to 75' then removed during grouting.

Initial Fluid Level (7/12/10)
▼ Depth to water: 85.39 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 96.0) Portland/Bentonite Grout
(96.0 - 98.0) Bentonite Chips
(98.0 - 110.0) 16/30 Silica Sand

Well Materials
(0 - 100.0) Casing, 2" Sch 40 FJT PVC
(100.0 - 110.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.33

Union Pacific Railroad

Log of Boring: MW-59B

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/26/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	33
Driller's License:	4885	Northing:	728144.74
Field Supervisor:	Chris Moore	Easting:	3168357.83
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.67

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0			DO	CL	SANDY CLAY, very dark gray, moist, firm.
5		--			SANDY CLAY, CL, gray, moist, firm, laminated.
		0			
10		0	10.0/10.0		
		0		SM	SILTY SAND, SM, gray wet, soft.
		0		SP	SAND, SP, gray, wet, soft.
15		0			
		0			
20		0	10.0/10.0		
		0		CL	SILTY CLAY, CL, mottled reddish brown and gray, moist, firm to hard, 29.4, 30.9, 31.7, 32.2, 32.7: sand and gravel size calcareous nodules/seams
25		0			
		0	8.0/8.0		
30		0			

PBW
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Notes:
Top 5 feet drilled out (DO) with a hydrovac to clear for utilities.

Initial Fluid Level (7/12/10)
▼ Depth to water: 7.43 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 24.0) Portland/Bentonite Grout
(24.0 - 27.0) Bentonite Chips
(27.0 - 33.0) 16/30 Silica Sand

Well Materials
(0 - 28.0) Casing, 2" Sch 40 FJT PVC
(28.0 - 33.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.36

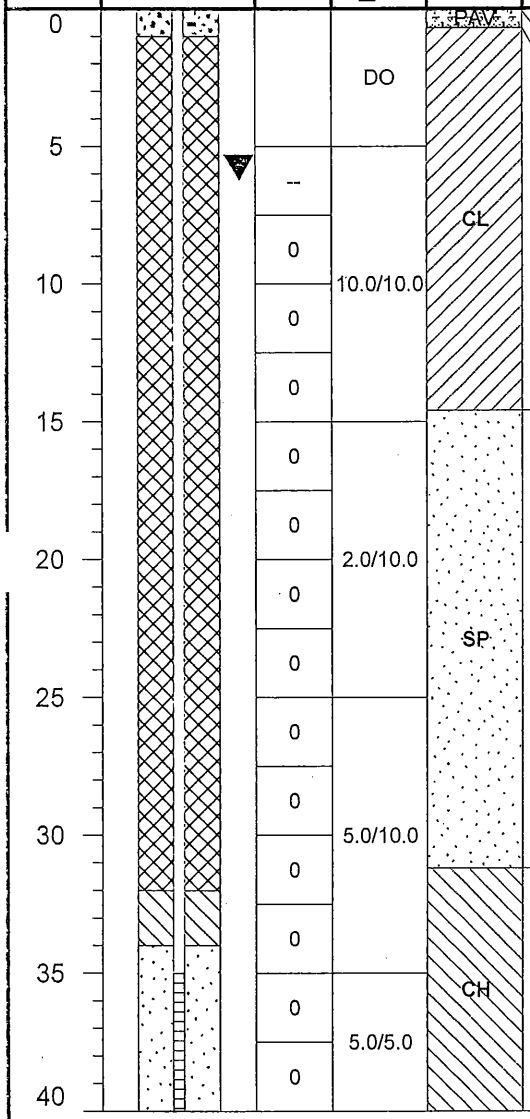
Union Pacific Railroad

Log of Boring: MW-67B

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/26/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	40
Driller's License:	4885	Northing:	729781.52
Field Supervisor:	Chris Moore	Easting:	3167587.88
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.53



Lithologic Description
Asphalt Pavement
Gravel Base Material
SILTY CLAY, CL, gray, moist, firm, laminated.
SILTY SAND, SM, gray wet, soft, very fine grained.
CLAY, CH, reddish brown, moist, firm to hard, 34.3-34.5 and 37.2-37.4: wet sand lens, 38.0-38.1 and 38.7-38.8: sand to gravel size calcaroues nodules.

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.

Initial Fluid Level (7/12/10)
▼ Depth to water: 5.76 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 32.0) Portland/Bentonite Grout
(32.0 - 34.0) Bentonite Chips
(34.0 - 40.0) 16/30 Silica Sand

Well Materials
(0 - 35.0) Casing, 2" Sch 40 FJT PVC
(35.0 - 40.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
43.93

Union Pacific Railroad

Log of Boring: MW-68C

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/25/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	73
Driller's License:	4885	Northing:	729164.26
Field Supervisor:	Chris Moore	Easting:	3167345.75
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.98

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0			DO	PAV	Asphalt Pavement
					Gravel Base Material
				CH	CLAY, CH, gray, moist, soft to firm, with gravel.
5		--			
		0			
10		0	1.0/10.0		
		0			
15		0		CL	SILTY CLAY, CL, gray, moist, firm, laminated, with sand, 19.2-20.2: clay lens.
	▼	0			
		0.1		SP	SAND, SP, gray, wet, soft, very fine grained, slight odor.
20		0.3	10.0/10.0		
		0			
25		1		CH	CLAY, CH, reddish brown, moist, firm to hard, some gray mottling, strong odor, 28.4, 31.2,and 33.4: sand to gravel size calcaroues nodules with sheen/NAPL, 35.9-36.7: sand layer, odor, 37.0-44.0: slickensided fractures.
		54.4			
30		82.1	10.0/10.0		
		46.7			
35		100.3			
		0			
40		1.5	10.0/10.0		
		2.6			
45		0.7		CL	SILTY CLAY, CL, reddish brown, moist, soft to firm, slight odor.
		3.4		CH	CLAY, CH, reddish brown, moist, firm to hard.
50			10.0/10.0		

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.
Sonic isolation casing advanced to 55' then removed during grouting.

Initial Fluid Level (7/12/10)
▼ Depth to water: 16.52 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 56.0) Portland/Bentonite Grout
(56.0 - 58.0) Bentonite Chips
(58.0 - 70.0) 16/30 Silica Sand
(70.0 - 73.0) Hole cave-in

Well Materials
(0 - 60.0) Casing, 2" Sch 40 FJT PVC
(60.0 - 70.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.8

Union Pacific Railroad

Log of Boring: MW-68C

PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/25/10	Drilling Method:	Roto Sonic
Drilling Company:	WDC Exploration	Borehole Diameter (in.):	6
Driller:	William Bludworth	Total Depth (ft):	73
Driller's License:	4885	Northing:	729164.26
Field Supervisor:	Chris Moore	Easting:	3167345.75
Sampling Method:	4"/6"x10' Barrel	Ground Elev. (ft AMSL):	44.98

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
55		0.3		CH	
		0			
		0	10.0/10.0	SM	SILTY SAND, reddish brown, moist, soft, slight odor, very fine grained.
60		0			
		0.1			
		0		SP	SAND, SP, reddish brown, wet, soft, very fine grained, slight odor.
65		0			
		0	8.0/8.0	CH	CLAY, CH, reddish brown, moist, firm to hard, 68.3-69.4: silty.
70		0		CL	SILTY CLAY, CL, brown, moist, firm, laminated.

PBW
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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.
Sonic isolation casing advanced to 55' then removed during grouting.

Initial Fluid Level (7/12/10)
▼ Depth to water: 16.52 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 56.0) Portland/Bentonite Grout
(56.0 - 58.0) Bentonite Chips
(58.0 - 70.0) 16/30 Silica Sand
(70.0 - 73.0) Hole cave-in

Well Materials
(0 - 60.0) Casing, 2" Sch 40 FJT PVC
(60.0 - 70.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
44.8

Union Pacific Railroad

Log of Boring: MW-69A

PRR Houston Wood Preserving Works Houston, TX	Completion Date:	6/26/10	Drilling Method:	Geoprobe
	Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
	Driller:	Clay Neal	Total Depth (ft):	23
PBW Project No. 1358	Driller's License:		Northing:	728135.7
	Field Supervisor:	Tim Jennings	Easting:	3168234.02
	Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	45.7

Depth (ft)	Well Materials	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0		0	3.1/4.0	PAV	Asphalt Pavement
		0			Gravel Base Material
					SANDY CLAY, CL, dark brown, moist, firm.
5		0	4.0/4.0		
		0		CL	SILTY CLAY, CL, mottled gray and orange, moist, soft to firm, trace calcaroues nodules, becomes sandy with depth.
		0	4.0/4.0		
10		0			SANDY CLAY, CL, mottled light gray and orange, moist, soft.
		1.2	4.0/4.0		
		1.5		SP	SAND, light gray, wet, soft, fine grained, some sandy clay interbeds.
15		1.3	3.7/4.0		
		0.6		CL	CLAY, CL, mottled gray and orange, moist, hard.
20		0	3.0/3.0	SP	SAND, light brown, wet, soft, fine grained.

PBW

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Notes:
Top 8 feet drilled out (DO) with a hydrovac to clear for utilities.

Initial Fluid Level (7/12/10)
▼ Depth to water: 11.81 ft BTOC

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 3.5) Bentonite Chips
(3.5 - 18.5) 16/30 Silica Sand

Well Materials
(0 - 8.5) Casing, 1" Sch 40 FJT PVC
(8.5 - 18.5) Screen, 1" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
45.71

Union Pacific Railroad

Log of Boring: SB-118

UPRR Houston Wood Preserving Works Houston, TX	Completion Date:	1/27/09	Drilling Method:	Direct Sonic
	Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
	Driller:	Keith Barge	Total Depth (ft):	4.5
PBW Project No. 1358	Driller's License:	4786	Northing:	728815.348
	Field Supervisor:	Tim Jennings	Easting:	3167394.652
	Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	3.8	4.5/4.5	FILL	FILL, sandy/gravelly clay, dark brown, moist, fine-coarse gravel, brick fragments.
2				
3	3.8		CL	SANDY CLAY, CL, dark gray, moist, soft.
4				

PBW

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-119

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	5
Driller's License:	4786	Northing:	728832.625
Field Supervisor:	Tim Jennings	Easting:	3167482.45
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	3.3		FILL	FILL, clayey/gravelly sand, dark brown, moist, fine gravel, soft.
2		4.5/5.0		
3				SANDY CLAY, CL, grayish brown, moist, soft.
4	1.3		CL	
5				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-120

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	5
Driller's License:	4786	Northing:	728842.233
Field Supervisor:	Tim Jennings	Easting:	3167582.927
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	5.0/5.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2				
3	0		SM	SILTY SAND, SM, grayish brown, moist, soft.
4				
5			CL	SILTY CLAY, CL, grayish brown, moist, firm.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-121

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	5
Driller's License:	4786	Northing:	728846.746
Field Supervisor:	Tim Jennings	Easting:	3167677.527
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	3.4		FILL	FILL, sandy/gravelly clay, dark brown, moist, fine-coarse gravel, brick fragments.
2		4.5/5.0		
3	4.8		CL	SANDY CLAY, CL, grayish brown, moist, soft.
4				
5				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-122

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	4.5
Driller's License:	4786	Northing:	728848.25
Field Supervisor:	Tim Jennings	Easting:	3167786.131
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	4.2	4.5/4.5	FILL	FILL, silty sand/sand, dark brown, moist, fine-coarse gravel, odor below 1.8'
2				
3	6.8		CL	SILTY CLAY, CL, dark gray, moist, soft to firm, odor to 4.0'.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

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Union Pacific Railroad

Log of Boring: SB-123

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	4
Driller's License:	4786	Northing:	728862.902
Field Supervisor:	Tim Jennings	Easting:	3167880.66
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	2.8	4.0/4.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
2				
3	1.5		CL	SANDY CLAY, CL, dark gray, moist, soft - firm.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-124

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	5
Driller's License:	4786	Northing:	728876.833
Field Supervisor:	Tim Jennings	Easting:	3168079.741
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	3.6		FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
2				
3		5.0/5.0		
4	2.5		CL	SANDY CLAY, CL, gray, moist, soft - firm.
5				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-125

JPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	4
Driller's License:	4786	Northing:	728882.904
Field Supervisor:	Tim Jennings	Easting:	3168277.883
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	5.1	4.0/4.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2				
3	2.5		CL	SANDY CLAY, CL, gray, moist, soft - firm.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-126

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	4
Driller's License:	4786	Northing:	728480.2176
Field Supervisor:	Tim Jennings	Easting:	3168202.033
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	2.4	4.0/4.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2				
3	2.9		CL	SANDY CLAY, CL, gray, moist, soft - firm.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-127

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/28/09	Drilling Method:	Hand Auger
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	3
Driller:	--	Total Depth (ft):	4
Driller's License:	--	Northing:	728080.4626
Field Supervisor:	Tim Jennings	Easting:	3168215.787
Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0.6	4.0/4.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2				
3	0.8		CL	SANDY CLAY, CL, gray, moist, soft - firm.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-129

PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/28/09	Drilling Method:	Hand Auger
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	4
Driller:	--	Total Depth (ft):	4
Driller's License:	--	Northing:	727544.891
Field Supervisor:	Tim Jennings	Easting:	3167960.995
Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	1.4		FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
2		4.0/4.0		
3	1.4		CL	SANDY CLAY, CL, gray, moist, soft - firm.
4				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-130

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	3
Driller's License:	4786	Northing:	727145.4023
Field Supervisor:	Tim Jennings	Easting:	3167981.088
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0.8	3.0/3.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2	1.3			
3			CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-131

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	3.5
Driller's License:	4786	Northing:	726805.9605
Field Supervisor:	Tim Jennings	Easting:	3167938.124
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	3.5/3.5	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2				
3	0		CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.

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Notes:
Borehole plugged with bentonite chips upon completion.

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Union Pacific Railroad

Log of Boring: SB-132

PRR Houston Wood Preserving Works Houston, TX	Completion Date:	1/27/09	Drilling Method:	Direct Sonic
	Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
	Driller:	Keith Barge	Total Depth (ft):	3
PBW Project No. 1358	Driller's License:	4786	Northing:	726792.6815
	Field Supervisor:	Tim Jennings	Easting:	3167538.344
	Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	3.0/3.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2	2.2		CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.
3			SP	SAND, SP, brown, moist, soft, fine to medium grained.

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Notes:
Borehole plugged with bentonite chips upon completion.

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Union Pacific Railroad

Log of Boring: SB-133

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	2
Driller's License:	4786	Northing:	726779.4024
Field Supervisor:	Tim Jennings	Easting:	3167138.565
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0 1 2	2.1	2.0/2.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.

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Notes:
Borehole plugged with bentonite chips upon completion.

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Union Pacific Railroad

Log of Boring: SB-134

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/27/09	Drilling Method:	Direct Sonic
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	2
Driller:	Keith Barge	Total Depth (ft):	4.5
Driller's License:	4786	Northing:	726907.7051
Field Supervisor:	Tim Jennings	Easting:	3166869.574
Sampling Method:	2"x5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0				
1	1.9	4.5/4.5	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
2			CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.
3	3.2			
4			SP	SAND, SP, brown, moist, soft, fine to medium grained.

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Notes:
Borehole plugged with bentonite chips upon completion.

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Union Pacific Railroad

Log of Boring: SB-135

UPRR Houston Wood Preserving Works Houston, TX	Completion Date:	1/28/09	Drilling Method:	Hand Auger
	Drilling Company:	Universal Drilling	Borehole Diameter (in.):	3
	Driller:	--	Total Depth (ft):	3.3
PBW Project No. 1358	Driller's License:	--	Northing:	726799.59
	Field Supervisor:	Tim Jennings	Easting:	3166569.23
	Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0			FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2	1.8	3.3/3.3	CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.
3				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-136

UPRR Houston Wood Preserving Works Houston, TX	Completion Date:	1/28/09	Drilling Method:	Hand Auger
	Drilling Company:	Universal Drilling	Borehole Diameter (in.):	3
	Driller:	--	Total Depth (ft):	2.5
PBW Project No. 1358	Driller's License:	--	Northing:	726783.22
	Field Supervisor:	Tim Jennings	Easting:	3166169.56
	Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	1	2.5/2.5	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2			CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-137

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	1/28/09	Drilling Method:	Hand Auger
Drilling Company:	Universal Drilling	Borehole Diameter (in.):	3
Driller:	--	Total Depth (ft):	2
Driller's License:	--	Northing:	726766.78
Field Supervisor:	Tim Jennings	Easting:	3165769.9
Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	--	2.0/2.0	FILL	FILL, gravelly sand, dark brown, moist, fine-coarse gravel.
1				
2			CL	SANDY CLAY, CL, gray, moist, soft - firm, some gravel.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-138

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/24/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728906.98
Field Supervisor:	Tim Jennings	Easting:	3167790.59
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	2.4/4.0	FILL	FILL, sand and gravel.
	0		CL	SANDY CLAY, CL, brown, moist, firm.
5	0	3.5/4.0		SILTY CLAY, CL, gray, moist, hard, trace calcaroues nodules.
	1.6			
	0.9	3.3/4.0		
10	0			SANDY CLAY, CL, mottled gray and orange, moist, soft.
	0	2.9/4.0		SILTY/SANDY CLAY, gray, moist, soft.
15	0			
	0.3	3.4/4.0	SP	SAND, SP, wet, soft, slight odor.
20	0.6			

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-139

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/24/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728923.38
Field Supervisor:	Tim Jennings	Easting:	3167934.48
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	2.3	2.2/4.0	SM	SILTY SAND, SM, brown, dry, very soft.
	0		CL	SANDY CLAY, CL, brown, moist, firm.
5	0	3.2/4.0		
	0			
	0	4.0/4.0		SANDY CLAY, CL, mottled gray and orange, moist, hard, 13.5-14.2: creosote odor and hydrocarbon staining.
10	0			
	0	3.2/4.0		
	0		SP	SAND, SP, light brown, wet, soft, few iron nodules.
15	0.9	2.0/4.0		
	0			
20				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-140

PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/23/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728933.29
Field Supervisor:	Tim Jennings	Easting:	3168026.86
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0.8	3.0/4.0	FILL	FILL, sand and gravel.
	0		CL	SANDY CLAY, CL, brown, moist, firm.
5	0	4.0/4.0		SANDY/SILTY CLAY, CL, gray, moist, hard, trace calcaroues nodules.
	0			
	0	4.0/4.0		SILTY CLAY, CL, mottled gray and orange, moist, hard.
10	0			
	0	4.0/4.0		
	0			
15	0		SP	SILTY SAND, SP, light brown, wet, soft.
	0	4.0/4.0		
20	0			SAND, SP, light brown, wet, soft.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-141

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/23/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728934.74
Field Supervisor:	Tim Jennings	Easting:	3168099.78
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0.6	2.0/4.0	SC	CLAYEY SAND, SC, brown, dry, very soft.
	0		CL	SILTY CLAY, CL, light brown, moist, hard, trace calcaroues nodules.
5	0	3.0/4.0		
	0			
	0	4.0/4.0		
10	0			
	0	4.0/4.0		
15	0			
	0	4.0/4.0		SANDY CLAY, CL, mottled gray and orange, moist, soft.
	1.9		SP	SAND, SP, light brown, wet, soft.
20				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-142

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728946.89
Field Supervisor:	Tim Jennings	Easting:	3168183.17
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	2.9/4.0	SC	CLAYEY SAND, SC, brown, dry, very soft.
	0		CL	SANDY CLAY, CL, brown, moist, firm.
5	0	4.0/4.0		
	0			CLAY, light gray, moist, firm, with calcaroues nodules.
	0	4.0/4.0		
10	0		CH	CLAY, CH, mottled gray and orange, moist, soft, trace calcaroues nodules.
	0	3.0/4.0		
15	0		SM	SILTY SAND, SM, light brown, wet, soft.
	0	4.0/4.0	SP	SAND, SP, light brown, wet, soft.
20	0			

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-143

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728892.91
Field Supervisor:	Tim Jennings	Easting:	3168184.12
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	2.5/4.0	FILL	FILL, sand and gravel.
	0.6			SANDY CLAY, CL, brown, moist, firm.
5	0	4.0/4.0		
	0			SANDY/SILTY CLAY, CL, gray, moist, hard, trace calcaroues nodules.
	0	2.0/4.0	CL	
10				
	0	4.0/4.0		
15	0			
	0	3.3/4.0		
20	0		SP	SAND, SP, gray, wet, soft.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-144

IPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728854
Field Supervisor:	Tim Jennings	Easting:	3167787
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0.6	2.9/4.0	FILL	FILL, sand, soft, loose.
	0.6			SILTY CLAY, CL, light brown, moist, hard, below 5.6: strong odor.
5	0.6	3.7/4.0		
	9.6			
	4.8	4.0/4.0	CL	CLAY, CH, gray, moist, soft to firm, odor.
10	1.5			
	10.2	3.0/4.0		SANDY CLAY, CL, gray, moist, firm.
15	5.4			
	8.9	4.0/4.0	SP	SAND, SP, gray, wet, soft, strong odor and sheen.
20	10.3			

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-145

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728880.61
Field Supervisor:	Tim Jennings	Easting:	3168080.44
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	1.8	2.5/4.0	FILL	FILL, gravelly clay, moist, soft.
	8.9			SANDY CLAY, CL, dark brown, moist, firm.
5	1.3	4.0/4.0		SILTY CLAY, CL, dark brown, moist, hard.
	0			
	0.6	4.0/4.0	CL	CLAY, CL, gray, moist, hard, trace calcaroues nodules.
10	0			
	0	4.0/4.0		
15	0.6			SANDY CLAY, CL, gray, moist, firm.
	0	4.0/4.0	SC	CLAYEY SAND, SC, light brown, wet, soft.
20	72.1		SP	SAND, SP, gray, wet, soft.

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-146

'PRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	728848.61
Field Supervisor:	Tim Jennings	Easting:	3167715.03
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	2.8/4.0	FILL	FILL, sand, soft, loose, some metal fragments.
	0		CL	SILTY CLAY, CL, brown, moist, soft.
5	0	4.0/4.0		
	0			
	0	4.0/4.0		SILTY CLAY, CL, gray, moist, hard, trace calcaroues nodules.
10	0			
	0	4.0/4.0		
	0.6		SP	SAND, SP, gray, wet, soft.
15	0	4.0/4.0		
	0			
20				

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Notes:
Borehole plugged with bentonite chips upon completion.

Union Pacific Railroad

Log of Boring: SB-147

UPRR Houston Wood Preserving Works
Houston, TX

PBW Project No. 1358

Completion Date:	6/22/10	Drilling Method:	Geoprobe
Drilling Company:	Alpine Field Services	Borehole Diameter (in.):	3
Driller:	Clay Neal	Total Depth (ft):	20
Driller's License:	56591	Northing:	727530
Field Supervisor:	Tim Jennings	Easting:	3165209
Sampling Method:	2"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	PID (ppm-v)	Recovery (ft/ft)	USCS	Lithologic Description
0	0	2.9/4.0	FILL	FILL, sand, soft, loose, some shell fragments.
	0			SANDY CLAY, CL, dark brown, moist, firm, slight odor.
5	0	4.0/4.0		
	0		CL	SANDY CLAY, CL, mottled gray and orange, moist, firm, slight odor.
	0	4.0/4.0		
10	0			
	0	4.0/4.0		
15	0			SILTY SAND, SM, light brown, wet, soft.
	0	2.0/4.0	SM	
20	0			

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Notes:
Borehole plugged with bentonite chips upon completion.

APPENDIX 3
MONITOR WELL DEVELOPMENT AND PURGING DATA

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-21-10

Sample Number: WG-1620-MW11B-012110
Sampling Location (well ID, etc.): MW11B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.15
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 5.15
Total Depth (ft. BGL): 46.75
Casing Diameter (In ID): 4.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: Bailer
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7.4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1422 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1427		.1	23.1	6.81	1270	0.23	-131	8.7	5.34
1432		↓	23.2	6.84	1310	0.21	-136	7.3	5.36
1437		↓	23.2	6.85	1320	0.20	-131	7.6	5.36

Water Level (ft. BMP) at End of Purge: 5.36
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~1350~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1450	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number:	WG-1620-MW11A-012110	Starting Water Level (ft. BMP):	4.97
Sampling Location (well ID, etc.):	MW11A	Casing Stickup (ft.):	-
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.97
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	24.10
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1506 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1511		.1	23.4	6.91	1170	0.71	-106	6.7	5.16
1516		.1	23.7	6.92	1210	0.63	-108	7.2	5.17
1521		.1	23.6	6.92	1220	0.62	-108	7.7	5.17

Water Level (ft. BMP) at End of Purge: 5.17 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
~~1530~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	~~—~~
1530	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-21-10

Sample Number: WG-1620-MW10B-012110
Sampling Location (well ID, etc.): MW10B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.91
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.91
Total Depth (ft. BGL): 46.50
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7.4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1551 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1559		.1	22.3	6.84	1170	0.63	-212	11	5.31
1603		.1	22.7	6.87	1140	0.56	-211	6.7	5.32
1606		.1	22.7	6.88	1130	0.54	-206	8.1	5.32

Water Level (ft. BMP) at End of Purge: 5.32 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
~~B~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1615	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-21-10

Sample Number: WC-1620-MW10A-012110
Sampling Location (well ID, etc.): MW10A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.64
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.64
Total Depth (ft. BGL): 25.60
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1623 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1633		.1	22.4	7.13	1090	0.74	-181	11	4.81
1638		↓	22.7	7.14	1060	0.61	-186	8.1	4.81
1643		↓	22.7	7.15	1060	0.62	-186	7.2	4.80

Water Level (ft. BMP) at End of Purge: 4.80
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
	~~40 ml~~	G	~~3~~	~~N~~	~~HCl~~	
1650	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number: WG-1620-MW02-012210		Starting Water Level (ft. BMP):	3.91
Sampling Location (well ID, etc.): MW02		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	3.91
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	20.15
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

0654 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0704		.1	22.3	6.56	870	0.51	-171	6.7	4.13
0709		↓	22.7	6.61	840	0.42	-170	6.3	4.14
0714		↓	22.7	6.62	830	0.43	-170	5.7	4.14

Water Level (ft. BMP) at End of Purge: 4.14 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
	~~40 ml~~	~~G~~	~~3~~	~~N~~	HCl	
0720	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number: WG-1620-MW01A-012210
Sampling Location (well ID, etc.): MW01A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.07
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.07
Total Depth (ft. BGL): 19.90
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0746 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0756		.1	22.3	6.93	1120	0.63	-134	8.7	3.26
0801		.1	22.4	6.94	1140	0.61	-139	13	3.27
0806		.1	22.4	6.94	1150	0.61	-139	12	3.27

Water Level (ft. BMP) at End of Purge: 3.27 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
~~—~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	~~—~~
0820	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number:	WG-1620-P-10-012210	Starting Water Level (ft. BMP):	4.06
Sampling Location (well ID, etc.):	P-10	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.06
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	42.80
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1203 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1213		.1	23.1	6.81	1160	1.13	-86	8.7	4.28
1218		↓	23.4	6.91	1180	0.91	-81	3.7	4.30
1223		↓	23.4	6.92	1190	0.82	-82	3.9	4.31

Water Level (ft. BMP) at End of Purge: 4.31 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~1140~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1240	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number: WG-1620-P-12-012210 | Starting Water Level (ft. BMP): 4.13

Sampling Location (well ID, etc.): P-12 | Casing Stickup (ft.): -

Sampled by: JTB | Starting Water Level (ft. BGL): 4.13

Measuring Point (MP) of Well: TOC | Total Depth (ft. BGL): 42.90

Screened Interval (ft. BGL): — | Casing Diameter (In ID): -

Filter Pack Interval (ft. BGL): — | Casing Volume (gal.): -

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556

pH Meter: YSI 556 | Field Calibration: 7-4

Conductivity Meter: YSI 556 | Field Calibration: 1413

Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1057		.1	22.7	7.11	1280	0.71	-181	10	4.46
1102		↓	22.8	7.13	1260	0.68	-171	8.3	4.51
1107		↓	22.8	7.14	1260	0.67	-170	7.2	4.51

Water Level (ft. BMP) at End of Purge: 4.51 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Time	Bottles Collected: Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1120	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number: WG-1620-MW07-012210		Starting Water Level (ft. BMP):	4.02
Sampling Location (well ID, etc.): MW07		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	4.02
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	24.80
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1003									
1013		.1	21.7	6.91	810	0.71	-71	18	4.29
1018		↓	22.4	6.84	860	0.63	-103	11	4.31
1023		↓	22.4	6.85	870	0.62	-104	12	4.31

Water Level (ft. BMP) at End of Purge: 4.31 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Time	Bottles Collected: Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1030	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-22-10

Sample Number:	WG-1620-MW08-012210	Starting Water Level (ft. BMP):	4.17
Sampling Location (well ID, etc.):	MW08	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.17
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	25.15
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time (0851)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0901		.1	22.1	7.21	780	0.61	-176	8.3	4.29
0906		↓	22.3	7.23	790	0.47	-134	6.7	4.29
0911		↓	22.4	7.24	780	0.43	-137	6.9	4.30

Water Level (ft. BMP) at End of Purge: 4.30 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~—~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
0920	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 12010

Sample Number: WG-1620-MW47C-012110	Starting Water Level (ft. BMP): 16.41
Sampling Location (well ID, etc.): MW47C	Casing Stickup (ft.): -
Sampled by: JTB	Starting Water Level (ft. BGL): 16.41
Measuring Point (MP) of Well: TOC	Total Depth (ft. BGL): 70.40
Screened Interval (ft. BGL): —	Casing Diameter (In ID): —
Filter Pack Interval (ft. BGL): —	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: bailer

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1517									
1522		.1	22.3	7.99	470	0.71	-37	14	16.72
1527		.1	22.4	8.01	490	0.63	-41	31	16.73
1532		.1	22.4	8.01	490	0.62	-42	30	16.73

Water Level (ft. BMP) at End of Purge: 16.73 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1545	40 ml	G	3	N	HCl	VOCs
1545	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG-1620-MW62B-012110
Sampling Location (well ID, etc.): MW62B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.13
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 5.13
Total Depth (ft. BGL): 35.35
Casing Diameter (In ID): —
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7.4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

Time (1334)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1344		.1	22.3	6.91	930	0.41	-273	6.3	
1349		"	22.7	6.86	910	0.51	-267	5.1	
1354		"	22.7	6.85	910	0.50	-271	5.1	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
1405	40 ml	G	3	N	HCl	VOCs
1405	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-21-10

Sample Number:	WC-1620-P11-012110	Starting Water Level (ft. BMP):	5.67
Sampling Location (well ID, etc.):	P11	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	5.67
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	42.10
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time (1234)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1239		.1	21.6	7.52	1260	1.71	-217	8.1	5.91
1244		↓	21.8	7.59	1270	1.52	-221	7.1	5.92
1249		↓	21.8	7.59	1270	1.51	-222	7.1	5.92

Water Level (ft. BMP) at End of Purge: 5.92 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1300	40 ml	G	3	N	HCl	VOCs
1300	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG-1620-MW21C-012110
Sampling Location (well ID, etc.): MW21C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 21.89
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 21.89
Total Depth (ft. BGL): 75.90
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7.4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

1059 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1109		.1	21.7	7.16	1260	0.63	-221	37	22.31
1114		↓	21.6	7.21	1270	0.56	-227	26	2230
1119		↓	21.6	7.22	1270	0.57	-228	25	22.30

Water Level (ft. BMP) at End of Purge: 22.30 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1145	40 ml	G	3	N	HCl	
1145	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG1620-MW64A-012110
Sampling Location (well ID, etc.): MW64A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.52
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.52
Total Depth (ft. BGL): 22.20
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

Time (1012)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1017		1	21.7	6.71	1730	0.32	-181	8.6	6.89
1022		↓	22.3	6.74	1770	0.27	-186	7.2	6.89
1027		↓	22.4	6.95	1780	0.26	-187	7.1	6.90

Water Level (ft. BMP) at End of Purge: 6.90 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
1035	40 ml	G	3	N	HCl	
1035	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-MW66D-012010

Sampling Location (well ID, etc.): MW66D

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 84.02

Casing Stickup (ft.): 0

Starting Water Level (ft. BGL): 84.02

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0937 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0947		.1	22.7	10.31	610	0.74	-171	8.3	84.21
0952		.1	22.7	10.34	670	0.71	-161	7.6	84.27
0957		.1	22.8	10.34	686	0.70	-160	7.5	84.28

Water Level (ft. BMP) at End of Purge: 84.28 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1010	40 ml	G	3	N	HCl	
1010	1 L	G	2	N	Neat	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-20-10

Sample Number: WG-1620-MW~~49B~~-012010
Sampling Location (well ID, etc.): MW~~49B~~ 49B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.73
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 9.73
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst
pH Meter: YSI 556
Conductivity Meter: YSI 556
Filter / Filter Size:

Thermometer: YSI 556
Field Calibration: 7-4
Field Calibration: 1413
Other:

SAMPLING MEASUREMENTS

1034 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1044		.1	22.3	8.16	570	0.56	-167	9.6	10.07
1049		.1	22.7	8.17	530	0.51	-177	9.1	10.09
1054		↓	22.7	8.17	540	0.50	-179	9.3	10.09

Water Level (ft. BMP) at End of Purge: 10.09
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1100	40 ml	G	3	N	HCl	VOCs
1100	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-MW59D-012010
Sampling Location (well ID, etc.): MW59D
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 81.73
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 81.73
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: Dave
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other: —

SAMPLING MEASUREMENTS

1128 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1138		.1	22.3	8.71	460	0.47	-171	11	81.92
1143		.1	22.6	8.89	510	0.46	-176	21	81.90
1148		.1	22.7	8.83	520	0.46	-177	22	81.90

Water Level (ft. BMP) at End of Purge: 81.90 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1205	40 ml	G	3	N	HCl	VOCs
1205	1 L	G	2	N	Neat	SVOCs

Comments: WG-1620-FD03-012010
FIELD DUPLICATE

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-20-10

Sample Number:	WG-1620-MW59A-012010	Starting Water Level (ft. BMP):	8.62
Sampling Location (well ID, etc.):	MW59A	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	8.62
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1229 Time	Cum. Vol (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1239		.1	22.3	7.51	670	0.42	-231	13	8.91
1244		↓	22.4	7.51	620	0.41	-213	16	8.93
1249		↓	22.4	7.53	620	0.41	-213	17	8.94

Water Level (ft. BMP) at End of Purge: 8.94 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1255	40 ml	G	3	N	HCl	VOCs
1255	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-MWSOA-012010		Starting Water Level (ft. BMP):	7.02
Sampling Location (well ID, etc.): MW SOA		Casing Stickup (ft.):	
Sampled by: JTB		Starting Water Level (ft. BGL):	7.02
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1316 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1326		.1	22.3	7.17	670	0.71	-118	8.1	7.26
1331		↓	22.7	7.21	690	0.63	-106	7.3	7.31
1336		↓	22.8	7.21	690	0.62	-105	7.5	7.32

Water Level (ft. BMP) at End of Purge: 7.32 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1345	40 ml	G	3	N	HCl	VOCs
1345	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-20-10

Sample Number:	WG-1620-MW51A-012010	Starting Water Level (ft. BMP):	7.83
Sampling Location (well ID, etc.):	MW51A	Casing Stickup (ft.):	-
Sampled by:	JTB	Starting Water Level (ft. BGL):	7.83
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	-
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	-

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Bailer

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1413 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1423		.1	22.3	6.74	1210	0.42	-131	8.9	8.13
1428		↓	22.4	6.79	1230	0.41	-134	7.4	8.14
1433		↓	22.4	6.79	1240	0.41	-135	7.5	8.14

Water Level (ft. BMP) at End of Purge: 8.14 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1445	40 ml	G	3	N	HCl	VOCs
1445	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number:	WG-1620-MW61A-012010	Starting Water Level (ft. BMP):	6.49
Sampling Location (well ID, etc.):	MW61A	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	6.49
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1609									
1614		1	22.3	6.34	1320	0.71	-76	13	6.92
1619		1	22.4	6.41	1360	0.56	-71	21	6.90
1624		1	22.5	6.42	1370	0.55	-72	18	6.91

Water Level (ft. BMP) at End of Purge: 6.91 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1630	40 ml	G	3	N	HCl	VOCs
1630	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-MW60A-012010
Sampling Location (well ID, etc.): MW60A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 7.72
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 7.72
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1647 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1652		.1	22.3	7.06	790	0.46	-118	8.9	7.93
1657		.1	22.7	7.13	830	0.32	-126	8.7	7.94
1702		.1	22.7	7.14	840	0.31	-127	8.7	7.94

Water Level (ft. BMP) at End of Purge: 7.94 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1710	40 ml	G	3	N	HCl	VOCs
1710	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG-1620-MW49A-012110
Sampling Location (well ID, etc.): MW49A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 11.07
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 11.07
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0616 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0621		.1	21.7	6.81	960	0.21	-109	6.7	
0626			21.6	6.84	950	0.23	-111	7.2	
0631		↓	21.7	6.87	940	0.24	-111	7.3	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0640	40 ml	G	3	N	HCl	VOCs
0640	1 L	G	2	N	Neat	SVOCs

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG-1620-MW48C-012110
Sampling Location (well ID, etc.): MW48C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 15.81
Casing Stickup (ft.): -
Starting Water Level (ft. BGL): 15.81
Total Depth (ft. BGL): -
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0711 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0714		1	22.1	7.07	1130	0.31	-151	3.7	16.03
0721		1	22.3	7.11	1160	0.26	-153	4.7	16.07
0726		1	22.3	7.12	1170	0.24	-154	4.9	16.08

Water Level (ft. BMP) at End of Purge: 16.08 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0735	40 ml	G	3	N	HCl	VOCs
0735	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-21-10

Sample Number: WG-1620-MW54C-012110
Sampling Location (well ID, etc.): MW54C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 15.46
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 15.46
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0803 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0813		.1	21.9	6.79	1920	0.83	-217	4.7	15.72
0818			22.3	6.81	1870	0.86	-230	4.7	15.73
0823		↓	22.4	6.82	1860	0.85	-231	4.4	15.73

Water Level (ft. BMP) at End of Purge: 15.73
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0830	40 ml	G	3	N	HCl	VOCs
0830	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-21-10

Sample Number: W6-1620-MW65D-012110		Starting Water Level (ft. BMP):	84.39
Sampling Location (well ID, etc.): MW65D		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	84.39
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	-
Screened Interval (ft. BGL):	-	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	-	Casing Volume (gal.):	-

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

0909 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0919		.1	21.7	9.18	1130	0.31	-126	8.7	84.62
0924		"	21.4	9.21	1170	0.26	-121	7.3	84.63
0929		"	21.4	9.22	1170	0.27	-123	7.4	84.63

Water Level (ft. BMP) at End of Purge: 84.63 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0940	40 ml	G	3	N	HCl	VOCs
0940	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-MW53C-011310
Sampling Location (well ID, etc.): MW-53C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 15.19
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 15.19
Total Depth (ft. BGL): 71.25
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

0634 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0644		.1	19.9	9.16	1170	0.31	-313	neutral	15.33
0649		↓	19.7	9.21	1140	0.16	-312	↓	15.37
0654		↓	19.7	9.22	1150	0.15	-312	↓	15.38

Water Level (ft. BMP) at End of Purge: 15.38
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0705	40 ml	G	3	N	HCl	VOCs
0705	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-MW44A 011310		Starting Water Level (ft. BMP):	10.23
Sampling Location (well ID, etc.): MW44A		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	10.23
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	28.00
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0727 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0737		.1	20.4	6.93	1020	0.39	-257	neutral	10.46
0742		↓	20.5	6.96	1040	0.31	-263	↓	10.48
0747		↓	20.5	6.97	1050	0.30	-264	↓	10.49

Water Level (ft. BMP) at End of Purge: 10.49 | Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0800	40 ml	G	3	N	HCl	VOCs
0800	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-13-10

Sample Number: WG-1620-MW36A-011310
Sampling Location (well ID, etc.): MW-36A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.23
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 9.23
Total Depth (ft. BGL): 27.80
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

0823 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0828		.1	21.9	6.93	1260	0.61	-237	neutral	9.47
0833			21.8	6.96	1290	0.32	-226		9.48
0838			21.8	6.97	1270	0.31	-227		9.49

Water Level (ft. BMP) at End of Purge: 9.49
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0845	40 ml	G	3	N	HCl	VOCs
0845	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-MW28A-011310
Sampling Location (well ID, etc.): MW28A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.54
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.54
Total Depth (ft. BGL): 25.90
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

0934 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0944		.1	21.6	6.89	1485	1.16	-218	neutral	4.79
0949		↓	21.7	6.86	1490	0.74	-217	↓	4.81
0954		↓	21.7	6.85	1490	0.72	-217	↓	4.82

Water Level (ft. BMP) at End of Purge: 4.82
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1005	40 ml	G	3	N	HCl	VOCs
1005	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number:	WG-1620-MW28C-011310	Starting Water Level (ft. BMP):	14.89
Sampling Location (well ID, etc.):	MW28C	Casing Stickup (ft.):	-
Sampled by:	JTB	Starting Water Level (ft. BGL):	14.89
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	86.34
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7.4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1041									
1051		.1	22.1	10.74	930	0.51	-340	neutral	15.16
1056		〃	21.4	10.61	970	0.54	-343	〃	15.17
1101		〃	21.7	10.62	980	0.53	-346	〃	15.17

Water Level (ft. BMP) at End of Purge: 15.17 | Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1115	40 ml	G	3	N	HCl	VOCs
1115	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-13-10

Sample Number:	WG-1620-MW33A-011310	Starting Water Level (ft. BMP):	4.79
Sampling Location (well ID, etc.):	MW33A	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.79
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	25.20
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

1303 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1313		.1	21.4	7.39	1035	0.71	-277	neutral	5.13
1318		1	21.7	7.34	1015	0.59	-281	〃	5.16
1323		〃	21.6	7.34	1020	0.58	-280	〃	5.17

Water Level (ft. BMP) at End of Purge: 5.17 Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1330	40 ml	G	3	N	HCl	VOCs
1330	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-13-10

Sample Number: WG-1620-FD01-011310

Sampling Location (well ID, etc.): DUPLICATE AT MW33A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. BGL):

Casing Diameter (In ID):

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1330	40 ml	G	3	N	HCl	VOCS
1330	1 L	G	2	N	Neat	SVOCS

Comments: DUPLICATE @ MW33A

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-13-10

Sample Number:	WG-1620-MW33B-011310	Starting Water Level (ft. BMP):	4.61
Sampling Location (well ID, etc.):	MW-33B	Casing Stickup (ft.):	-
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.61
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	33.10
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

1406 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1416		.1	20.6	7.17	1930	1.13	-281	neutral	4.92
1421		↓	20.8	7.21	1960	0.63	-271	↓	4.97
1426		↓	20.8	7.22	1970	0.61	-277	↓	4.98

Water Level (ft. BMP) at End of Purge: 4.98 Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1435	40 ml	G	3	N	HCl	VOCs
1435	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-MW26A-011310
Sampling Location (well ID, etc.): MW-26A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 4.31
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.31
Total Depth (ft. BGL): 26.20
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

1503 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1513		.1	20.3	6.81	930	0.66	-213	neutral	4.63
1518		↓	20.4	6.84	970	0.56	-226	↓	4.64
1523		↓	20.4	6.85	980	0.55	-230	↓	4.64

Water Level (ft. BMP) at End of Purge: 4.64
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1530	40 ml	G	3	N	HCl	VOCs
1530	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-MW63B-011310
Sampling Location (well ID, etc.): MW-63B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 1.34
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 1.34
Total Depth (ft. BGL): 30.25
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7.4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

1617 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1627		.1	21.03	7.16	1770	0.31	-113	neutral	1.89
1632		"	21.3	7.17	1790	0.26	-117	"	1.89
1637		"	21.4	7.17	1790	0.25	-117	"	1.93

Water Level (ft. BMP) at End of Purge: 1.93
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1645	40 ml	G	3	N	HCl	VOCs
1645	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-13-10

Sample Number: WG-1620-FB01-011310
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: D.I water
Purging: — Sampling: —
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst
pH Meter: YSI 556
Conductivity Meter: YSI 556
Filter / Filter Size:
Thermometer: YSI 556
Field Calibration:
Field Calibration:
Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
—	field blank								

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
1705	40 ml	G	3	N	HCl	VOCs
1705	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-14-10

Sample Number: WG-1620-MW32A-011410
Sampling Location (well ID, etc.): MW-32A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.55
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.55
Total Depth (ft. BGL): 32.55
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: bailer
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0801 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0811		.1	20.6	8.15	420	0.63	-290	neutral	3.79
0816		1	20.4	8.21	470	0.37	-267	w/ clear	3.81
0821		↓	20.4	8.22	460	0.36	-269		3.81

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0830	40 ml	G	3	N	HCl	VOCs
0830	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-14-10

Sample Number: WG-1620 - MW38A - 011410
Sampling Location (well ID, etc.): MW-38A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 2.27
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 2.27
Total Depth (ft. BGL): 22.15
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

0846 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0856		.1	18.7	7.12	805	1.13	-212	mutrial	2.51
0901		↓	18.9	7.16	815	0.87	-226	↓	2.56
0906		↓	18.9	7.17	820	0.86	-231	↓	2.57

Water Level (ft. BMP) at End of Purge: 2.57
Sample Intake Depth (ft. BMP): MID POINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0915	40 ml	G	3	N	HCl	VOCs
0915	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-14-10

Sample Number: WG-1620-MW38B-011410		Starting Water Level (ft. BMP):	1.44
Sampling Location (well ID, etc.): MW38B		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	1.44
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	37.65
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

0942 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0952		.1	20.1	7.21	1020	0.86	-255	mutual	2.16
0957		↓	20.2	7.26	1040	0.74	-260	↓	2.27
1002		↓	20.2	7.27	1035	0.73	-261	↓	2.26

Water Level (ft. BMP) at End of Purge: 2.26 | Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1010	40 ml	G	3	N	HCl	VOCS
1010	1 L	G	2	N	Neat	SVOCS

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-14-10

Sample Number: WG-1620-MW24C-011410
Sampling Location (well ID, etc.): MW24C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 20.46
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 20.46
Total Depth (ft. BGL): 72.45
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: bare
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

Time (1041)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1051		.1	20.3	10.73	970	1.16	-283	neutral	20.89
1056		↓	20.6	10.71	980	0.84	-279	↓	20.91
1101		↓	20.7	10.71	980	0.81	-281	↓	20.92

Water Level (ft. BMP) at End of Purge: 20.92
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1110	40 ml	G	3	N	HCl	VOCS
1110	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-14-10

Sample Number: WG-1620-MW24B-011410
Sampling Location (well ID, etc.): MW24B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.89
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 9.89
Total Depth (ft. BGL): 48.80
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: bailer
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

1123 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1133		.1	21.3	7.34	1460	1.32	-280	neutral	10.34
1138		↓	21.5	7.37	1475	0.86	-276	↓	10.35
1143		↓	21.6	7.34	1470	0.82	-271	↓	10.35

Water Level (ft. BMP) at End of Purge: 10.35
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1200	40 ml	G	3	N	HCl	VOCs
1200	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-14-10

Sample Number: WG-1620-MW27C-011410
Sampling Location (well ID, etc.): MW-27C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 14.82
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 14.82
Total Depth (ft. BGL): 71.60
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1249									
1259		1	21.4	10.84	1170	1.34	-323	6.4	15.16
1304		1	21.2	10.73	1230	0.93	-326	7.1	15.17
1309		↓	21.2	10.71	1220	0.92	-327	7.4	15.17

Water Level (ft. BMP) at End of Purge: 15.17
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1320	40 ml	G	3	N	HCl	VOCs
1320	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-14-10

Sample Number: WG-1620 - MW-35A - 011410	Starting Water Level (ft. BMP): 4.14
Sampling Location (well ID, etc.): MW-35A	Casing Stickup (ft.): -
Sampled by: JTB	Starting Water Level (ft. BGL): 4.14
Measuring Point (MP) of Well: TOC	Total Depth (ft. BGL): 28.20
Screened Interval (ft. BGL): —	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL): —	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

1351 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1401		.1	22.8	6.64	2660	0.32	-298	8.3	4.63
1406		↓	22.6	6.71	2710	0.26	-263	7.4	4.64
1411		↓	22.7	6.72	2720	0.24	-264	7.1	4.63

Water Level (ft. BMP) at End of Purge: 4.63 Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1420	40 ml	G	3	N	HCl	VOCS
1420	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-14-10

Sample Number: WG-1620-MW35B-011410
Sampling Location (well ID, etc.): MW-35B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.51
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.51
Total Depth (ft. BGL): 43.05
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

1448 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1458		.1	21.?	6.71	2320	1.36	-292	8.9	3.81
1503		1	21.6	6.77	2360	1.01	-293	6.7	3.86
1508		↓	21.6	6.78	2370	.89	-293	6.1	3.87

Water Level (ft. BMP) at End of Purge: 3.87
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1520	40 ml	G	3	N	HCl	VOCs
1520	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-14-10

Sample Number:	WG-1620 - MW24A - 011410	Starting Water Level (ft. BMP):	3.72
Sampling Location (well ID, etc.):	MW-24A	Casing Stickup (ft.):	-
Sampled by:	JTB	Starting Water Level (ft. BGL):	3.72
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	20.90
Screened Interval (ft. BGL):		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	-

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	-	Other:	

SAMPLING MEASUREMENTS

1543 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1553		.1	20.4	6.87	1590	1.39	-171	6.4	4.13
1558		↓	20.7	6.81	1610	1.06	-172	2.6	4.16
1603		↓	20.7	6.82	1615	1.05	-172	3.1	4.17

Water Level (ft. BMP) at End of Purge: 4.17 Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1615	40 ml	G	3	N	HCl	VOCs
1615	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-15-10

Sample Number: WG-1620-MW22A-011510		Starting Water Level (ft. BMP):	1.32
Sampling Location (well ID, etc.): MW22A		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	1.32
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	—

SAMPLING MEASUREMENTS

0709 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0719		.1	20.1	6.97	1400	0.72	-243	7.4	1.71
0924		↓	20.3	6.93	1410	0.56	-261	8.6	1.76
0729		↓	20.6	6.94	1430	0.55	-260	8.2	1.76

Water Level (ft. BMP) at End of Purge: 1.76 | Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0800	40 ml	G	3	N	HCl	VOCs
0800	1 L	G	2	N	Neat	SVOCs

Comments: MS/MSD @ the well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-14-10

Sample Number: WG-1620 - FB02 - 011410
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: D.I. water
Purging: — Sampling: —
Disposal of Discharged Water: —

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration:
Conductivity Meter: YSI 556 Field Calibration:
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
—	field blank								

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1645	40 ml	G	3	N	HCl	VOCs
1645	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-15-10

Sample Number: WG-1620-MW22B-011510
Sampling Location (well ID, etc.): MW22B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.27
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.27
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

0827 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0837		.1	19.4	6.94	1365	1.51	-131	8.1	3.49
0842			19.7	6.99	1350	1.18	-86	6.7	3.51
0847		↓	19.8	6.98	1340	1.17	-137	8.2	3.52

Water Level (ft. BMP) at End of Purge: 3.52 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
0900	40 ml	G	3	N	HCl	VOCs
0900	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-15-10

Sample Number: WG-1620-MW25A-011510
Sampling Location (well ID, etc.): MW25A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.84
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.84
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

0933 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0943		.1	21.4	7.45	625	0.71	-86	3.4	7.13
0948			21.7	7.41	630	0.61	-113	4.7	7.16
0953		↓	21.6	7.40	640	0.61	-114	4.8	7.17

Water Level (ft. BMP) at End of Purge: 7.17
Sample Intake Depth (ft. BMP): MIDPOINT OF SCREEN

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1005	40 ml	G	3	N	HCl	VOCS
1005	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-15-10

Sample Number: WG-1620-MW25C-011510
Sampling Location (well ID, etc.): MW25C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 13.68
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 13.68
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst
pH Meter: YSI 556
Conductivity Meter: YSI 556
Filter / Filter Size: —
Thermometer: YSI 556
Field Calibration: 7-4
Field Calibration: 1413
Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1043									
1052		.1	21.4	10.59	2220	0.72	-89	7.9	13.93
1057			21.7	10.71	2160	0.61	-87	6.7	13.95
1102		↓	21.7	10.72	2160	0.59	-87	7.1	13.96

Water Level (ft. BMP) at End of Purge: 13.96
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1115	40 ml	G	3	N	HCl	VOCs
1115	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW15A-011810
Sampling Location (well ID, etc.): MW15A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.64
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 8.64
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0907 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0917	—	.1	23.1	7.07	1130	0.27	-81	3.3	8.86
0922		↓	23.2	7.06	1160	0.23	-186	4.2	8.87
0927		↓	23.2	7.06	1170	0.22	-187	4.1	8.87

Water Level (ft. BMP) at End of Purge: 8.87 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0940	40 ml	G	3	N	HCl	VOCs
0940	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620 - MW15C - 011810
Sampling Location (well ID, etc.): MW15C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 21.88
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 21.88
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: bailer
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0956 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1004	—	.1	21.7	9.31	1130	0.63	-234	8.7	22.13
1011		↓	21.8	9.29	1160	0.61	-231	8.1	22.15
1016		↓	21.8	9.26	1170	0.61	-232	8.2	22.15

Water Level (ft. BMP) at End of Purge: 22.15 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1025	40 ml	G	3	N	HCl	VOCs
1025	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW17-011810 | Starting Water Level (ft. BMP): 21.98

Sampling Location (well ID, etc.): MW17C | Casing Stickup (ft.): —

Sampled by: JTB | Starting Water Level (ft. BGL): 21.98

Measuring Point (MP) of Well: TOC | Total Depth (ft. BGL):

Screened Interval (ft. BGL): — | Casing Diameter (In ID): 2.0

Filter Pack Interval (ft. BGL): — | Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556

pH Meter: YSI 556 | Field Calibration: 7-4

Conductivity Meter: YSI 556 | Field Calibration: 1413

Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

Time (1057)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1107	—	.1	21.1	7.13	1430	0.36	-193	3.4	22.31
1112		↓	21.2	7.16	1460	0.31	-196	4.3	22.33
1117		↓	21.2	7.17	1470	0.30	-197	4.4	22.33

Water Level (ft. BMP) at End of Purge: 22.33 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1125	40 ml	G	3	N	HCl	VOCs
1125	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW17-011810
Sampling Location (well ID, etc.): MW17
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 10.62
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 10.62
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1151 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1201	—	.1	21.9	7.13	910	0.71	-126	6.7	10.86
1206			21.5	7.16	970	0.68	-133	8.3	10.88
1211		↓	21.5	7.16	960	0.67	-136	8.4	10.89

Water Level (ft. BMP) at End of Purge: 10.89 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1220	40 ml	G	3	N	HCl	VOCs
1220	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-18-10

Sample Number: WG-1620-MW16-011810
Sampling Location (well ID, etc.): MW16
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.66
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 8.66
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1257 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1307	—	.1	22.3	6.91	890	0.56	-162	3.3	8.93
1312		1	20.4	6.94	920	0.53	-167	2.7	8.94
1317		↓	20.4	6.95	930	0.52	-166	2.1	8.94

Water Level (ft. BMP) at End of Purge: 8.94 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1325	40 ml	G	3	N	HCl	VOCs
1325	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-18-10

Sample Number: WG-1120-MW55A-011810

Sampling Location (well ID, etc.): MW55A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 10.83

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 10.83

Total Depth (ft. BGL):

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1348 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1358	—	.1	20.7	7.31	1120	0.26	-106	18	11.13
1403		↓	20.6	7.39	1130	0.23	-102	22	11.16
1408		↓	20.7	7.40	1140	0.22	-102	24	11.17

Water Level (ft. BMP) at End of Purge: 11.17 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1415	40 ml	G	3	N	HCl	VOCs
1415	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW19C-011810
Sampling Location (well ID, etc.): MW19C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 24.47
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 24.47
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

1439 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1449	—	.1	20.3	7.47	1610	0.36	-171	34	24.72
1454		↓	20.1	7.46	1570	0.31	-172	31	24.77
1459		↓	20.1	7.46	1580	0.30	-172	30	24.78

Water Level (ft. BMP) at End of Purge: 24.78 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1510	40 ml	G	3	N	HCl	VOCs
1510	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW52A-011810
Sampling Location (well ID, etc.): MW52A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 12.57
Casing Stickup (ft.): -
Starting Water Level (ft. BGL): 12.57
Total Depth (ft. BGL):
Casing Diameter (In ID): 4.0
Casing Volume (gal.): -

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: Done
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

1628 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1538	—	.1	21.1	7.13	1130	0.71	-131	17	12.86
1543			21.3	7.14	1030	0.63	-136	23	12.91
1548		↓	21.3	7.18	1040	0.61	-137	24	12.92

Water Level (ft. BMP) at End of Purge: 12.92 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1600	40 ml	G	3	N	HCl	VOCs
1600	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-18-10

Sample Number: WG-1620-MW23C-011810

Sampling Location (well ID, etc.): MW23C

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 20.29

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 20.29

Total Depth (ft. BGL):

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1621									
1631	—	.1	21.8	7.47	670	0.39	-89	8.6	20.47
1636			21.7	7.46	730	0.36	-116	7.4	20.48
1641		↓	21.7	7.46	740	0.35	-117	7.3	20.48

Water Level (ft. BMP) at End of Purge: 20.48 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1650	40 ml	G	3	N	HCl	VOCs
1650	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-18-10

Sample Number: WG-1620-MW~~80~~A-011810
Sampling Location (well ID, etc.): MW~~80~~A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 16.51
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 16.51
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1721									
1731	—	.1	21.6	6.79	810	0.36	-196	27	16.71
1736		↓	21.7	6.81	870	0.28	-193	23	16.73
1741		↓	21.7	6.81	860	0.27	-193	24	16.74

Water Level (ft. BMP) at End of Purge: 16.74
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1750	40 ml	G	3	N	HCl	VOCs
1750	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-18-10

Sample Number: WG-1620-FB03-011810
Sampling Location (well ID, etc.): FB03
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: DI rinse
Purging: — Sampling: —
Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration:
Conductivity Meter: YSI 556 Field Calibration:
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
field blank									

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1815	40 ml	G	3	N	HCl	VOCs
1815	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-19-10

Sample Number: WG-1620-MW-18C-011910

Sampling Location (well ID, etc.): MW18C

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 22.56

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 22.56

Total Depth (ft. BGL):

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0631									
0641		.1	21.8	8.61	1680	0.33	-186	6.7	22.81
0646		.1	22.3	8.57	1630	0.21	-193	6.2	22.83
0651		.1	22.4	8.56	1620	0.20	-194	6.2	22.83

Water Level (ft. BMP) at End of Purge: 22.83 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0700	40 ml	G	3	N	HCl	VOCs
0700	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-MW14-011910
Sampling Location (well ID, etc.): MW-14
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.24
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 8.24
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0731 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0741		.1	22.7	11.36	1530	2.16	-176	6.7	8.52
0746		1	22.4	11.41	1560	2.03	-181	8.3	8.53
0751		↓	22.4	11.42	1570	2.02	-182	8.6	8.53

Water Level (ft. BMP) at End of Purge: 8.53 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0810	40 ml	G	3	N	HCl	VOCs
0810	1 L	G	2	N	Neat	SVOCs

Comments: (A) WG-1620-FD02-011910
duplicate @ this well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-MW-39B-011910
Sampling Location (well ID, etc.): MW-39B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.61
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 5.61
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0837 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0847		.1	21.7	6.74	1370	0.63	-261	16	5.91
0852		↓	21.6	6.79	1390	0.61	-271	21	5.93
0857		↓	21.6	6.79	1390	0.61	-270	22	5.94

Water Level (ft. BMP) at End of Purge: 5.94
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0905	40 ml	G	3	N	HCl	VOCs
0905	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-19-10

Sample Number:	WG-1620-MW12C-011910	Starting Water Level (ft. BMP):	23.03
Sampling Location (well ID, etc.):	MW12C	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	23.03
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	—

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0932									
0942		.1	21.9	11.07	1730	1.03	-216	18	23.34
0947		↓	22.1	11.16	1710	0.93	-222	16	23.35
0952		↓	22.7	11.17	1710	0.92	-223	16	23.35

Water Level (ft. BMP) at End of Purge: 23.35 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1000	40 ml	G	3	N	HCl	VOCs
1000	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-19-10

Sample Number: WG-1620-MW12A-011910
Sampling Location (well ID, etc.): MW12A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.47
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 5.47
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1029									
1039		.1	21.7	6.98	720	0.26	-291	4.7	5.69
1044		↓	21.8	6.92	740	0.23	-292	5.16	5.68
1049		↓	21.8	6.93	740	0.23	-292	5.15	5.68

Water Level (ft. BMP) at End of Purge: 5.68
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1100	40 ml	G	3	N	HCl	VOCs
1100	1 L	G	2	N	Neat	SVOCs

Comments:

Pastor, Behling & Wheeler, LLC
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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-TW41B-011910
Sampling Location (well ID, etc.): TW41B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.86
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.86
Total Depth (ft. BGL):
Casing Diameter (In ID): 4.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: bare
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst
pH Meter: YSI 556
Conductivity Meter: YSI 556
Filter / Filter Size:
Thermometer: YSI 556
Field Calibration: 7-4
Field Calibration: 1413
Other:

SAMPLING MEASUREMENTS

1127 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1132		.1	21.7	7.18	1830	0.71	-137	16	4.99
1142		↓	21.3	7.21	1860	0.63	-142	18	5.03
1147		↓	21.4	7.22	1860	0.62	-141	18	5.04

Water Level (ft. BMP) at End of Purge: 5.04
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1155	40 ml	G	3	N	HCl	VOCs
1155	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-MW13-011910		Starting Water Level (ft. BMP):	9.22
Sampling Location (well ID, etc.): MW-13		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	9.22
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	—

SAMPLING MEASUREMENTS

1312 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1322		.1	21.7	6.67	1060	0.74	-231	8.7	9.49
1327		↓	21.6	6.68	1080	0.68	-237	9.2	9.51
1332		↓	21.6	6.68	1080	0.68	-236	9.2	9.51

Water Level (ft. BMP) at End of Purge: 9.51 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1340	40 ml	G	3	N	HCl	VOCs
1340	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-MW40B-011910		Starting Water Level (ft. BMP):	5.37
Sampling Location (well ID, etc.): MW40B		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	5.37
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: Same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1407 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1417		.1	22.3	6.79	1730	0.53	-219	10.3	5.67
1422		↓	22.1	6.74	1720	0.51	-234	16	5.69
1427		↓	22.1	6.75	1720	0.51	-235	17	5.68

Water Level (ft. BMP) at End of Purge: 5.68 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1435	40 ml	G	3	N	HCl	VOCs
1435	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-19-10

Sample Number: WG-1620-MW42B-011910
Sampling Location (well ID, etc.): MW-42B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.02
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.02
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1511 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1521		.1	21.3	7.13	1090	0.60	-93	13	6.23
1526		↓	20.7	7.16	1120	0.43	-97	16	6.24
1531		↓	20.8	7.17	1130	0.42	-97	16	6.24

Water Level (ft. BMP) at End of Purge: 6.24
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1540	40 ml	G	3	N	HCl	VOCs
1540	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-19-10

Sample Number: WG-1620-FB04-011910 | Starting Water Level (ft. BMP): NA

Sampling Location (well ID, etc.): FB04 | Casing Stickup (ft.):

Sampled by: JTB | Starting Water Level (ft. BGL):

Measuring Point (MP) of Well: TOC | Total Depth (ft. BGL):

Screened Interval (ft. BGL): | Casing Diameter (In ID):

Filter Pack Interval (ft. BGL): | Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: D.I rinse

Purging: — | Sampling: —

Disposal of Discharged Water: —

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556

pH Meter: YSI 556 | Field Calibration: 7-4

Conductivity Meter: YSI 556 | Field Calibration: 1413

Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge: | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1610	40 ml	G	3	N	HCl	VOCs
1610	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-MW57A-012010 Starting Water Level (ft. BMP): 9.78

Sampling Location (well ID, etc.): MW57A Casing Stickup (ft.): -

Sampled by: JTB Starting Water Level (ft. BGL): 9.78

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL):

Screened Interval (ft. BGL): — Casing Diameter (In ID): 2.0

Filter Pack Interval (ft. BGL): — Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0634 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0644		.1	20.7	6.71	1080	0.61	-191	18	10.03
0649			20.9	6.72	1030	0.53	-196	13	10.04
0654		↓	20.9	6.72	1020	0.52	-197	14	10.04

Water Level (ft. BMP) at End of Purge: 10.04 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0700	40 ml	G	3	N	HCl	VOCs
0700	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 1-20-10

Sample Number: WG-1620-TW56A-012010		Starting Water Level (ft. BMP):	14.53
Sampling Location (well ID, etc.): TW56A		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	14.53
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0838		.1	20.6	7.46	1320	0.71	-86	8.2	14.67
0843		↓	20.7	7.47	1340	0.32	-89	8.3	14.68
0848		↓	20.7	7.47	1340	0.31	-89	8.3	14.68

Water Level (ft. BMP) at End of Purge: 14.68 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0900	40 ml	G	3	N	HCl	VOCs
0900	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 1-20-10

Sample Number: WG-1620-MW58A-012010
Sampling Location (well ID, etc.): MW58A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 12.29
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 12.29
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: | Other:

SAMPLING MEASUREMENTS

0134 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0744		.1	22.7	6.89	860	0.42	-157	8.7	12.46
0749		↓	22.6	6.89	870	0.36	-161	6.7	12.47
0754		↓	22.7	6.89	860	0.32	-162	7.1	12.47

Water Level (ft. BMP) at End of Purge: 12.47 | Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0800	40 ml	G	3	N	HCl	VOCs
0800	1 L	G	2	N	Neat	SVOCs

Comments:

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WATER LEVEL MONITORING RECORD

DATE: 7 | 12 | 10

Project No. 1358 | Project Name: Houston Wood Preserving Works | PAGE 1 of 4

Weather Conditions: SUNNY, 95°

Measuring Device: SOLINST | Datum (MSL, NGVD, etc.):

Observations/Comments:

Well ID	Time	MP Elevation (ft.)	Depth to Product (ft. BMP)	Depth to Water (ft. BMP)	Conversions or Corrections	PSH Thickness (ft.)	Remarks TOTAL DEPTH	Measured By
MW-01A				3.87				JB
MW-02				4.37				
MW-07				4.72				
MW-08				4.96				
MW-10A				5.23				
MW-10B				5.33				
MW-11A				5.51				
MW-11B				5.67				
P-10				2.06				
P-12				3.93				
MW-03				3.86			18.55	
MW-04				5.02			24.10	
MW-05				4.86			27.45	
MW-09				4.32			25.30	
MW-12A				9.72			32.35	
MW-12B			44.25	7.47			48.10	
MW-12C				23.91			75.60	
MW-13				11.12			26.10	
MW-14				10.54			44.60	
MW-15A				10.81			30.05	
MW-15C				23.08			68.65	
MW-16				10.31			28.80	
MW-17				12.96			33.30	
MW-17C				23.03			75.20	
MW-18A				18.11			35.55	
MW-18C				23.77			62.00	
MW-19C				25.67			76.00	
MW-20A				10.62			28.15	
MW-21C				23.01			75.90	

Measured By: John Beaupt

Checked By:

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WATER LEVEL MONITORING RECORD

DATE: 7/12/10

Project No. 1358 | Project Name: Houston Wood Preserving Works | PAGE 2 of 4

Weather Conditions: Sunny, 95°

Measuring Device: SOLINST | Datum (MSL, NGVD, etc.):

Observations/Comments:

WELL ID			DEPTH TO PRODUCT	DEPTH TO WATER	TOTAL DEPTH		REMARKS	
MW-22A				6.52	19.80			JB
MW-22B				6.21	36.65			
MW-23C			72.40	21.41	72.70			
MW-24AR				4.29	20.90			
MW-24B				12.82	48.80			
MW-24C				20.44	72.45			
MW-25A				7.78	28.80			
MW-25C				16.05	62.00			
MW-26A				8.12	26.20			
MW-27A				5.31	26.90			
MW-27C				16.12	71.60			
MW-28A				8.66	25.90			
MW-28C				15.89	86.34			
MW-29A				3.62	21.50			
MW-29B				19.29	50.10			
MW-29C				21.32	72.75			
MW-30A				12.61	35.10			
MW-31A				14.06	34.60			
MW-32A			29.45	6.12	32.40			
MW-33A				7.61	25.20			
MW-33B				7.02	hard @	32.10		
MW-34C				NM	NM			
MW-35A				6.04	28.20			
MW-35B				6.39	43.05			
MW-36A				9.14	27.80			
MW-38A				6.42	22.15			
MW-38B				5.72	37.65			
MW-39B				9.31	41.35			
MW-40B				9.17	42.80			
MW-41B			38.45	6.32	42.75			
MW-42B				7.13	42.50			

Measured By: John Black

Checked By:

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WATER LEVEL MONITORING RECORD

DATE: 7/12/10

Project No. 1358 | Project Name: Houston Wood Preserving Works | PAGE 3 of 4

Weather Conditions: Sunny, 95°

Measuring Device: SOLINST | Datum (MSL, NGVD, etc.):

Observations/Comments:

WELL ID	DEPTH TO PRODUCT	DEPTH TO WATER	TOTAL DEPTH	REMARKS
MW-44A		11.24	28.00	JB
MW-44C	70.35	16.91	70.80	
MW-45C	68.80	16.61	70.30	
MW-46C	72.25	16.29	72.90	
MW-47C		18.33	70.40	
MW-48C		17.42	72.50	
MW-49A		11.62	38.04	
MW-50A		8.74	24.76	
MW-51A		9.16	24.81	
MW-52A		14.19	31.26	
MW-53C		15.71	70.25	
MW-54C		16.49	72.05	
P-11		6.78	42.10	
MW-55A		12.72	27.47	
MW-59A		9.97	20.55	
MW-61A		8.09	21.22	
MW-60A		8.61	28.38	
MW-64A		6.82	22.20	
TW-56A		15.78	25.05	
MW-57A	24.55	8.56	27.10	
MW-58A		14.03	28.70	
MW-62B		5.79	35.35	
MW-63B		5.71	36.25	
MW-49B		11.36	34.75	
TW-41B		6.12	42.40	
MW-59D		82.16	118.50	
MW-65D		84.39	103.60	
MW-66D		84.86	109.95	

Measured By: John Brayh

Checked By:

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WATER LEVEL MONITORING RECORD

DATE: 7/12/10

Project No. 1358 | Project Name: Houston Wood Preserving Works | PAGE 4 of 4

Weather Conditions: Sunny, 95°

Measuring Device: SOLINST | Datum (MSL, NGVD, etc.):

Observations/Comments:

WELL ID			DEPTH TO PRODUCT	DEPTH TO WATER	TOTAL DEPTH			
~~MW-26C~~				—				JB
MW-36B				1.32				
MW-36D				85.39				
MW-59B				7.43				
MW-67D				5.76				
MW-69A				11.81				
MW-68C				16.52				

Measured By: John Blayk

Checked By:

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Round Rock Texas
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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-SMJFB-20100714
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: NA
Purging: Sampling: NA
Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration:
Conductivity Meter: YSI 556 Field Calibration:
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
field blank									

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
	40 ml	G	3	N	HCl	
1430	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-SMVX2-20100714 Starting Water Level (ft. BMP): NA

Sampling Location (well ID, etc.): MW-SMVX2 Casing Stickup (ft.):

Sampled by: JTB DUPLICATE AT MW01A Starting Water Level (ft. BGL):

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL):

Screened Interval (ft. BGL): — Casing Diameter (In ID):

Filter Pack Interval (ft. BGL): — Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment:

Purging: Sampling:

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration:

Conductivity Meter: YSI 556 Field Calibration:

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	duplicate @			MW01A					

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
	40 ml	G	3	N	HCl	
1415	1 L	G	2	N	Neat	SVOC

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-MW01A-20100714
Sampling Location (well ID, etc.): MW01A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.87
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.87
Total Depth (ft. BGL): —
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1336 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1346	—	.2	24.1	6.84	1310	0.82	-96	6.2	4.06
1351			24.2	6.86	1370	0.81	-101	6.9	4.07
1356			24.2	6.85	1380	0.81	-102	6.9	4.07

Water Level (ft. BMP) at End of Purge: 4.07 Sample Intake Depth (ft. BMP): 2' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~1415~~	~~40 ML~~	~~G~~	~~8~~	~~N~~	~~HCL~~	
1415	1 L	G	2	N	Neat	SVOC

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-MW02-20100714
Sampling Location (well ID, etc.): MW-02
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.37
Casing Stickup (ft.): ~
Starting Water Level (ft. BGL): 4.37
Total Depth (ft. BGL): ~
Casing Diameter (In ID): ~
Casing Volume (gal.): ~

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1218 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1228	—	1	24.2	6.93	1330	1.12	-96	5.2	
1233		1	24.3	6.96	1340	1.06	-92	4.7	
1238		1	24.3	6.97	1340	1.04	-92	4.9	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
~~1250~~	~~40 ml~~	~~G~~	~~2~~	~~N~~	~~Neat~~	
1250	1 L	G	2	N	Neat	SVOC

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number:	WG-1620-MW08-20100714	Starting Water Level (ft. BMP):	4.96
Sampling Location (well ID, etc.):	MW08	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.96
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1016 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1027	—	.2	23.9	6.84	1260	0.76	-52	8.3	
1032		↓	24.2	6.87	1240	0.68	-67	8.9	
1037		↓	24.2	6.89	1230	0.67	-68	7.6	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
~~1050~~	~~40 mL~~	~~G~~	~~2~~	~~N~~	~~HCl~~	
1050	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-MW07-20100714
Sampling Location (well ID, etc.): MW07
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 4.73
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 4.73
Total Depth (ft. BGL):
Casing Diameter (In ID): 4.0
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: Dave
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0902 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0911	—	.1	24.1	6.91	1230	0.67	-76	6.2	
0916		↓	24.3	6.87	1260	0.61	-81	7.9	
0921		↓	24.3	6.86	1270	0.62	-82	8.3	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
~~0930~~	~~40 ml~~	~~G~~	~~6~~	~~N~~	~~HCl~~	
0930	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: W6-1620-SMVX-1-20100714 Starting Water Level (ft. BMP): NA

Sampling Location (well ID, etc.): DUPLICATE AT P10 Casing Stickup (ft.):

Sampled by: JTB Starting Water Level (ft. BGL):

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL):

Screened Interval (ft. BGL): Casing Diameter (In ID):

Filter Pack Interval (ft. BGL): Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: NA Sampling: NA

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration:

Conductivity Meter: YSI 556 Field Calibration:

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	duplicate		@	P10					

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
	~~1 L~~	G	~~2~~	N	~~Neat~~	
0840	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-P10-20100714
Sampling Location (well ID, etc.): P10
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 2.06
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 2.06
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0803 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0812		.2	24.1	6.89	1120	1.09	-107	9.3	
0816		"	24.3	6.92	1170	0.92	-111	7.4	
0821		"	24.2	6.93	1180	0.91	-112	7.7	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP): 45

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
~~0840~~	~~1 L~~	~~G~~	~~2~~	~~N~~	~~Neat~~	
0840	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-14-10

Sample Number: WG-1620-P12-20100714

Sampling Location (well ID, etc.): P12

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 3.93

Casing Stickup (ft.): --

Starting Water Level (ft. BGL): 3.93

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other: —

SAMPLING MEASUREMENTS

0652 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0702		.2	24.1	6.72	1320	0.86	-77	8.1	4.51
0707		↓	24.3	6.74	1360	0.78	-73	5.7	4.52
0712		↓	24.3	6.74	1370	0.77	-74	6.2	4.52

Water Level (ft. BMP) at End of Purge: 4.52 Sample Intake Depth (ft. BMP): 45

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
0740	1 L	G	2	N	Neat	SVOCS

Comments: MS/MSD @ this well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-13-10

Sample Number: WG-1620-MW10B-20100713		Starting Water Level (ft. BMP):	5.33
Sampling Location (well ID, etc.): MW 10B		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	5.33
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	47.15
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

1609 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1619	—	.1	23.9	6.74	1260	0.86	-103	3.9	5.51
1624		.1	24.4	6.79	1220	0.79	-106	4.7	5.52
1629		.1	24.3	6.81	1230	0.78	-107	4.8	5.52

Water Level (ft. BMP) at End of Purge: 5.52 Sample Intake Depth (ft. BMP): 40

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~1600~~	~~40 mL~~	~~G~~	~~2~~	~~N~~	~~HCl~~	
1645	1 L	G	2	N	Neat	SVOC

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-13-10

Sample Number: WG-1620-MW10A-20100713
Sampling Location (well ID, etc.): MW10A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.23
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 5.23
Total Depth (ft. BGL): 24.20
Casing Diameter (In ID): 4.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: Dave
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1513 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1523	—	.1	24.1	6.93	1060	0.79	-67	5.2	5.56
1528		.1	24.2	6.96	1030	0.71	-71	5.9	5.57
1533		.1	24.2	6.97	1040	0.69	-72	5.7	5.57

Water Level (ft. BMP) at End of Purge: 5.57 Sample Intake Depth (ft. BMP): 18

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
~~1535~~	~~40 ml~~	~~G~~	~~3~~	~~N~~	~~HCl~~	
1545	1 L	G	2	N	Neat	SVOC

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-13-10

Sample Number: WG-1620-MW-11B-20100713

Sampling Location (well ID, etc.): MW-11B

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.67

Casing Stickup (ft.): -

Starting Water Level (ft. BGL): 5.67

Total Depth (ft. BGL): 45.20

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1419 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1429	—	.1	23.7	6.89	1320	0.46	-96	7.3	5.86
1434		.1	23.8	6.86	1340	0.41	-91	8.6	5.87
1439		↓	23.8	6.87	1350	0.40	-92	8.9	5.87

Water Level (ft. BMP) at End of Purge: 5.87 Sample Intake Depth (ft. BMP): 40

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
~~1500~~	~~40 mL~~	~~G~~	~~6~~	~~N~~	~~HCl~~	
1500	1 L	G	2	N	Neat	SVOC

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 7-13-10

Sample Number:	WG-1620-MW11A-20100713	Starting Water Level (ft. BMP):	5.51
Sampling Location (well ID, etc.):	MW-11A	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	5.51
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	23.10
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: Peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	—

SAMPLING MEASUREMENTS

1310 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1320	—	.1	24.2	6.79	1620	0.61	-87	6.1	5.72
1325		.1	24.7	6.84	1670	0.53	-92	5.2	5.71
1330		↓	24.6	6.85	1680	0.52	-93	5.7	5.71

Water Level (ft. BMP) at End of Purge: 5.71 | Sample Intake Depth (ft. BMP): 17

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
[illegible]	[illegible]	G	2	N	HCl	
1350	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-1-10

Sample Number: WG-1620-FB-7-20100701
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP):
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment:
Purging: Sampling:
Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration:
Conductivity Meter: YSI 556 Field Calibration:
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1200	40 ml	G	3	N	HCl	VOCs
1200	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-1-10

Sample Number: WG-1620-MW61A-20100701
Sampling Location (well ID, etc.): MW61A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.09
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 8.09
Total Depth (ft. BGL): —
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other: —

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1122									
1127	—	1	25.7	6.79	3420	0.72	-217	14	
1132		1	25.2	6.84	3510	0.52	-201	8.6	
1137		1	25.2	6.84	3520	0.51	-202	7.9	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP): 18

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1145	40 ml	G	3	N	HCl	VOCs
1145	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-1-10

Sample Number: WG-1620-MW66D-20100701
Sampling Location (well ID, etc.): MW-66D
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 84.86
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 84.86
Total Depth (ft. BGL): —
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1031 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1038	—	.1	25.1	7.06	1860	1.17	-117	8.1	
1042			25.3	7.07	1870	1.06	-112	6.1	
1047		↓	25.4	7.04	1870	1.04	-111	6.7	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1100	40 ml	G	3	N	HCl	VOCs
1100	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 7-1-10

Sample Number: WG-1620-MW59D-20100701		Starting Water Level (ft. BMP):	82.16
Sampling Location (well ID, etc.): MW59D		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	82.16
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0947 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0952	—	.1	26.1	6.86	2120	0.81	-172	6.1	
0957			26.3	6.91	2160	0.63	-177	5.1	
1002		↓	26.3	6.91	2170	0.62	-178	5.7	

Water Level (ft. BMP) at End of Purge: | Sample Intake Depth (ft. BMP): 115

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1010	40 ml	G	3	N	HCl	VOCs
1010	1 L	G	2	N	Neat	SVOCs

Comments: DUPLICATE
WG-1620-MW53-20100701

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 7-1-10

Sample Number: WG-1620-MW35B-20100630
Sampling Location (well ID, etc.): MW 35B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.39
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.39
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

0656 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0706	—	.1	23.4	6.96	1110	0.76	-86	7.9	6.56
0711		.1	23.5	6.92	1120	0.72	-84	7.2	6.61
0716		.1	23.5	6.91	1120	0.71	-84	7.1	6.62

Water Level (ft. BMP) at End of Purge: 6.62 | Sample Intake Depth (ft. BMP): 40

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0730	40 ml	G	3	N	HCl	VOCs
0730	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-1-10

Sample Number: WG-1620-MW65D-20100701	Starting Water Level (ft. BMP): 84.39
Sampling Location (well ID, etc.): MW-65D	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 84.39
Measuring Point (MP) of Well: TOC	Total Depth (ft. BGL): —
Screened Interval (ft. BGL): —	Casing Diameter (In ID): —
Filter Pack Interval (ft. BGL): —	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time (0842)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0847	—	.1	24.1	7.12	870	0.52	-63	8.6	
0852		"	23.7	7.07	880	0.41	-67	7.1	
0857		"	23.8	7.06	870	0.40	-67	7.3	

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP): 105

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0910	40 ml	G	3	N	HCl	VOCs
0910	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-1-10

Sample Number: WG-1620-MW32A-20100701

Sampling Location (well ID, etc.): MW 32A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.12

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 6.12

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0743 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0753	—	.1	23.6	6.74	1130	0.76	-103	6.9	6.31
0758		.1	23.7	6.78	1160	0.71	-104	7.4	6.32
0803		.1	23.7	6.79	1170	0.72	-104	7.6	6.31

Water Level (ft. BMP) at End of Purge: 6.31

Sample Intake Depth (ft. BMP): 30

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0815	40 ml	G	3	N	HCl	VOCs
0815	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-FB6-20100630
Sampling Location (well ID, etc.): FIELD BLANK #6
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: —
Purging: — Sampling: D.I water
Disposal of Discharged Water: —

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: —
Conductivity Meter: YSI 556 Field Calibration: —
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1645	40 ml	G	3	N	HCl	VOCs
1645	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-MW35A-20100630
Sampling Location (well ID, etc.): MW35A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.04
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.04
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1536 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1546	—	.1	24.1	6.74	890	0.61	-101	12	
1551		.1	23.7	6.77	890	0.53	-104	9.6	
1556		.1	23.6	6.78	910	0.52	-105	9.4	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP): 23

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1605	40 ml	G	3	N	HCl	VOCs
1605	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-MW27C-20100630
Sampling Location (well ID, etc.): MW-27C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 16.12
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 16.12
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: Same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

Time (1418)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1428	—	.1	23.6	6.83	1160	0.89	-109	6.1	16.27
1433		1	23.7	6.89	1140	0.83	-113	5.3	16.28
1438		↓	23.7	6.91	1130	0.84	-114	5.3	16.28

Water Level (ft. BMP) at End of Purge: 16.28 Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1450	40 ml	G	3	N	HCl	VOCs
1450	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-30-10

Sample Number:	WG-1620-MW28C-20100630	Starting Water Level (ft. BMP):	15.89
Sampling Location (well ID, etc.):	MW28C	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	15.89
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1325	—	.1	23.9	6.96	1210	0.73	-81	6.1	16.17
1330			23.8	6.97	1230	0.67	-86	5.2	16.21
1335		↓	23.8	6.97	1240	0.68	-88	5.7	16.20

Water Level (ft. BMP) at End of Purge: 16.20 | Sample Intake Depth (ft. BMP): 85

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1345	40 ml	G	3	N	HCl	VOCs
1345	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-MW28A-20100630		Starting Water Level (ft. BMP):	8.66
Sampling Location (well ID, etc.): MW28A		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	8.66
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

1226 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1236	—	.1	23.6	6.79	1260	1.07	-57	16	8.84
1241		.1	23.7	6.84	1210	0.98	-61	8.1	8.85
1246		.1	23.7	6.84	1220	0.97	-62	8.6	8.85

Water Level (ft. BMP) at End of Purge: 8.85 Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
1200	40 ml	G	3	N	HCl	VOCs
1300	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-MW63B-20100630		Starting Water Level (ft. BMP):	5.71
Sampling Location (well ID, etc.): MW-63B		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	5.71
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	-
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	-

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1133									
1138	—	.1	23.4	6.86	1260	0.72	-101	16	6.67
1146		.1	23.7	6.84	1270	0.68	-103	17	6.73
1153		.1	23.7	6.83	1270	0.67	-104	17	6.74

Water Level (ft. BMP) at End of Purge: 6.74 Sample Intake Depth (ft. BMP): 32

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1200	40 ml	G	3	N	HCl	VOCs
1200	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-1620-MW54C-20100630		Starting Water Level (ft. BMP):	16.49
Sampling Location (well ID, etc.): MW54C		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	16.49
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

1039 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1048	—	.1	24.1	6.91	1170	1.16	-72	18	
1053			23.6	6.94	1190	1.04	-77	7.9	
1056		↓	23.6	6.95	1190	1.03	-78	8.4	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1105	40 ml	G	3	N	HCl	VOCs
1105	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-30-10

Sample Number: WG-1620-MW53C-20100630		Starting Water Level (ft. BMP):	15.71
Sampling Location (well ID, etc.): MW 53C		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	15.71
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	—
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7.4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0937 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0946	—	.1	23.7	6.77	1080	0.81	-83	5.7	
0950			23.9	6.81	1050	0.76	-86	6.2	
0957		↓	23.9	6.82	1060	0.77	-87	5.8	

Water Level (ft. BMP) at End of Purge: | Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1010	40 ml	G	3	N	HCl	VOCs
1010	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: W6-1620-MW44A-20100630
Sampling Location (well ID, etc.): MW44A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 11.24
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 11.24
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0819 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0829	—	.1	23.6	6.71	920	0.93	-112	12	11.46
0834		.1	23.5	6.78	970	0.91	-116	9.6	11.47
0839		.1	23.5	6.78	960	0.91	-117	8.4	11.47

Water Level (ft. BMP) at End of Purge: 11.47 Sample Intake Depth (ft. BMP): 24

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0850	40 ml	G	3	N	HCl	VOCs
0850	1 L	G	2	N	Neat	SVOCs

Comments: MS/MSD @ this well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-30-10

Sample Number: WG-11620-MW25A-20100630

Sampling Location (well ID, etc.): MW25A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 7.78

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 7.78

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0721 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0731	—	.1	23.4	6.86	1130	0.84	-67	16	8.03
0736		.1	23.5	6.81	1160	0.79	-71	12	8.05
0741		.1	23.5	6.82	1170	0.78	-72	11	8.06

Water Level (ft. BMP) at End of Purge: 8.06 Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0750	40 ml	G	3	N	HCl	VOCs
0750	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG-1620-FBS-20100629
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: —
Purging: — Sampling: D.I water
Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1645	40 ml	G	3	N	HCl	VOCs
1645	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-29-10

Sample Number: WG-1620-MW36A-20100629
Sampling Location (well ID, etc.): MW-36A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.14
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 9.14
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1541									
1551	—	.1	24.1	6.89	1180	1.09	-72	16	9.38
1556		1	23.8	6.92	1150	1.03	-76	12	9.39
1602		↓	23.8	6.93	1140	1.02	-77	12	9.39

Water Level (ft. BMP) at End of Purge: 9.39
Sample Intake Depth (ft. BMP): 24

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
1615	40 ml	G	3	N	HCl	VOCs
1615	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-29-10

Sample Number:	WG-1620-MW24AR-20100629	Starting Water Level (ft. BMP):	4.29
Sampling Location (well ID, etc.):	MW-24AR	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	4.29
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1422									
1432	—	.1	23.7	6.71	970	0.71	-101	11	4.61
1437		.1	23.6	6.73	960	0.63	-104	9.3	4.62
1442		↓	23.6	6.72	960	0.62	-105	8.7	4.61

Water Level (ft. BMP) at End of Purge: 4.61 | Sample Intake Depth (ft. BMP): 16

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1500	40 ml	G	3	N	HCl	VOCs
1500	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-29-10

Sample Number: WG-1620-MW24B-20100629
Sampling Location (well ID, etc.): MW-24B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 12.82
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 12.82
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

1326 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1336	—	.1	23.9	6.91	1020	1.16	-66	3.6	13.13
1341		↓	24.2	6.87	1040	1.06	-68	5.2	13.14
1346		↓	24.2	6.86	1040	1.05	-68	5.7	13.14

Water Level (ft. BMP) at End of Purge: 13.14
Sample Intake Depth (ft. BMP): 45

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1400	40 ml	G	3	N	HCl	VOCs
1400	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG-1620-MW24C-20100629
Sampling Location (well ID, etc.): MW24C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 20.44
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 20.44
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time (1233)	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1243	—	.1	24.4	6.81	1160	0.86	-86	16	20.59
1248			24.3	6.87	1120	0.81	-91	12	20.58
1253		↓	24.3	6.87	1130	0.80	-92	11	20.58

Water Level (ft. BMP) at End of Purge: 20.58 Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1300	40 ml	G	3	N	HCl	VOCs
1300	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG1620-MW22A-20100629
Sampling Location (well ID, etc.): MW22A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.52
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.52
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1127 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1137	—	.1	24.3	6.76	1190	0.69	-134	12	6.81
1142		.1	24.1	6.78	1160	0.61	-139	8.7	6.80
1147		.1	24.2	6.79	1170	0.60	-138	9.1	6.80

Water Level (ft. BMP) at End of Purge: 6.80 Sample Intake Depth (ft. BMP): 20

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1200	40 ml	G	3	N	HCl	VOCs
1200	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG 1620 - MW22B - 20100629
Sampling Location (well ID, etc.): MW-22B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.21
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.21
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time (1046)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1056	—	.1	23.9	6.83	1060	1.16	-82	13	6.42
1101		↓	24.1	6.87	1030	1.02	-86	16	6.44
1106		↓	24.2	6.87	1040	1.03	-87	14	6.45

Water Level (ft. BMP) at End of Purge: 6.45 Sample Intake Depth (ft. BMP): 33

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1115	40 ml	G	3	N	HCl	VOCs
1115	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-29-10

Sample Number: WG-1620-MW38B-20100629		Starting Water Level (ft. BMP):	5.72
Sampling Location (well ID, etc.): MW38B		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	5.72
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	-
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time (0956)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1006	—	.1	23.6	6.84	1260	0.86	-67	13	5.97
1011		.1	23.7	6.82	1230	0.79	-72	10	5.98
1016		.1	23.7	6.81	1240	0.78	-73	10	5.98

Water Level (ft. BMP) at End of Purge: 5.98 | Sample Intake Depth (ft. BMP): 32

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1025	40 ml	G	3	N	HCl	VOCs
1025	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG-1620-MW38A-20100629
Sampling Location (well ID, etc.): MW38A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.42
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.42
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0912 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0922	—	.1	23.9	6.84	1210	0.92	-122	6.1	6.69
0927		.1	23.8	6.89	1240	0.82	-127	4.7	6.70
0932		.1	23.9	6.88	1240	0.85	-128	5.2	6.70

Water Level (ft. BMP) at End of Purge: 6.70
Sample Intake Depth (ft. BMP): 17

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0940	40 ml	G	3	N	HCl	VOCs
0940	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-29-10

Sample Number: WG-1620-MW33B-20100629

Sampling Location (well ID, etc.): MW-33B

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 7.02

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 7.02

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0818 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0828	—	1	24.1	6.91	1310	1.13	-76	8.2	7.39
0833		1	23.7	6.91	1360	1.06	-71	8.6	7.41
0838		1	23.8	6.97	1350	1.05	-72	8.7	7.41

Water Level (ft. BMP) at End of Purge: 7.41 Sample Intake Depth (ft. BMP): 37

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0845	40 ml	G	3	N	HCl	VOCs
0845	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-29-10

Sample Number: WG-1620-MW33A-20100629
Sampling Location (well ID, etc.): MW33A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): ~~[illegible]~~ | ~~[illegible]~~ —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 7.61
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 7.61
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other: —

SAMPLING MEASUREMENTS

0716 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0726	—	.1	24.3	6.79	1160	0.72	-107	6.2	7.96
0731		↓	24.6	6.77	1190	0.61	-111	5.2	8.01
0736		↓	24.7	6.76	1190	0.59	-112	5.7	8.01

Water Level (ft. BMP) at End of Purge: 8.01
Sample Intake Depth (ft. BMP): 20

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0745	40 ml	G	3	N	HCl	VOCs
0745	1 L	G	2	N	Neat	SVOCs

Comments: (A) duplicate @ this well

(A) WG-1620-MWX2-20100629

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-25-10

Sample Number: W6-1620-- FB4-20100625
Sampling Location (well ID, etc.): [redacted] - FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: —
Purging: — Sampling: D.I water
Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: —
Conductivity Meter: YSI 556 Field Calibration: —
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	Field blank								

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1030	40 ml	G	3	N	HCl	VOCs
1030	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-25-10

Sample Number: WG-1620-MW26A-20100625		Starting Water Level (ft. BMP):	8.12
Sampling Location (well ID, etc.): MW-26A		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	8.12
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0926 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0936	—	.1	24.2	6.84	960	0.61	-77	6.7	8.47
0941		↓	24.3	6.86	980	0.46	-81	9.1	8.46
0946		↓	24.3	6.87	980	0.45	-82	9.2	8.46

Water Level (ft. BMP) at End of Purge: 8.46 | Sample Intake Depth (ft. BMP): 23

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1000	40 ml	G	3	N	HCl	VOCs
1000	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-25-10

Sample Number: WG-1620-MW50A-20100625
Sampling Location (well ID, etc.): MW50A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.74
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 8.74
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0814 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0826	—	.1	23.9	6.84	1010	0.71	-72	13	9.13
0831			23.6	6.86	1040	0.62	-77	10	9.14
0836		↓	23.7	6.87	1050	0.61	-76	9.6	9.14

Water Level (ft. BMP) at End of Purge: 9.14 Sample Intake Depth (ft. BMP): 20

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0845	40 ml	G	3	N	HCl	VOCs
0845	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-25-10

Sample Number: WG-1620-MW49A-20100625
Sampling Location (well ID, etc.): MW49A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 11.62
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 11.62
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0713 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0723	—	1	23.9	6.71	1160	0.93	-109	5.7	11.89
0728		1	24.1	6.74	1190	0.87	-112	6.9	11.91
0733		1	24.2	6.75	1190	0.86	-113	7.1	11.91

Water Level (ft. BMP) at End of Purge: 11.91
Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0945	40 ml	G	3	N	HCl	VOCs
0745	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-FB3-20100624
Sampling Location (well ID, etc.): FIELD BLANK
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. BGL):
Casing Diameter (In ID):
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: new equipment
Purging: — Sampling: DI water
Disposal of Discharged Water: —

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	Field Blank								

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1615	40 ml	G	3	N	HCl	VOCs
1615	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW51A-20100624
Sampling Location (well ID, etc.): MW51A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.16
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 9.16
Total Depth (ft. BGL): —
Casing Diameter (In ID): —
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: bare
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1527 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1537	—	.1	23.6	6.79	1170	0.91	-136	6.1	
1542		.1	23.7	6.86	1210	0.90	-141	4.2	
1547		.1	23.7	6.87	1220	0.90	-142	4.4	

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP): 23

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1600	40 ml	G	3	N	HCl	VOCs
1600	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: W6-1620-MW47C-20100624
Sampling Location (well ID, etc.): MW-47C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 18.33
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 18.33
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1423 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1433	—	.1	24.7	6.93	960	1.09	-67	6.1	
1438		↓	24.6	6.96	990	.96	-73	4.9	
1443		↓	24.6	6.92	980	.95	-74	5.2	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1500	40 ml	G	3	N	HCl	VOCs
1500	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW49B-20100624
Sampling Location (well ID, etc.): MW-49B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 11.36
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 11.36
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

1322 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1332	—	.1	24.3	6.79	1210	0.93	-106	12	11.63
1337		.1	24.5	6.86	1230	0.86	-109	9.1	11.64
1342		.1	24.5	6.87	1240	0.85	-110	9.3	11.64

Water Level (ft. BMP) at End of Purge: 11.64
Sample Intake Depth (ft. BMP): 30

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1350	40 ml	G	3	N	HCl	VOCs
1350	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW59A-20100624	Starting Water Level (ft. BMP): 9.97
Sampling Location (well ID, etc.): MW59A	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 9.97
Measuring Point (MP) of Well: TOC	Total Depth (ft. BGL): —
Screened Interval (ft. BGL): —	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL): —	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1227									
1237	—	.1	23.9	6.83	1030	1.13	-103	4.2	10.32
1242		.1	24.1	6.87	1060	1.06	-99	5.6	10.33
1247		↓	24.2	6.88	1070	1.05	-99	5.5	10.33

Water Level (ft. BMP) at End of Purge: 10.33 Sample Intake Depth (ft. BMP): 18

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1300	40 ml	G	3	N	HCl	VOCs
1300	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW48C-20100624

Sampling Location (well ID, etc.): MW48C

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 17.42

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 17.42

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1134 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1144	—	.1	24.1	6.91	1260	0.86	-161	6.9	17.77
1149		.1	24.3	6.93	1270	0.79	-156	7.4	17.78
1154		.1	24.4	6.94	1270	0.78	-155	7.5	17.77

Water Level (ft. BMP) at End of Purge: 17.77 Sample Intake Depth (ft. BMP): 17

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1205	40 ml	G	3	N	HCl	VOCs
1205	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW60A-20100624

Sampling Location (well ID, etc.): MW60A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.61

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 8.61

Total Depth (ft. BGL): —

Casing Diameter (In ID): 1.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

1037 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1047	—	.1	23.7	6.71	1060	0.86	-67	18	9.17
1052		.1	23.9	6.74	1020	0.78	-72	15	9.20
1057		.1	23.9	6.75	1030	0.77	-73	14	9.21

Water Level (ft. BMP) at End of Purge: 9.21 Sample Intake Depth (ft. BMP): 23

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1110	40 ml	G	3	N	HCl	VOCs
1110	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-24-10

Sample Number: WG-1620-MW18C-20100624
Sampling Location (well ID, etc.): MW18C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 23.77
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 23.77
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

0916 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0926	—	.2	24.3	6.84	1160	0.71	-79	6.2	24.08
0930		↓	24.4	6.89	1120	0.56	-82	5.1	24.11
0935		↓	24.4	6.88	1130	0.54	-83	5.6	24.12

Water Level (ft. BMP) at End of Purge: 24.12 Sample Intake Depth (ft. BMP): 75

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1000	40 ml	G	3	N	HCl	VOCs
1000	1 L	G	2	N	Neat	SVOCs

Comments: MS/MSD @ this well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-24-10

Sample Number: WG-1620-MW18A-20100624 | Starting Water Level (ft. BMP): 18.11

Sampling Location (well ID, etc.): MW18A | Casing Stickup (ft.): —

Sampled by: JTB | Starting Water Level (ft. BGL): 18.11

Measuring Point (MP) of Well: TOC | Total Depth (ft. BGL): —

Screened Interval (ft. BGL): — | Casing Diameter (In ID): 2.0

Filter Pack Interval (ft. BGL): — | Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556

pH Meter: YSI 556 | Field Calibration: 7-4

Conductivity Meter: YSI 556 | Field Calibration: 1413

Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

0828 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L /m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0838	—	.1	24.3	6.74	1160	0.86	-178	8.6	18.42
0843		↓	24.1	6.79	1180	0.67	-113	7.2	18.44
0848		↓	24.1	6.79	1180	0.66	-113	7.5	18.44

Water Level (ft. BMP) at End of Purge: 18.44 | Sample Intake Depth (ft. BMP): 30

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0900	40 ml	G	3	N	HCl	VOCs
0900	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-23-10

Sample Number: WG-1620-MW58A-20100623
Sampling Location (well ID, etc.): MW58A
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 14.03
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 14.03
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: None
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1548 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1558	—	.1	24.3	6.81	1120	0.79	-116	6.2	14.26
1603		.1	24.4	6.74	1160	0.72	-121	7.4	14.25
1608		.1	24.5	6.75	1170	0.72	-120	7.9	14.25

Water Level (ft. BMP) at End of Purge: 14.25 Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1615	40 ml	G	3	N	HCl	VOCs
1615	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-23-10

Sample Number: WG-1620-MW57A-20100623 Starting Water Level (ft. BMP): ____

Sampling Location (well ID, etc.): MW-57A Casing Stickup (ft.): ____

Sampled by: JTB Starting Water Level (ft. BGL): ____

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL): ____

Screened Interval (ft. BGL): — Casing Diameter (In ID): ____

Filter Pack Interval (ft. BGL): — Casing Volume (gal.): ____

PRODUCT!

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: ____

Conductivity Meter: YSI 556 Field Calibration: ____

Filter / Filter Size: Other: ____

SAMPLING MEASUREMENTS

1453 Time	Cum. Vol (gal. or (L))	Purge Rate (gal. or (L /m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1503	—	.1	24.3	6.79	1620	0.86	-139	16	
1508		↓	24.6	6.78	1670	0.79	-141	21	
1513		↓	24.6	6.79	1680	0.78	-142	22	

Water Level (ft. BMP) at End of Purge: ____ Sample Intake Depth (ft. BMP): 23

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1520	40 ml	G	3	N	HCl	VOCS
1520	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 (620-) Project Name: UPRR Houston Wood Preserving Works Date: 6-23-10

Sample Number: WG-FB2-20100623

Sampling Location (well ID, etc.): FIELD BLANK

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): NA

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. BGL):

Casing Diameter (In ID):

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: — Sampling: D.I water

Disposal of Discharged Water: —

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: —

Conductivity Meter: YSI 556 Field Calibration: —

Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge:

Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1430	40 ml	G	3	N	HCl	VOCs
1430	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-23-10

Sample Number: WG-1620-MW23C-20100623		Starting Water Level (ft. BMP):	21.41
Sampling Location (well ID, etc.): MW-23C		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	21.41
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	-
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	-

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time (1329)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1339	—	.1	24.3	6.81	1680	1.13	-126	26	21.67
1344		↓	24.7	6.76	1630	1.06	-128	19	21.68
1349		↓	24.6	6.75	1640	1.05	-129	18	21.68

Water Level (ft. BMP) at End of Purge: 21.68 Sample Intake Depth (ft. BMP): 68

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1400	40 ml	G	3	N	HCl	VOCs
1400	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-23-10

Sample Number: WG-1620-MW17C-20100623
Sampling Location (well ID, etc.): MW17C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 23.03
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 23.03
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

1236 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1246	—	.1	24.8	6.91	1640	0.92	-86	12	23.31
1251		↓	24.9	6.86	1670	0.81	-91	9.1	23.30
1256		↓	24.9	6.87	1680	0.82	-92	9.6	23.30

Water Level (ft. BMP) at End of Purge: 23.30
Sample Intake Depth (ft. BMP): 65

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1305	40 ml	G	3	N	HCl	VOCs
1305	1 L	G	2	N	Neat	SVOCs

Comments:

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-23-10

Sample Number:	WG-1620-MW17-20100623	Starting Water Level (ft. BMP):	12.96
Sampling Location (well ID, etc.):	MW17	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	12.96
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

1132 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1142	—	.1	24.7	7.27	1140	0.62	-106	21	13.26
1147		↓	24.2	7.34	1170	0.51	-113	16	13.29
1152		↓	24.3	7.35	1180	0.50	-113	15	13.29

Water Level (ft. BMP) at End of Purge: 13.29 | Sample Intake Depth (ft. BMP): 30

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1200	40 ml	G	3	N	HCl	VOCs
1200	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-23-10

Sample Number:	WG-1620-MW19C-20100623	Starting Water Level (ft. BMP):	25.67
Sampling Location (well ID, etc.):	MW-19C	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	25.67
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

Time (1047)	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1057	—	.1	24.7	6.72	1590	0.93	-67	6.7	25.86
1102		↓	24.3	6.79	1560	0.86	-63	4.7	25.88
1107		↓	24.4	6.77	1570	0.85	-64	5.2	25.89

Water Level (ft. BMP) at End of Purge: 25.89 Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1115	40 ml	G	3	N	HCl	VOCs
1115	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-23-10

Sample Number:	WG-1620-MW16-20100623	Starting Water Level (ft. BMP):	10.31
Sampling Location (well ID, etc.):	MW16	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	10.31
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0951 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1001	—	.1	24.7	7.06	1010	1.01	-136	16	10.67
1006			24.8	7.12	1040	0.89	-141	11	10.66
1011		↓	24.8	7.13	1030	0.82	-142	12	10.66

Water Level (ft. BMP) at End of Purge: 10.66 | Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1020	40 ml	G	3	N	HCl	VOCs
1020	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-23-10

Sample Number: WG-1620-MW15C-20100623		Starting Water Level (ft. BMP):	23.08
Sampling Location (well ID, etc.): MW15C		Casing Stickup (ft.):	–
Sampled by: JTB		Starting Water Level (ft. BGL):	23.08
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	–
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

0900 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0916	—	.1	24.7	6.86	1360	0.86	-106	13	23.23
0921		↓	24.3	6.89	1350	0.79	-102	16	23.26
0926		↓	24.4	6.89	1350	0.78	-101	17	23.26

Water Level (ft. BMP) at End of Purge: 23.26 | Sample Intake Depth (ft. BMP): 70

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0935	40 ml	G	3	N	HCl	VOCs
0935	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-23-10

Sample Number:	WG-1620-MW15A-20100623	Starting Water Level (ft. BMP):	10.81
Sampling Location (well ID, etc.):	MW-15A	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	10.81
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: Same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

0817 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0827	—	.1	24.2	7.29	1420	1.31	-128	8.9	11.13
0832		↓	24.4	7.31	1460	1.17	-132	11	11.16
0837		↓	24.5	7.32	1470	1.16	-133	12	11.17

Water Level (ft. BMP) at End of Purge: 11.17 Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
0845	40 ml	G	3	N	HCl	VOCs
0845	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number: WG-1620-FB1-20100622 Starting Water Level (ft. BMP): NA

Sampling Location (well ID, etc.): FIELD BLANK @ MW13 Casing Stickup (ft.):

Sampled by: JTB Starting Water Level (ft. BGL):

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL):

Screened Interval (ft. BGL): — Casing Diameter (In ID):

Filter Pack Interval (ft. BGL): — Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: Sampling: tubing

Disposal of Discharged Water:

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration:

Conductivity Meter: YSI 556 Field Calibration:

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
	field blank								

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1630	40 ml	G	3	N	HCl	VOCs
1630	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-22-10

Sample Number: WG-1620-MW13-20100622		Starting Water Level (ft. BMP):	11.12
Sampling Location (well ID, etc.): MW-13		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	11.12
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

1521 Time	Cum. Vol (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1531	—	.1	24.9	6.74	1620	1.17	-106	12	
1536			24.6	6.77	1670	1.02	-107	17	
1541		↓	24.7	6.78	1680	1.04	-107	18	

Water Level (ft. BMP) at End of Purge: | Sample Intake Depth (ft. BMP): 20

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1550	40 ml	G	3	N	HCl	VOCs
1550	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-22-10

Sample Number: WG-1620-P11-20100622
Sampling Location (well ID, etc.): P11
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.78
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 6.78
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump | Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst | Thermometer: YSI 556
pH Meter: YSI 556 | Field Calibration: 7-4
Conductivity Meter: YSI 556 | Field Calibration: 1413
Filter / Filter Size: — | Other:

SAMPLING MEASUREMENTS

1417 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1427	—	.1	24.7	6.88	1390	1.26	-89	7.2	7.03
1432		1	24.8	6.89	1390	1.04	-93	8.6	7.05
1437		↓	24.8	6.89	1370	1.02	-94	8.7	7.05

Water Level (ft. BMP) at End of Purge: 7.05
Sample Intake Depth (ft. BMP): 45

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1450	40 ml	G	3	N	HCl	VOCs
1450	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number:	WG-1620-MW40B-20100622	Starting Water Level (ft. BMP):	9.17
Sampling Location (well ID, etc.):	MW-40B	Casing Stickup (ft.):	–
Sampled by:	JTB	Starting Water Level (ft. BGL):	9.17
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	–
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	–

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

1308 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1319	—	.1	24.7	6.91	1830	1.12	-81	3.6	9.31
1324		↓	24.5	6.82	1810	0.90	-75	5.2	9.33
1329		↓	24.5	6.84	1825	0.91	-77	6.1	9.34

Water Level (ft. BMP) at End of Purge: 9.34 Sample Intake Depth (ft. BMP): 35

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1345	40 ml	G	3	N	HCl	VOCs
1345	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 | Project Name: UPRR Houston Wood Preserving Works | Date: 6-22-10

Sample Number: WG-1620-MW12A-20100622		Starting Water Level (ft. BMP):	9.72
Sampling Location (well ID, etc.): MW-12A		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	9.72
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	—
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump | Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	

SAMPLING MEASUREMENTS

1213 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1223	—	.1	24.7	6.71	1420	1.06	-62	6.9	9.91
1228		↓	24.9	6.77	1480	0.96	-74	7.9	9.96
1233		↓	24.9	6.79	1470	0.95	-77	7.6	9.97

Water Level (ft. BMP) at End of Purge: 9.97 | Sample Intake Depth (ft. BMP): 25

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1240	40 ml	G	3	N	HCl	VOCs
1240	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number: WG-1620-MW12C-20100622

Sampling Location (well ID, etc.): MW-12C

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 23.91

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 23.91

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: — Other:

SAMPLING MEASUREMENTS

1039 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1049	—	.1	25.1	7.11	2030	0.72	-79	6.1	24.12
1054		1	24.9	7.14	2060	0.61	-81	5.8	24.13
1059		↓	24.9	7.15	2070	0.60	-81	5.7	24.13

Water Level (ft. BMP) at End of Purge: 24.13 Sample Intake Depth (ft. BMP): 75.30

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1110	40 ml	G	3	N	HCl	VOCs
1110	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number: WG-1620-MW-39B-20100622		Starting Water Level (ft. BMP):	9.31
Sampling Location (well ID, etc.): MW-39B		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	9.31
Measuring Point (MP) of Well: TOC		Total Depth (ft. BGL):	-
Screened Interval (ft. BGL): —		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic pump Sampling: bare

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size: —		Other:	

SAMPLING MEASUREMENTS

0951 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1001	—	.1	24.5	6.74	1310	0.67	-121	6.2	9.61
1006			24.6	6.78	1340	0.62	-117	7.9	9.60
1011		↓	24.6	6.77	1350	0.61	-116	8.1	9.59

Water Level (ft. BMP) at End of Purge: 9.59 Sample Intake Depth (ft. BMP): 35

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1020	40 ml	G	3	N	HCl	VOCs
1020	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number:	W6-1620-MW14-20100622	Starting Water Level (ft. BMP):	10.54
Sampling Location (well ID, etc.):	MW14	Casing Stickup (ft.):	—
Sampled by:	JTB	Starting Water Level (ft. BGL):	10.54
Measuring Point (MP) of Well:	TOC	Total Depth (ft. BGL):	
Screened Interval (ft. BGL):	—	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: None

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	—	Other:	—

SAMPLING MEASUREMENTS

0843 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L /m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0853		.1	25.1	6.96	1680	1.07	-126	8.6	11.07
0858		1	25.3	6.98	1650	0.92	-131	6.2	11.13
0903		↓	25.4	6.98	1640	0.91	-137	6.9	11.12

Water Level (ft. BMP) at End of Purge: 11.12 Sample Intake Depth (ft. BMP): 40

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0915	40 ml	G	3	N	HCl	VOCs
0915	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 6-22-10

Sample Number: WG-1620-MW21C-20100622
Sampling Location (well ID, etc.): MW-21C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 23.01
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 23.01
Total Depth (ft. BGL):
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: — Other: —

SAMPLING MEASUREMENTS

0742 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0752	—	.1	24.2	6.87	1230	0.62	-195	13	23.26
0757		1	24.3	6.82	1210	0.51	-191	17	23.25
0802		↓	24.3	6.81	1210	0.50	-192	18	23.25

Water Level (ft. BMP) at End of Purge: 23.25 Sample Intake Depth (ft. BMP): 65.00

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0815	40 ml	G	3	N	HCl	VOCs
0815	1 L	G	2	N	Neat	SVOCs

Comments: WG-1620-MWX1-20100622
FIELD DUPLICATE AT THIS WELL

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GROUNDWATER SAMPLING RECORD

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Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-MW64A-20100714

Sampling Location (well ID, etc.): MW64A

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 6.82

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 6.82

Total Depth (ft. BGL): —

Casing Diameter (In ID): —

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic | bladder Sampling: bailer

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1448 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1458	—	.1	26.7	6.93	2670	0.74	-86	8.7	7.07
1503			27.1	6.94	2810	0.61	-82	6.2	7.13
1508		↓	27.2	6.94	2820	0.60	-81	6.7	7.14

Water Level (ft. BMP) at End of Purge: 7.14 Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1515	40 ml	G	3	N	HCl	BTEX
1515	1 L	G	2	N	Neat	SVOCs

Comments:

Pastor, Behling & Wheeler, LLC
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Round Rock, TX 78664
(512) 671-3434 Fax (512) 671-3446

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-14-10

Sample Number: WG-1620-MW62B-20100714

Sampling Location (well ID, etc.): MW62B

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.79

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 5.79

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1956 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1605	—	.1	26.3	6.81	3100	1.13	-79	13	6.39
1610			26.2	6.79	3130	1.06	-72	16	
1615		↓	26.1	6.78	3140	1.05	-72	16	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1630	40 ml	G	3	N	HCl	BTEX
1630	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW48C-20100715 Starting Water Level (ft. BMP): 17.42

Sampling Location (well ID, etc.): MW48C Casing Stickup (ft.): —

Sampled by: JTB Starting Water Level (ft. BGL): 17.42

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL): —

Screened Interval (ft. BGL): — Casing Diameter (In ID): 2.0

Filter Pack Interval (ft. BGL): — Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0622	—	.1	29.8	6.91	4160	1.39	-67	12	
0627		.1	25.7	6.96	4070	1.31	-71	8.4	
0632		.1	25.7	6.95	4060	1.30	-72	6.2	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0645	40 ml	G	3	N	HCl	BTEX
0645	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW59B-20100715 Starting Water Level (ft. BMP): 7.43

Sampling Location (well ID, etc.): MW-59B Casing Stickup (ft.): —

Sampled by: JTB Starting Water Level (ft. BGL): 7.43

Measuring Point (MP) of Well: TOC Total Depth (ft. BGL): —

Screened Interval (ft. BGL): — Casing Diameter (In ID): 2.0

Filter Pack Interval (ft. BGL): — Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

0709 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0719	—	.1	25.7	6.77	3260	0.89	-118	21	
0724		.1	25.9	6.79	3170	0.76	-116	16	
0729		.1	25.9	6.80	3190	0.75	-115	15	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0745	40 ml	G	3	N	HCl	BTEX
0745	1 L	G	2	N	Neat	SVOCS

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW69A-20100715	Starting Water Level (ft. BMP): 11.81
Sampling Location (well ID, etc.): MW69A	Casing Stickup (ft.): —
Sampled by: JTB	Starting Water Level (ft. BGL): 11.81
Measuring Point (MP) of Well: TOC	Total Depth (ft. BGL): —
Screened Interval (ft. BGL): —	Casing Diameter (In ID): —
Filter Pack Interval (ft. BGL): —	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Solinst	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:		Other:	

SAMPLING MEASUREMENTS

0832 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0842	—	.1	25.7	6.84	2720	0.96	-136	16	
0847		↓	25.9	6.81	2760	0.78	-139	17	
0852		↓	25.9	6.80	2770	0.79	-138	17	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0905	40 ml	G	3	N	HCl	BTEX
0905	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW36D-20100715

Sampling Location (well ID, etc.): MW36D

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 85.39

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 85.39

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

24hr Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1047	—	.1	25.8	6.81	3610	1.34	-81	24	
1052		↓	26.1	6.84	3640	1.27	-74	21	
1057		↓	26.2	6.84	3650	1.26	-75	18	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1130	40 ml	G	3	N	HCl	BTEX
1130	1 L	G	2	N	Neat	SVOCS

Comments: MS/MSD @ the well

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GROUNDWATER SAMPLING RECORD

PAGE ___ of ___

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW36B-20100715
Sampling Location (well ID, etc.): MW36B
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 1.32
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 1.32
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic / bladder Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1143	—	.1	27.1	6.81	2720	1.31	-89	16	
1158			26.7	6.82	2760	1.26	-92	27	
1203		↓	26.7	6.83	2770	1.23	-93	28	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1220	40 ml	G	3	N	HCl	BTEX
1220	1 L	G	2	N	Neat	SVOCs

Comments: duplicate of this well
WG-1620-MWX4-20100715

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GROUNDWATER SAMPLING RECORD

PAGE ___ of ___

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WC-1620-MW67B-20100715

Sampling Location (well ID, etc.): MW67B

Sampled by: JTB

Measuring Point (MP) of Well: TOC

Screened Interval (ft. BGL): —

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 5.76

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 5.76

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated equipment

Purging: peristaltic / bladder Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Solinst Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

1252 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1259	—	.1	26.2	7.07	3360	1.61	-79	17	
1305			26.3	7.09	3280	1.42	-63	19	
1310		↓	26.3	7.09	3270	1.43	-64	19	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1330	40 ml	G	3	N	HCl	VOCs
1330	1 L	G	2	N	Neat	SVOCs

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1358 Project Name: UPRR Houston Wood Preserving Works Date: 7-15-10

Sample Number: WG-1620-MW18C-20100715
Sampling Location (well ID, etc.): MW18C
Sampled by: JTB
Measuring Point (MP) of Well: TOC
Screened Interval (ft. BGL): —
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 16.52
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 16.52
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated equipment
Purging: peristaltic / bladder Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: Solinst Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: Other:

SAMPLING MEASUREMENTS

Time (346)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1356	—	1	25.9	6.96	3100	1.16	-81	18	
1401			26.3	6.91	3210	1.02	-77	12	
1406		↓	26.2	6.89	3220	1.03	-76	13	

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1420	40 ml	G	3	N	HCl	VOCs
1420	1 L	G	2	N	Neat	SVOCs

Comments:

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APPENDIX 6
MONITORING WELL RECORDS

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

STATE OF TEXAS WELL REPORT for Tracking #227928

Owner:	**Union Pacific Railroad**	Owner Well #:	**MW-36B**
Address:	**5710 Liberty Rd. Houston , TX 77026**	Grid #:	**65-14-8**
Well Location:	**Wylie St. @ Cushing St. Houston , TX 77026**	Latitude:	**29° 47' 18" N**
Well County:	**Harris**	Longitude:	**095° 19' 01" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **6/24/2010** Completed: **6/24/2010**
Diameter of Hole:	Diameter: **6 in From Surface To 43 ft**
Drilling Method:	Other: **Sonic Core**
Borehole Completion:	Gravel Packed From: **36 ft to 43 ft** Gravel Pack Size: **16/30 Sand**
Annular Seal Data:	1st Interval: **From 2 ft to 34 ft with 8/ Port.Slurry (#sacks and material)** 2nd Interval: **From 34 ft to 36 ft with 1/Bent.Chips (#sacks and material)** 3rd Interval: **No Data** Method Used: **Tremmie** Cemented By: **WDC** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Alternative Procedure Used**

Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**

Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and

	resubmittal.
Company Information:	**WDC Exploration & Wells** **8811 Robbins Rd.** **Indianapolis , IN 46268**
Driller License Number:	**4885**
Licensed Well Driller Signature:	**William B. Bludworth**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#227928**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0-.2 Asphalt

.2-.7 Gravel Base

.7-15.5 Clay, light gray.

15.5-27.5 Sand, brown, trace clay.

27.5-33.5 Clay, reddish brown, some gray mottling.

33.5-41.2 Clay, light brown, some sand, gravel and calc. nods.

Sandy lense 39.5-39.8.

41.2-43 Clay, mottled reddish brown and gray.

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To

2 N PVC Riser .5-38 Sch#40

2 N PVC Screen 38-43 .010" slot

STATE OF TEXAS WELL REPORT for Tracking #227920

Owner:	**Union Pacific Railroad**	Owner Well #:	**MW-36D**
Address:	**5710 Liberty Rd. Houston , TX 77026**	Grid #:	**65-14-8**
Well Location:	**Wylie St. @ Cushing St. Houston , TX 77026**	Latitude:	**29° 47' 18" N**
Well County:	**Harris**	Longitude:	**095° 19' 02" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **6/22/2010** Completed: **6/23/2010**
Diameter of Hole:	Diameter: **8 in From Surface To 75 ft** Diameter: **6 in From 75 ft To 110 ft**
Drilling Method:	Other: **Sonic Core**
Borehole Completion:	Gravel Packed From: **98 ft to 110 ft** Gravel Pack Size: **16/30 Sand**
Annular Seal Data:	1st Interval: **From 2 ft to 96 ft with 20/Port.Slurry (#sacks and material)** 2nd Interval: **From 96 ft to 98 ft with 1/Bent.Chips (#sacks and material)** 3rd Interval: **No Data** Method Used: **Tremmie** Cemented By: **WDC** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Alternative Procedure Used**

Water Level:	Static level: **85.7 ft. below land surface on 6/24/2010** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**

Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete

	the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**WDC Exploration & Wells** **8811 Robbins Rd.** **Indianapolis , IN 46268**
Driller License Number:	**4885**
Licensed Well Driller Signature:	**William B. Bludworth**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#227920**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0-.2 Asphalt

.2-.7 Gravel Base

.7-8.5 Clay, gray.

8.5-13 Silty Sandy Clay, gray.

13-15.5 Same, mottled strong brown.

15.5-27.5 Sand, brown, very fine, trace clay lenses.

27.5-34 Clay, brown, some gray mottling.

34-40 Clay, light brown, some calc. nodules.

40-59 Clay, mottled brown and gray, some slickensided fractures to 47'.

59-67.5 Silty Sand, reddish brown, some clayey lenses.

67.5-103.4 Clay, reddish brown, trace gray silty lenses.

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To

2 N PVC Riser .5-100 Sch#40

2 N PVC Screen 100-110 .010" slot

103.4-104.3 Sand/ Silty Sand, reddish brown.

104.3-106.5 Clay, reddish brown.

106.5-110 Silty Sandy Clay, light gray.

STATE OF TEXAS WELL REPORT for Tracking #227950

Owner:	**Union Pacific Railroad**	Owner Well #:	**MW-59B**
Address:	**5710 Liberty Rd. Houston , TX 77026**	Grid #:	**65-14-8**
Well Location:	**Lookwood Dr. loop to Wallisville Rd. Houston , TX 77026**	Latitude:	**29° 47' 08" N**
Well County:	**Harris**	Longitude:	**095° 18' 59" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **6/26/2010**
Completed: **6/26/2010**

Diameter of Hole: Diameter: **6 in From Surface To 33 ft**

Drilling Method: Other: **Sonic Core**

Borehole Completion: Gravel Packed From: **27 ft to 33 ft**
Gravel Pack Size: **16/30 Sand**

Annular Seal Data: 1st Interval: **From 2 ft to 24 ft with 5/ Port.Slurry (#sacks and material)**
2nd Interval: **From 24 ft to 27 ft with 1/Bent.Chips (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Tremmie**
Cemented By: **WDC**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and

	resubmittal.
Company Information:	**WDC Exploration & Wells** **8811 Robbins Rd.** **Indianapolis , IN 46268**
Driller License Number:	**4885**
Licensed Well Driller Signature:	**William B. Bludworth**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#227950**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0-2 Sandy Clay, gray.

2-9 Sandy Clay, gray.

9-12.4 Silty Sand, gray.

12.4-20.9 Sand

20.9-33 Silty Clay, w/ Sand, mottled reddish brown and gray.

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To

2 N PVC Riser .5-28 Sch#40
2 N PVC Screen 28-33 .010" slot

STATE OF TEXAS WELL REPORT for Tracking #227947

Owner:	**Union Pacific Railroad**	Owner Well #:	**MW-67B**
Address:	**5710 Liberty Rd. Houston , TX 77026**	Grid #:	**65-14-8**
Well Location:	**Fontinot St. between Lucille and Jewel Houston , TX 77026**	Latitude:	**29° 47' 24" N**
Well County:	**Harris**	Longitude:	**095° 19' 07" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **6/26/2010**
Completed: **6/26/2010**

Diameter of Hole: Diameter: **6 in From Surface To 40 ft**

Drilling Method: Other: **Sonic Core**

Borehole Completion: Gravel Packed From: **34 ft to 40 ft**
Gravel Pack Size: **16/30 Sand**

Annular Seal Data: 1st Interval: **From 2 ft to 32 ft with 7/ Port.Slurry (#sacks and material)**
2nd Interval: **From 32 ft to 34 ft with 1/Bent.Chips (#sacks and material)**
3rd Interval: **No Data**
Method Used: **Tremmie**
Cemented By: **WDC**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and

	resubmittal.
Company Information:	**WDC Exploration & Wells** **8811 Robbins Rd.** **Indianapolis , IN 46268**
Driller License Number:	**4885**
Licensed Well Driller Signature:	**William B. Bludworth**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#227947**) on your written request.

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0-.2 Asphalt

.2-.7 Gravel Base

.7-14.6 Silty Clay, grayish brown, some sand and fe nodes.

14.6-31.2 Sand, vf.

31.2-40 Clay, reddish brown, few slickensided fractures.

34.3-34.5 Silty Sandy lense, wet.

37.2-37.4 Silty Sand lense, wet.

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To

2 N PVC Riser .5-35 Sch#40
2 N PVC Screen 35-40 .010" slot

STATE OF TEXAS WELL REPORT for Tracking #227936

Owner:	**Union Pacific Railroad**	Owner Well #:	**MW-68C**
Address:	**5710 Liberty Rd. Houston , TX 77026**	Grid #:	**65-14-8**
Well Location:	**Wylie St. @ Clementine St. Houston , TX 77026**	Latitude:	**29° 47' 19" N**
Well County:	**Harris**	Longitude:	**095° 19' 09" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:
Started: **6/25/2010**
Completed: **6/25/2010**

Diameter of Hole:
Diameter: **8 in From Surface To 45 ft**
Diameter: **6 in From 45 ft To 73 ft**

Drilling Method:
Other: **Sonic Core**

Borehole Completion:
Gravel Packed From: **58 ft to 70 ft**
Gravel Pack Size: **16/30 Sand**

Annular Seal Data:
1st Interval: **From 2 ft to 56 ft with 18/ Port.Slurry (#sacks and material)**
2nd Interval: **From 56 ft to 58 ft with 1/Bent.Chips (#sacks and material)**
3rd Interval: **From 70 ft to 73 ft with Slough (#sacks and material)**
Method Used: **Tremmie**
Cemented By: **WDC**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion:
Alternative Procedure Used

Water Level:
Static level: **No Data**
Artesian flow: **No Data**

Packers:
No Data

Plugging Info:
Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump:
No Data

Well Tests:
No Data

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **Yes**
Hydrocarbon contamination encountered (includes gasoline, diesel, etc.)
The driller did certify that while drilling, deepening, or otherwise altering the above described well, undesirable water or constituents

	was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in a such a manner as to avoid injury or pollution.
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**WDC Exploration & Wells 8811 Robbins Rd. Indianapolis , IN 46268**
Driller License Number:	**4885**
Licensed Well Driller Signature:	**William B. Bludworth**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#227936**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description

0-.2 Asphalt

.2-.7 Gravel Base

.7-13 Clay.

13-16.7 Silty Clay, w/ Sand, very fine.

16.7-24.3 Sand, gray, vf.

18-20 Clay lense

24.3-35.9 Clay, reddish brown, gray mottling.

35.9-45.6 Sand, vf, wet. Frequent slickensided fractures.

45.6-56.2 Silty Clay, reddish brown.

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To

2 N PVC Riser .5-60 Sch#40

2 N PVC Screen 60-70 .010" slot

56.2-62.5 Silty Sand, reddish brown, vf.

62.5-68.3 Sand, reddish brown, vf.

68.3-71.7 Clay, reddish brown, silty from 68.3-69.4".

71.7-73 Silty Clay, brown.

APPENDIX 7
AQUIFER TESTING DATA

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

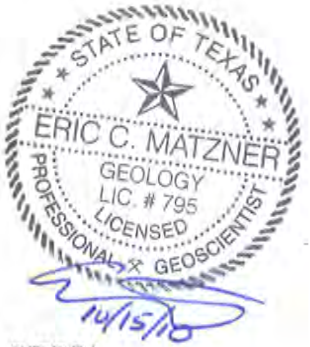
UPRR Houston Wood Preserving Works
Houston, Texas

APPENDIX 7

HYDRUALIC CONDUCTIVITY CALULATIONS, SUSTAINABLE WELL YEILD ESTIMATES, AND GROUNDWATER CLASSIFICATION

Affected Property Assessment Report Addendum

UPRR Houston Wood Preserving Works
Houston, Texas



Project Background

Groundwater classification activities were performed at the Union Pacific Railroad (UPRR) Houston Wood Preserving Works Site (the Site), located in Houston, Texas, in support of PCL development and response action planning for the Affected Property Assessment Report (APAR). The Texas Commission on Environmental Quality (TCEQ) has developed a guidance document (RG-336/TRRP-8 Groundwater Classification) that provides detailed procedures for collecting and interpreting data needed to distinguish between Class 2, Class 3, and saturated soils. According to the guidance, a groundwater-bearing unit is defined as a saturated geologic formation, group of formations, or part of a formation that has a hydraulic conductivity equal to or greater than 1×10^{-5} centimeters per second (cm/sec). Saturated zones with hydraulic conductivities values less than 1×10^{-5} cm/sec are considered to be non-groundwater bearing zones (or "saturated soils"). The difference between a Class 2 and Class 3 groundwater-bearing zone is that a Class 3 zone is incapable of yielding 150 gallons per day (gdp) from a properly completed well.

A previous groundwater classification demonstration was submitted to the TCEQ in the APAR Addendum (PBW, 2009). The TCEQ issued a comment letter dated November 18, 2009 with a technical review of the groundwater classification demonstration in an interoffice memorandum dated October 15, 2009. The conclusion of the TCEQ technical review was that the TCEQ did not concur that an adequate demonstration had been provided to classify the B-CZ as a Class 3 groundwater resource. Comments raised in the TCEQ technical review are addressed in this Appendix.

The procedures outlined in TRRP-8 were generally followed during the aquifer characterization at the Site; however due to extremely slow recovery rates observed in the monitoring wells (e.g., some wells took days to weeks to recover to static water levels after being bailed dry), it was not practical to perform repeat tests at each well location as suggested by TRRP-8.

Site Stratigraphy and Groundwater Occurrence

Geologic logs from soil and monitoring wells borings were used to evaluate the subsurface geology at the Site (PBW, 2009; Appendix 2 of this Updated APAR Addendum). Subsurface

geology at the Site is characterized by transmissive groundwater bearing units (GWBUs) separated by cohesive zones. For the purposes of this report, the Site stratigraphy from ground surface to a depth of about 135 feet below ground surface is grouped into nine distinct units (with the GWBUs identified):

(1) Surface fill material;
(2) A-Cohesive Zone (A-CZ);
(3) A-Transmissive Zone (A-TZ) (GWBU);
(4) B-Cohesive Zone (B-CZ);
(5) B-Transmissive Zone (B-TZ) (GWBU);
(6) C-Cohesive Zone (C-CZ);
(7) C-Transmissive Zone (C-TZ) (GWBU);
(8) D-Cohesive Zone (D-CZ); and
(9) D-Transmissive Zone (GWBU).

Detailed descriptions of each lithologic unit are provided in Section 1.3 of the APAR Addendum (PBW, 2009).

General groundwater flow within the GWBU's have been evaluated based on historical water level measurements collected from the monitoring well network installed across the Site. Groundwater in each transmissive zone appears to be under confined conditions. Potentiometric maps for the most recent groundwater monitoring event are provided in Section 5 of this APAR. Table 5D provides historical groundwater levels measurements collected at the Site.

A concern that was raised in the TCEQ technical review of the previous Class 3 groundwater demonstration was the potential hydrostratigraphic interconnection between the A-TZ, B-TZ, B-CZ, and underlying C-TZ. As discussed in Section 5.0, dissolved COC concentrations in groundwater exceed the TRRP Tier 1 PCLs in the A-TZ, B-TZ, and C-TZ, as wells as in the B-CZ when compared to TRRP PCLs.

One of the considerations in the conceptual site model for groundwater and contaminant flow is the degree of connectivity between the A-TZ, B-TZ, and to a lesser extent, the C-TZ as demonstrated by similar groundwater potentiometric elevations in the A-TZ and B-TZ/B-CZ, and lower elevations in the C-TZ. North of the Site, groundwater potentiometric elevations in wells completed in the B-CZ are generally equal to or greater that the potentiometric elevation measured in the A-TZ wells in the same area. As an example, the groundwater potentiometric elevation measured in July 2010 in B-CZ well MW-33B was 37.03 feet HVD (Figure 5A-4) compared to the elevation measured in MW-26A at 36.50 feet HVD (Figure 5A-2), indicating an upward gradient. A nearby C-TZ well MW-68C had a groundwater potentiometric elevation of 28.28 feet HVD (Figure 5A-6) during the same gauging event, about an eight-foot elevation difference downward, suggesting a lack of connectivity to the C-TZ.

Te groundwater chemistry data and the presence of DNAPL in the A-TZ, B-TZ/B-CZ, and C-TZ, suggest support some interconnectivity between the transmissive zones, either through micro/macro fractures in the cohesive zones or from potential historical geotechnical borings

drilled either at the Site (possibly for construction of the facility) or near the Site (i.e., geotechnical borings for the construction of the Lockwood Bridge). However, as detailed in Section 5.0 of the Updated APAR Addendum, groundwater PCLE zones at the Site are stable and do not indicate increasing COC concentrations or DNAPL volumes in the C-TZ from 2008 through 2010. The data suggest that taking in account interconnectivity of the transmissive zones via the cohesive zones, the hydrologic balance between the transmissive zones have reached a state of equilibrium in terms of COC mass loading from the shallower zones into the C-TZ and natural degradation of the COCs in the C-TZ limiting the migration of the PCLE Zone in groundwater.

As stated in the TCEQ Guidance (TRRP-8)," the applicable groundwater resource classification for a given hydraulically-interconnected GWBU will be determined based on consideration of the current use, water quality, and well yield of that GWBU only" (TCEQ, 2003). Therefore, the objective of evaluating the hydraulic properties of the B-CZ is to assess the hydraulic conductivity of the cohesive zone for determining the appropriate potential pathway for that individual hydrostratigraphic unit. The pathway of concern for exposure to the COCs in groundwater is human health groundwater ingestion (GWGWIng). The question to be addressed through the hydraulic testing is whether or not the B-CZ yields sufficient groundwater to be considered a groundwater-bearing unit.

Hydraulic testing of the underlying C-TZ has shown that this GWBU is classified as a Class 2 groundwater resource (PBW, 2009). Therefore, potential response actions for the C-TZ groundwater PCLE zone will address potential groundwater ingestion pathway for that GWBU. Since the C-TZ groundwater PCLE zone has shown to be stable over time, potential response actions for the C-TZ will also take into account potential interconnectivity with the shallower zones (i.e., B-CZ) and risk of NAPL or additional dissolved mass loading from the shallower zones that could cause plume growth or migration. Therefore, potential response actions are not necessary for the B-CZ, if shown to be saturated soils, since appropriate response actions will address the underlying GWBU.

Baildown/Slug Test Procedures

Site specific hydraulic conductivities for the B-CZ and D-TZ water bearing zones were evaluated through baildown or slug tests conducted at the Site during investigations conducted in 2009 and 2010. Aquifer tests conducted for these investigations were single-well, instantaneous head-change tests conducted either by slug or baildown methods that were performed on wells constructed and developed in accordance with TCEQ guidelines found at 16 TAC §76.1000.

Aquifer tests were conducted at the following seven wells:

1. B-CZ wells: MW-33B, MW-36B, MW-49B, MW-59B, MW-63B, and MW-67B
2. D-TZ well: MW-36D.

Monitoring well boring logs for the wells tested are provided in Appendix 2 of the Updated APAR Addendum.

The TCEQ technical review of the 2009 groundwater classification demonstration included a comment on different screen intervals for the B-CZ wells. Specifically, the comment (5d) stated "the APAR should provide an explanation or rational for use of 5 foot screen lengths in newly installed wells as supposed to 10 foot screen lengths, since this could have an affect on hydraulic properties of the monitoring wells." Below is a summary of the screened intervals for the B-CZ wells tested in 2009 and 2010:

WELL NO.	Top Screen Interval (FT BGS)	Bottom Screen Interval (FT BGS)	Screen length (FT)	Intervals of Carbonaceous Gravels Seams (FT BGS)
MW-33B	32	42	10	33.0, 35.0, 40.0
MW-35B	32	42	10	33 – 36
MW-36B	38	43	5	39.5 – 39.8
MW-49B	30	35	5	27.5, 30.6-31, 32.3-32.4
MW-59B	28	33	5	29.4, 30.9, 31.7, 32.2, 32.7
MW-63B	31	36	5	26-31, 31.6-35
MW-67B	35	40	5	34.3-34.5, 37.2-37.4, 38-38.1, 38.7-38.8

The wells listed above were designed so that the screened interval for the wells penetrated each of the carbonate gravel seams noted in the B-CZ soil boring logs. Except for one interval at MW-49B (27.5 ft bgs) and MW-63B (26-31 ft bgs), the wells were screened across each carbonate interval observed.

Evaluating the effects of a 5-foot screen interval compared to a 10-foot screen interval, the main component of flow into a well is the open area of the screened interval. An estimated open area for a 2-in polyvinyl chloride (PVC) well screen with 0.010-in slot size is approximately 2.4 in^2/foot of screen (http://www.certainteed.com/resources/slottedpvcwellcasing403733f.pdf). A 5-ft well screen has about 12 in^2 of open area compared to 24 in^2 for a 10-ft screen. To calculate an estimated flow rating (gallons per minute (GPM)/ft), the following equation was provided by a well screen vendor (http://www.certainteed.com/resources/slottedpvcwellcasing403733f.pdf):

> *Flow Rating (GPM/ft) = Open Area (in2/ft) * (0.5 blockage factor) * (0.31 conversion factor) at an entrance velocity of 0.1 feet/second*

Therefore, with a 2-in well with 0.010-in slot, 5-ft screen interval, the flow rating into the well is: 12 in^2 * 0.5 * 0.31 = 1.9 GPM, or 2,678 gallons per day (GPD) compared with 3.8 GPM (5,356 GPD). Based on these flow ratings into a 2-in well constructed at the Site, the shorter screen interval will not significantly affect the flow into well.

Where practical, multiple tests were conducted to ensure that test results were not influenced by "skin-effects". However, of the B-CZ wells, multiple baildown tests were performed at only one (MW-35B) of the six monitoring wells due to extremely slow recovery rates in the other wells.

The procedures for the baildown/slug tests were as follows:

1. The static water level was measured.
2. An instantaneous positive or negative head displacement was induced by introduction or removal of a solid slug (or volume of water) from the well.
3. Recovering water levels were measured using an electronic water-level meter.
4. Once water levels stabilized the test was repeated.

The tests were performed on six B-CZ monitoring wells (MW-33B, MW-36B, MW-49B, MW-59B, MW-63B, and MW-67B) by removing multiple bailers of water and measuring the recovery of the water column. Due to the extremely slow recovery times of these wells, this procedure can be considered an instantaneous removal of water from the well. Water level changes observed during the slug tests are provided in Tables 7.1A through 7.1H., field notes of the tests are provided in Attachment 7A.

Calculation of Hydraulic Conductivity

The slug test data were analyzed using AQTESOLV v3.0 software (HydroSOLVE, Inc.). Hydraulic conductivity (K) was calculated using the Bouwer – Rice solution for confined aquifers. Input parameters used in the slug test analysis are summarized in Table 7.2. Solutions for individual aquifer tests are provided as Attachment 7B. Hydraulic conductivity results are summarized in Table 7.3.

In accordance with TCEQ Guidance document TRRP-8, the representative hydraulic conductivity value for a single well is defined as the arithmetic mean of the individual slug test results from the well. The representative hydraulic conductivity value for a water-bearing unit is defined as the geometric mean of the inter-well results, as shown in the following equation:

$$\overline{æ} = \sqrt[n]{K_1 \cdot K_2 \cdot \ldots \cdot K_n}$$

where,

$\overline{K}$ = representative hydraulic conductivity for the water-bearing unit;
K_n = inter-well hydraulic conductivity values; and
n = the number of measurements.

Using the geometric mean approach, the hydraulic conductivity value for the B-CZ unit was calculated to be 5×10^{-7} cm/sec, which is less than the TCEQ threshold for a saturated soil classification. The hydraulic conductivity of well MW-35B (located just north of the Site and north of Liberty Road) is 1×10^{-4} cm/sec, which exceeds the threshold for saturated soil

classification. Based on a cyclic bail-down and recovery test analysis previously submitted in an APAR Addendum (PBW, 2009), this well is capable of yielding more than 150 GPD. As discussed in the APAR Addendum (PBW, 2009), there appears to be a transition from the more transmissive B-TZ in the north central portion of the Site to the thin carbonate seams to the northeast and east portions of the Site and off-site.

The geometric mean of the hydraulic conductivities of the B-CZ wells north of Liberty Road (MW-33B, MW-36B, MW-63B, and MW-67B) or east of the Site (MW-49B and MW-59B) is 2 x 10^{-7} cm/sec, which is two orders of magnitude less than the threshold for saturated soils classification.

Groundwater Classification Summary

A lithologic transition from the B-TZ unit results a Class 2 groundwater bearing zone classification near well MW-35B to a saturated soils classification northeast of MW-35B and east of the Site. Thicker, more transmissive sands present south of Liberty Road grade into a more massive clay north of Liberty Road and although saturated, the unit becomes incapable of producing water. This designation is reasonable since wells completed within the B-CZ north of Liberty Road were installed in clay with thin saturated stringers of carbonate sand. Although these thin (few inches thick) sand stringers may allow for the preferential transport of contaminants, they are incapable of yielding appreciable quantities of water. This is further supported by the time required (days to weeks) for a displaced water level to return to equilibrium.

TABLE 7.1A
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-33B 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
6	32.15	22.46
7	32.09	22.4
8	32.04	22.35
9	31.99	22.3
10	31.95	22.26
11	31.9	22.21
12	31.86	22.17
15	31.69	22
24	31.34	21.65
31	31.04	21.35
36	30.83	21.14
41	30.66	20.97
46	30.42	20.73
51	30.19	20.5
56	29.99	20.3
66	29.53	19.84
76	29.18	19.49
86	28.79	19.1
146	26.92	17.23
189	25.84	16.15
249	24.17	14.48
290	22.56	12.87
384	20.21	10.52
2947	10.02	0.33

TABLE 7.1B
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-35B Bail Down Test 1 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
5	16.15	10.36
5.25	15.05	9.26
5.5	14.16	8.37
5.75	13.8	8.01
6	13.24	7.45
6.25	12.81	7.02
6.5	12.37	6.58
6.75	11.9	6.11
7	11.51	5.72
7.25	11.12	5.33
7.5	10.77	4.98
7.75	10.47	4.68
8	10.13	4.34
8.5	9.59	3.8
9	9.09	3.3
9.5	8.64	2.85
10	8.17	2.38
11	7.61	1.82
12	7.06	1.27
13	6.67	0.88
14	6.37	0.58
15	6.14	0.35
16	5.98	0.19
17	5.82	0.03
18	5.71	-0.08
19	5.66	-0.13
20	5.63	-0.16

TABLE 7.1B
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-35B Bail Down Test 2 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
25	16.47	10.68
0.25	15.31	9.52
0.5	14.39	8.6
0.75	13.89	8.1
1	13.4	7.61
1.25	12.99	7.2
1.5	12.53	6.74
1.75	12.12	6.33
2	11.75	5.96
2.25	11.33	5.54
2.5	10.96	5.17
2.75	10.6	4.81
3	10.22	4.43
3.5	9.64	3.85
4	9.08	3.29
4.5	8.67	2.88
5	8.21	2.42
6	7.62	1.83
7	7.11	1.32
8	6.68	0.89
9	6.32	0.53
10	6.06	0.27
11	5.85	0.06
12	5.76	-0.03
13	5.69	-0.1
14	5.64	-0.15

TABLE 7.1B
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-35B Bail Down Test 3 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
5	17.06	11.27
5.25	15.83	10.04
5.5	14.96	9.17
5.75	14.51	8.72
6	14.02	8.23
6.25	13.56	7.77
6.5	13.12	7.33
6.75	12.73	6.94
7	12.47	6.68
7.25	12.06	6.27
7.5	11.74	5.95
7.75	11.38	5.59
8	10.91	5.12
8.5	10.32	4.53
9	9.77	3.98
9.5	9.53	3.74
10	9.09	3.3
11	8.46	2.67
12	7.96	2.17
13	7.53	1.74
14	7.21	1.42
15	7.01	1.22
16	6.82	1.03
17	6.7	0.91
18	6.51	0.72
19	6.29	0.5
20	6.03	0.24
21	5.91	0.12
22	5.78	-0.01
23	5.65	-0.14

TABLE 7.1B
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-35B Slug In 1/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
0.17	1.57	1.95
0.33	1.68	1.84
0.50	1.76	1.76
0.67	1.83	1.69
0.83	1.93	1.59
1.00	2.02	1.5
1.17	2.09	1.43
1.33	2.15	1.37
1.50	2.22	1.3
1.67	2.28	1.24
1.83	2.35	1.17
2.00	2.41	1.11
2.25	2.47	1.05
2.50	2.52	1
2.75	2.58	0.94
3.00	2.63	0.89
3.25	2.69	0.83
3.50	2.73	0.79
3.75	2.77	0.75
4.00	2.8	0.72
4.25	2.83	0.69
4.50	2.86	0.66
4.75	2.9	0.62
5.00	2.93	0.59
5.50	2.97	0.55
6.00	3.01	0.51
6.50	3.04	0.48
7.00	3.07	0.45
7.50	3.1	0.42
8.00	3.11	0.41
9.00	3.15	0.37
10.00	3.16	0.36
12.50	3.19	0.33
15.00	3.2	0.32
20.00	3.2	0.32
25.00	3.2	0.32

TABLE 7.1B
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-35B Slug Out 1/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
0.17	4.96	1.76
0.33	4.84	1.64
0.50	4.74	1.54
0.67	4.65	1.45
0.83	4.54	1.34
1.00	4.46	1.26
1.17	4.39	1.19
1.33	4.31	1.11
1.50	4.24	1.04
1.67	4.19	0.99
1.83	4.13	0.93
2.00	4.08	0.88
2.17	4.01	0.81
2.33	3.97	0.77
2.50	3.92	0.72
2.67	3.89	0.69
2.83	3.85	0.65
3.00	3.81	0.61
3.25	3.76	0.56
3.50	3.71	0.51
3.75	3.67	0.47
4.00	3.63	0.43
4.25	3.59	0.39
4.50	3.57	0.37
4.75	3.54	0.34
5.00	3.52	0.32
5.50	3.47	0.27
6.00	3.43	0.23
6.50	3.39	0.19
7.00	3.38	0.18
8.00	3.35	0.15
9.00	3.32	0.12
10.00	3.31	0.11

TABLE 7.1C
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36B Bail Down Test 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
11.25	42.3	37.92
11.5	42.14	37.76
11.75	42.08	37.7
12	42.01	37.63
12.25	41.93	37.55
12.5	41.89	37.51
12.75	41.84	37.46
13	41.81	37.43
14.5	41.69	37.31
16	41.63	37.25
17.5	41.6	37.22
19	41.57	37.19
20.5	41.54	37.16
22	41.51	37.13
25	51.47	37.09
28	41.44	37.06
31	41.41	37.03
34	41.39	37.01
39	41.36	36.98
47	41.3	36.92
68	41.23	36.85
86	41.19	36.81
110	41.14	36.76
140	41.11	36.73
191	41.06	36.68
222	41.04	36.66
254	41.02	36.64
297	41	36.62
342	40.99	36.61
20502	38.16	33.78

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug In 1 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
0.5	82.37	3.1
2	82.7	2.77
2.33	82.76	2.71
2.67	82.81	2.66
3	82.88	2.59
3.33	82.95	2.52
4	83.01	2.46
5	83.06	2.41
6	83.22	2.25
7	83.37	2.1
8	83.49	1.98
9	83.61	1.86
10	83.72	1.75
11	83.94	1.53
12	84.03	1.44
13	84.11	1.36
14	84.18	1.29
16.5	84.35	1.12
19	84.5	0.97
24	84.73	0.74
29	84.9	0.57
34	85.03	0.44

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug Out 1 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
1	88.02	2.55
1.25	87.96	2.49
1.5	87.9	2.43
1.75	87.85	2.38
2	87.81	2.34
2.25	87.76	2.29
2.5	87.71	2.24
2.75	87.66	2.19
3	87.62	2.15
3.5	87.54	2.07
4	87.46	1.99
5	87.31	1.84
6	87.18	1.71
8	86.94	1.47
13	86.52	1.05
28	85.89	0.42
33	85.78	0.31
38	85.71	0.24
48	85.61	0.14
53	85.59	0.12
65	85.55	0.08

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug In 2 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
0.33	82.37	3.1
0.67	82.46	3.01
1	82.55	2.92
1.33	82.62	2.85
1.67	82.7	2.77
2	82.77	2.7
2.33	82.82	2.65
2.67	82.9	2.57
3	82.96	2.51
3.33	83.02	2.45
3.67	83.07	2.4
4	83.12	2.35
4.33	83.18	2.29
4.67	83.23	2.24
5	83.28	2.19
5.5	83.36	2.11
6	83.43	2.04
6.5	83.5	1.97
7	83.56	1.91
8	83.69	1.78
9	83.8	1.67
11	83.99	1.48
12	84.09	1.38
14.5	84.28	1.19
17	84.46	1.01
19.5	84.59	0.88
22	84.7	0.77
24.5	84.8	0.67
27	84.9	0.57
32	85.03	0.44
37	85.13	0.34
42	85.2	0.27
47	85.26	0.21

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug Out 2 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
1	88.28	2.81
1.33	88.19	2.72
1.67	88.11	2.64
2	88.05	2.58
2.33	87.98	2.51
2.67	87.91	2.44
3	87.86	2.39
3.33	87.8	2.33
3.67	87.74	2.27
4	87.69	2.22
4.33	87.62	2.15
4.67	87.58	2.11
5	87.53	2.06
5.5	87.46	1.99
6	87.39	1.92
6.5	87.32	1.85
7	87.36	1.89
8	87.14	1.67
9	87.03	1.56
11.5	86.8	1.33
14	86.6	1.13
16.5	86.43	0.96
19	86.31	0.84
21.5	86.18	0.71
24	86.09	0.62
26.5	86.02	0.55
29	85.95	0.48
34	85.84	0.37
39	85.76	0.29
44	85.71	0.24

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug In 3 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
0.33	82.54	2.93
0.67	82.63	2.84
1	82.72	2.75
1.33	82.79	2.68
1.67	82.85	2.62
2	82.92	2.55
2.33	82.98	2.49
2.67	83.05	2.42
3	83.11	2.36
3.33	83.18	2.29
3.67	83.22	2.25
4	83.28	2.19
4.33	83.33	2.14
4.67	83.38	2.09
5	83.43	2.04
5.5	83.5	1.97
6	83.57	1.9
6.5	83.63	1.84
7	83.7	1.77
8	83.82	1.65
9	83.92	1.55
10	84.02	1.45
11	84.11	1.36
12	84.2	1.27
14.5	84.38	1.09
17	84.55	0.92
19.5	84.67	0.8
22	84.78	0.69
24.5	84.87	0.6
27	84.95	0.52
29.5	85.02	0.45
32	85.08	0.39
34.5	85.12	0.35
37	85.16	0.31
39.5	85.2	0.27
42	85.23	0.24
47	85.28	0.19
52	85.31	0.16

TABLE 7.1D
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-36D Slug Out 3 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
1.33	88.25	2.78
1.67	88.18	2.71
2	88.1	2.63
2.33	88.03	2.56
2.67	87.97	2.5
3	87.9	2.43
3.33	87.84	2.37
3.67	87.78	2.31
4	87.71	2.24
4.33	87.66	2.19
4.67	87.61	2.14
5	87.56	2.09
5.33	87.51	2.04
5.67	87.46	1.99
6	87.41	1.94
6.5	87.34	1.87
7	87.28	1.81
7.5	87.22	1.75
8	87.16	1.69
9	87.02	1.55
10	86.93	1.46
11	86.84	1.37
12	86.75	1.28
13	86.67	1.2
14	86.6	1.13
16.5	86.43	0.96
19	86.29	0.82
21.5	86.18	0.71
24	86.08	0.61
26.5	85.99	0.52
29	85.93	0.46
34	85.81	0.34
39	85.75	0.28
44	85.69	0.22
49	85.63	0.16

TABLE 7.1E
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-49B 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
6	33.15	19.25
7	32.98	19.08
8	32.86	18.96
9	32.79	18.89
10	32.74	18.84
11	32.71	18.81
12	32.68	18.78
14	32.63	18.73
17	32.56	18.66
21	32.52	18.62
26	32.48	18.58
36	32.43	18.53
96	32.11	18.21
200	31.68	17.78
2,844	30.28	16.38

TABLE 7.1F
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-59B Bail Down Test 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
12	32.46	24.15
12.25	32.39	24.08
12.50	32.33	24
12.75	32.28	24
13	32.23	24
13.25	32.18	24
13.50	32.14	24
15	32.01	24
16.5	31.92	23.61
18	31.84	23.53
19.5	31.76	23.45
21	31.7	23.39
22.5	31.64	23.33
24	31.58	23.27
27	31.47	23.16
30	31.39	23.08
35	31.26	22.95
40	31.18	22.87
45	31.09	22.78
50	31	22.69
55	30.92	22.61
65	30.79	22
75	30.66	22
299	28.37	20
519	25.11	17
20679	9.31	1

TABLE 7.1G
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-63B Bail Down Test 2/25/2009		
Time (min)	Water Level (ft)	Displacement (ft)
6	34.97	9.39
7	34.84	9.26
8	34.74	9.16
9	34.68	9.1
10	34.64	9.06
11	34.61	9.03
14	34.54	8.96
16	34.48	8.9
21	34.43	8.85
26	34.39	8.81
46	34.3	8.72
110	34.2	8.62
147	34.16	8.58
215	34.14	8.56
311	34.13	8.55
342	34.12	8.54
435	34.06	8.48
3,017	33.76	8.18
18,696	31.96	6.38

TABLE 7.1H
AQUIFER TESTING WATER LEVEL CHANGES

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

MW-67B Bail Down Test 7/22/10		
Time (min)	Water Level (ft)	Displacement (ft)
9.5	38.1	35.47
9.75	37.88	35.25
10	37.79	35.16
10.25	37.74	35.11
10.5	37.66	35.03
10.75	37.61	34.98
11	37.58	34.95
12.5	37.3	34.67
14	37.15	34.52
15.5	37.03	34.4
17	36.96	34.33
18.5	36.9	34.27
20	36.85	34.22
23	36.77	34.14
26	36.7	34.07
29	36.64	34.01
34	36.57	33.94
39	36.5	33.87
44	36.43	33.8
49	36.37	33.74
54	36.31	33.68
59	36.27	33.64
64	36.23	33.6
69	36.19	33.56
208	35.43	32.8
429	33.96	31.33
20589	9.63	7

TABLE 7.2
INPUT PARAMETERS FOR HYDRUALIC CONDUCTIVITY DETERMINATION

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

Well Number	Well Diameter (in)	Well Radius (ft) (r(c))	Total Well Depth	Screened Interval (ft BMP)		Type of Test	Static WL	WL Below Top of Screen	Conf./Uncon.	Expected Displacement	Sat Aquifer Thickness (D)	Saturated Screen Length	Depth of Well Pentration (H)	Well Bore Radius (r(w))
				Top	Bottom									
MW-33B	2	0.08	43	32	42	Bail Down	9.69	No	Confined	22.46	0.5	10	5	0.33
MW-35B	2	0.08	42	32	42	Bail Down	5.79	No	Confined	10.36	0.5	10	5	0.33
						Slug	3.52	No	Confined	2.75				
MW-36B	2	0.08	43	38	43	Bail Down	4.38	No	Confined	39.00	0.5	5	5	0.33
MW-36D	2	0.08	110	100	110	Slug	85.47	No	Confined	3.13	1	10	10	0.33
MW-49B	2	0.08	35	30	45	Bail Down	13.9	No	Confined	19.25	2	5	5	0.33
MW-59B	2	0.08	33	28	33	Bail Down	8.31	No	Confined	25	4	5	5	0.33
MW-63B	2	0.08	36	31	36	Bail Down	25.58	No	Confined	9.39	4	5	5	0.33
MW-67B	2	0.08	40	35	40	Bail Down	2.62	No	Confined	38	5	5	5	0.33

TABLE 7.3
SUMMARY OF AQUIFER TEST RESULTS AND SUSTAINABLE WELL YIELD CALCULATIONS

Groundwater Resource Classification: UPRR Houston Wood Preserving Works
Houston, Texas

Well Number	Type of Test	Analysis Method	Hydraulic Conductivity, K (cm/sec)	Average K (cm/sec)	Representative K (cm/sec)	Saturated Thickness, b (ft)	Confining Head, h_c (ft)	Average Yield, Q (GPD)
B-CZ Wells								
MW-33B	Bail Down	Bouwer - Rice	7.E-07	7.E-07	5.E-07	0.5	23	0.3
MW-35B	Bail Down	Bouwer - Rice	1.E-04	1.E-04		0.5	29	31
			1.E-04					31
			9.E-05					25
	Slug	Bouwer - Rice	1.E-04					31
			2.E-04					45
MW-36B	Bail Down	Bouwer - Rice	6.E-08	6.E-08		0.5	35	0.04
MW-49B	Bail Down	Bouwer - Rice	1.E-07	1.E-07		2	19	0.15
MW-59B	Bail Down	Bouwer - Rice	5.E-07	5.E-07		4	21	1.01
MW-63B	Bail Down	Bouwer - Rice	1.E-07	1.E-07		4	6	0.09
MW-67B	Bail Down	Bouwer - Rice	2.E-07	2.E-07		5	32	0.78
D-TZ Wells								
MW-36D	Slug	Bouwer - Rice	3.E-05	3.E-05	3.E-05	1	18	10.44
			4.E-05					13.53
			3.E-05					10.92
			3.E-05					11.04
			3.E-05					11.15
			3.E-05					11.45

ATTACHMENT 7A

AQUIFER TEST FIELD NOTES

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-33B
Slug IN or OUT:	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 32.02 after bailing [redacted] 9.09	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
3 gallons removed, stopped bailing, well is dry	Expected Well Response (+/- ft.):
Start Time: [redacted] 1000	End Time: Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
0	32.[redacted]15
1 MIN	[redacted] 32.09
2 MIN	32.04
3	31.99
4	31.95
5	31.90
6	31.86
9 MIN	31.69
18 MIN	31.34
25	31.04
30	30.83
35	30.66
40	30.42

Minutes Since Start	Water Level (ft. BMP)
45	30.19
50	29.99
60	29.53
[redacted]70	29.18
80	28.79
140	26.92
	25.84
	24.17
	22.56
	20.21
2-27-09	10.02

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

1030
1120
1220
1303
1403
1444
1618
1101

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-35B
Slug IN or OUT: bail down	Measuring Point (MP): TOC / STAINLESS
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 5.79	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
5 gallons removed, stopped bailing	Expected Well Response (+/- ft.):
Start Time:	End Time:
	Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
START	16.15
15 SEC	15.05
30 SEC	14.16
45 SEC	13.80
1 MIN	13.24
15	12.81
30	12.37
45	11.90
2 MIN	11.51
15	11.12
30	10.77
45	10.47
3 MIN	10.13

Minutes Since Start	Water Level (ft. BMP)
3 MIN 30 SEC	9.59
4 MIN	9.09
30	8.64
5 MIN	8.17
6 MIN	7.61
7 MIN	7.06
8 MIN	6.67
9 MIN	6.37
10 MIN	6.14
11 MIN	5.98
12 MIN	5.82
13 MIN	5.71
14 MIN	5.66

Minutes Since Start	Water Level (ft. BMP)
15 MIN	5.63

Minutes Since Start	Water Level (ft. BMP)

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-35B
Slug IN or OUT:	Measuring Point (MP): TOC / STAINLESS
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 5.64	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
5 gallons removed	Expected Well Response (+/- ft.):
Start Time:	End Time: / Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
START	16.47
15	15.31
30	14.39
45	13.89
1 MIN	13.40
15	12.99
30	12.53
45	12.12
2 MIN	11.75
15	11.33
30	10.96
45	10.60
3 MIN	10.22

Minutes Since Start	Water Level (ft. BMP)
3 MIN 30 SEC	9.64
4 MIN	9.08
30	8.67
5	8.21
6	7.62
7	7.11
8	6.68
9	6.32
10	6.06
11	5.85
12	5.76
13	5.69
14	5.64

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-35B
Slug IN or OUT:	Measuring Point (MP): TOC / STAINLESS
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 5.67	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
5 gallons removed	Expected Well Response (+/- ft.):
Start Time: 1520	End Time:
	Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
START	17.06
15	15.83
30	14.96
45	14.51
1 MIN	14.02
15	13.56
30	13.12
45	12.73
2 MIN	12.47
15	12.06
30	11.74
45	11.38
3 MIN	10.91

Minutes Since Start	Water Level (ft. BMP)
30	10.32
4 MIN	9.77
30	9.53
5	9.09
6	8.46
7	7.96
8	7.53
9	7.21
10	7.01
11	6.82
12	6.70
13	6.51
14	6.29

Minutes Since Start	Water Level (ft. BMP)
15	6.03
16	5.91
17	5.78
18	5.65

Minutes Since Start	Water Level (ft. BMP)

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-49B
Slug IN or OUT:	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL): 34.75	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 13.90	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
4 gallons removed, well is dry	Expected Well Response (+/- ft.):
Start Time: 1325	End Time:
	Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
0	33.15
1 MIN	32.98
2 MIN	32.86
3 MIN	32.79
4 MIN	32.74
5 MIN	32.71
6 MIN	32.68
8 MIN	32.63
10 MIN	32.56
15 MIN	32.52
20 MIN	32.48
30 MIN	32.43
1455	32.11

Minutes Since Start	Water Level (ft. BMP)
1639	31.68
2-27-09 1055	30.28

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

SLUG TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 2-25-09	Well No.: MW-43B
Slug IN or OUT: bail down (dry)	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2	MP Height (ft. above ground level):
Well Depth (ft. BGL): 36.25	Slug Type (stainless, PVC, Teflon): bailer
Screen Interval (ft. BGL):	Slug Length (ft.):
Starting WL (ft. BMP): 34.97 after bailing 25.58	Slug Diameter (ft.):
Decon. Procedures:	Slug Volume (cu. ft.):
3 gallons removed, well is dry	Expected Well Response (+/- ft.):
Start Time: 0855	End Time: Performed by: JTB

Minutes Since Start	Water Level (ft. BMP)
0.	34.97
1 MIN	34.84
2	34.74
3	34.68
4	34.64
5	34.61
7 MIN 30 SEC	34.54
0903 10 MIN	34.48
15 MIN	34.42
20 MIN	34.39
0933 40 MIN	34.30
1037 104 MIN	34.20
1114 141	34.16

Minutes Since Start	Water Level (ft. BMP)
1222 209	34.14
1403	34.13
1437	34.12
1612	34.06
2-27-09 1104	33.76
3/10/09 0835	31.96

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

UP - Houston

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 36B
Pump or Bailer: Bailer	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2"	MP Height (ft. above ground level): -0.60
Well Depth (ft. BGL): MP 42.82	Casing Volume (gal): 6.61
Screen Interval (ft. BGL): 38-43	Bailer/Pump Type (stainless, PVC, Teflon): PVC
Starting WL (ft. BMP): 4.38	Volume Removed (V1) (gal): 7.75
Decon. Procedures: dedicated equipment	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time: 11:22	End Time: Performed by: S. Burndt

Minutes Since Start	Water Level (ft. BMP)
11:33:15	42.30
11:33:30	42.14
11:33:45	42.08
11:33 00	42.01
11:34 15	41.93
11:34 30	41 89
11:34 45	41.84
11:35 00	41.81
11:36:30	41.69
11:38:00	41.63
11:39:30	41.60
11:41:00	41.57
11:42:30	41.54

Minutes Since Start	Water Level (ft. BMP)
11:44:00	41.51
11:47:	41.47
11:50	41.44
11:53	41.41
11:56	41.39
12:01	41.36
12:09	41.30
12:30	41.23
12:48	41.19
13:12	41.14
13:42	41.11
14:33	41.06
15:04	41.04

Minutes Since Start	Water Level (ft. BMP)
15:36	41.02
16:19	41.00
17:04	40.99

Minutes Since Start	Water Level (ft. BMP)

Notes:

90% Recovery of watercol. 8.224 DTW

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

UP - Houston

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 59B
Pump or Bailer: Bailer	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2"	MP Height (ft. above ground level): −0.25
Well Depth (ft. ~~BGL~~): mp 32.91	Casing Volume (gal): 4.23
Screen Interval (ft. BGL): 28-33	Bailer/Pump Type (stainless, PVC, Teflon): PVC
Starting WL (ft. BMP): 8.31	Volume Removed (V1) (gal): 6.75
Decon. Procedures: dedicated equipment D.I. Rinse	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time: Bailing 8:25	End Time:
	Performed by: S. D. Berndt

Minutes Since Start	Water Level (ft. BMP)
8:37:00	32.46
8:37:15	32.39
8:37:30	32.33
8:37:45	32.28
8:38:00	32.23
8:38:15	32.18
8:38:30	32.14
8:40:00	32.01
8:41:30	31.92
8:43:00	31.84
8:44:30	31.76
8:46	31.70
8:47:30	31.64

Minutes Since Start	Water Level (ft. BMP)
8:49	31.58
8:52	31.47
8:55	31.39
9:00	31.26
9:05	31.18
9:10	31.09
9:15	31.00
9:20	30.92
9:30	30.79
9:40	30.66
13:24	28.37
17:04	25.11

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

V1 - 90% recovery DTW should be 10.77

UP - Houston

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 67B
Pump or Bailer: Bailer	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2"	MP Height (ft. above ground level): -0.50
Well Depth (ft. BGL): MP ~~2.08~~ 39.46	Casing Volume (gal): 6.34
Screen Interval (ft. BGL): 35-40	Bailer/Pump Type (stainless, PVC, Teflon): PVC
Starting WL (ft. BMP): 2.62	Volume Removed (V1) (gal): 7.25
Decon. Procedures: dedicated equipment DI Rinse	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time: 10:01	End Time:
	Performed by: SD Berndt

Minutes Since Start	Water Level (ft. BMP)
10:10:30	38.45
10:10 45	38.89
10:11:00	38.79
10:11:15	38.74
10:11:30	38.66
10:11 45	38.61
10:12	38.58
10:13:30	38.30
10:1500	38.15
10:16:30	37.03
10:19	36.96
10:19:30	36.90
10:21	36.85

Minutes Since Start	Water Level (ft. BMP)
10:24	36.77
10:27	36.70
10:30	36.64
10:35	36.57
10:40	36.50
10:45	36.43
10:50	36.37
10:55	36.31
11:00	36.27
11:05	36.23
11:10	36.19
13:29	35.43
17:10	33.96

Minutes Since Start	Water Level (ft. BMP)

Minutes Since Start	Water Level (ft. BMP)

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

90% recovery of water colum DTW 6.30

UP - Houston

Slug BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 360
Pump or Bailer: Slug In / Out	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2"	MP Height (ft. above ground level): -0.35
Well Depth (ft. BGL): NA	Casing Volume (gal): 4.22
Screen Interval (ft. BGL): 100-110	Bailer/Pump Type (stainless, PVC, Teflon): PVC Slug 1 5/8" x 5.0'
Starting WL (ft. BMP): 85.47	Volume Removed (V1) (gal): 2.86 ft displaced
Decon. Procedures: DI Rinse	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time: 12:31	End Time:
	Performed by:

Slug in 12:31

Minutes Since Start	Water Level (ft. BMP)
12:31	
12:32	
12:33	
12:34	
12:35	
12:36	
12:37	
12:38	
12:39	
12:40	
12:41	
12:42	
12:43	
12:44	
12:45	
12:46	
12:47	
12:48	
12:49	
12:50	
12:55	
13:00	
13:05	

Minutes Since Start	Water Level (ft. BMP)
12:39:00	83.61
12:40	83.72
12:41	83.84
12:42	83.94
12:43	84.03
12:44	84.11
12:45	84.18
12:46:30	
12:47:30	84.35
12:50	84.50
12:55	84.73
13:00	84.90
13:05	85.03

Slug Out 13:07

Minutes Since Start	Water Level (ft. BMP)
13:08:00	88.02
13:08:15	87.96
13:08:30	87.90
13:08:45	87.85
13:09:00	87.81
13:09:15	87.76
13:09:30	87.71
13:09:45	87.66
13:10	87.62
13:10:30	87.54
13:11:00	87.46
13:12	87.31
13:13	87.18

Minutes Since Start	Water Level (ft. BMP)
13:15	86.94
13:20	86.52
13:25	85.89
Check other wells	
13:40	85.78
13:45	85.71
13:55	85.61
14:00	85.59
14:12	85.55
Talking to John	

Cross section of Slug

Has a 1" knob center on one side the whole length

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

UP - Houston

Slug BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 36D
~~Pump or Bailer~~: Slug In V2	Measuring Point (MP):
Well Diameter (in.): 2	MP Height (ft. above ground level):
Well Depth (ft. BGL): 110 Not measured	Casing Volume (gal): See page 1
Screen Interval (ft. BGL): 100 - 110	Bailer/Pump Type (stainless, PVC, Teflon): PVC Slug
Starting WL (ft. BMP): 85.55 (14:12)	Volume Removed (V1) (gal):
Decon. Procedures: D I Rinse	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time:	End Time:
	Performed by: S D Berndt

Slug In 14:18

Minutes Since Start	Water Level (ft. BMP)
14:18 00	82.37
14:18 40	82.46
1418 00	82.55
14 19:20	82.62
14:19 40	82.70
1420:00	82.77
1420:20	82.82
14:20:40	82.90
14 2100	82.96
14:21:20	83.02
14:21:40	83.07
14:22:00	83.12
14:22:20	83.18

Minutes Since Start	Water Level (ft. BMP)
14:22:40	83.23
14:23:00	83.28
14:23:30	83.36
14:24:00	83.43
14:24:30	83.50
14:25:00	83.56
1426:00	83:69
14:27:00	83.80
1428:00	—
14:25	83:99
14:30	84.09
14:32:30	84.28
14:35:00	84.46

Minutes Since Start	Water Level (ft. BMP)
14:37:30	84:59
14:40:00	84.70
14:42:30	84.80
14:45:00	84.90
14:50	85.05
14:55	85.13
15:00	85.20
15:05	85.26

Minutes Since Start	Water Level (ft. BMP)

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

UP-Houston

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 36D
~~Pump~~ or Bailer: Slug Out V2	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Casing Volume (gal):
Screen Interval (ft. BGL):	Bailer/Pump Type (stainless, PVC, Teflon):
Starting WL (ft. BMP): See page #1	Volume Removed (V1) (gal):
Decon. Procedures:	Volume Removed (V2) (gal): See page #1
	Volume Removed (V3) (gal):
Start Time:	End Time:
	Performed by: SD Berndt

Slug Out 15:06

Minutes Since Start	Water Level (ft. BMP)
15:07:00	98.25
15:07:20	88.19
15:07:40	88.12
15:08:00	88.05
15:08:20	87.98
15:08:40	87.91
15:09:00	87.86
15:09:20	87.80
15:09:40	87.74
15:10:00	87.69
15:10:20	87.62
15:10:40	87.58
15:11:00	87.53

Minutes Since Start	Water Level (ft. BMP)
15:11:30	87.46
15:12:00	87.39
15:12:30	87.32
15:13:00	87.36
15:14:00	87.14
15:15.00	87.03
15:17.30	86.80
15:20:00	86.60
15:22:30	86.43
15:25:00	86.31
15:27:30	86.18
15:30:00	86.09
~~15:35:00~~ 15:32:30	86.02

Minutes Since Start	Water Level (ft. BMP)
15:35:00	85.95
15:40	85.84
15:45	85.76
15:50	85.71

Minutes Since Start	Water Level (ft. BMP)

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 36D
Pump or Bailer: Slug V3	Measuring Point (MP):
Well Diameter (in.):	MP Height (ft. above ground level):

Well Depth (ft. BGL):	Casing Volume (gal):
Screen Interval (ft. BGL):	Bailer/Pump Type (stainless, PVC, Teflon):
Starting WL (ft. BMP): See page # 1	Volume Removed (V1) (gal):
Decon. Procedures:	Volume Removed (V2) (gal): See Page # 1
	Volume Removed (V3) (gal):
Start Time: Slug In 1553	End Time: Performed by:

Minutes Since Start	Water Level (ft. BMP)
15:53:20	82.54
15:53:40	82.63
15:54:00	82.72
15:54:20	82.79
15:54:40	82.85
15:55:00	82.92
15:55:20	82.98
15:55:40	83.05
15:56:00	83.11
15:56:20	83.18
15:56:40	83.22
15:57:00	83.28
15:57:20	83.33

Minutes Since Start	Water Level (ft. BMP)
15:57:40	83.38
15:58:00	83.43
15:58:30	83.50
15:59:00	83.57
15:59:30	83.63
16:00:00	83.70
16:01	83.82
16:02	83.92
16:03	84.02
16:04	84.11
16:05	84.20
16:07:30	84.38
16:10	84.55

Minutes Since Start	Water Level (ft. BMP)
16:12:30	84.67
16:15:00	84.78
16:17:30	84.87
16:20:00	84.95
16:22:30	85.02
16:25:00	85.08
16:27:30	85.12
16:30:00	85.16
16:32:30	85.20
16:35	85.23
16:40	85.28
16:45	85.31

Minutes Since Start	Water Level (ft. BMP)

Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

BAILDOWN TEST FORM

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

Date Tested: 7-22-10	Well No.: 36D
Pump or Bailer: Slug In	Measuring Point (MP): TOC/PVC
Well Diameter (in.): 2.0	MP Height (ft. above ground level):
Well Depth (ft. BGL):	Casing Volume (gal):
Screen Interval (ft. BGL):	Bailer/Pump Type (stainless, PVC, Teflon):
Starting WL (ft. BMP): See page #1	Volume Removed (V1) (gal): See page #1
Decon. Procedures:	Volume Removed (V2) (gal):
	Volume Removed (V3) (gal):
Start Time:	End Time:
Performed by:	

16:46:00 Slug In

Minutes Since Start	Water Level (ft. BMP)
16:47:20	88.25
16:47 40	88.18
16:48:00	88.10
16:48:20	88 03
16:48:40	87.97
16:49:00	87.90
16:49:20	87.84
16:49:40	87.78
16:50:00	87.71
16:50:20	87.66
16:50:40	87.601
16:51:00	87.56
16:51:20	87.51

Minutes Since Start	Water Level (ft. BMP)
16:51:40	87.46
16:52:00	87.41
16:52:30	87.34
16:53:00	87.29
16:53:30	87.22
16:54:00	87.16
16:55:00	87.02
16:56:00	86.93
16:57	86 84
16:58	86.75
16:59	86.67
17:00	86 60
17:02:30	86.43

Minutes Since Start	Water Level (ft. BMP)
17:05:00	86.29
17:07:30	86.18
17:10:00	86.08
17:12:30	85.99
17:15:00	85.93
17:20:00	85.81
17:25:00	85.75
17:30	85.69
17:35	85.63

Minutes Since Start	Water Level (ft. BMP)

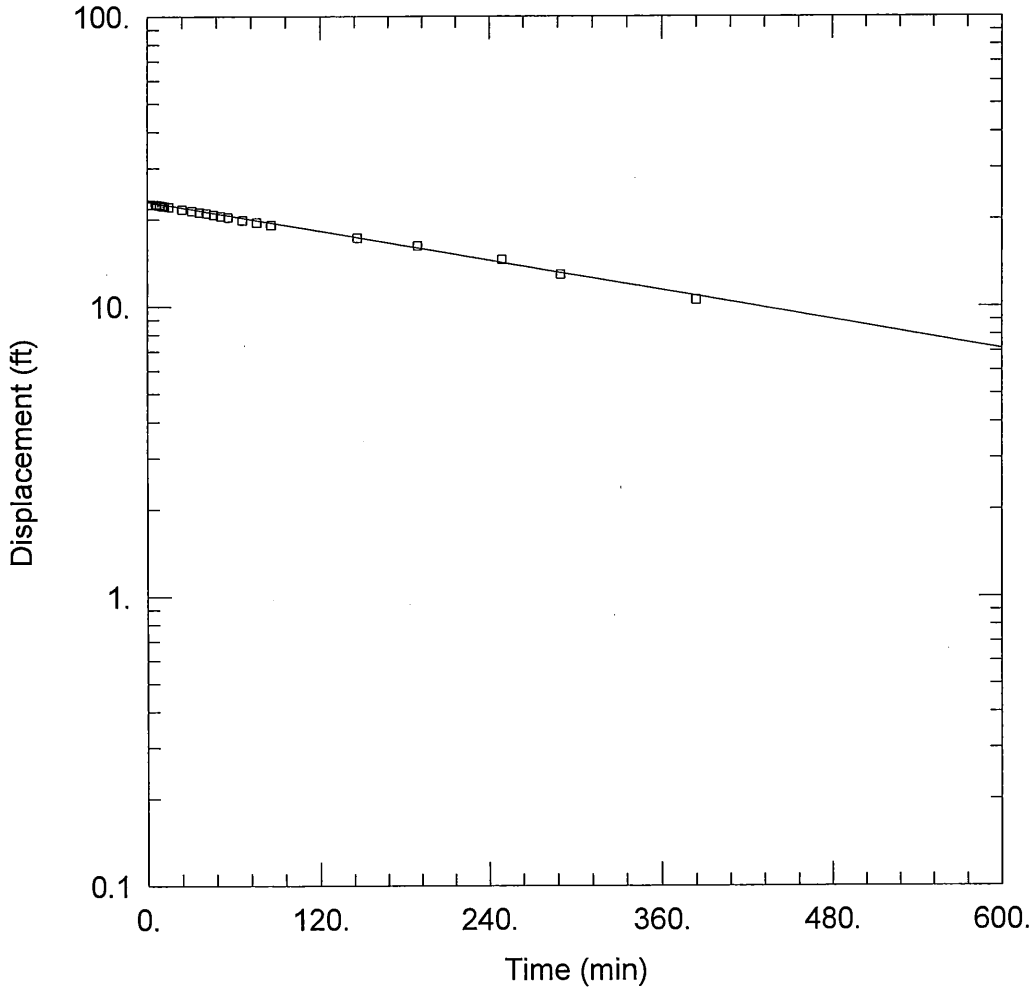
Notes:

Volume (cu ft/linear ft): 2" well = 0.023; 4" well = 0.088

1 gal = 0.133680556 cu ft

ATTACHMENT 7B

AQUIFER TEST SOLUTIONS



BAILDOWN TEST - MW-33B

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW33B_baildown.aqt
Date: 09/08/10 Time: 15:46:59

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-33B
Test Date: 02/25/09

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-33B)

Initial Displacement: 22.46 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
K = 7.308E-07 cm/sec
Solution Method: Bouwer-Rice
y0 = 22.97 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW33B_baildown.aqt
Title: Baildown Test - MW-33B
Date: 09/02/10
Time: 15:11:10

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 02/25/09
Test Well: MW-33B

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 22.46 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 23

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6.	22.46	46.	20.73
7.	22.4	51.	20.5
8.	22.35	56.	20.3
9.	22.3	66.	19.84
10.	22.26	76.	19.49
11.	22.21	86.	19.1
12.	22.17	146.	17.23
15.	22.	189.	16.15
24.	21.65	249.	14.48
31.	21.35	290.	12.87
36.	21.14	384.	10.52
41.	20.97		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Errors Detected in Data Set

WARNING: Initial displacement > saturated thickness!

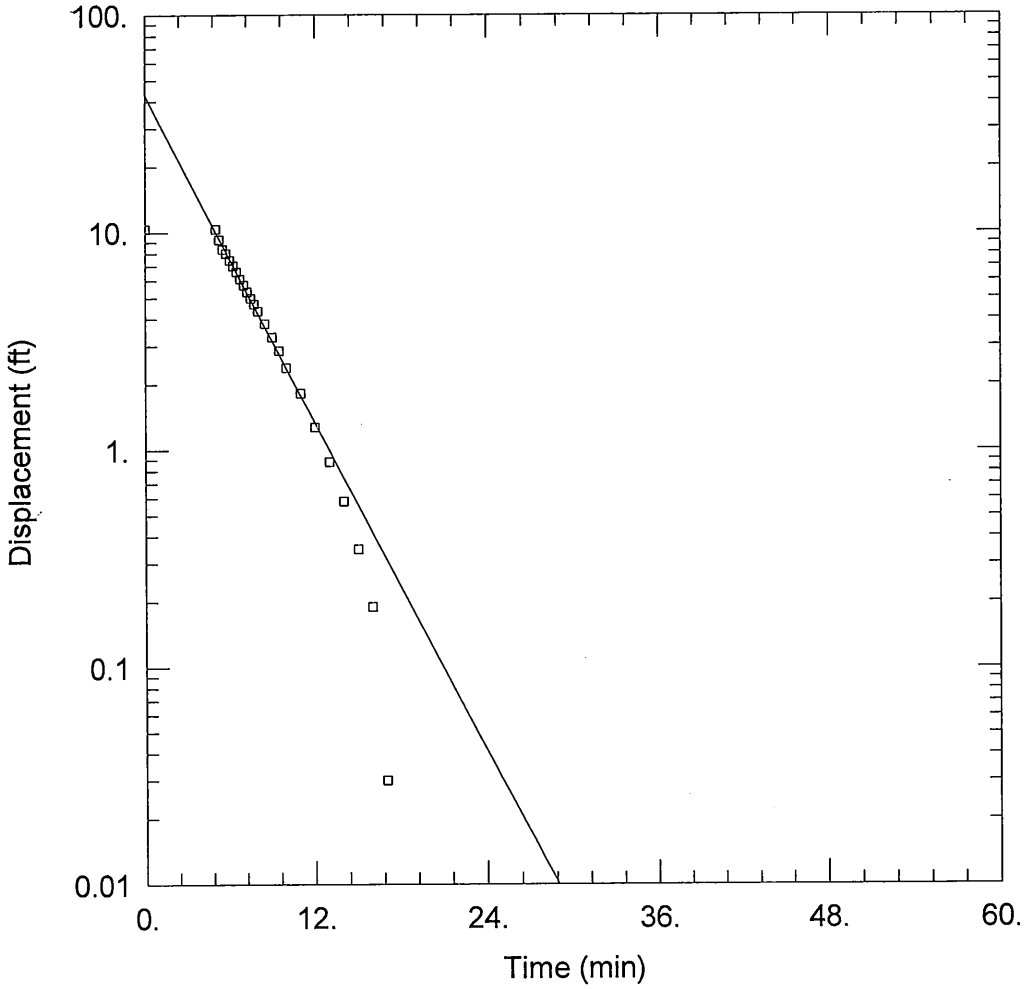
Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 23



BAILDOWN TEST - MW-35B BAIL DOWN TEST 1

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown.aqt
Date: 09/02/10 Time: 15:52:50

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-35B
Test Date: 02/25/09

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-35B)

Initial Displacement: 10.36 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
K = 0.0001084 cm/sec
Solution Method: Bouwer-Rice
y0 = 42.81 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown.aqt
Title: Baildown Test - MW-35B Bail Down Test 1
Date: 09/02/10
Time: 15:52:57

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 02/25/09
Test Well: MW-35B

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 10.36 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 27

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	10.36	9.	3.3
5.25	9.26	9.5	2.85
5.5	8.37	10.	2.38
5.75	8.01	11.	1.82
6.	7.45	12.	1.27
6.25	7.02	13.	0.88
6.5	6.58	14.	0.58
6.75	6.11	15.	0.35
7.	5.72	16.	0.19
7.25	5.33	17.	0.03
7.5	4.98	18.	-0.08
7.75	4.68	19.	-0.13
8.	4.34	20.	-0.16
8.5	3.8		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0001168	cm/sec
y0	10.09	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0001084	2.124E-06	cm/sec
y0	42.81	1.531	ft

Parameter Correlations

	K	y0
K	1.00	0.98
y0	0.98	1.00

Residual Statistics

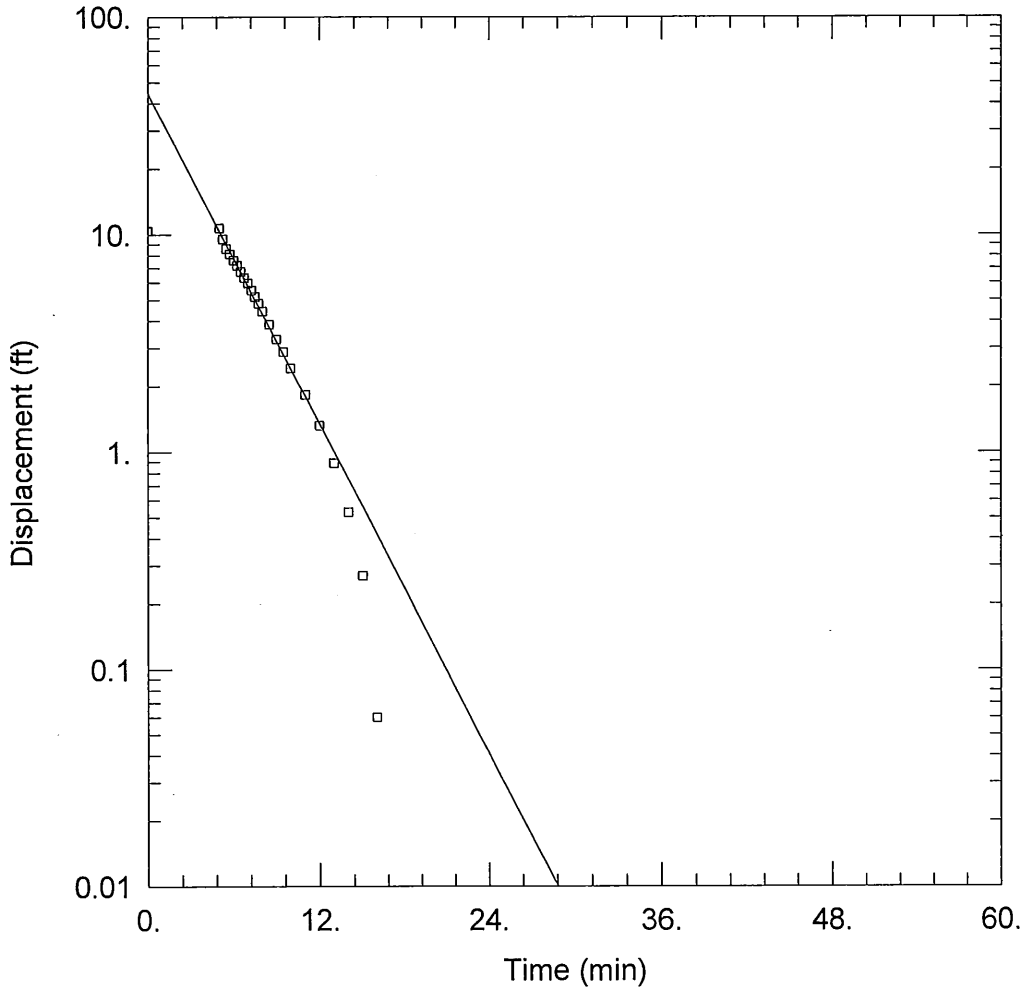
for weighted residuals

Sum of Squares . . . . . 0.8342 ft^2
Variance . . . . . 0.03337 ft^2
Std. Deviation . . . . . 0.1827 ft
Mean . . . . . -0.05387 ft
No. of Residuals . . . . . 27.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 27



BAILDOWN TEST - MW-35B BAIL DOWN TEST 2

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown2.aqt
Date: 09/02/10 Time: 15:54:34

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-35B
Test Date: 02/25/09

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-35B)

Initial Displacement: 10.36 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0001092 cm/sec
y0 = 44.49 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown2.aqt
Title: Baildown Test - MW-35B Bail Down Test 2
Date: 09/02/10
Time: 15:33:40

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 02/25/09
Test Well: MW-35B

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 10.36 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 26

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	10.68	8.5	3.85
5.25	9.52	9.	3.29
5.5	8.6	9.5	2.88
5.75	8.1	10.	2.42
6.	7.61	11.	1.83
6.25	7.2	12.	1.32
6.5	6.74	13.	0.89
6.75	6.33	14.	0.53
7.	5.96	15.	0.27
7.25	5.54	16.	0.06
7.5	5.17	17.	-0.03
7.75	4.81	18.	-0.1
8.	4.43	19.	-0.15

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0001168	cm/sec
y0	10.09	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	0.0001092	2.426E-06	cm/sec
y0	44.49	1.815	ft

Parameter Correlations

	K	y0
K	1.00	0.98
y0	0.98	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 1.085 ft^2
Variance . . . . . 0.04522 ft^2
Std. Deviation . . . . . 0.2126 ft
Mean . . . . . -0.05729 ft
No. of Residuals . . . . . 26.
No. of Estimates 2

Errors Detected in Data Set

WARNING: Maximum displacement > initial displacement!

WARNING: Initial displacement > saturated thickness!

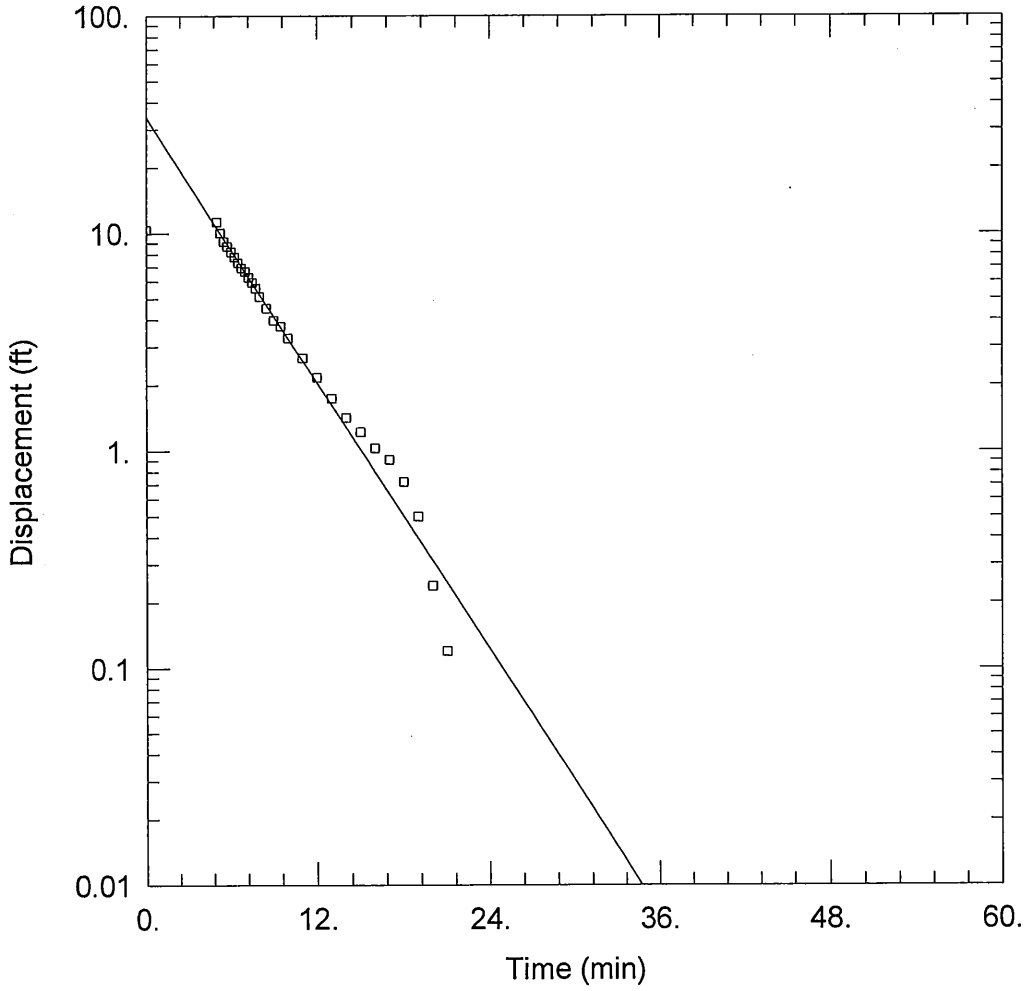
Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 26



BAILDOWN TEST - MW-35B BAIL DOWN TEST 3

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown3.aqt
Date: 09/02/10 Time: 15:47:40

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-35B
Test Date: 02/25/09

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-35B)

Initial Displacement: 10.36 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 8.79E-05 cm/sec
y0 = 34.22 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_baildown3.aqt
Title: Baildown Test - MW-35B Bail Down Test 3
Date: 09/02/10
Time: 15:46:39

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 02/25/09
Test Well: MW-35B

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 10.36 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 30

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
5.	11.27	9.5	3.74
5.25	10.04	10.	3.3
5.5	9.17	11.	2.67
5.75	8.72	12.	2.17
6.	8.23	13.	1.74
6.25	7.77	14.	1.42
6.5	7.33	15.	1.22
6.75	6.94	16.	1.03
7.	6.68	17.	0.91
7.25	6.27	18.	0.72
7.5	5.95	19.	0.5
7.75	5.59	20.	0.24
8.	5.12	21.	0.12
8.5	4.53	22.	-0.01
9.	3.98	23.	-0.14

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0001168	cm/sec
y0	10.09	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	8.79E-05	1.729E-06	cm/sec
y0	34.22	1.036	ft

Parameter Correlations

	K	y0
K	1.00	0.97
y0	0.97	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 1.114 ft^2
Variance . . . . . 0.03977 ft^2
Std. Deviation . . . . . 0.1994 ft
Mean . . . . . 0.009668 ft
No. of Residuals . . . . . 30.
No. of Estimates 2

Errors Detected in Data Set

WARNING: Maximum displacement > initial displacement!

WARNING: Initial displacement > saturated thickness!

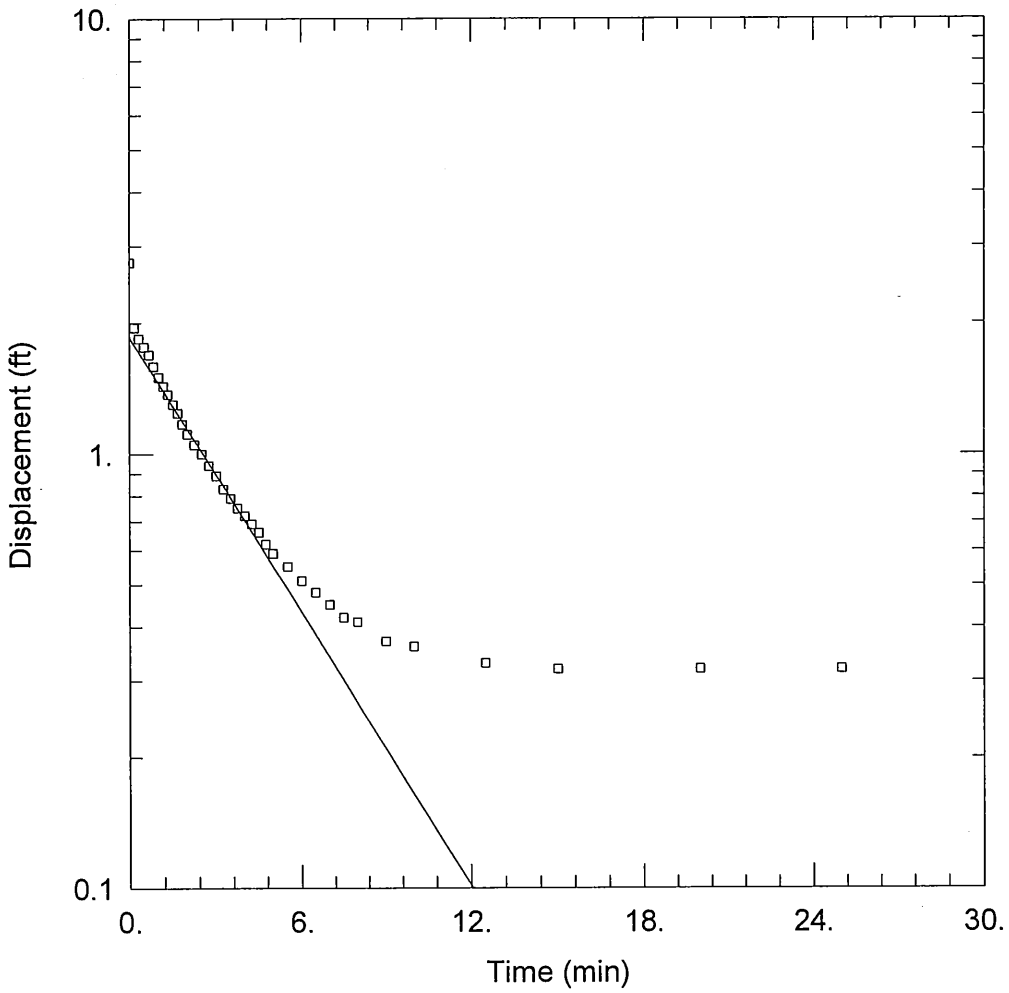
Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 30



WELL TEST ANALYSIS

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_Slugin_Jan10.aqt
Date: 09/02/10 Time: 14:47:53

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW
Test Well: MW-35B
Test Date: 01/22/10

AQUIFER DATA

Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-35B)

Initial Displacement: 2.75 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0001089 cm/sec
y0 = 1.853 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_Slugin_Jan10.aqt
Date: 09/02/10
Time: 14:41:39

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW
Test Date: 01/22/10
Test Well: MW-35B

AQUIFER DATA

Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 2.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 36

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.17	1.95	3.75	0.75
0.33	1.84	4.	0.72
0.5	1.76	4.25	0.69
0.67	1.69	4.5	0.66
0.83	1.59	4.75	0.62
1.	1.5	5.	0.59
1.17	1.43	5.5	0.55
1.33	1.37	6.	0.51
1.5	1.3	6.5	0.48
1.67	1.24	7.	0.45
1.83	1.17	7.5	0.42
2.	1.11	8.	0.41
2.25	1.05	9.	0.37
2.5	1.	10.	0.36
2.75	0.94	12.5	0.33
3.	0.89	15.	0.32
3.25	0.83	20.	0.32
3.5	0.79	25.	0.32

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

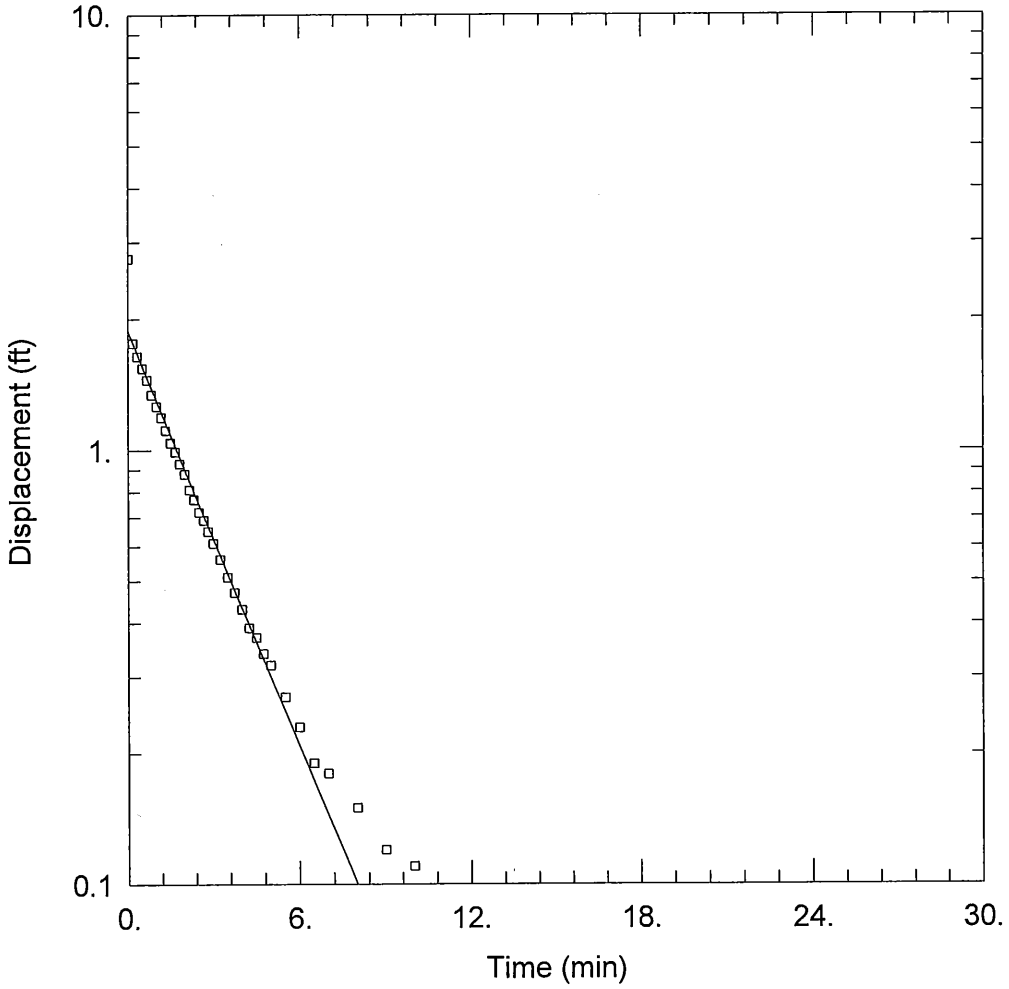
Estimated Parameters

Parameter	Estimate	
K	0.0001089	cm/sec
y0	1.853	ft

Errors Detected in Data Set
No errors detected!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 36



WELL TEST ANALYSIS

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_Slugout_Jan10.aqt
Date: 09/02/10 Time: 14:48:55

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW
Test Well: MW-35B
Test Date: 01/22/10

AQUIFER DATA

Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-35B)

Initial Displacement: 2.75 ft
Wellbore Radius: 0.333 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 ft
Well Skin Radius: 0.333 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0001648 cm/sec
y0 = 1.879 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW35B_Slugout_Jan10.aqt
Date: 09/02/10
Time: 14:42:00

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW
Test Date: 01/22/10
Test Well: MW-35B

AQUIFER DATA

Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 2.75 ft
Casing Radius: 0.083 ft
Wellbore Radius: 0.333 ft
Well Skin Radius: 0.333 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 33

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.17	1.76	3.	0.61
0.33	1.64	3.25	0.56
0.5	1.54	3.5	0.51
0.67	1.45	3.75	0.47
0.83	1.34	4.	0.43
1.	1.26	4.25	0.39
1.17	1.19	4.5	0.37
1.33	1.11	4.75	0.34
1.5	1.04	5.	0.32
1.67	0.99	5.5	0.27
1.83	0.93	6.	0.23
2.	0.88	6.5	0.19
2.17	0.81	7.	0.18
2.33	0.77	8.	0.15
2.5	0.72	9.	0.12
2.67	0.69	10.	0.11
2.83	0.65		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

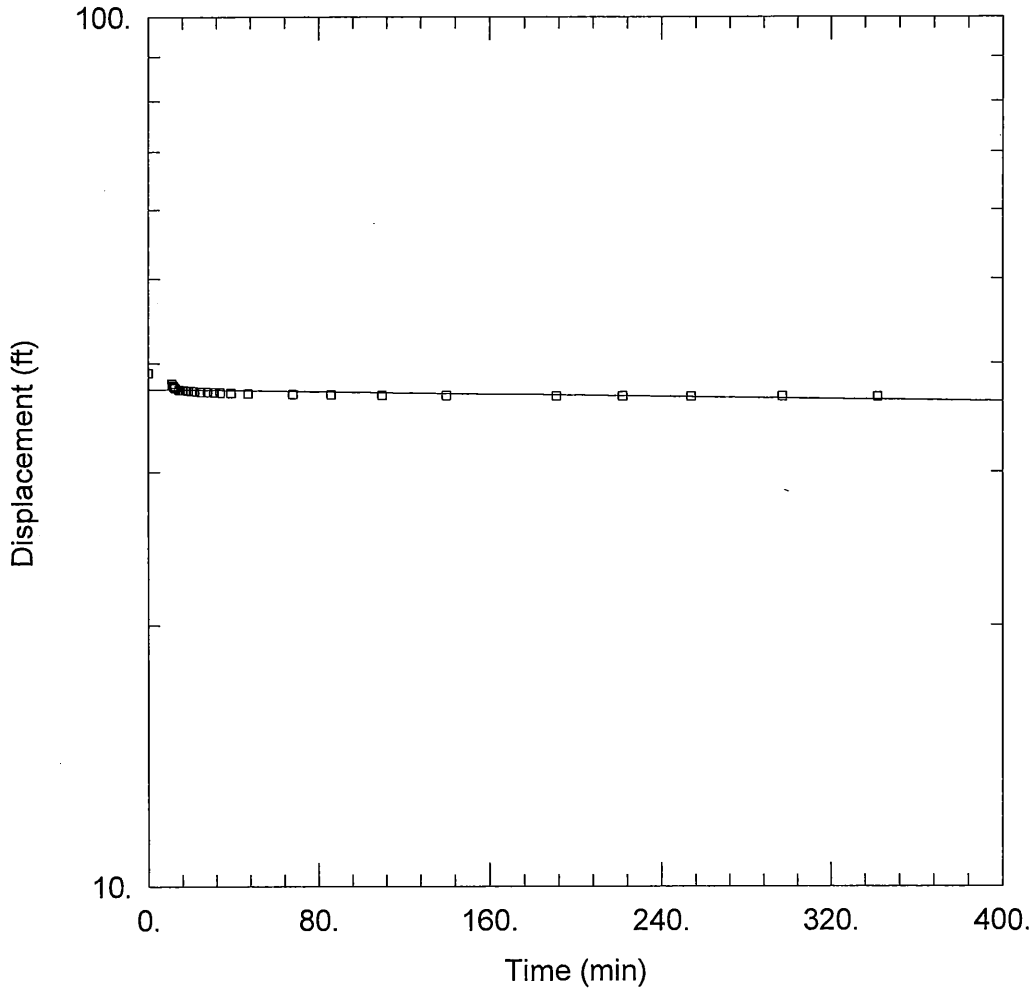
Estimated Parameters

Parameter	Estimate	
K	0.0001648	cm/sec
y0	1.879	ft

Errors Detected in Data Set
No errors detected!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 33



MW-36B BAIL DOWN TEST

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36B.aqt
Date: 09/02/10 Time: 12:47:01

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36B
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36B)

Initial Displacement: 39. ft
Wellbore Radius: 0.33 ft
Screen Length: 5. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 5.612E-08 cm/sec
y0 = 37.34 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36B.aqt
Title: MW-36B Bail Down Test
Date: 09/02/10
Time: 12:47:10

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36B

AQUIFER DATA

Saturated Thickness: 0.5 ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 39. ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 5. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 29

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
11.25	37.92	28.	37.06
11.5	37.76	31.	37.03
11.75	37.7	34.	37.01
12.	37.63	39.	36.98
12.25	37.55	47.	36.92
12.5	37.51	68.	36.85
12.75	37.46	86.	36.81
13.	37.43	110.	36.76
14.5	37.31	140.	36.73
16.	37.25	191.	36.68
17.5	37.22	222.	36.66
19.	37.19	254.	36.64
20.5	37.16	297.	36.62
22.	37.13	342.	36.61
25.	37.09		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.222E-06	cm/sec
y0	40.22	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	5.612E-08	9.541E-09	cm/sec
y0	37.34	0.05964	ft

Parameter Correlations

	K	y0
K	1.00	0.61
y0	0.61	1.00

Residual Statistics

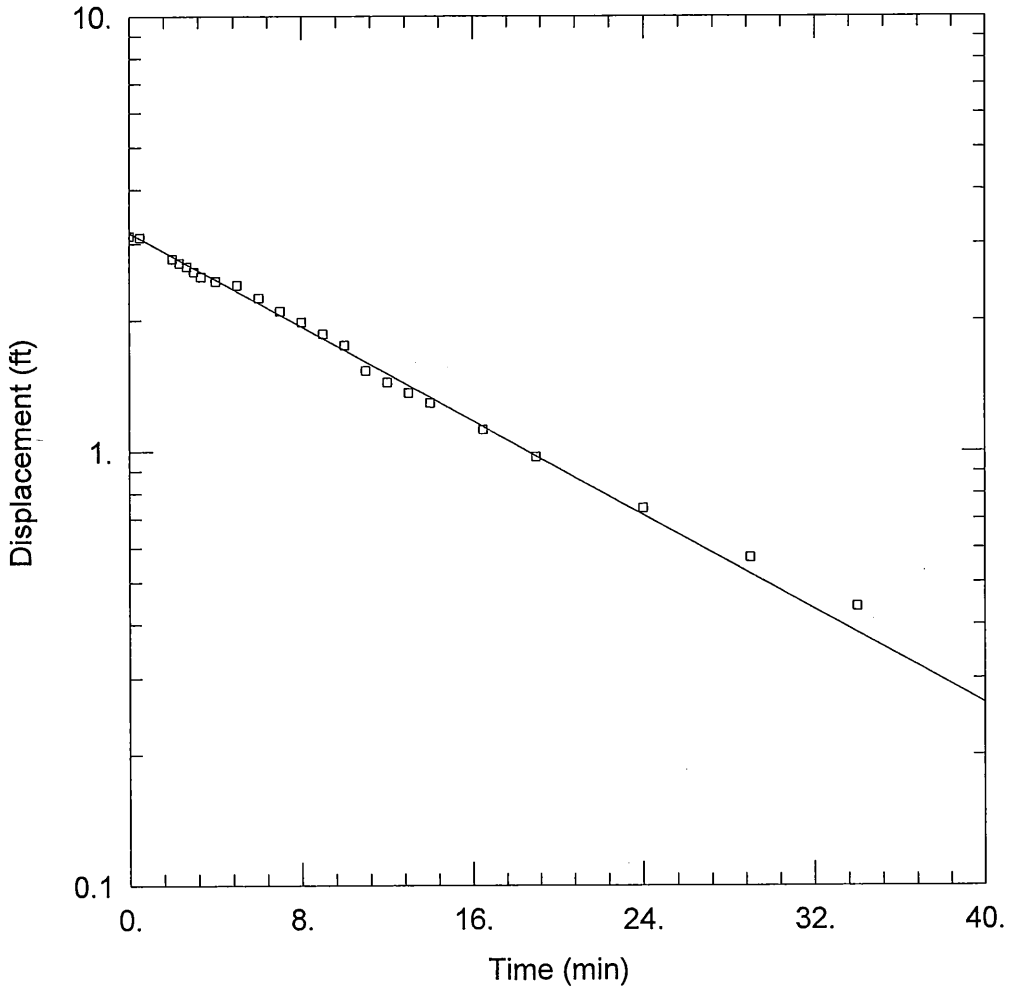
for weighted residuals

Sum of Squares . . . . . 1.72 ft^2
Variance . . . . . 0.0637 ft^2
Std. Deviation . . . . . 0.2524 ft
Mean . . . . . 3.573E-06 ft
No. of Residuals . . . . . 29.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 29



MW-36D SLUG IN 1

Data Set: J:\...\MW-36D_In_1.aqt
Date: 09/02/10 Time: 12:51:01

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice

K = 2.831E-05 cm/sec y0 = 3.181 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_In_1.aqt
Title: MW-36D Slug In 1
Date: 09/02/10
Time: 12:51:06

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 22

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.5	3.1	9.	1.86
2.	2.77	10.	1.75
2.333	2.71	11.	1.53
2.667	2.66	12.	1.44
3.	2.59	13.	1.36
3.333	2.52	14.	1.29
4.	2.46	16.5	1.12
5.	2.41	19.	0.97
6.	2.25	24.	0.74
7.	2.1	29.	0.57
8.	1.98	34.	0.44

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	2.831E-05	cm/sec
y0	3.181	ft

Errors Detected in Data Set

WARNING: Initial displacement > saturated thickness!

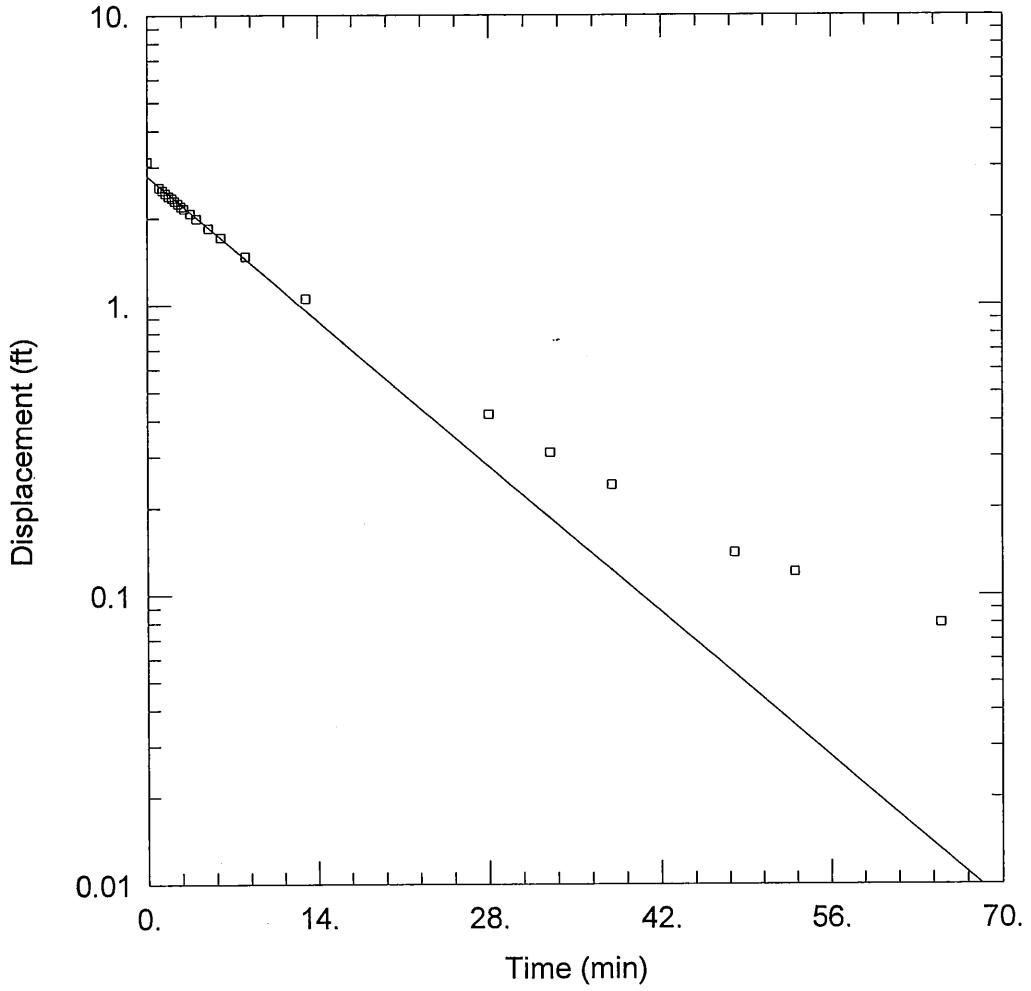
Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 22



MW-36D SLUG OUT 1

Data Set: J:\...\MW-36D_Out_1.aqt
Date: 09/02/10 Time: 12:53:17

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 3.747E-05 cm/sec
y0 = 2.793 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_Out_1.aqt
Title: MW-36D Slug Out 1
Date: 09/02/10
Time: 12:53:23

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 21

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.	2.55	5.	1.84
1.25	2.49	6.	1.71
1.5	2.43	8.	1.47
1.75	2.38	13.	1.05
2.	2.34	28.	0.42
2.25	2.29	33.	0.31
2.5	2.24	38.	0.24
2.75	2.19	48.	0.14
3.	2.15	53.	0.12
3.5	2.07	65.	0.08
4.	1.99		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.747E-05	cm/sec
y0	2.793	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	3.207E-05	8.095E-07	cm/sec
y0	2.676	0.01938	ft

Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

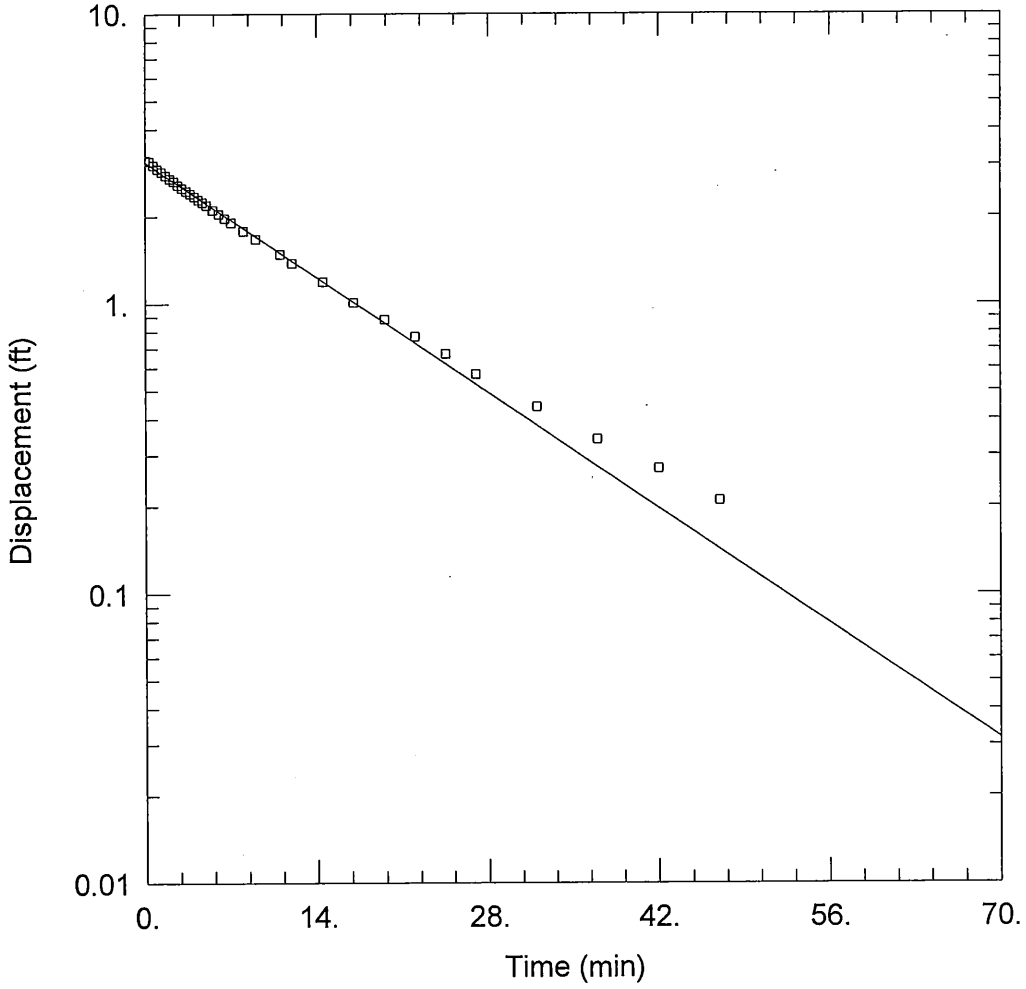
for weighted residuals

Sum of Squares . . . . . 0.03039 ft^2
Variance . . . . . 0.0016 ft^2
Std. Deviation . . . . . 0.03999 ft
Mean . . . . . 0.01095 ft
No. of Residuals . . . . . 21.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 21



MW-36D SLUG IN 2

Data Set: J:\...\MW-36D_In_2.aqt
Date: 09/02/10 Time: 12:54:53

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 2.972E-05 cm/sec
y0 = 3.075 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_In_2.aqt
Title: MW-36D Slug In 2
Date: 09/02/10
Time: 12:54:58

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 33

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.3333	3.1	6.5	1.97
0.6667	3.01	7.	1.91
1.	2.92	8.	1.78
1.333	2.85	9.	1.67
1.667	2.77	11.	1.48
2.	2.7	12.	1.38
2.333	2.65	14.5	1.19
2.667	2.57	17.	1.01
3.	2.51	19.5	0.88
3.333	2.45	22.	0.77
3.667	2.4	24.5	0.67
4.	2.35	27.	0.57
4.333	2.29	32.	0.44
4.667	2.24	37.	0.34
5.	2.19	42.	0.27
5.5	2.11	47.	0.21
6.	2.04		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.747E-05	cm/sec
y0	2.793	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	2.972E-05	4.057E-07	cm/sec
y0	3.075	0.01563	ft

Parameter Correlations

	K	y0
K	1.00	0.71
y0	0.71	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 0.05345 ft^2
Variance . . . . . 0.001724 ft^2
Std. Deviation . . . . . 0.04152 ft
Mean . . . . . 0.007108 ft
No. of Residuals . . . . . 33.
No. of Estimates 2

Diagnostic Statistics

Aquifer Model: Confined
Solution Method: Bouwer-Rice

Estimated Parameters

Parameter	Estimate	Std. Error	
K	2.972E-05	4.057E-07	cm/sec
y0	3.075	0.01563	ft

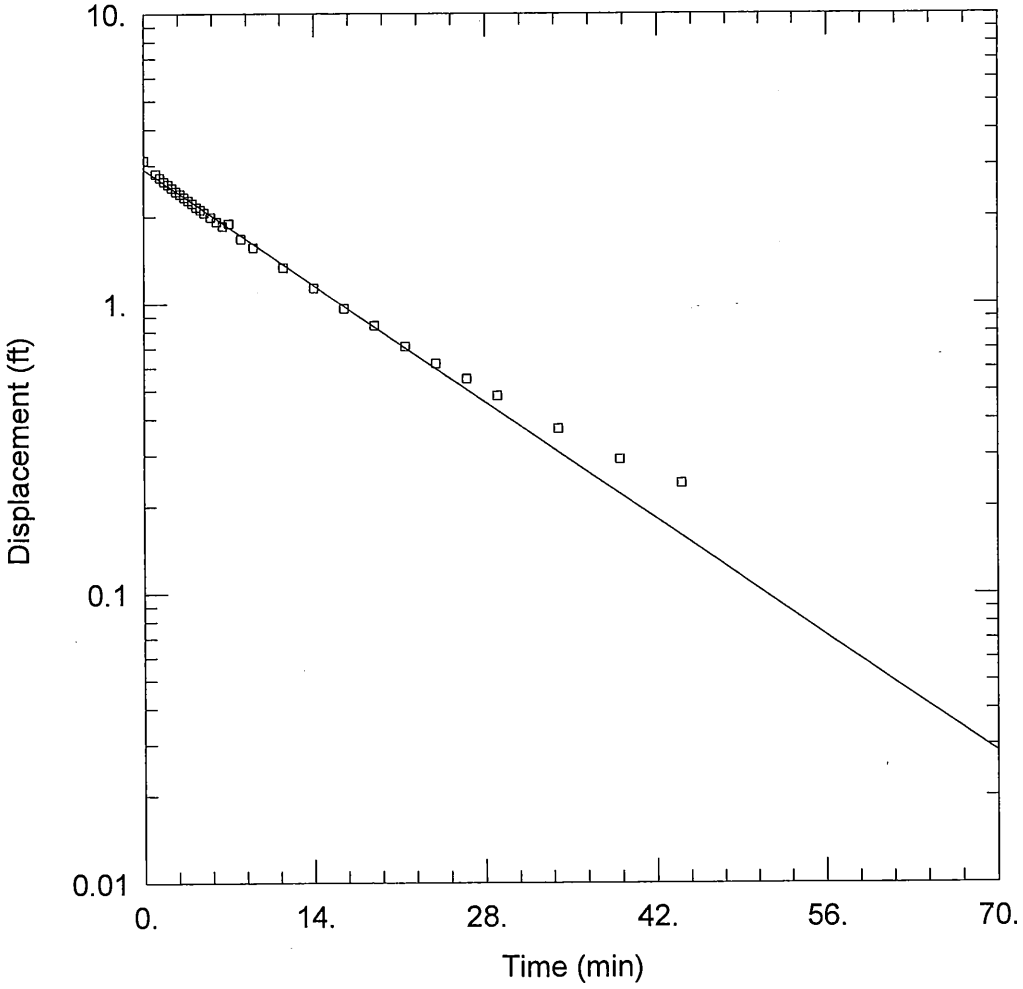
Parameter Correlations

	K	y0
K	1.00	0.71
y0	0.71	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 0.05345 ft^2
Variance . . . . . 0.001724 ft^2
Std. Deviation . . . . . 0.04152 ft
Mean . . . . . 0.007108 ft
No. of Residuals . . . . . 33.
No. of Estimates 2



MW-36D SLUG OUT 2

Data Set: J:\...\MW-36D_Out_2.aqt
Date: 09/02/10 Time: 13:11:35

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice

K = 3.007E-05 cm/sec y0 = 2.913 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_Out_2.aqt
Title: MW-36D Slug Out 2
Date: 09/02/10
Time: 13:11:40

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft.
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 30

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.	2.81	6.5	1.85
1.333	2.72	7.	1.89
1.667	2.64	8.	1.67
2.	2.58	9.	1.56
2.333	2.51	11.5	1.33
2.667	2.44	14.	1.13
3.	2.39	16.5	0.96
3.333	2.33	19.	0.84
3.667	2.27	21.5	0.71
4.	2.22	24.	0.62
4.333	2.15	26.5	0.55
4.667	2.11	29.	0.48
5.	2.06	34.	0.37
5.5	1.99	39.	0.29
6.	1.92	44.	0.24

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.747E-05	cm/sec
y0	2.793	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	3.007E-05	4.782E-07	cm/sec
y0	2.913	0.01836	ft

Parameter Correlations

	K	y0
K	1.00	0.74
y0	0.74	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 0.05049 ft^2
Variance . . . . . 0.001803 ft^2
Std. Deviation . . . . . 0.04247 ft
Mean . . . . . 0.006514 ft
No. of Residuals . . . . . 30.
No. of Estimates 2

Errors Detected in Data Set

WARNING: Initial displacement > saturated thickness!

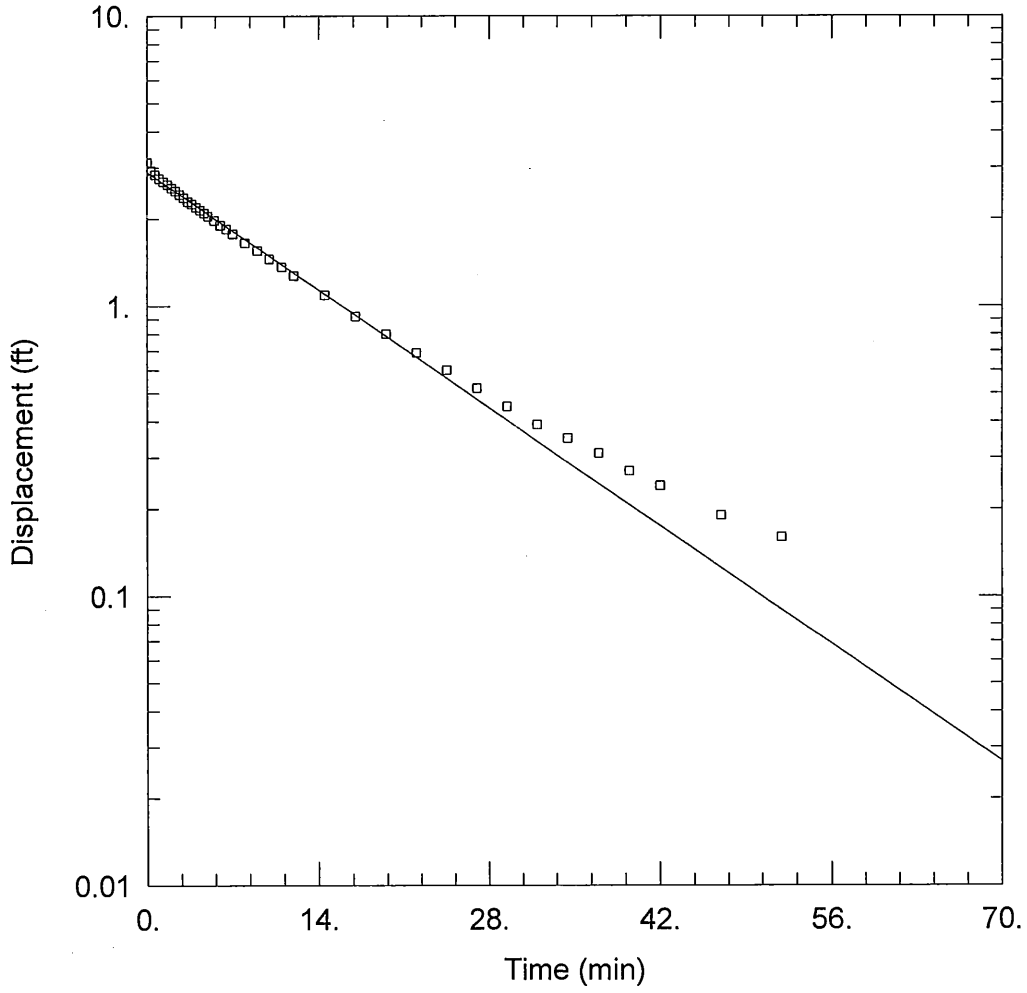
Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 30



MW-36D SLUG IN 3

Data Set: J:\...\MW-36D_In_3.aqt
Date: 09/02/10 Time: 13:14:26

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 3.039E-05 cm/sec
y0 = 2.897 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_In_3.aqt
Title: MW-36D Slug In 3
Date: 09/02/10
Time: 13:14:31

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 38

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.3333	2.93	8.	1.65
0.6667	2.84	9.	1.55
1.	2.75	10.	1.45
1.333	2.68	11.	1.36
1.667	2.62	12.	1.27
2.	2.55	14.5	1.09
2.333	2.49	17.	0.92
2.667	2.42	19.5	0.8
3.	2.36	22.	0.69
3.333	2.29	24.5	0.6
3.667	2.25	27.	0.52
4.	2.19	29.5	0.45
4.333	2.14	32.	0.39
4.667	2.09	34.5	0.35
5.	2.04	37.	0.31
5.5	1.97	39.5	0.27
6.	1.9	42.	0.24
6.5	1.84	47.	0.19
7.	1.77	52.	0.16

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.747E-05	cm/sec
y0	2.793	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	3.039E-05	4.307E-07	cm/sec
y0	2.897	0.01631	ft

Parameter Correlations

	K	y0
K	1.00	0.70
y0	0.70	1.00

Residual Statistics

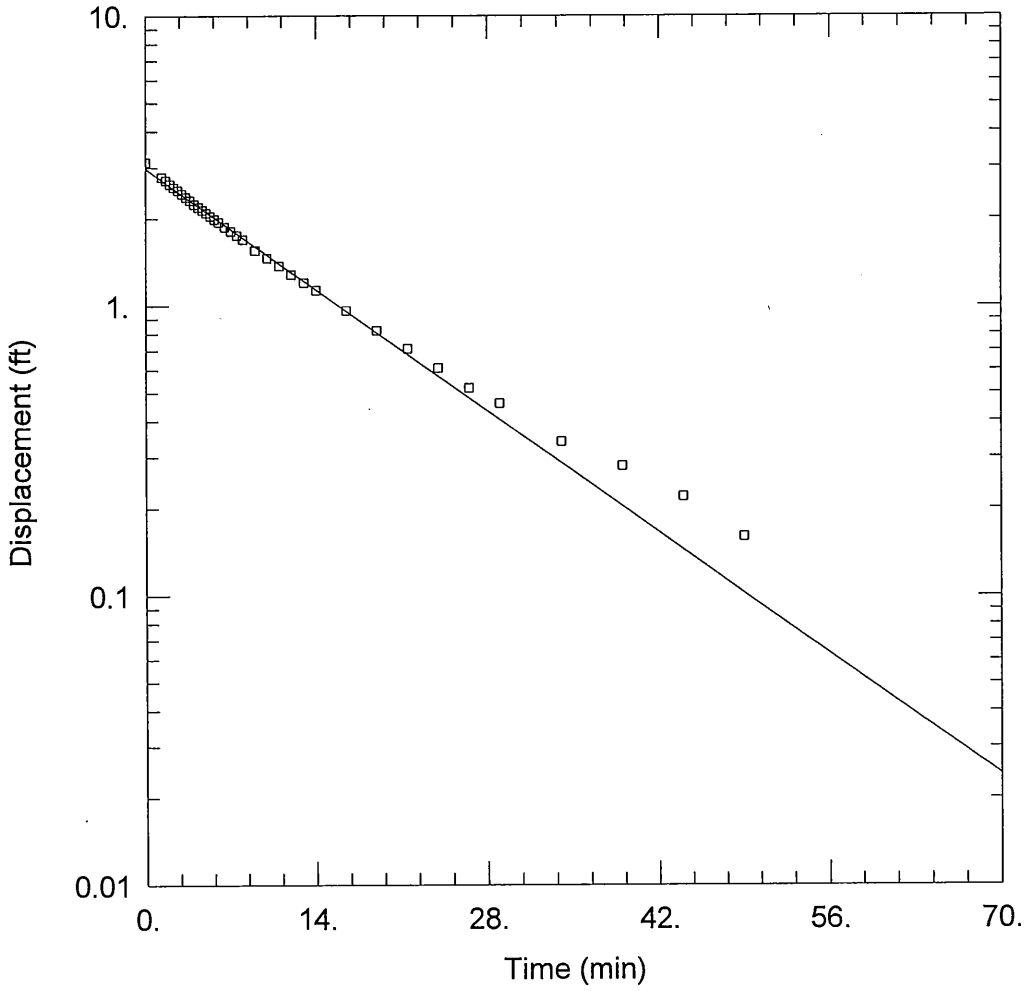
for weighted residuals

Sum of Squares . . . . . 0.06963 ft^2
Variance . . . . . 0.001934 ft^2
Std. Deviation . . . . . 0.04398 ft
Mean . . . . . 0.009762 ft
No. of Residuals . . . . . 38.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 38



MW-36D SLUG OUT 3

Data Set: J:\...\MW-36D_Out_3.aqt
Date: 09/02/10 Time: 13:16:26

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-36D
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-36D)

Initial Displacement: 3.13 ft
Wellbore Radius: 0.33 ft
Screen Length: 10. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 10. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 3.126E-05 cm/sec
y0 = 2.974 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-36D_Out_3.aqt
Title: MW-36D Slug Out 3
Date: 09/02/10
Time: 13:16:31

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-36D

AQUIFER DATA

Saturated Thickness: 1. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 3.13 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 10. ft
Total Well Penetration Depth: 10. ft
Gravel Pack Porosity: 0.3

No. of observations: 35

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.333	2.78	8.	1.69
1.667	2.71	9.	1.55
2.	2.63	10.	1.46
2.333	2.56	11.	1.37
2.667	2.5	12.	1.28
3.	2.43	13.	1.2
3.333	2.37	14.	1.13
3.667	2.31	16.5	0.96
4.	2.24	19.	0.82
4.333	2.19	21.5	0.71
4.667	2.14	24.	0.61
5.	2.09	26.5	0.52
5.333	2.04	29.	0.46
5.667	1.99	34.	0.34
6.	1.94	39.	0.28
6.5	1.87	44.	0.22
7.	1.81	49.	0.16
7.5	1.75		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.747E-05	cm/sec
y0	2.793	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	3.126E-05	4.143E-07	cm/sec
y0	2.974	0.01755	ft

Parameter Correlations

	K	y0
K	1.00	0.79
y0	0.79	1.00

Residual Statistics

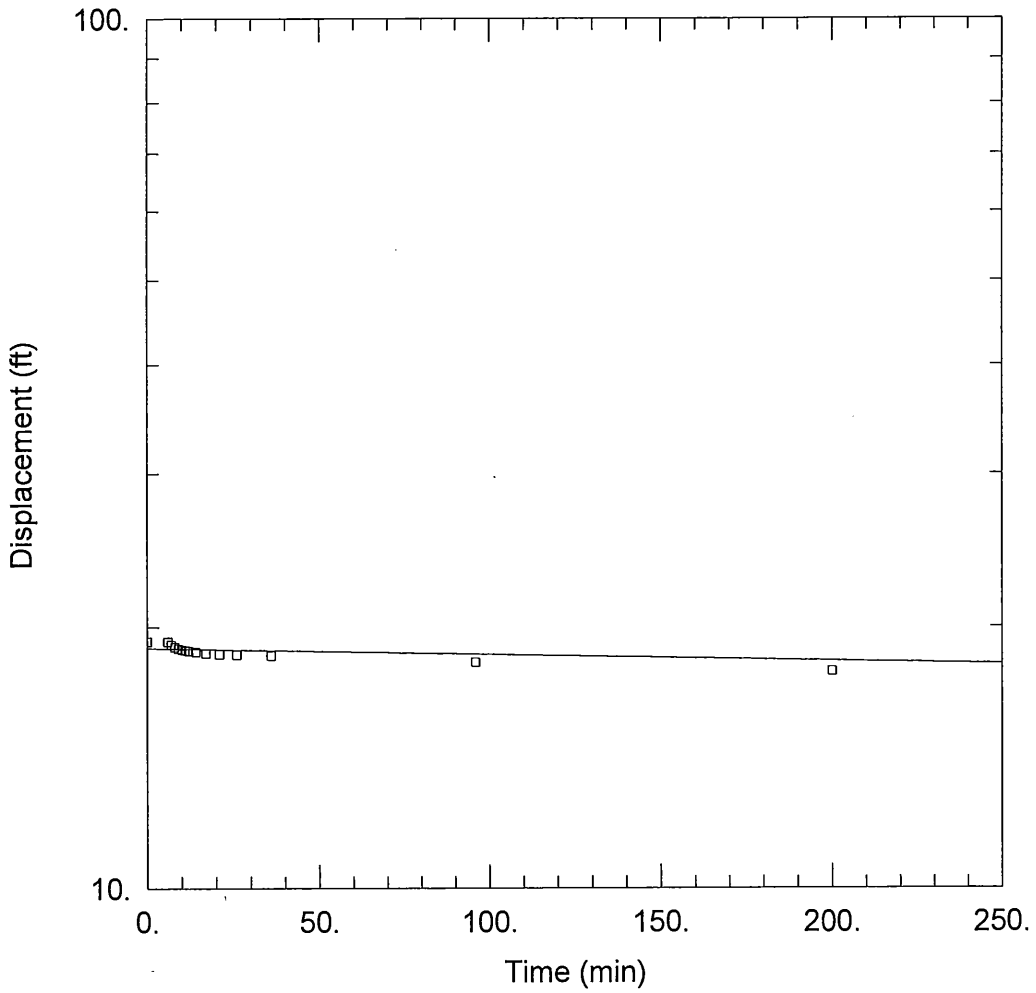
for weighted residuals

Sum of Squares . . . . . 0.04746 ft^2
Variance . . . . . 0.001438 ft^2
Std. Deviation . . . . . 0.03792 ft
Mean . . . . . 0.007306 ft
No. of Residuals . . . . . 35.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 35



MW-49B BAIL DOWN TEST

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW-49B.aqt
Date: 09/02/10 Time: 16:32:47

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-49B

AQUIFER DATA

Saturated Thickness: 2. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-49B)

Initial Displacement: 19.25 ft
Wellbore Radius: 0.33 ft
Screen Length: 5. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 1.183E-07 cm/sec
y0 = 18.91 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW-49B.aqt
Title: MW-49B Bail Down Test
Date: 09/02/10
Time: 16:32:51

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Well: MW-49B

AQUIFER DATA

Saturated Thickness: 2. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 19.25 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 5. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 14

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6.	19.25	14.	18.73
7.	19.08	17.	18.66
8.	18.96	21.	18.62
9.	18.89	26.	18.58
10.	18.84	36.	18.53
11.	18.81	96.	18.21
12.	18.78	200.	17.78

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	1.183E-07	cm/sec
y0	18.91	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	1.183E-07	3.371E-08	cm/sec
y0	18.91	0.05337	ft

Parameter Correlations

	K	y0
K	1.00	0.55
y0	0.55	1.00

Residual Statistics

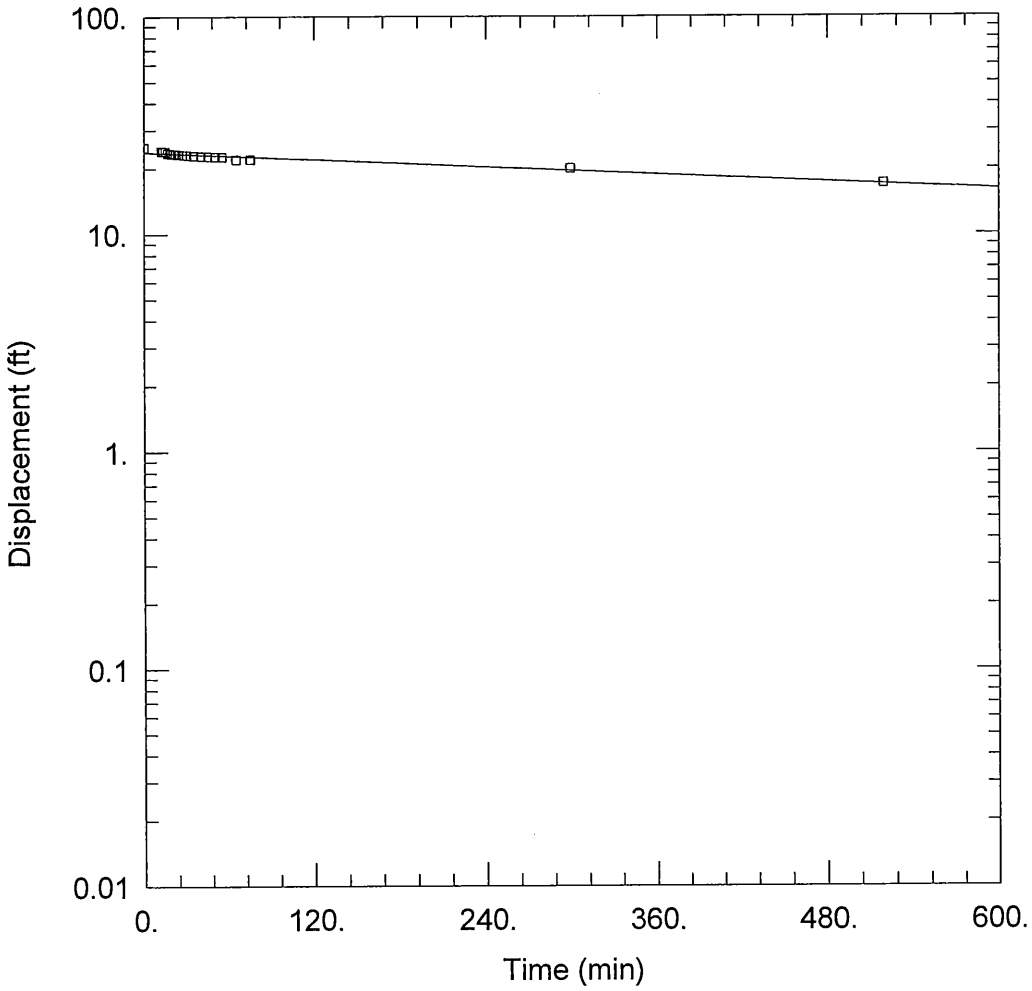
for weighted residuals

Sum of Squares . . . . . 0.3276 ft^2
Variance . . . . . 0.0273 ft^2
Std. Deviation . . . . . 0.1652 ft
Mean . . . . . 1.23E-05 ft
No. of Residuals . . . . . 14.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 14



MW-59B BAIL DOWN TEST

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-59B.aqt
Date: 09/02/10 Time: 13:21:33

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-59B
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 4. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-59B)

Initial Displacement: 25. ft
Wellbore Radius: 0.33 ft
Screen Length: 5. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 4.615E-07 cm/sec
y0 = 23.81 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-59B.aqt
Title: MW-59B Bail Down Test
Date: 09/02/10
Time: 13:21:39

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-59B

AQUIFER DATA

Saturated Thickness: 4. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 25. ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 5. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 25

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
12.	24.15	24.	23.27
12.25	24.08	27.	23.16
12.5	24.	30.	23.08
12.75	24.	35.	22.95
13.	24.	40.	22.87
13.25	24.	45.	22.78
13.5	24.	50.	22.69
15.	24.	55.	22.61
16.5	23.61	65.	22.
18.	23.53	75.	22.
19.5	23.45	299.	20.
21.	23.39	519.	17.
22.5	23.33		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate

K	7.814E-06	cm/sec
y0	2.974	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	4.615E-07	3.084E-08	cm/sec
y0	23.81	0.1018	ft

Parameter Correlations

	K	y0
K	1.00	0.48
y0	0.48	1.00

Residual Statistics

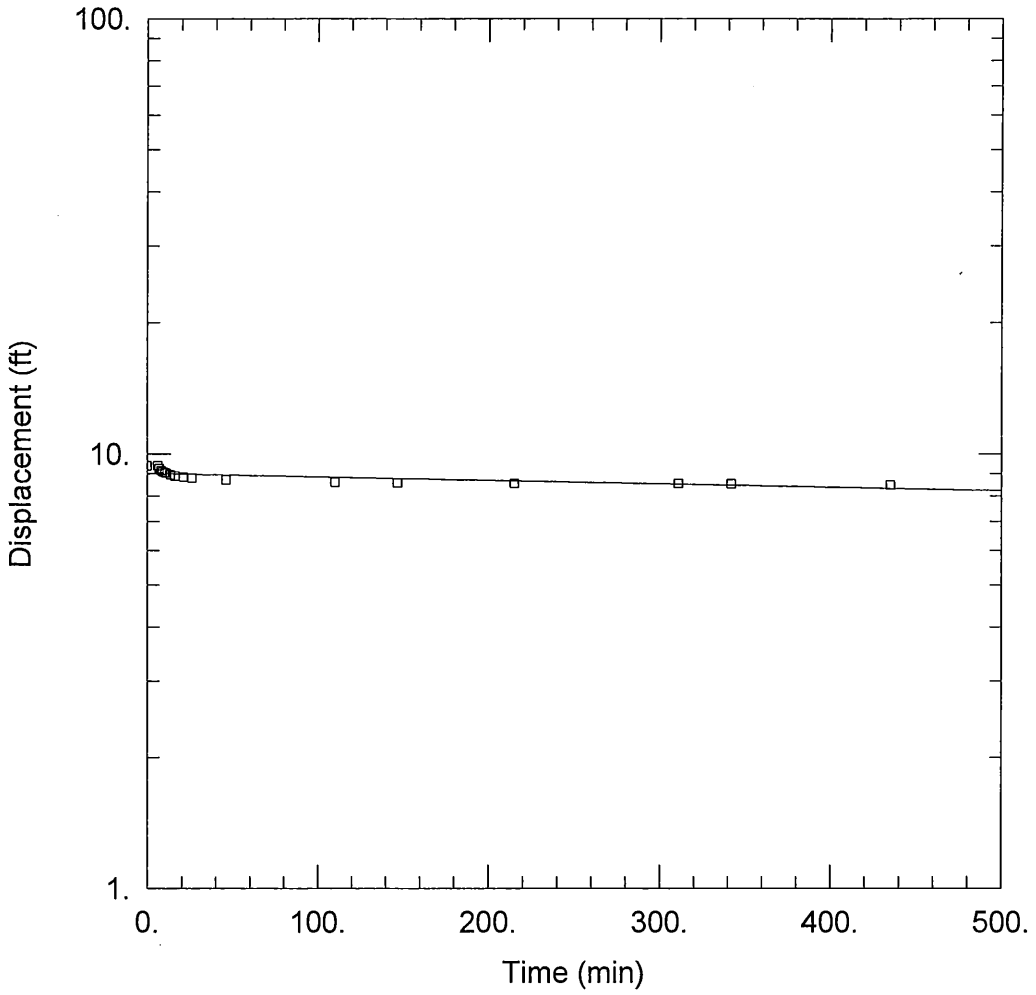
for weighted residuals

Sum of Squares . . . . . 4.491 ft^2
Variance . . . . . 0.1871 ft^2
Std. Deviation . . . . . 0.4326 ft
Mean . . . . . 0.03885 ft
No. of Residuals . . . . . 26.
No. of Estimates 2

Errors Detected in Data Set
WARNING: Initial displacement > saturated thickness!

Options Available
Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary
Slug Test
Total no. of observations: 25



MW-63B BAIL DOWN TEST

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW-63B.aqt
Date: 09/02/10 Time: 16:37:18

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-63B
Test Date: 2/25/2009

AQUIFER DATA

Saturated Thickness: 4. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-63B)

Initial Displacement: 9.39 ft
Wellbore Radius: 0.33 ft
Screen Length: 5. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 1.278E-07 cm/sec
y0 = 9.021 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\MW-63B.aqt
Title: MW-63B Bail Down Test
Date: 09/02/10
Time: 16:37:22

PROJECT INFORMATION

Company: Pastor, Behling & Wheeler, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 2/25/2009
Test Well: MW-63B

AQUIFER DATA

Saturated Thickness: 4. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 9.39 ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 5. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 17

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
6.	9.39	26.	8.81
7.	9.26	46.	8.72
8.	9.16	110.	8.62
9.	9.1	147.	8.58
10.	9.06	215.	8.56
11.	9.03	311.	8.55
13.5	8.96	342.	8.54
16.	8.9	435.	8.48
21.	8.85		

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	5.914E-08	cm/sec
y0	18.91	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	1.278E-07	2.621E-08	cm/sec
y0	9.021	0.05471	ft

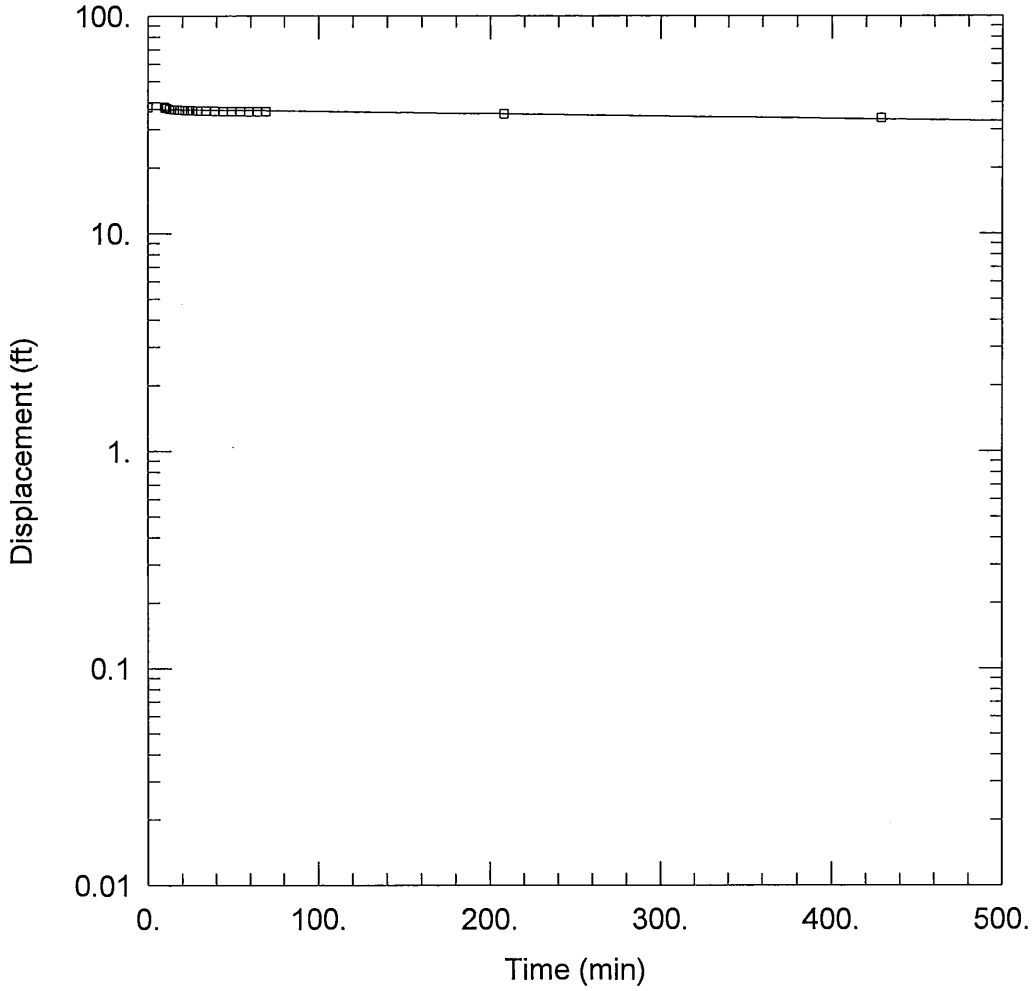
Parameter Correlations

	K	y0
K	1.00	0.59
y0	0.59	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 0.4801 ft^2
Variance . . . . . 0.032 ft^2
Std. Deviation . . . . . 0.1789 ft
Mean . . . . . 2.37E-05 ft
No. of Residuals . . . . . 17.
No. of Estimates 2



MW-67B BAIL DOWN TEST

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-67B.aqt
Date: 09/02/10 Time: 13:25:20

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Test Location: HWPW, Houston, TX
Test Well: MW-67B
Test Date: 7/22/10

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-67B)

Initial Displacement: 38. ft
Wellbore Radius: 0.33 ft
Screen Length: 5. ft
Gravel Pack Porosity: 0.3
Casing Radius: 0.0833 ft
Well Skin Radius: 0.33 ft
Total Well Penetration Depth: 5. ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 1.747E-07 cm/sec
y0 = 37.27 ft

Data Set: J:\1358 - UPRR Houston Preserving Works\Slug Tests\July 2010 Slug Tests\MW-67B.aqt
Title: MW-67B Bail Down Test
Date: 09/02/10
Time: 13:25:56

PROJECT INFORMATION

Company: PBW, LLC
Client: UPRR
Project: 1358
Location: HWPW, Houston, TX
Test Date: 7/22/10
Test Well: MW-67B

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Initial Displacement: 38. ft
Casing Radius: 0.0833 ft
Wellbore Radius: 0.33 ft
Well Skin Radius: 0.33 ft
Screen Length: 5. ft
Total Well Penetration Depth: 5. ft
Gravel Pack Porosity: 0.3

No. of observations: 26

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
9.5	38.1	23.	36.77
9.75	37.88	26.	36.7
10.	37.79	29.	36.64
10.25	37.74	34.	36.57
10.5	37.66	39.	36.5
10.75	37.61	44.	36.43
11.	37.58	49.	36.37
12.5	37.3	54.	36.31
14.	37.15	59.	36.27
15.5	37.03	64.	36.23
17.	36.96	69.	36.19
18.5	36.9	208.	35.43
20.	36.85	429.	33.96

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate

K	3.692E-07	cm/sec
y0	23.81	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	1.747E-07	2.29E-08	cm/sec
y0	37.27	0.1043	ft

Parameter Correlations

	K	y0
K	1.00	0.51
y0	0.51	1.00

Residual Statistics

for weighted residuals

Sum of Squares . . . . . 5764.2 ft^2
Variance . . . . . 240.2 ft^2
Std. Deviation . . . . . 15.5 ft
Mean . . . . . -0.1763 ft
No. of Residuals . . . . . 26.
No. of Estimates 2

Errors Detected in Data Set

WARNING: Maximum displacement > initial displacement!

WARNING: Initial displacement > saturated thickness!

Options Available

Choose a solution to perform forward solution or curve matching analyses.

Data Set Summary

Slug Test

Total no. of observations: 26

APPENDIX 9
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

APPENDIX 9

CALCULATION OF TIER 2 ^{GW}Soil PCLs

Affected Property Assessment Report Addendum
UPRR Houston Wood Preserving Works
Houston, Texas

Introduction

As discussed in the Affected Property Assessment Report (APAR) for the UPRR Houston Wood Preserving Works (the Site), soil concentrations of site-specific chemicals of concern (COCs) exceeded the Tier 1 Residential ^{GW}Soil Protective Concentration Levels (PCL) for residential land use (30.0-acre source area). Therefore, Tier 2 ^{GW}Soil PCLs were calculated for COCs in soils in accordance with the Soil-to-Groundwater PCL equations presented in Figure 30 TAC §350.75(b)(1).

Tier 2 PCL equations consider the soil leachate to groundwater as the exposure pathway, surface and subsurface soils as the source medium, and groundwater as the exposure medium. Site-specific data (i.e., total fraction organic carbon (foc), bulk density, volumetric water content, volumetric air content, and pH) were collected from soil boring MW-14(5) as discussed in the Revised APAR (ERM, 2004) to evaluate the site-specific soil attenuation model and develop Tier 2 PCLs. Details on the Tier 2 evaluations and assumptions are discussed below.

Tier 2 ^{GW}Soil PCL Evaluation

As detailed in Figure 30 TAC §350.75(b)(1), the applicable Tier 1 TRRP PCL for the soil leachate to groundwater pathway (^{GW}Soil) is calculated using the following equation:

$$^{GW}Soil = \left[\frac{Groundwater\_PCL * LDF}{K_{SW}}\right] * \frac{L_2}{L_1}$$

Where:

$$K_{SW}\left[\frac{mg/L - water}{mg/kg - soil}\right] = \left[\frac{\rho_b}{\left[\theta_{ws} + K_d \rho_b + \theta_{as} H'\right]}\right]$$

Where:

K_{SW} = Soil - leachate partion factor for COC (mg/L - water, mg/kg - soil)
LDF = Leachate Dilution Factor (TRRP Default, 30 TAC350.75(b)(1)
L_1 = Thickness of affected soil (cm)
L_2 = Depth from top of affected soil to groundwater table (cm)
H' = Dimensionless Henry's Law Constant

K_d = Soil - water partition coefficient (cm^3 - water/g - carbon)

ρ_b = bulk density (g/cm^3)

θ_{as} = Volumetric air content of vadose zone soils (cm^3 - air/cm^3 - soil) = $\theta_T - \theta_{ws}$)

θ_{ws} = Volumetric water content of vadose zone soils (cm^3 - water/cm^3 - soil) = $\theta_T - \theta_{ws}$)

Details of the Tier 1 default variables from Figure 30 TAC §350.75(b)(1) are provided in Attachment 1.

Site-specific data for total fraction organic carbon (foc), bulk density (ρ_b), total soil porosity (θ_T), and pH were collected from soil boring MW-14(5) as discussed in the Revised APAR (ERM, 2004) to evaluate the site-specific soil attenuation model and develop Tier 2 PCLs. TRRP default parameters were used for the Tier 2 PCL calculation for Groundwater PCLs (Residential and Commerical/Industrial Tier 1 PCLs in groundwater), volumetric air content (θ_{as}), and volumetric water content (θ_{ws}).

Soil sample MW-14(5) that was analyzed for geochemical parameters was collected from 5 to 7 feet bgs. This interval is part of the clay unit described as the A-CZ, which was encountered between the overlying fill material and the underlying GWBU A-TZ. The A-CZ was encountered in every boring that was advanced through to the A-TZ across the Site. The boring log describes the soil as silty clay, consistent with the description for the A-CZ across the Site (Section 1.3 of the APAR Addendum, PBW, 2009) below the fill material. Therefore, the one sample is representative of the vadose zone lithology for evaluating attenuation of COCs in soils.

The thickness of affected soil (L_1) and depth from top of affected soil to groundwater (L_2) were conservatively assumed to be the same value given the depth of the COCs that exceeded PCLs were detected in some soil samples near the top of the saturated zone.

Tier 2 ^{GW}Soil PCLs were developed for 42 COCs detected in soils at the Site, as shown on Table 9-1 for Residential PCLs and Table 9-2 for Commercial/Industrial PCLs. Groundwater PCLs ($^{GW}GW_{Ing}$) used for the Tier 2 Residential and Commercial/Industrial PCL calculations are provided on Table 9-3. Using the combination of site-specific and TRRP default parameters for the Tier 2 calculations, the Tier 2 ^{GW}Soil PCLs calculated are protective of potential soil leachate to groundwater.

REFERENCES

ERM, 2004. *Revised Affected Property Assessment Report (APAR)*, Houston Wood Preserving Works, Houston, Texas, June 10, 2004.

Pastor, Behling & Wheeler, LLC (PBW), 2009. Affected Property Assessment Report Addendum, Union Pacific Railroad Houston Wood Preserving Works, TCEQ SWR No. 31547, Houston, TX. July.

Texas Commission on Environmental Quality (TCEQ), 2005. *Tiered Development of Human Health PCLs*, Guidance Document TRRP-22.

TABLES

APPENDIX TABLE 9-1
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON
TIER 2 SOIL-TO-GROUNDWATER PCL CALCULATION - RESIDENTIAL LAND USE

EQUATIONS		SOURCE
Ksw =	$\frac{Pb}{(Kd * Pb + nw + na * H')}$	Figure 30TAC350.75(b)(1)
LDF =	$\frac{\text{Leachate Dilution Factor} * L2}{L1}$	Figure 30TAC350.75(b)(1)
^{GW}Soil =	$\frac{^{GW}GW * LDF * L2}{Ksw * L1}$	Figure 30TAC350.75(b)(1)

PARAMETER DESCRIPTIONS	TRRP DEFAULT	VALUES USED	SOURCE
^{GW}GW = Residential Tier 1 PCL in groundwater (mg/L)			TRRP Table of Residential Tier 1 PCLs for groundwater
^{GW}Soil = groundwater protective soil concentration (mg/kg)			calculated below
Ksw= soil leachate partition factor for COC (mg/l-water/mg/kg-soil)			calculated below
Kd = soil water partition coefficient		chemical specific	Chemical specific. Calculated from Site-specific foc and TRRP default for Koc values
foc = soil organic carbon fraction	0.006	0.03	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
Pb = dry soil bulk density (g-soil/cm3-soil)	1.67	1.84	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
n = total soil porosity	0.37	0.31	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
na = volumetric air content of vadose zone soils (cm3-air/cm3-soil)	0.21	0.21	Default
L1 = thickness of impacted soil zone (ft)	site-specific	15.5	Average depth to A Transmissive unit.
L2 = distance from top of impacted soil zone to groundwater (ft)	site-specific	15.5	Assumes soil contaminated from surface
nw = volumetric water content of vadose zone soils (cm3-water/cm3-soil)	0.16	0.16	Default
H' = dimensionless Henry's Law Constant		chemical specific	Chemical/Physical Properties Table (March 31, 2008)
LDF = Leachate dilution factor		10	30 acre source area, TRRP default
pH = soil pH		7.3	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR

APPENDIX TABLE 9-1
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON

TIER 2 SOIL-TO-GROUNDWATER PCL CALCULATION - RESIDENTIAL LAND USE

TIER 2 PCL CALCULATION SUMMARY

VOCs/SVOCs

CAS	Analyte	GWGWIng	Koc	Kd	Pb	n	na	nw	H'	*L1*	*L2*	*LDF*	Ksw	Tier 2 ^{GW}Soil PCL (mg/Kg)
107-06-2	1,2-Dichloroethane	5.0E-03	17.37801	0.52134	1.84	0.31	0.21	0.16	0.053209599	16	16	10	1.628	**3.1E-02**
122-66-7	1,2-Diphenylhydrazine	1.1E-03	660.6933	19.8208	1.84	0.31	0.21	0.16	1.42169E-07	16	16	10	0.050	**2.3E-01**
105-67-9	2,4-Dimethylphenol	4.9E-01	117.4897	3.524692	1.84	0.31	0.21	0.16	8.314E-05	16	16	10	0.277	**1.8E+01**
51-28-5	2,4-Dinitrophenol	4.9E-02	0.01	0.0003	1.84	0.31	0.21	0.16	2.01199E-07	16	16	10	11.460	**4.3E-02**
121-14-2	2,4-Dinitrotoluene	1.3E-03	51.28614	1.538584	1.84	0.31	0.21	0.16	3.60412E-05	16	16	10	0.615	**2.2E-02**
606-20-2	2,6-Dinitrotoluene	1.3E-03	41.68694	1.250608	1.84	0.31	0.21	0.16	3.10528E-05	16	16	10	0.748	**1.8E-02**
91-58-7	2-Chloronaphthalene	2.0E+00	8511.382	255.3415	1.84	0.31	0.21	0.16	0.02544084	16	16	10	0.004	**5.0E+03**
91-57-6	2-Methylnaphthalene	9.8E-02	4315.191	129.4557	1.84	0.31	0.21	0.16	0.018466437	16	16	10	0.008	**1.3E+02**
88-74-4	2-Nitroaniline	7.3E-03	26.91534	0.80746	1.84	0.31	0.21	0.16	2.0785E-05	16	16	10	1.118	**6.6E-02**
91-94-1	3,3'-Dichlorobenzidine	2.0E-03	724.4358	21.73307	1.84	0.31	0.21	0.16	8.64656E-07	16	16	10	0.046	**4.4E-01**
99-09-2	3-Nitroaniline	7.3E-03	39.41571	1.182471	1.84	0.31	0.21	0.16	2.31021E-07	16	16	10	0.788	**9.3E-02**
534-52-1	4,6-Dinitro-o-cresol	2.4E-03	0.031623	0.000949	1.84	0.31	0.21	0.16	1.06835E-07	16	16	10	11.376	**2.1E-03**
7005-72-3	4-Chlorophenyl Phenyl Ether	6.1E-05	13101.13	393.0338	1.84	0.31	0.21	0.16	0.012991679	16	16	10	0.003	**2.4E-01**
100-01-6	4-Nitroaniline	2.4E-02	11.24441	0.337332	1.84	0.31	0.21	0.16	3.32726E-08	16	16	10	2.357	**1.0E-01**
100-02-7	4-Nitrophenol	4.9E-02	3.162278	0.094868	1.84	0.31	0.21	0.16	3.23864E-08	16	16	10	5.500	**8.9E-02**
83-32-9	Acenaphthene	1.5E+00	3981.071	119.4321	1.84	0.31	0.21	0.16	0.00644335	16	16	10	0.008	**1.8E+03**
208-96-8	Acenaphthylene	1.5E+00	6918.308	207.5493	1.84	0.31	0.21	0.16	0.00473898	16	16	10	0.005	**3.0E+03**
71-43-2	Benzene	5.0E-03	66.06935	1.982081	1.84	0.31	0.21	0.16	0.227387905	16	16	10	0.477	**1.0E-01**
56-55-3	Benzo(a)anthracene	1.3E-03	354813.5	10644.41	1.84	0.31	0.21	0.16	0.00013926	16	16	10	0.000	**1.3E+02**
50-32-8	Benzo(a)pyrene	2.0E-04	954992.6	28649.78	1.84	0.31	0.21	0.16	4.69741E-05	16	16	10	0.000	**5.7E+01**
111-91-1	bis(2-Chloroethoxy)methane	8.3E-04	306.6728	9.200184	1.84	0.31	0.21	0.16	0.001247675	16	16	10	0.108	**7.7E-02**
111-44-4	bis(2-Chloroethyl)ether	8.3E-04	15.48817	0.464645	1.84	0.31	0.21	0.16	0.000889598	16	16	10	1.813	**4.6E-03**
117-81-7	bis(2-Ethylhexyl)phthalate	6.0E-03	681292.3	20438.77	1.84	0.31	0.21	0.16	0.00045727	16	16	10	0.000	**1.2E+03**
86-74-8	Carbazole	4.6E-02	2454.71	73.64129	1.84	0.31	0.21	0.16	0.003375484	16	16	10	0.014	**3.4E+01**
108-90-7	Chlorobenzene	1.0E-01	213.7962	6.413885	1.84	0.31	0.21	0.16	0.181660905	16	16	10	0.153	**6.5E+00**
218-01-9	Chrysene	1.3E-01	309029.4	9270.881	1.84	0.31	0.21	0.16	5.02997E-05	16	16	10	0.000	**1.2E+04**
132-64-9	Dibenzofuran	9.8E-02	8487.142	254.6143	1.84	0.31	0.21	0.16	0.005282986	16	16	10	0.004	**2.5E+02**
84-74-2	Di-n-butyl phthalate	2.4E+00	33884.43	1016.533	1.84	0.31	0.21	0.16	5.94451E-05	16	16	10	0.001	**2.5E+04**
100-41-4	Ethylbenzene	7.0E-01	204	6.12	1.84	0.31	0.21	0.16	0.327571601	16	16	10	0.160	**4.4E+01**
206-44-0	Fluoranthene	9.8E-01	48977.89	1469.337	1.84	0.31	0.21	0.16	0.000387848	16	16	10	0.001	**1.4E+04**
86-73-7	Fluorene	9.8E-01	7585.778	227.5733	1.84	0.31	0.21	0.16	0.002643852	16	16	10	0.004	**2.2E+03**
75-09-2	Methylene chloride	5.0E-03	11.74898	0.352469	1.84	0.31	0.21	0.16	0.091038302	16	16	10	2.223	**2.2E-02**
91-20-3	Naphthalene	4.9E-01	1548.817	46.4645	1.84	0.31	0.21	0.16	0.02003674	16	16	10	0.021	**2.3E+02**
98-95-3	Nitrobenzene	1.2E-02	131.8256	3.954769	1.84	0.31	0.21	0.16	0.000856342	16	16	10	0.247	**4.9E-01**
621-64-7	n-Nitrosodi-n-propylamine	1.3E-04	19.72423	0.591727	1.84	0.31	0.21	0.16	9.35325E-05	16	16	10	1.473	**8.8E-04**
86-30-6	N-Nitrosodiphenylamine	1.9E-01	331.1311	9.933933	1.84	0.31	0.21	0.16	0.00020785	16	16	10	0.100	**1.9E+01**
87-86-5	Pentachlorophenol	1.0E-03	410	12.3	1.84	0.31	0.21	0.16	1.16396E-05	16	16	10	0.081	**1.2E-01**
85-01-8	Phenanthrene	7.3E-01	14125.38	423.7614	1.84	0.31	0.21	0.16	0.0054041	16	16	10	0.002	**3.1E+03**
108-95-2	Phenol	7.3E+00	17.37801	0.52134	1.84	0.31	0.21	0.16	2.47342E-05	16	16	10	1.644	**4.5E+01**
129-00-0	Pyrene	7.3E-01	38018.93	1140.568	1.84	0.31	0.21	0.16	0.00045727	16	16	10	0.001	**8.4E+03**
108-88-3	Toluene	1.0E+00	140	4.199999	1.84	0.31	0.21	0.16	0.276024789	16	16	10	0.232	**4.3E+01**
1330-20-7	Xylenes (tot)	1.0E+01	240.0001	7.200002	1.84	0.31	0.21	0.16	0.292652786	16	16	10	0.137	**7.3E+02**

APPENDIX TABLE 9-2
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON
TIER 2 SOIL-TO-GROUNDWATER PCL CALCULATION - COMMERCIAL/INDUSTRIAL LAND USE

EQUATIONS		SOURCE
Ksw =	$\frac{Pb}{(Kd * Pb + nw + na * H')}$	Figure 30TAC350.75(b)(1)
LDF =	$\frac{\text{Leachate Dilution Factor} * L2}{L1}$	Figure 30TAC350.75(b)(1)
^{GW}Soil =	$\frac{^{GW}GW * LDF * L2}{Ksw * L1}$	Figure 30TAC350.75(b)(1)

PARAMETER DESCRIPTIONS	TRRP DEFAULT	VALUES USED	SOURCE
^{GW}GW = Commercial/Industrial Tier 1 PCL in groundwater (mg/L)			TRRP Table of Commerical/Industiral Tier 1 PCLs for groundwater
^{GW}Soil = groundwater protective soil concentration (mg/kg)			calculated below
Ksw= soil leachate partition factor for COC (mg/l-water/mg/kg-soil)			calculated below
Kd = soil water partition coefficient		chemical specific	Chemical specific. Calculated from Site-specific foc and TRRP default for Koc values
foc = soil organic carbon fraction	0.006	0.03	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
Pb = dry soil bulk density (g-soil/cm3-soil)	1.67	1.84	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
n = total soil porosity	0.37	0.31	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR
na = volumetric air content of vadose zone soils (cm3-air/cm3-soil)	0.21	0.21	TRRP Default
L1 = thickness of impacted soil zone (ft)	site-specific	15.5	Average depth to A Transmissive unit.
L2 = distance from top of impacted soil zone to groundwater (ft)	site-specific	15.5	Assumes soil contaminated from surface
nw = volumetric water content of vadose zone soils (cm3-water/cm3-soil)	0.16	0.16	TRRP Default
H' = dimensionless Henry's Law Constant		chemical specific	Chemical/Physical Properties Table (March 31, 2008)
LDF = Leachate dilution factor		10	30 acre source area, TRRP default
pH = soil pH		7.3	site specific , soil sample MW-14 (5'), see Attachment C-6 in revised APAR

TIER 2 PCL CALCULATION SUMMARY

APPENDIX TABLE 9-2
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON

TIER 2 SOIL-TO-GROUNDWATER PCL CALCULATION - COMMERCIAL/INDUSTRIAL LAND USE

VOCs/SVOCs

CAS	Analyte	$^{GW}GW_{ing}$	Koc	Kd	Pb	n	na	nw	H'	*L1*	*L2*	*LDF*	Ksw	Tier 2 ^{GW}Soil PCL (mg/Kg)
107-06-2	1,2-Dichloroethane	5.0E-03	17.37801	0.52134	1.84	0.31	0.21	0.16	0.053209599	16	16	10	1.628	**3.1E-02**
122-66-7	1,2-Diphenylhydrazine	2.6E-03	660.6933	19.8208	1.84	0.31	0.21	0.16	1.42169E-07	16	16	10	0.050	**5.1E-01**
105-67-9	2,4-Dimethylphenol	1.5E+00	117.4897	3.524692	1.84	0.31	0.21	0.16	8.314E-05	16	16	10	0.277	**5.3E+01**
51-28-5	2,4-Dinitrophenol	1.5E-01	0.01	0.0003	1.84	0.31	0.21	0.16	2.01199E-07	16	16	10	11.460	**1.3E-01**
121-14-2	2,4-Dinitrotoluene	3.0E-03	51.28614	1.538584	1.84	0.31	0.21	0.16	3.60412E-05	16	16	10	0.615	**4.9E-02**
606-20-2	2,6-Dinitrotoluene	3.0E-03	41.68694	1.250608	1.84	0.31	0.21	0.16	3.10528E-05	16	16	10	0.748	**4.0E-02**
91-58-7	2-Chloronaphthalene	5.8E+00	8511.382	255.3415	1.84	0.31	0.21	0.16	0.02544084	16	16	10	0.004	**1.5E+04**
91-57-6	2-Methylnaphthalene	2.9E-01	4315.191	129.4557	1.84	0.31	0.21	0.16	0.018466437	16	16	10	0.008	**3.8E+02**
88-74-4	2-Nitroaniline	2.2E-02	26.91534	0.80746	1.84	0.31	0.21	0.16	2.0785E-05	16	16	10	1.118	**2.0E-01**
91-94-1	3,3'-Dichlorobenzidine	4.5E-03	724.4358	21.73307	1.84	0.31	0.21	0.16	8.64656E-07	16	16	10	0.046	**9.9E-01**
99-09-2	3-Nitroaniline	2.2E-02	39.41571	1.182471	1.84	0.31	0.21	0.16	2.31021E-07	16	16	10	0.788	**2.8E-01**
534-52-1	4,6-Dinitro-o-cresol	7.3E-03	0.031623	0.000949	1.84	0.31	0.21	0.16	1.06835E-07	16	16	10	11.376	**6.4E-03**
7005-72-3	4-Chlorophenyl Phenyl Ether	1.4E-04	13101.13	393.0338	1.84	0.31	0.21	0.16	0.012991679	16	16	10	0.003	**5.4E-01**
100-01-6	4-Nitroaniline	5.4E-02	11.24441	0.337332	1.84	0.31	0.21	0.16	3.32726E-08	16	16	10	2.357	**2.3E-01**
100-02-7	4-Nitrophenol	1.5E-01	3.162278	0.094868	1.84	0.31	0.21	0.16	3.23864E-08	16	16	10	5.500	**2.7E-01**
83-32-9	Acenaphthene	4.4E+00	3981.071	119.4321	1.84	0.31	0.21	0.16	0.00644335	16	16	10	0.008	**5.2E+03**
208-96-8	Acenaphthylene	4.4E+00	6918.308	207.5493	1.84	0.31	0.21	0.16	0.00473898	16	16	10	0.005	**9.1E+03**
71-43-2	Benzene	5.0E-03	66.06935	1.982081	1.84	0.31	0.21	0.16	0.227387905	16	16	10	0.477	**1.0E-01**
56-55-3	Benzo(a)anthracene	2.8E-03	354813.5	10644.41	1.84	0.31	0.21	0.16	0.00013926	16	16	10	0.000	**3.0E+02**
50-32-8	Benzo(a)pyrene	2.0E-04	954992.6	28649.78	1.84	0.31	0.21	0.16	4.69741E-05	16	16	10	0.000	**5.7E+01**
111-91-1	bis(2-Chloroethoxy)methane	1.9E-03	306.6728	9.200184	1.84	0.31	0.21	0.16	0.001247675	16	16	10	0.108	**1.7E-01**
111-44-4	bis(2-Chloroethyl)ether	1.9E-03	15.48817	0.464645	1.84	0.31	0.21	0.16	0.000889598	16	16	10	1.813	**1.0E-02**
117-81-7	bis(2-Ethylhexyl)phthalate	6.0E-03	681292.3	20438.77	1.84	0.31	0.21	0.16	0.00045727	16	16	10	0.000	**1.2E+03**
86-74-8	Carbazole	1.0E-01	2454.71	73.64129	1.84	0.31	0.21	0.16	0.003375484	16	16	10	0.014	**7.5E+01**
108-90-7	Chlorobenzene	1.0E-01	213.7962	6.413885	1.84	0.31	0.21	0.16	0.181660905	16	16	10	0.153	**6.5E+00**
218-01-9	Chrysene	2.8E-01	309029.4	9270.881	1.84	0.31	0.21	0.16	5.02997E-05	16	16	10	0.000	**2.6E+04**
132-64-9	Dibenzofuran	2.9E-01	8487.142	254.6143	1.84	0.31	0.21	0.16	0.005282986	16	16	10	0.004	**7.4E+02**
84-74-2	Di-n-butyl phthalate	7.3E+00	33884.43	1016.533	1.84	0.31	0.21	0.16	5.94451E-05	16	16	10	0.001	**7.4E+04**
100-41-4	Ethylbenzene	7.0E-01	204	6.12	1.84	0.31	0.21	0.16	0.327571601	16	16	10	0.160	**4.4E+01**
206-44-0	Fluoranthene	2.9E+00	48977.89	1469.337	1.84	0.31	0.21	0.16	0.000387848	16	16	10	0.001	**4.3E+04**
86-73-7	Fluorene	2.9E+00	7585.778	227.5733	1.84	0.31	0.21	0.16	0.002643852	16	16	10	0.004	**6.6E+03**
75-09-2	Methylene chloride	5.0E-03	11.74898	0.352469	1.84	0.31	0.21	0.16	0.091038302	16	16	10	2.223	**2.2E-02**
91-20-3	Naphthalene	1.5E+00	1548.817	46.4645	1.84	0.31	0.21	0.16	0.02003674	16	16	10	0.021	**6.8E+02**
98-95-3	Nitrobenzene	3.7E-02	131.8256	3.954769	1.84	0.31	0.21	0.16	0.000856342	16	16	10	0.247	**1.5E+00**
621-64-7	n-Nitrosodi-n-propylamine	2.9E-04	19.72423	0.591727	1.84	0.31	0.21	0.16	9.35325E-05	16	16	10	1.473	**2.0E-03**
86-30-6	N-Nitrosodiphenylamine	4.2E-01	331.1311	9.933933	1.84	0.31	0.21	0.16	0.00020785	16	16	10	0.100	**4.2E+01**
87-86-5	Pentachlorophenol	1.0E-03	410	12.3	1.84	0.31	0.21	0.16	1.16396E-05	16	16	10	0.081	**1.2E-01**
85-01-8	Phenanthrene	2.2E+00	14125.38	423.7614	1.84	0.31	0.21	0.16	0.0054041	16	16	10	0.002	**9.3E+03**
108-95-2	Phenol	2.2E+01	17.37801	0.52134	1.84	0.31	0.21	0.16	2.47342E-05	16	16	10	1.644	**1.3E+02**
129-00-0	Pyrene	2.2E+00	38018.93	1140.568	1.84	0.31	0.21	0.16	0.00045727	16	16	10	0.001	**2.5E+04**
108-88-3	Toluene	1.0E+00	140	4.199999	1.84	0.31	0.21	0.16	0.276024789	16	16	10	0.232	**4.3E+01**
1330-20-7	Xylenes (tot)	1.0E+01	240.0001	7.200002	1.84	0.31	0.21	0.16	0.292652786	16	16	10	0.137	**7.3E+02**

APPENDIX TABLE 9-3
LIST OF RESIDENTIAL AND COMMERCIAL/INDUSTRIAL PCLS
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

CAS	Analyte	$^{GW}GW_{Ing}$ (mg/L)	
		Residential	Commercial/ Industrial
107-06-2	1,2-Dichloroethane	5.0E-03	5.0E-03
122-66-7	1,2-Diphenylhydrazine	1.1E-03	2.6E-03
105-67-9	2,4-Dimethylphenol	4.9E-01	1.5E+00
51-28-5	2,4-Dinitrophenol	4.9E-02	1.5E-01
121-14-2	2,4-Dinitrotoluene	1.3E-03	3.0E-03
606-20-2	2,6-Dinitrotoluene	1.3E-03	3.0E-03
91-58-7	2-Chloronaphthalene	2.0E+00	5.8E+00
91-57-6	2-Methylnaphthalene	9.8E-02	2.9E-01
88-74-4	2-Nitroaniline	7.3E-03	2.2E-02
91-94-1	3,3'-Dichlorobenzidine	2.0E-03	4.5E-03
99-09-2	3-Nitroaniline	7.3E-03	2.2E-02
534-52-1	4,6-Dinitro-o-cresol	2.4E-03	7.3E-03
7005-72-3	4-Chlorophenyl Phenyl Ether	6.1E-05	1.4E-04
100-01-6	4-Nitroaniline	2.4E-02	5.4E-02
100-02-7	4-Nitrophenol	4.9E-02	1.5E-01
83-32-9	Acenaphthene	1.5E+00	4.4E+00
208-96-8	Acenaphthylene	1.5E+00	4.4E+00
71-43-2	Benzene	5.0E-03	5.0E-03
56-55-3	Benzo(a)anthracene	1.3E-03	2.8E-03
50-32-8	Benzo(a)pyrene	2.0E-04	2.0E-04
111-91-1	bis(2-Chloroethoxy)methane	8.3E-04	1.9E-03
111-44-4	bis(2-Chloroethyl)ether	8.3E-04	1.9E-03
117-81-7	bis(2-Ethylhexyl)phthalate	6.0E-03	6.0E-03
86-74-8	Carbazole	4.6E-02	1.0E-01
108-90-7	Chlorobenzene	1.0E-01	1.0E-01
218-01-9	Chrysene	1.3E-01	2.8E-01
132-64-9	Dibenzofuran	9.8E-02	2.9E-01
84-74-2	Di-n-butyl phthalate	2.4E+00	7.3E+00
100-41-4	Ethylbenzene	7.0E-01	7.0E-01
206-44-0	Fluoranthene	9.8E-01	2.9E+00
86-73-7	Fluorene	9.8E-01	2.9E+00
75-09-2	Methylene chloride	5.0E-03	5.0E-03
91-20-3	Naphthalene	4.9E-01	1.5E+00
98-95-3	Nitrobenzene	1.2E-02	3.7E-02
621-64-7	n-Nitrosodi-n-propylamine	1.3E-04	2.9E-04
86-30-6	N-Nitrosodiphenylamine	1.9E-01	4.2E-01
87-86-5	Pentachlorophenol	1.0E-03	1.0E-03
85-01-8	Phenanthrene	7.3E-01	2.2E+00
108-95-2	Phenol	7.3E+00	2.2E+01
129-00-0	Pyrene	7.3E-01	2.2E+00
108-88-3	Toluene	1.0E+00	1.0E+00
1330-20-7	Xylenes (tot)	1.0E+01	1.0E+01

Note:
PCLs based on March 2010 TRRP PCL Tables

ATTACHMENT 1

TCEQ TRRP TIER 2 DEFAULT VARIABLES, FIGURE 30 TAC §350.75(b)(1)

Tier 2 PCL Equations

Tier 2 Lateral Groundwater Transport PCL Equations

$$^{GW}LT\text{-}GW_{Ing} = {}^{GW}GW_{Ing} \cdot DAF$$

$$^{GW}LT\text{-}GW_{Class3} = {}^{GW}GW_{Class3} \cdot DAF$$

$$^{SW}LT\text{-}GW = {}^{SW}GW \cdot DAF$$

(for $^{GW}GW_{Ing}$, $^{GW}GW_{Class\,3}$, ^{SW}GW see Figure: 30 TAC §350.75(b)(1))

$$DAF = \frac{C_{si}}{C(x)_i} = \text{inverse of below expression}$$

Solute Transport with First-Order Decay:

Calibrate transient model to site conditions making sure that the condition, $C(x)_i = C_{si}$ at source is satisfied when x=0. Then solve the steady state model to determine DAF using the same parameters used to calibrate the transient model.

Transient:

$$\frac{C(x)_i}{C_{si}}_{trans} = \left(\frac{1}{2}\right)\exp\left(\left(\frac{x}{2\alpha_x}\right)\left[1-\sqrt{1+\frac{4\lambda_i\alpha_x}{v}}\right]\right)\operatorname{erfc}\left[\frac{x - vt\sqrt{1+4\lambda_i\alpha_x/v}}{2\sqrt{\alpha_x vt}}\right]\operatorname{erf}\left(\frac{S_w}{4\sqrt{\alpha_y x}}\right)\operatorname{erf}\left(\frac{S_d}{2\sqrt{\alpha_z(x \text{ or } x')}}\right)$$

Steady state:

$$\frac{C(x)_i}{C_{si}}_{max} = \exp\left(\frac{x}{2\alpha_x}\left[1-\sqrt{1+\frac{4\lambda_i\alpha_x}{v}}\right]\right)\operatorname{erf}\left(\frac{S_w}{4\sqrt{\alpha_y x}}\right)\operatorname{erf}\left(\frac{S_d}{2\sqrt{\alpha_z(x \text{ or } x')}}\right)$$

Use x′ in vertical dispersivity term when $x \geq x'$, otherwise use x.

Solute Transport with Biodegradation by Electron-Acceptor Superposition Method:

$$C(x)_i = \left[(C_{si} + B\,C_i)\operatorname{erf}\left(\frac{S_w}{4\sqrt{\alpha_y x}}\right)\operatorname{erf}\left(\frac{S_d}{2\sqrt{\alpha_z x}}\right)\right] - BC_i$$

$$\text{where: } BC_i = BC_T \cdot \frac{C_{si}}{\sum C_{si}} \quad \text{and} \quad BC_T = \sum \frac{C(ea)_n}{UF_n}$$

Tier 2 Lateral Air Transport PCL Equations

$$^{LT\text{-}Air}GW_{Inh\text{-}V} = {}^{Air}GW_{Inh\text{-}V} \cdot ADF \text{ (See Figure : 30TAC §350.75(b)(1))}$$

$$^{LT\text{-}Air}Soil_{Inh\text{-}VP} = {}^{Air}Soil_{Inh\text{-}VP} \cdot ADF \text{ (See Figure : 30TAC §350.75(b)(1))}$$

$$^{LT\text{-}Air}Soil_{Inh\text{-}V} = {}^{Air}Soil_{Inh\text{-}V} \cdot ADF \text{ (See Figure : 30TAC §350.75(b)(1))}$$

$$ADF = \frac{C_{si}}{C(x)_i} = \text{inverse of below expression}$$

$$\frac{C(x)_i}{C_{si}} = \frac{Q}{2\pi U_{air}\,\sigma_y\,\sigma_z} \cdot \exp\left(-\frac{y^2}{2\sigma_y^2}\right)\left(\exp\left(-\frac{(z-\delta_{air})^2}{2\sigma_z^2}\right) + \exp\left(-\frac{(z+\delta_{air})^2}{2\sigma_z^2}\right)\right)$$

$$\text{where :} \quad Q = \frac{U_{air}\,(\delta_{air})(A)}{L}$$

Tier 2 Soil-to-Groundwater PCL Equation

$$^{GW}Soil = \frac{(\text{Groundwater PCL}^{*}) \cdot LDF}{K_{sw}} \cdot \frac{L_2}{L_1}$$

*Critical groundwater PCL as determined in accordance with §350.78.

$$K_{sw}\left[\frac{(mg/L - H_2O)}{(mg/kg - soil)}\right] = \frac{\rho_b}{\theta_{ws} + K_d\,\rho_b + H'\,\theta_{as}}$$

$$LDF\,[\text{dimensionless}] = 1 + \frac{U_{gw}\,\delta_{gw}}{I_f\,W_s}$$

$$\delta_{gw}\,[m] = (2\,\alpha_v\,W_s)^{0.5} + b_{gw}\left[1 - \exp\left(\frac{-I_f\,W_s}{U_{gw}\,b_{gw}}\right)\right]$$

Theoretical Soil Saturation Limit Equation for Liquids

$$C_{sat}\,(mg/kg) = \left(\frac{S}{\rho_b}\right)\left[\theta_{ws} + K_d\,\rho_b + \theta_{as}\,H'\right]$$

not applicable to mercury

Term	COC Chemical/Physical and Affected Property Parameters Definition	Tier 1 Defaults	Change to Tier 1 Default Allowed?	Rule Citation
C_{si}	Concentration of COC *i* in source zone (mg/L or mg/m^3)	NA	NA	§350.75(c) and (d)
$C(x)_i$	Concentration of COC *i* at distance x downgradient or downwind of source (mg/L or mg/m^3)	NA	NA	§350.75(c) and (d)
x	Distance downgradient or downwind of source (m)	NA	Tier 2, 3	§350.33(f)(4) and §350.37 (b), (e)-(i)
x′	vertical limit over which spreading occurs (m) $x' = (b_{gw}-S_d)^2/\alpha_z$	NA	Tier 2, 3	§350.75(c) and (d)
b_{gw}	Aquifer thickness (m)	NA	Tier 2, 3	§350.75(c) and (d)
S_d	Source depth (m)	NA	Tier 2, 3	§350.75(c) and (d)
α_x	Longitudinal groundwater dispersivity (m)	NA	Tier 2, 3	§350.75(c) and (d)
α_y	Transverse groundwater dispersivity (m)	NA	Tier 2, 3	§350.75(c) and (d)
α_z	Vertical groundwater dispersivity (m)	NA	Tier 2, 3	§350.75(c) and (d)
λ_i	First-order degradation rate (day^{-1}) for COC *i*	NA	Tier 2, 3	§350.75(c) and (d) and §350.75(f)
t	Time since release (days)	NA	Tier 2, 3	--
v	COC velocity (m/day) $v = v_w/R_i$	NA	Tier 2, 3	§350.75(c) and (d)
v_w	Groundwater seepage velocity (m/day) $v_w = K \cdot i/\theta_e$	NA	Tier 2, 3	§350.75(c) and (d)
K	Hydraulic conductivity (m/day)	NA	Tier 2, 3	§350.75(c) and (d)
i	Hydraulic gradient (m/m)	NA	Tier 2, 3	§350.75(c) and (d)
θ_e	Effective soil porosity	NA	Tier 2, 3	§350.75(c) and (d)
R_i	Constituent retardation factor $R_i = 1+K_d \rho_b/\theta_T$	NA	Tier 2, 3	§350.75(c) and (d)
K_d	Soil-water partition coefficient (cm^3-water/g-soil) •for organics • for inorganics	(Figure 30 TAC §350.73(e)) $K_d = K_{oc} \cdot foc$ K_d = pH dependent value	Tier 2, 3	§350.73(e) and (Figures 30 TAC §350.73(e)(1)(A-C)
K_{oc}	Soil organic carbon-water partition coefficient (cm^3-water/g-carbon)	(Figure 30 TAC §350.73(e))	Tier 2, 3	§350.73(e) and (Figures 30 TAC §350.73(e)(1)(A-C)
foc	Fraction of organic carbon in soil (g-carbon/g-soil) (soil-to-groundwater)	0.002 (soil-to-groundwater)	Tier 2, 3	§350.75(c) and (d)
ρ_b	Soil bulk density (g-soil/cm^3-soil)	1.67	Tier 2, 3	§350.75(c) and (d)
θ_T	Total soil porosity = 1 - (ρ_b/ρ_s) (cm^3-pore space/cm^3-soil)	NA	Tier 2, 3	§350.75(c) and (d)
ρ_s	Particle density (g/cm^3)	2.65	Tier 2, 3	§350.75(c) and (d)
erfc	Complimentary error function (see pg 637, Domenico, P.A. and Schwartz, F.W., 1990. *Physical and Chemical Hydrogeology*, John Wiley & Sons, New York. 824pp. or p. 539, Cherry, J. A., 1979. *Groundwater*, Prentice-Hall, New Jersey. 604 pp.)	NA	Tier 2, 3	--

Term	COC Chemical/Physical and Affected Property Parameters Definition	Tier 1 Defaults	Change to Tier 1 Default Allowed?	Rule Citation
erf	Error function (see pg 637, Domenico, P.A. and Schwartz, F.W., 1990. *Physical and Chemical Hydrogeology*, John Wiley & Sons, New York. 824pp. or p. 539, Cherry, J. A., 1979. *Groundwater*, Prentice-Hall, New Jersey. 604 pp.)	NA	Tier 2, 3	--
S_w	Source width (m)	NA	Tier 2, 3	§350.75(c) and (d)
BC_i	Biodegradation capacity available for COC *i*	NA	Tier 2, 3	§350.75(c) and (d) and §350.75(f)
BC_T	Total biodegradation capacity of all electron acceptors in groundwater	NA	Tier 2, 3	§350.75(c) and (d) and §350.75(f)
$C(ea)_n$	Concentration of electron acceptor *n* in groundwater	NA	Tier 2, 3	§350.75(c) and (d)
UF_n	Utilization factor for electron acceptor *n* (*i.e.*, mass ratio of electron acceptor to hydrocarbon consumed in biodegradation reaction)	NA	Tier 2, 3	§350.75(c) and (d) and §350.75(f)
U_{air}	Windspeed above ground surface in ambient mixing zone (m/s)	2.4	Tier 2, 3	§350.75(c) and (d)
δ_{air}	Ambient air mixing zone height (m)	2	No	NA
A	Cross sectional area of air emissions source (m^2)	NA	Tier 2, 3	§350.75(c) and (d)
L	Length of air emissions source (m) parallel to wind direction	NA	Tier 2, 3	§350.75(c) and (d)
σ_y	Transverse air dispersion coefficient (m) (dispersion estimates based on the Pasquill-Gifford system adopted by U.S. Public Health Service, Turner, 1970, *EPA Workbook of Atmospheric Dispersion Estimates*; see Cooper & Alley, 1994, *Air Pollution Control*)	NA	Tier 2, 3	§350.75(c) and (d)
σ_z	Vertical air dispersion coefficient (m) (dispersion estimates based on the Pasquill-Gifford system adopted by U.S. Public Health Service, Turner, 1970, *EPA Workbook of Atmospheric Dispersion Estimates*; see Cooper & Alley, 1994, *Air Pollution Control*)	NA	Tier 2, 3	§350.75(c) and (d)
Q	Air volumetric flow through mixing zone (m^3/s)	NA	Tier 2, 3	§350.75(c) and (d)
y	Lateral distance from source zone (assumed to be 0) (m)	0	No	NA
z	Height of breathing zone (assumed equal to δ_{air}) (m)	2	No	NA
K_{sw}	Soil-leachate partition factor for COC (mg/L-water/mg/kg-soil)	property-specific	Tier 2, 3	§350.75(e) and §350.75(c) and (d)

Term	COC Chemical/Physical and Affected Property Parameters Definition	Tier 1 Defaults	Change to Tier 1 Default Allowed?	Rule Citation
θ_{ws}	Volumetric water content of vadose zone soils (soil-to-groundwater) (cm^3-water/cm^3-soil)	0.16	Tier 2, 3	§350.75(c) and (d)
θ_{as}	Volumetric air content of vadose zone soils (cm^3-air/cm^3-soil) = θ_T-θ_{ws}	0.21	Tier 2, 3	§350.75(c) and (d)
H'	Henry's Law Constant (dimensionless) H' = H/RT	(Figure 30 TAC §350.73(e))	No	NA
H	Henry's Law Constant (atm-m^3/mol) H = H'RT	See H'	No	NA
S	Aqueous solubility limit of COC (mg/l)	NA	Tier 2, 3	§350.75(i)(9)
R	Universal Gas Constant (atm-m^3/gmol-°K)	8.25×10^{-5}	No	NA
T	Temperature (°K) = 273 + °C	293	No	NA
LDF	Lateral Dilution Factor 0.5 acre source area 30 acre source area	 20 10	 Tier 2, 3 Tier 2, 3	 §350.75(c) and (d) §350.75(c) and (d)
L_1	Thickness of affected soil (cm)	NA	Tier 2, 3	§350.75(c) and (d)
L_2	Depth from top of affected soil to groundwater table (cm)	$L_2 = L_1$	Tier 2, 3	§350.75(c) and (d)
U_{gw}	Groundwater Darcy velocity (cm/yr) $U_{gw} = K \cdot i \cdot 36{,}500$ d-cm/yr-m *Note:* U_{gw} must be converted to units of cm/yr	NA	Tier 2, 3	§350.75(c) and (d)
δ_{gw}	Groundwater mixing zone thickness (m) upper bound: $\delta_{gw} \leq b_{gw}$	NA	Tier 2, 3	§350.75(c) and (d)
I_f	Net infiltration rate of water through soil (cm/yr) Upper bound: $I_f \leq K_{vs}$ (3.15×10^7 s/yr) •sand •silt •clay	NA	Tier 2, 3 $0.0018(P)^2$ $0.0009(P)^2$ $0.00018(P)^2$	§350.75(c) and (d)
K_{vs}	Saturated hydraulic conductivity of vadose zone soils (cm/s)	NA	Tier 2, 3	§350.75(c) and (d)
P	Mean annual precipitation (cm/yr)	NA	Tier 2, 3	§350.75(c) and (d)
α_v	Vertical groundwater dispersivity = $0.0056 \cdot W_s$ (m)	NA	Tier 2, 3	§350.75(c) and (d)
W_s	Lateral width of affected vadose zone in direction of groundwater flow (m)	NA	Tier 2, 3	§350.75(c) and (d)
C_{sat}	Soil saturation limit (mg_i/kg-soil)	NA	Tier 2, 3	§350.75(i)(9)

APPENDIX 10
LABORATORY DATA PACKAGES AND DATA USABILITY SUMMARY

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

CONESTOGA-ROVERS
& ASSOCIATES

E-Mail Date: March 18, 2010
E-Mail To: Eric Matzner/ Pastor, Behling & Wheeler, LLC
c.c.: Patricia Lynch
E-Mail and Hard Copy if Requested

DATA USABILITY SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SEMI-ANNUAL COMPLIANCE MONITORING
HOUSTON, TEXAS
JANUARY 2010

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
6320 Rothway, Suite 100
Houston, Texas 77040
Telephone: 713-734-3090 Fax: 713-734-3391
Contact: Patricia L. Lynch [bjw]
Date: March 18, 2010
www.CRAworld.com

Data Usability Summary

Reviewer:	Patricia L. Lynch – Conestoga-Rovers & Associates, Inc.
Contract Laboratory:	ALS Laboratory Group—Houston, Texas
Project/Area of Interest:	UPRR Houston Wood Preserving Works – Houston, Texas
Description of Data Packages Reviewed:	Groundwater sample results for SWMU No. 1 in data package 1001524
Sample Collection Date(s):	January 21 – 22, 2010
Intended Use of Data:	To monitor the COCs in groundwater at the site and to evaluate whether migration of COCs could result in risk to human or ecological health.

1.0 Scope of Data Usability Summary

Data were reviewed and validated in accordance with Title 30 of the Texas Administrative Code Section 350.54 (30 TAC 350.54) as described in *Review and Reporting of COC Concentration Data,* (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The review included examination of the reported data, the laboratory review checklist (LRC), and field/laboratory quality assurance/quality control (QA/QC) samples collected at the Site. Tables summarizing data qualifications discussed in this DUS can be found in Appendix A.

Ten (10) groundwater samples plus two field duplicates and one field blank were analyzed for semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C[1]

A sampling and analysis summary is presented in Table 1. This summary includes a cross-reference of field sample identification numbers and laboratory sample numbers. Each sample was assigned a unique field identification number. The lists of SVOC target compounds are presented in Table 2.

2.0 Laboratory Qualifications

Analytical services were provided by ALS Laboratory Group (ALS) located in Houston, Texas. The laboratory's quality assurance program is consistent with the quality standards outlined in the National Environmental Laboratory Accreditation Program (NELAP). The laboratory was accredited under Texas Certification Number T104704231-09-1-TX at the time the analyses were performed.

[1] "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with subsequent revisions).

3.0 Project Objectives

3.1 Levels of Required Performance (LORP)

Prior to sampling, the LORP for each COC was established for the investigation. A standard available analytical method was selected and minimal detection limits that are at or below the Texas Risk Reduction Tier 1 Residential Protective Concentration Levels (PCLs), $^{GW}GW_{ING}$ for groundwater were sought.

3.2 Sampling/Analytical QA/QC Objectives

Pastor, Behling & Wheeler, LLC designed the QA/QC program to identify contamination resulting from sample collection, sample transport and the analytical process.

- Method blanks of a similar matrix to that of the associated samples are prepared by the laboratory and analyzed to determine if laboratory contaminants are affecting the analytical results. Method blanks are prepared and analyzed with each batch.

- A field blank was collected and analyzed to determine if the chemicals of concern would be detected based on the ambient field conditions. The field blank was kept in the same environment in which the other field samples were collected.

Similarly, the QA/QC program was designed to evaluate the quality of the resulting data with respect to bias and precision. First, a laboratory control sample (LCS) was prepared and analyzed with each batch. The recovery ranges established by the laboratory are adopted as the acceptance criteria for the project. Second, a matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed with each batch. The recovery ranges and RPDs established by the laboratory are adopted as the acceptance criteria for the project. Third, field duplicates were collected and submitted for analysis. The RPD acceptance criterion for the water field duplicates is 30 percent. This RPD criterion is only used when sample concentrations are above the estimated regions of detection.

4.0 Data Review/Validation Results

4.1 Analytical Results

The laboratory qualified analytes with concentrations above the Sample Detection Limits (SDLs) but below the Method Quantitation Limits (MQL) as estimated on the analytical tables per the TRRP-13 document. None of the data required further qualification based on the established QC criteria.

4.2 LORP

All SDLs and unadjusted MQLs met the LORP for this investigation.

4.3 Preservation and Holding Times

Samples were properly preserved in the field and cooled to 4°C (±2°C). Samples were delivered on ice with chains of custody, and the paperwork was filled out properly. All samples were prepared and analyzed within the applicable holding times.

4.4 Sample Containers

Sample containers were certified pre-cleaned glass provided by the laboratory. These containers meet or exceed analyte specifications established in the USEPA *Specifications and Guidance for Contaminant-free Sample Containers*.

4.5 Calibrations

According to the LRCs, initial calibration and continuing calibration data met the criteria for the selected methods.

4.6 Blanks

Method Blank: As this was not discrete samples handled in the field, the method blank is not listed on the sample identification cross-reference list found in Table 1. Results are reported in the data package on a laboratory batch basis. All of the laboratory blank results were reported as ND (not detected).

Field Blank: A field blank was collected and analyzed for semi-volatiles and is listed on the sample summary table. All target SVOC compounds were non-detect in the field blank.

4.7 Internal Standard and Surrogate Recoveries

Recoveries of internal standards and surrogates for SVOCs are addressed in the LRCs of the laboratory data packages. All surrogate recoveries and internal standard areas and retention times were within the acceptance limits.

4.8 Laboratory Control Samples (LCS)

LCS data for all COCs were reported for the batch, and the LCS spike recoveries for all COCs were within the project objectives.

4.9 Matrix Spikes

Sample WG-1620-P12-012210 was selected for matrix spike/matrix spike duplicate analyses for SVOCs, and the results are reported in the data packages. All recoveries and RPDs were within the laboratory established control limits.

4.10 Field Duplicate

Field duplicates of samples listed below were collected and analyzed.

- WG-1620-FD01-012210 is a duplicate of WG-1620-MW01A-012210.
- WG-1620-FD02-012210 is a duplicate of WG-1620-P10-012210.

All results showed good precision above the estimated regions of detection (see Table 3). Some results were non-detect, and the RPDs could not be calculated. Only detected results are found on Table 3.

4.11 Field Procedures

Pastor, Behling & Wheeler, LLC collected soil groundwater samples in accordance with their Standard Operating Procedures (SOP) for sample collection.

4.12 Summary

The analytical data in this report are usable to assess the impact of COCs in groundwater at the site without qualification.

APPENDIX A

TABLES

TABLE 1

SAMPLE AND ANALYSIS SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
SWMU NO. 1
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample I.D.	*Location I.D.*	*Matrix*	*Date (mm/dd/yy)*	*Time (hr:min)*	*Analysis/Parameters [1 parameter]*	*Comment*
WG-1620-MW02-012210	MW-02	Water	01/22/10	7:20:00 AM	SVOCs	
WG-1620-MW01A-012210	MW-01A	Water	01/22/10	8:20:00 AM	SVOCs	
WG-1620-FD01-012210	MW-01A	Water	01/22/10	8:20:00 AM	SVOCs	Field duplicate of WG-1620-MW01A-012210
WG-1620-MW08-012210	MW-08	Water	01/22/10	9:20:00 AM	SVOCs	
WG-1620-MW07-012210	MW-07	Water	01/22/10	10:30:00 AM	SVOCs	
WG-1620-P12-012210	P-12	Water	01/22/10	11:20:00 AM	SVOCs	
WG-1620-P10-012210	P-10	Water	01/22/10	12:40:00 PM	SVOCs	
WG-1620-FD02-012210	P-10	Water	01/22/10	12:40:00 PM	SVOCs	Field duplicate of WG-1620-P10-012210
WG-1620-FB01-012210	Field Blank	Water	01/22/10	1:00:00 PM	SVOCs	Field Blank
WG-1620-MW11B-012110	MW-11B	Water	01/21/10	2:50:00 PM	SVOCs	
WG-1620-MW11A-012110	MW-11A	Water	01/21/10	3:30:00 PM	SVOCs	
WG-1620-MW10B-012110	MW-10B	Water	01/21/10	4:15:00 PM	SVOCs	
WG-1620-MW10A-012110	MW-10A	Water	01/21/10	4:50:00 PM	SVOCs	

Notes:
SVOCs Semi-Volatile Organic Compounds.

TABLE 2

TARGET COMPOUND SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
SWMU NO. 1
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

SVOCs (ATZ)	SVOCs (BTZ)
Acenaphthene	Acenaphthene
Acenaphthylene	Acenaphthylene
Anthracene	Anthracene
bis(2-ethylhexyl)phthalate	bis(2-ethylhexyl)phthalate
Dibenzofuran	Dibenzofuran
Fluoranthene	Fluoranthene
Fluorene	Fluorene
Naphthalene	Naphthalene
Phenanthrene	Pyrene
Pyrene	Phenol
2-Methylnaphthalene	Di-n-butyl phthalate

Notes:
SVOCs - Semi-Volatile Organic Compounds.

TABLE 3

FIELD DUPLICATE SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
SWMU NO. 1
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample Location:	*MW01A*					
	Orig		*Duplicate*		*RPD*	*Units*
Semi-Volatile Organics						
Dibenzofuran	1.6	J	1.4	J	13.0	µg/L
Fluoranthene	1.7	J	1.5	J	12.0	µg/L
Acenaphthene	40		39		2.5	µg/L
Fluorene	22		19		15.0	µg/L
Naphthalene	4.3	J	3.6	J	18.0	µg/L
2-Methylnaphthalene	1.9	J	1.8	J	5.4	µg/L

Notes:
J - Estimated concentration
RPD - Relative Percent Difference.

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

01-Mar-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: UPRR HWPW SWMU 1 Work Order: **1001524**

Dear Eric,

ALS Laboratory Group received 13 samples on 22-Jan-2010 04:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 28.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Work Order: 1001524

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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.

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Rev Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 03/01/2010
Project Name: UPRR HWPW SWMU 1	Laboratory Job Number: 1001524
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40719

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				3

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 03/01/2010
Project Name: UPRR HWPW SWMU 1	Laboratory Job Number: 1001524
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40719

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 03/01/2010
Project Name: UPRR HWPW SWMU 1	Laboratory Job Number: 1001524
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40719

ER #[1]	DESCRIPTION
	No Exceptions.

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

ALS Laboratory Group

Date: 01-Mar-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Work Order: **1001524**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001524-01	WG-1620-MW02-012210	Water		1/22/2010 07:20	1/22/2010 16:00	☐
1001524-02	WG-1620-MW01A-012210	Water		1/22/2010 08:20	1/22/2010 16:00	☐
1001524-03	WG-1620-FD01-012210	Water		1/22/2010 08:20	1/22/2010 16:00	☐
1001524-04	WG-1620-MW08-012210	Water		1/22/2010 09:20	1/22/2010 16:00	☐
1001524-05	WG-1620-MW07-012210	Water		1/22/2010 10:30	1/22/2010 16:00	☐
1001524-06	WG-1620-P12-012210	Water		1/22/2010 11:20	1/22/2010 16:00	☐
1001524-07	WG-1620-P10-012210	Water		1/22/2010 12:40	1/22/2010 16:00	☐
1001524-08	WG-1620-FD02-012210	Water		1/22/2010 12:40	1/22/2010 16:00	☐
1001524-09	WG-1620-FB01-012210	Water		1/22/2010 13:00	1/22/2010 16:00	☐
1001524-10	WG-1620-MW11B-012110	Water		1/21/2010 14:50	1/22/2010 16:00	☐
1001524-11	WG-1620-MW11A-012110	Water		1/21/2010 15:30	1/22/2010 16:00	☐
1001524-12	WG-1620-MW10B-012110	Water		1/21/2010 16:15	1/22/2010 16:00	☐
1001524-13	WG-1620-MW10A-012110	Water		1/21/2010 16:50	1/22/2010 16:00	☐

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW02-012210
Collection Date: 1/22/2010 07:20 AM

Work Order: 1001524
Lab ID: 1001524-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 17:52
Acenaphthene	**7.3**		**0.90**	**5.0**	**µg/L**	1	1/27/2010 17:52
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 17:52
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 17:52
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 17:52
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 17:52
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 17:52
Fluorene	**3.7**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 17:52
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 17:52
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 17:52
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 17:52
Surr: 2,4,6-Tribromophenol	*62.7*			*42-124*	*%REC*	1	1/27/2010 17:52
Surr: 2-Fluorobiphenyl	*60.7*			*48-120*	*%REC*	1	1/27/2010 17:52
Surr: 2-Fluorophenol	*50.4*			*20-120*	*%REC*	1	1/27/2010 17:52
Surr: 4-Terphenyl-d14	*56.2*			*51-135*	*%REC*	1	1/27/2010 17:52
Surr: Nitrobenzene-d5	*56.0*			*41-120*	*%REC*	1	1/27/2010 17:52
Surr: Phenol-d6	*52.9*			*20-120*	*%REC*	1	1/27/2010 17:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW01A-012210
Collection Date: 1/22/2010 08:20 AM

Work Order: 1001524
Lab ID: 1001524-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	**1.9**	J	**0.90**	**5.0**	**µg/L**	1	1/27/2010 18:15
Acenaphthene	**40**		**0.90**	**5.0**	**µg/L**	1	1/27/2010 18:15
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 18:15
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 18:15
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 18:15
Dibenzofuran	**1.6**	J	**0.70**	**5.0**	**µg/L**	1	1/27/2010 18:15
Fluoranthene	**1.7**	J	**0.50**	**5.0**	**µg/L**	1	1/27/2010 18:15
Fluorene	**22**		**0.60**	**5.0**	**µg/L**	1	1/27/2010 18:15
Naphthalene	**4.3**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 18:15
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 18:15
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 18:15
Surr: 2,4,6-Tribromophenol	*70.5*			*42-124*	*%REC*	1	1/27/2010 18:15
Surr: 2-Fluorobiphenyl	*60.1*			*48-120*	*%REC*	1	1/27/2010 18:15
Surr: 2-Fluorophenol	*54.6*			*20-120*	*%REC*	1	1/27/2010 18:15
Surr: 4-Terphenyl-d14	*57.1*			*51-135*	*%REC*	1	1/27/2010 18:15
Surr: Nitrobenzene-d5	*59.1*			*41-120*	*%REC*	1	1/27/2010 18:15
Surr: Phenol-d6	*59.8*			*20-120*	*%REC*	1	1/27/2010 18:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-FD01-012210
Collection Date: 1/22/2010 08:20 AM

Work Order: 1001524
Lab ID: 1001524-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	**1.8**	J	**0.90**	**5.0**	**µg/L**	1	1/27/2010 18:38
Acenaphthene	**39**		**0.90**	**5.0**	**µg/L**	1	1/27/2010 18:38
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 18:38
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 18:38
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 18:38
Dibenzofuran	**1.4**	J	**0.70**	**5.0**	**µg/L**	1	1/27/2010 18:38
Fluoranthene	**1.5**	J	**0.50**	**5.0**	**µg/L**	1	1/27/2010 18:38
Fluorene	**19**		**0.60**	**5.0**	**µg/L**	1	1/27/2010 18:38
Naphthalene	**3.6**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 18:38
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 18:38
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 18:38
Surr: 2,4,6-Tribromophenol	*71.5*			*42-124*	*%REC*	1	1/27/2010 18:38
Surr: 2-Fluorobiphenyl	*63.1*			*48-120*	*%REC*	1	1/27/2010 18:38
Surr: 2-Fluorophenol	*53.5*			*20-120*	*%REC*	1	1/27/2010 18:38
Surr: 4-Terphenyl-d14	*56.2*			*51-135*	*%REC*	1	1/27/2010 18:38
Surr: Nitrobenzene-d5	*59.1*			*41-120*	*%REC*	1	1/27/2010 18:38
Surr: Phenol-d6	*57.5*			*20-120*	*%REC*	1	1/27/2010 18:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW08-012210
Collection Date: 1/22/2010 09:20 AM

Work Order: 1001524
Lab ID: 1001524-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 19:02
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 19:02
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 19:02
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 19:02
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 19:02
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 19:02
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 19:02
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 19:02
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 19:02
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 19:02
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 19:02
Surr: 2,4,6-Tribromophenol	*66.5*			*42-124*	*%REC*	1	1/27/2010 19:02
Surr: 2-Fluorobiphenyl	*58.7*			*48-120*	*%REC*	1	1/27/2010 19:02
Surr: 2-Fluorophenol	*49.8*			*20-120*	*%REC*	1	1/27/2010 19:02
Surr: 4-Terphenyl-d14	*58.0*			*51-135*	*%REC*	1	1/27/2010 19:02
Surr: Nitrobenzene-d5	*57.2*			*41-120*	*%REC*	1	1/27/2010 19:02
Surr: Phenol-d6	*57.3*			*20-120*	*%REC*	1	1/27/2010 19:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW07-012210
Collection Date: 1/22/2010 10:30 AM

Work Order: 1001524
Lab ID: 1001524-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 19:25
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 19:25
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 19:25
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 19:25
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 19:25
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 19:25
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 19:25
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 19:25
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 19:25
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 19:25
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 19:25
Surr: 2,4,6-Tribromophenol	*58.3*			*42-124*	*%REC*	1	1/27/2010 19:25
Surr: 2-Fluorobiphenyl	*55.6*			*48-120*	*%REC*	1	1/27/2010 19:25
Surr: 2-Fluorophenol	*46.9*			*20-120*	*%REC*	1	1/27/2010 19:25
Surr: 4-Terphenyl-d14	*56.7*			*51-135*	*%REC*	1	1/27/2010 19:25
Surr: Nitrobenzene-d5	*55.8*			*41-120*	*%REC*	1	1/27/2010 19:25
Surr: Phenol-d6	*53.1*			*20-120*	*%REC*	1	1/27/2010 19:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-P12-012210
Collection Date: 1/22/2010 11:20 AM

Work Order: 1001524
Lab ID: 1001524-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 15:56
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 15:56
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 15:56
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 15:56
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	1/27/2010 15:56
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 15:56
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 15:56
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 15:56
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 15:56
Phenol	U		0.50	5.0	µg/L	1	1/27/2010 15:56
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 15:56
Surr: 2,4,6-Tribromophenol	*57.7*			*42-124*	*%REC*	1	1/27/2010 15:56
Surr: 2-Fluorobiphenyl	*56.7*			*48-120*	*%REC*	1	1/27/2010 15:56
Surr: 2-Fluorophenol	*49.0*			*20-120*	*%REC*	1	1/27/2010 15:56
Surr: 4-Terphenyl-d14	*57.4*			*51-135*	*%REC*	1	1/27/2010 15:56
Surr: Nitrobenzene-d5	*56.4*			*41-120*	*%REC*	1	1/27/2010 15:56
Surr: Phenol-d6	*56.8*			*20-120*	*%REC*	1	1/27/2010 15:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-P10-012210
Collection Date: 1/22/2010 12:40 PM

Work Order: 1001524
Lab ID: 1001524-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 19:48
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 19:48
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 19:48
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 19:48
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	1/27/2010 19:48
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 19:48
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 19:48
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 19:48
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 19:48
Phenol	U		0.50	5.0	µg/L	1	1/27/2010 19:48
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 19:48
Surr: 2,4,6-Tribromophenol	*71.8*			*42-124*	*%REC*	1	1/27/2010 19:48
Surr: 2-Fluorobiphenyl	*58.3*			*48-120*	*%REC*	1	1/27/2010 19:48
Surr: 2-Fluorophenol	*50.5*			*20-120*	*%REC*	1	1/27/2010 19:48
Surr: 4-Terphenyl-d14	*55.8*			*51-135*	*%REC*	1	1/27/2010 19:48
Surr: Nitrobenzene-d5	*56.9*			*41-120*	*%REC*	1	1/27/2010 19:48
Surr: Phenol-d6	*55.8*			*20-120*	*%REC*	1	1/27/2010 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-FD02-012210
Collection Date: 1/22/2010 12:40 PM

Work Order: 1001524
Lab ID: 1001524-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 20:11
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 20:11
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 20:11
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 20:11
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	1/27/2010 20:11
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 20:11
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 20:11
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 20:11
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 20:11
Phenol	U		0.50	5.0	µg/L	1	1/27/2010 20:11
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 20:11
Surr: 2,4,6-Tribromophenol	*65.1*			*42-124*	*%REC*	1	1/27/2010 20:11
Surr: 2-Fluorobiphenyl	*57.8*			*48-120*	*%REC*	1	1/27/2010 20:11
Surr: 2-Fluorophenol	*52.5*			*20-120*	*%REC*	1	1/27/2010 20:11
Surr: 4-Terphenyl-d14	*58.0*			*51-135*	*%REC*	1	1/27/2010 20:11
Surr: Nitrobenzene-d5	*58.8*			*41-120*	*%REC*	1	1/27/2010 20:11
Surr: Phenol-d6	*61.2*			*20-120*	*%REC*	1	1/27/2010 20:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-FB01-012210
Collection Date: 1/22/2010 01:00 PM

Work Order: 1001524
Lab ID: 1001524-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 20:35
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 20:35
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 20:35
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 20:35
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 20:35
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 20:35
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 20:35
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 20:35
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 20:35
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 20:35
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 20:35
Surr: 2,4,6-Tribromophenol	*59.5*			*42-124*	*%REC*	1	1/27/2010 20:35
Surr: 2-Fluorobiphenyl	*55.6*			*48-120*	*%REC*	1	1/27/2010 20:35
Surr: 2-Fluorophenol	*48.9*			*20-120*	*%REC*	1	1/27/2010 20:35
Surr: 4-Terphenyl-d14	*52.8*			*51-135*	*%REC*	1	1/27/2010 20:35
Surr: Nitrobenzene-d5	*52.9*			*41-120*	*%REC*	1	1/27/2010 20:35
Surr: Phenol-d6	*52.9*			*20-120*	*%REC*	1	1/27/2010 20:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW11B-012110
Collection Date: 1/21/2010 02:50 PM

Work Order: 1001524
Lab ID: 1001524-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
Acenaphthene	**48**		**0.90**	**5.0**	**µg/L**	1	1/27/2010 20:58
Acenaphthylene	**1.3**	J	**0.50**	**5.0**	**µg/L**	1	1/27/2010 20:58
Anthracene	**1.1**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 20:58
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 20:58
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	1/27/2010 20:58
Dibenzofuran	**12**		**0.70**	**5.0**	**µg/L**	1	1/27/2010 20:58
Fluoranthene	**1.4**	J	**0.50**	**5.0**	**µg/L**	1	1/27/2010 20:58
Fluorene	**13**		**0.60**	**5.0**	**µg/L**	1	1/27/2010 20:58
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 20:58
Phenol	U		0.50	5.0	µg/L	1	1/27/2010 20:58
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 20:58
Surr: 2,4,6-Tribromophenol	*65.4*			*42-124*	*%REC*	1	1/27/2010 20:58
Surr: 2-Fluorobiphenyl	*58.8*			*48-120*	*%REC*	1	1/27/2010 20:58
Surr: 2-Fluorophenol	*48.9*			*20-120*	*%REC*	1	1/27/2010 20:58
Surr: 4-Terphenyl-d14	*55.0*			*51-135*	*%REC*	1	1/27/2010 20:58
Surr: Nitrobenzene-d5	*54.5*			*41-120*	*%REC*	1	1/27/2010 20:58
Surr: Phenol-d6	*58.0*			*20-120*	*%REC*	1	1/27/2010 20:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW11A-012110
Collection Date: 1/21/2010 03:30 PM

Work Order: 1001524
Lab ID: 1001524-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 21:21
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 21:21
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 21:21
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 21:21
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 21:21
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 21:21
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 21:21
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 21:21
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 21:21
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 21:21
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 21:21
Surr: 2,4,6-Tribromophenol	*66.8*			*42-124*	*%REC*	1	1/27/2010 21:21
Surr: 2-Fluorobiphenyl	*58.7*			*48-120*	*%REC*	1	1/27/2010 21:21
Surr: 2-Fluorophenol	*50.5*			*20-120*	*%REC*	1	1/27/2010 21:21
Surr: 4-Terphenyl-d14	*55.4*			*51-135*	*%REC*	1	1/27/2010 21:21
Surr: Nitrobenzene-d5	*55.5*			*41-120*	*%REC*	1	1/27/2010 21:21
Surr: Phenol-d6	*54.0*			*20-120*	*%REC*	1	1/27/2010 21:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW10B-012110
Collection Date: 1/21/2010 04:15 PM

Work Order: 1001524
Lab ID: 1001524-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
Acenaphthene	**52**		**0.90**	**5.0**	**µg/L**	1	1/27/2010 21:44
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 21:44
Anthracene	**2.5**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 21:44
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 21:44
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	1/27/2010 21:44
Dibenzofuran	**18**		**0.70**	**5.0**	**µg/L**	1	1/27/2010 21:44
Fluoranthene	**1.7**	J	**0.50**	**5.0**	**µg/L**	1	1/27/2010 21:44
Fluorene	**31**		**0.60**	**5.0**	**µg/L**	1	1/27/2010 21:44
Naphthalene	**3.7**	J	**0.60**	**5.0**	**µg/L**	1	1/27/2010 21:44
Phenol	U		0.50	5.0	µg/L	1	1/27/2010 21:44
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 21:44
Surr: 2,4,6-Tribromophenol	*67.9*			*42-124*	*%REC*	1	1/27/2010 21:44
Surr: 2-Fluorobiphenyl	*51.8*			*48-120*	*%REC*	1	1/27/2010 21:44
Surr: 2-Fluorophenol	*50.0*			*20-120*	*%REC*	1	1/27/2010 21:44
Surr: 4-Terphenyl-d14	*53.4*			*51-135*	*%REC*	1	1/27/2010 21:44
Surr: Nitrobenzene-d5	*54.5*			*41-120*	*%REC*	1	1/27/2010 21:44
Surr: Phenol-d6	*55.2*			*20-120*	*%REC*	1	1/27/2010 21:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Mar-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
Sample ID: WG-1620-MW10A-012110
Collection Date: 1/21/2010 04:50 PM

Work Order: 1001524
Lab ID: 1001524-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/27/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	1/27/2010 22:07
Acenaphthene	U		0.90	5.0	µg/L	1	1/27/2010 22:07
Acenaphthylene	U		0.50	5.0	µg/L	1	1/27/2010 22:07
Anthracene	U		0.60	5.0	µg/L	1	1/27/2010 22:07
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	1/27/2010 22:07
Dibenzofuran	U		0.70	5.0	µg/L	1	1/27/2010 22:07
Fluoranthene	U		0.50	5.0	µg/L	1	1/27/2010 22:07
Fluorene	U		0.60	5.0	µg/L	1	1/27/2010 22:07
Naphthalene	U		0.60	5.0	µg/L	1	1/27/2010 22:07
Phenanthrene	U		0.50	5.0	µg/L	1	1/27/2010 22:07
Pyrene	U		0.50	5.0	µg/L	1	1/27/2010 22:07
Surr: 2,4,6-Tribromophenol	*91.4*			*42-124*	*%REC*	1	1/27/2010 22:07
Surr: 2-Fluorobiphenyl	*70.2*			*48-120*	*%REC*	1	1/27/2010 22:07
Surr: 2-Fluorophenol	*54.5*			*20-120*	*%REC*	1	1/27/2010 22:07
Surr: 4-Terphenyl-d14	*71.9*			*51-135*	*%REC*	1	1/27/2010 22:07
Surr: Nitrobenzene-d5	*66.2*			*41-120*	*%REC*	1	1/27/2010 22:07
Surr: Phenol-d6	*67.8*			*20-120*	*%REC*	1	1/27/2010 22:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Mar-10

WorkOrder: 1001524
Test Code: 8270_TCL_W
Test Number: SW8270
Test Name: Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	2-Methylnaphthalene	91-57-6	0.9	5
A	Acenaphthene	83-32-9	0.9	5
A	Acenaphthylene	208-96-8	0.5	5
A	Anthracene	120-12-7	0.6	5
A	Bis(2-ethylhexyl)phthalate	117-81-7	3.3	5
A	Di-n-butyl phthalate	84-74-2	0.5	5
A	Dibenzofuran	132-64-9	0.7	5
A	Fluoranthene	206-44-0	0.5	5
A	Fluorene	86-73-7	0.6	5
A	Naphthalene	91-20-3	0.6	5
A	Phenanthrene	85-01-8	0.5	5
A	Phenol	108-95-2	0.5	5
A	Pyrene	129-00-0	0.5	5
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	5
S	Surr: 2-Fluorobiphenyl	321-60-8	0	5
S	Surr: 2-Fluorophenol	367-12-4	0	5
S	Surr: 4-Terphenyl-d14	1718-51-0	0	5
S	Surr: Nitrobenzene-d5	4165-60-0	0	5
S	Surr: Phenol-d6	13127-88-3	0	5

QC BATCH REPORT

Batch ID: **40719** Instrument ID **SV-3** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100127-40719** Units: **µg/L** Analysis Date: **1/27/2010 02:46 PM**

Client ID: Run ID: **SV-3_100127A** SeqNo: **1865439** Prep Date: **1/27/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	U	5.0								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Anthracene	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Di-n-butyl phthalate	U	5.0								
Dibenzofuran	U	5.0								
Fluoranthene	U	5.0								
Fluorene	U	5.0								
Naphthalene	U	5.0								
Phenanthrene	U	5.0								
Phenol	U	5.0								
Pyrene	U	5.0								
Surr: 2,4,6-Tribromophenol	*70.78*	5.0	*100*	0	*70.8*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*62.39*	5.0	*100*	0	*62.4*	*48-120*	0			
Surr: 2-Fluorophenol	*54.23*	5.0	*100*	0	*54.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*60.94*	5.0	*100*	0	*60.9*	*51-135*	0			
Surr: Nitrobenzene-d5	*62.85*	5.0	*100*	0	*62.9*	*41-120*	0			
Surr: Phenol-d6	*61.47*	5.0	*100*	0	*61.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001524
Project: UPRR HWPW SWMU 1

QC BATCH REPORT

Batch ID: **40719** Instrument ID **SV-3** Method: **SW8270**

LCS Sample ID: **SLCSW1-100127-40719** Units: **µg/L** Analysis Date: **1/27/2010 03:09 PM**

Client ID: Run ID: **SV-3_100127A** SeqNo: **1865440** Prep Date: **1/27/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	35.33	5.0	50	0	70.7	55-120	0			
Acenaphthene	36.07	5.0	50	0	72.1	55-120	0			
Acenaphthylene	36.9	5.0	50	0	73.8	55-120	0			
Anthracene	36.8	5.0	50	0	73.6	55-120	0			
Bis(2-ethylhexyl)phthalate	37.64	5.0	50	0	75.3	50-125	0			
Di-n-butyl phthalate	38.81	5.0	50	0	77.6	55-120	0			
Dibenzofuran	36.22	5.0	50	0	72.4	55-120	0			
Fluoranthene	36.29	5.0	50	0	72.6	55-120	0			
Fluorene	36.75	5.0	50	0	73.5	55-120	0			
Naphthalene	36.26	5.0	50	0	72.5	55-120	0			
Phenanthrene	36.88	5.0	50	0	73.8	55-120	0			
Phenol	66.06	5.0	100	0	66.1	50-120	0			
Pyrene	38.97	5.0	50	0	77.9	55-120	0			
Surr: 2,4,6-Tribromophenol	*70.1*	5.0	*100*	0	*70.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*67.68*	5.0	*100*	0	*67.7*	*48-120*	0			
Surr: 2-Fluorophenol	*65.94*	5.0	*100*	0	*65.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*67.35*	5.0	*100*	0	*67.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*66.52*	5.0	*100*	0	*66.5*	*41-120*	0			
Surr: Phenol-d6	*68.68*	5.0	*100*	0	*68.7*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001524
Project: UPRR HWPW SWMU 1

QC BATCH REPORT

Batch ID: **40719** Instrument ID **SV-3** Method: **SW8270**

MS Sample ID: **1001524-06AMS** Units: **µg/L** Analysis Date: **1/27/2010 04:19 PM**

Client ID: **WG-1620-P12-012210** Run ID: **SV-3_100127A** SeqNo: **1865442** Prep Date: **1/27/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	32.32	5.0	50	0	64.6	55-120	0			
Acenaphthene	33.42	5.0	50	0	66.8	55-120	0			
Acenaphthylene	34.27	5.0	50	0	68.5	55-120	0			
Anthracene	33.67	5.0	50	0	67.3	55-120	0			
Bis(2-ethylhexyl)phthalate	32.9	5.0	50	0	65.8	50-125	0			
Di-n-butyl phthalate	35.89	5.0	50	0	71.8	55-120	0			
Dibenzofuran	34.6	5.0	50	0	69.2	55-120	0			
Fluoranthene	34.42	5.0	50	0	68.8	55-120	0			
Fluorene	33.52	5.0	50	0	67	55-120	0			
Naphthalene	33.81	5.0	50	0	67.6	55-120	0			
Phenanthrene	34.88	5.0	50	0	69.8	55-120	0			
Phenol	66.62	5.0	100	0	66.6	50-120	0			
Pyrene	35.25	5.0	50	0	70.5	55-120	0			
Surr: 2,4,6-Tribromophenol	*59.55*	5.0	*100*	0	*59.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*57.08*	5.0	*100*	0	*57.1*	*48-120*	0			
Surr: 2-Fluorophenol	*60.88*	5.0	*100*	0	*60.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*56.32*	5.0	*100*	0	*56.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*60.55*	5.0	*100*	0	*60.6*	*41-120*	0			
Surr: Phenol-d6	*60.92*	5.0	*100*	0	*60.9*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001524
Project: UPRR HWPW SWMU 1

QC BATCH REPORT

Batch ID: **40719** Instrument ID **SV-3** Method: **SW8270**

MSD Sample ID: **1001524-06AMSD** Units: **µg/L** Analysis Date: **1/27/2010 04:43 PM**

Client ID: **WG-1620-P12-012210** Run ID: **SV-3_100127A** SeqNo: **1865443** Prep Date: **1/27/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	35.09	5.0	50	0	70.2	55-120	32.32	8.22	20	
Acenaphthene	33.96	5.0	50	0	67.9	55-120	33.42	1.61	20	
Acenaphthylene	36.01	5.0	50	0	72	55-120	34.27	4.95	20	
Anthracene	33.79	5.0	50	0	67.6	55-120	33.67	0.349	20	
Bis(2-ethylhexyl)phthalate	34.68	5.0	50	0	69.4	50-125	32.9	5.28	20	
Di-n-butyl phthalate	35.99	5.0	50	0	72	55-120	35.89	0.272	20	
Dibenzofuran	34.85	5.0	50	0	69.7	55-120	34.6	0.704	20	
Fluoranthene	35.41	5.0	50	0	70.8	55-120	34.42	2.82	20	
Fluorene	34.58	5.0	50	0	69.2	55-120	33.52	3.1	20	
Naphthalene	34.87	5.0	50	0	69.7	55-120	33.81	3.07	20	
Phenanthrene	34.15	5.0	50	0	68.3	55-120	34.88	2.12	20	
Phenol	61.81	5.0	100	0	61.8	50-120	66.62	7.49	20	
Pyrene	37.23	5.0	50	0	74.5	55-120	35.25	5.46	20	
Surr: 2,4,6-Tribromophenol	*67.84*	5.0	*100*	0	*67.8*	*42-124*	59.55	*13*	*20*	
Surr: 2-Fluorobiphenyl	*64.13*	5.0	*100*	0	*64.1*	*48-120*	57.08	*11.6*	*20*	
Surr: 2-Fluorophenol	*62.91*	5.0	*100*	0	*62.9*	*20-120*	60.88	*3.28*	*20*	
Surr: 4-Terphenyl-d14	*61.87*	5.0	*100*	0	*61.9*	*51-135*	56.32	*9.4*	*20*	
Surr: Nitrobenzene-d5	*64.9*	5.0	*100*	0	*64.9*	*41-120*	60.55	*6.93*	*20*	
Surr: Phenol-d6	*60.65*	5.0	*100*	0	*60.7*	*20-120*	60.92	*0.442*	*20*	

The following samples were analyzed in this batch:

1001524-01A	1001524-02A	1001524-03A
1001524-04A	1001524-05A	1001524-06A
1001524-07A	1001524-08A	1001524-09A
1001524-10A	1001524-11A	1001524-12A
1001524-13A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Mar-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW SWMU 1
WorkOrder: **1001524**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Fax. +1 281 530 5887

Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1001524

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW SWMU 1	A	LOW SVOC (8270) Select
Work Order		Project Number	1620	B	ATE LIST
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	BTE LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW02-012210	1-22-10	0720	W		2	X	X									
2	WG-1620-MW01A-012210	1-22-10	0820	W		2	X	X									
3	WG-1620-FD01-012210	1-22-10	0820	W		2	X	X									
4	WG-1620-MW08-012210	1-22-10	0920	W		2	X	X									
5	WG-1620-MW07-012210	1-22-10	1030	W		2	X	X									
6	WG-1620-P12-012210	1-22-10	1120	W		2	X		X								
7	WG-1620-P12MS-012210	1-22-10	1120	W		2	X		X								
8	WG-1620-P12MSD-012210	1-22-10	1120	W		2	X		X								
9	WG-1620-P10-012210	1-22-10	1240	W		2	X		X								
10	WG-1620-FD02-012210	1-22-10	1240	W		2	X		X								

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 1-22-10 Time: 1600

Received by: 1-23-10 10:25

Relinquished by: Date: 1-23-10 Time: 1025

Received by (Laboratory):

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Work Days TAT. 1-23-10

Cooler ID: 1303 5291 2584

Cooler Temp:

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
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Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 100124

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW SWMU 1	A	LOW SVOC (8270) Select
Work Order		Project Number	1620	B	ATZ LIST
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	BTZ LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-FB01-012210	1-22-10	1300	W		2	X	X									
2	WG-1620-MW11B-012110	1-21-10	1450	W		2	X		X								
3	WG-1620-MW11A-012110	1-21-10	1530	W		2	X	X									
4	WG-1620-MW10B-012110	1-21-10	1615	W		2	X		X								
5	WG-1620-MW10A-012110	1-21-10	1650	W		2	X	X									
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date: 1-22-10	Time: 1600	Received by:		Notes: 10 Work Days TAT.
Relinquished by:	Date: 1-23-10	Time: 1025	Received by (Laboratory):	1600 1-22-10 1023 1-23-10 1025	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

Cooler ID	Cooler Temp.
3303	
3291	
2581	

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **22-Jan-10 16:00**

Work Order: **1001524** Received by: **PS**

Checklist completed by Richard Sanchez (eSignature) 25-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 26-Jan-10 (Date)

Matrices: water
Carrier name: ALS.HS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	1.9c, 1.3c, 1.7c	002	
Cooler(s)/Kit(s):	1303,3291,2584		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CONESTOGA-ROVERS
& ASSOCIATES

E-Mail Date: March 4, 2010
E-Mail To: Eric Matzner/ Pastor, Behling & Wheeler, LLC
c.c.: Patricia Lynch
E-Mail and Hard Copy if Requested

DATA USABILITY SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SEMI-ANNUAL GROUNDWATER MONITORING
HOUSTON, TEXAS
JANUARY 2010

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
6320 Rothway, Suite 100
Houston, Texas 77040
Telephone: 713-734-3090 Fax: 713-734-3391
Contact: Patricia L. Lynch [bjw]
Date: March 4, 2010
www.CRAworld.com

Data Usability Summary

Reviewer:	Patricia L. Lynch – Conestoga-Rovers & Associates, Inc.
Contract Laboratory:	ALS Laboratory Group—Houston, Texas
Project/Area of Interest:	UPRR Houston Wood Preserving Works – Houston, Texas
Description of Data Packages Reviewed:	Groundwater sample results in data packages 1001258, 1001319, 1001396, 1001469, 1001482 & 1001525
Sample Collection Date(s):	January 13 -15, 2010 & January 18 – 21, 2010
Intended Use of Data:	To monitor the COCs in groundwater at the site and to evaluate whether migration of COCs could result in risk to human or ecological health.

1.0 Scope of Data Usability Summary

Data were reviewed and validated in accordance with Title 30 of the Texas Administrative Code Section 350.54 (30 TAC 350.54) as described in *Review and Reporting of COC Concentration Data,* (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The review included examination of the reported data, the laboratory review checklists (LRCs), and field/laboratory quality assurance/quality control (QA/QC) samples collected at the Site. Tables summarizing data qualifications discussed in this DUS can be found in Appendix A.

Groundwater samples plus field duplicates and trip blanks were analyzed for the following:

i. Volatile organic compounds (VOCs) by SW-846 Method 8260B[1]
ii. Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270D[1]

A sampling and analysis summary is presented in Table 1. This summary includes a cross-reference of field sample identification numbers and laboratory sample numbers. Each sample was assigned a unique field identification number. The lists of VOC and SVOC target compounds are presented in Tables 2A and 2B.

2.0 Laboratory Qualifications

Analytical services were provided by ALS Laboratory Group (ALS) located in Houston, Texas. The laboratory's quality assurance program is consistent with the quality standards outlined in the National Environmental Laboratory Accreditation Program (NELAP). The laboratory was accredited under Texas Certification Number T104704231-09-1-TX at the time the analyses were performed.

[1] "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with subsequent revisions).

3.0 Project Objectives

3.1 Levels of Required Performance (LORP)

Prior to sampling, the LORP for each COC was established for the investigation. Standard available analytical methods were selected and minimal detection limits that are at or below the Texas Risk Reduction Tier 1 Residential Protective Concentration Levels (PCLs), ^{GW} GW $_{ING}$ for groundwater were sought.

3.2 Sampling/Analytical QA/QC Objectives

Pastor, Behling & Wheeler, LLC designed the QA/QC program to identify contamination resulting from sample collection, sample transport and the analytical process.

- The trip blank is a zero headspace sample container filled by the laboratory with analyte-free water. Trip blanks were submitted and analyzed with the samples requiring volatile organic analysis. The trip blank samples were kept in the same environment in which the other field samples were collected.

- Method blanks of a similar matrix to that of the associated samples are prepared by the laboratory and analyzed to determine if laboratory contaminants are affecting the analytical results. Method blanks are prepared and analyzed with each batch.

- Field blanks were collected and analyzed to determine if the chemicals of concern would be detected based on the ambient field conditions. The field blanks were kept in the same environment in which the other field samples were collected.

Similarly, the QA/QC program was designed to evaluate the quality of the resulting data with respect to bias and precision. First, a laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was prepared and analyzed with each batch. The recovery ranges established by the laboratory are adopted as the acceptance criteria for the project. Second, a matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed with each batch. The recovery ranges and RPDs established by the laboratory are adopted as the acceptance criteria for the project. Third, field duplicates were collected and submitted for analysis. The RPD acceptance criterion for the water field duplicates is 30 percent. This RPD criterion is only used when sample concentrations are above the estimated regions of detection.

4.0 Data Review/Validation Results

4.1 Analytical Results

Summaries of the qualified analytical results are reported in Tables 3, 4, 5, 6 and 7. Analytes with concentrations above the Sample Detection Limits (SDLs) but below the Method Quantitation Limits (MQL) have been qualified as estimated on the analytical tables per the TRRP-13 document.

4.2 LORP

All SDLs and unadjusted MQLs met the LORP for this investigation. Data for some analyses were reported from dilutions due to the concentrations of target or non-target compounds in the samples. The SDLs and MQLs were adjusted for the dilution factors in these cases.

4.3 Preservation and Holding Times

Samples were properly preserved in the field and cooled to 4°C (±2°C). Samples were shipped with chains of custody, and the paperwork was filled out properly. All samples were shipped on ice. All samples were prepared and analyzed within the applicable holding times.

4.4 Sample Containers

Sample containers were certified pre-cleaned glass provided by the laboratory. These containers meet or exceed analyte specifications established in the USEPA *Specifications and Guidance for Contaminant-free Sample Containers*.

4.5 Calibrations

According to the LRCs, initial calibration and continuing calibration data met the criteria for the selected methods.

4.6 Blanks

Method Blanks: As these were not discrete samples handled in the field, the method blanks are not listed on the sample identification cross-reference table (Table 1). Results are reported in the data package on a laboratory batch basis. All of the laboratory blank results were reported as ND (not detected) except for methylene chloride in the VOC method blank associated with samples WG-1620-MW32A-011410 and WG-1620-MW25C-011510. The methylene chloride data does not require qualification since this compound was not detected in the samples.

Trip Blanks: The trip blanks, which were discrete samples handled in the field, are listed on the sample summary table. Results are reported in the data packages with the other project sample results. All of the trip blank results were reported as ND (not detected). Note that due to an oversight, ALS did not analyze WG-1620-TB02-011510.

Field Blanks: Field blanks were collected and analyzed for volatiles and semi-volatiles and are listed on the sample summary table. The SVOC compounds bis(2-ethylhexyl)phthalate and naphthalene were detected in some of the field blanks, and results for these compounds in samples with similar concentrations to the field blanks are qualified as non-detect (see Table 3).

4.7 Internal Standard and Surrogate Recoveries

Recoveries of internal standards and surrogates for VOCs and SVOCs are addressed in the LRCs of the laboratory data packages. All surrogate recoveries were within the acceptance limits except for the SVOC surrogate nitrobenzene-d5 in sample WG-1620--MW38A-011410. All other surrogate recoveries were within the control limits in this sample, and data qualification

was not required. Many SVOC surrogate recoveries could not be assessed due to necessary sample dilutions. However, data for these samples were also reported from lesser dilutions, and the recoveries in these dilutions were acceptable.

Semi-volatile internal standard areas for several samples were low, and results associated with these internal standards were qualified as estimated/ biased high (see Table 4). All other internal standard areas and retention limits were acceptable per the LRCs.

4.8 Laboratory Control Samples (LCS)/ Laboratory Control Sample Duplicates (LCSD)

LCS or LCS/LCSD data for all COCs were reported for each batch. LCS spike recoveries and RPDs for all COCs were within the project objectives.

4.9 Matrix Spikes

Several project samples were selected for matrix spike/matrix spike duplicate analyses for VOCs and SVOCs, and the results are reported in the data packages. All recoveries and RPDs were within the laboratory established control limits except as described below.

i. For sample WG-1620-TW41B-011910, the matrix spike recovery for chloroform and the MS/MSD recoveries for tetrachloroethene were below the established control limits. This sample required only the site-specific VOC compounds, but was analyzed in the same batch as other samples requiring the full VOC compound list. Chloroform and tetrachloroethene were not required on sample WG-1620-TW41B-011910 so data qualifiers were not applied to this sample based on MS or MSD recoveries.

ii. The RPD for bis(2-ethylhexyl)phthalate was slightly above the control limits in sample WG-1620- TW41B-011910, and several SVOC RPDs were above the control limits in sample WG-1620-MW22A-011510. The data for these compounds were qualified as estimated (see Table 5) in these samples.

The laboratory also performed MS/MSD analyses on unrelated samples from other projects, but the data for these unrelated samples cannot be used to assess precision for the associated project samples.

4.10 Field Duplicate

Field duplicates of samples listed below were collected and analyzed.

- WG-1620-FD01-011310 is a duplicate of WG-1620-MW33A-011310.
- WG-1620-FD02-011910 is a duplicate of WG-1620-MW14-011910.
- WG-1620-FD03-012010 is a duplicate of WG-1620-MW59D-012010.
- WG-1620-FD04-012110 is a duplicate of WG-1620-MW21C-012110.

Most results showed good precision above the estimated regions of detection (see Table 6). Many results were non-detect, and the RPDs could not be calculated. Duplicate RPDs that exceed the criteria of 30 percent for groundwater are summarized on Table 7.

4.11 Field Procedures

Pastor, Behling & Wheeler, LLC collected soil groundwater samples in accordance with their Standard Operating Procedures (SOP) for sample collection.

4.13 Summary

The analytical data in this report are usable to assess the impact of COCs in groundwater at the site. Qualifications of the data as discussed in this report are summarized in Appendix A.

APPENDIX A

TABLES

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

				Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOC*	*SVOCs*	*Comments*
WG-1620-MW53C-011310	MW53C	01/13/10	7:05	X	X	
WG-1620-MW44A-011310	MW44A	01/13/10	8:00	X	X	
WG-1620-MW36A-011310	MW36A	01/13/10	8:45	X	X	
WG-1620-MW28A-011310	MW28A	01/13/10	10:05	X	X	
WG-1620-MW28C-011310	MW28C	01/13/10	11:15	X	X	
WG-1620-MW33A-011310	MW33A	01/13/10	13:30	X	X	
WG-1620-FD01-011310	MW33A	01/13/10	1:30	X	X	Field Duplicate of WG-1620-MW33A-011310
WG-1620-MW-33B-011310	MW33B	01/13/10	14:35	X	X	
WG-1620-MW26A-011310	MW26A	01/13/10	15:30	X	X	
WG-1620-MW63B-011310	MW63B	01/13/10	16:45	X	X	MS/MSD (VOCs)
WG-1620-FB01-011310	NA	01/13/10	17:05	X	X	
WG-1620-TB01-011310	NA	01/13/10	NA	X		
WG-1620-MW32A-011410	MW32A	01/14/10	8:30	X	X	
WG-1620-MW38A-011410	MW38A	01/14/10	9:15	X	X	
WG-1620-MW38B-011410	MW38B	01/14/10	10:10	X	X	
WG-1620-MW24C-011410	MW24C	01/14/10	11:10	X	X	
WG-1620-MW24B-011410	MW24B	01/14/10	12:00	X	X	
WG-1620-MW27C-011410	MW27C	01/14/10	13:20	X	X	
WG-1620-MW35A-011410	MW35A	01/14/10	14:20	X	X	
WG-1620-MW35B-011410	MW35B	01/14/10	15:20	X	X	
WG-1620-MW24AR-011410	MW24AR	01/14/10	16:15	X	X	
WG-1620-MW22A-011510	MW22A	01/15/10	8:00	X	X	MS/MSD (VOCs & SVOCs)
WG-1620-FB02-011410	NA	01/14/10	16:45	X	X	
WG-1620-MW22B-011510	MW22B	01/15/10	9:00	X	X	
WG-1620-MW25A-011510	MW25A	01/15/10	10:05	X	X	
WG-1620-MW25C-011510	MW25C	01/15/10	11:15	X	X	
WG-1620-MW15A-011810	MW15A	01/18/10	9:40	X	X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

				Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOC*	*SVOCs*	*Comments*
WG-1620-MW15C-011810	MW15C	01/18/10	10:25	X	X	
WG-1620-MW17C-011810	MW17C	01/18/10	11:25	X	X	
WG-1620-MW17-011810	MW17	01/18/10	12:20	X	X	
WG-1620-MW16-011810	MW16	01/18/10	13:25	X	X	
WG-1620-MW55A-011810	MW55A	01/18/10	14:15	X	X	
WG-1620-MW19C-011810	MW19C	01/18/10	15:10	X	X	
WG-1620-MW52A-011810	MW52A	01/18/10	16:00	X	X	
WG-1620-MW23C-011810	MW23C	01/18/10	16:50	X	X	
WG-1620-MW18A-011810	MW18A	01/18/10	17:50	X	X	
WG-1620-FB03-011810	NA	01/18/10	18:15	X	X	
WG-1620-TB03-011810	NA	01/18/10	NA	X		
WG-1620-MW18C-011910	MW18C	01/19/10	7:00	X	X	
WG-1620-MW14-011910	MW14	01/19/10	8:10:	X	X	
WG-1620-FD02-011910	MW14	01/19/10	8:10	X	X	Filed Duplicate of WG-1620-MW14-011910
WG-1620-MW39B-011910	MW39B	01/19/10	9:05	X	X	
WG-1620-MW12C-011910	MW12C	01/19/10	10:00	X	X	
WG-1620-MW12A-011910	MW12A	01/19/10	11:00	X	X	
WG-1620-TW41B-011910	TW41B	01/19/10	11:55	X	X	MS/MSD (VOCs & SVOCs)
WG-1620-MW13-011910	MW13	01/19/10	13:40	X	X	
WG-1620-MW40B-011910	MW40B	01/19/10	14:35	X	X	
WG-1620-MW42B-011910	MW42B	01/19/10	15:40	X	X	
WG-1620-FB04-011910	NA	01/19/10	16:10	X	X	
WG-1620-TB04-011910	NA	01/19/10	NA	X		
WG-1620-MW57A-012010	MW57A	01/20/10	7:00	X	X	
WG-1620-MW58A-012010	MW58A	01/20/10	8:00	X	X	
WG-1620-TW56A-012010	MW56A	01/20/10	9:00	X	X	
WG-1620-MW66D-012010	MW66D	01/20/10	10:10	X	X	

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

				Analysis/Parameters		
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOC*	*SVOCs*	*Comments*
WG-1620-MW49B-012010	MW49B	01/20/10	11:00	X	X	
WG-1620-MW59D-012010	MW59D	01/20/10	12:05	X	X	
WG-1620-FD03-012010	MW59D	01/20/10	12:05	X	X	Field Duplicate of WG-1620-MW59D-012010
WG-1620-MW50A-012010	MW50A	01/20/10	13:45	X	X	
WG-1620-MW59A-012010	MW59A	01/20/10	12:55	X	X	
WG-1620-MW51A-012010	MW51A	01/20/10	14:45	X	X	
WG-1620-MW47C-012010	MW47C	01/20/10	15:45	X	X	
WG-1620-MW61A-012010	MW61A	01/20/10	16:30	X	X	
WG-1620-MW60A-012010	MW60A	01/20/10	17:10	X	X	
WG-1620-MW49A-012110	MW49A	01/21/10	6:40	X	X	
WG-1620-MW48C-012110	MW48C	01/21/10	7:35	X	X	
WG-1620-MW54C-012110	MW54C	01/21/10	8:30	X	X	
WG-1620-MW65D-012110	MW65D	01/21/10	9:40	X	X	
WG-1620-FB05-012010	NA	01/20/10	16:45	X	X	
WG-1620-TB05-012010	NA	01/20/10	NA	X		
WG-1620-MW64A-012110	MW64A	01/21/10	10:35	X	X	
WG-1620-MW21C-012110	MW21C	01/21/10	11:45	X	X	
WG-1620-FD04-012110	MW21C	01/21/10	11:45	X	X	Field Duplicate of WG-1620-MW21C-012110
WG-1620-FB06-012110	NA	01/21/10	12:00	X	X	
WG-1620-P11-012110	P11	01/21/10	13:00	X	X	
WG-1620-MW62B-012110	MW62B	01/21/10	14:05	X	X	
WG-1620-TB06-012110	NA	01/21/10	NA	X		

Notes:

VOCs Volatile Organic Compounds.

TABLE 2A

TARGET COMPOUND SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

VOCS (FULL LIST)	*VOCS (SITE SPECIFIC)*
Ethylbenzene	1,2-Dichloroethane
Styrene	Benzene
cis-1,3-Dichloropropene	Chlorobenzene
trans-1,3-Dichloropropene	Ethylbenzene
1,2-Dichloroethane	Methylene Chloride
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	Toluene
Toluene	Xylenes (total)
Chlorobenzene	
Dibromochloromethane	
Tetrachloroethene	
Xylene (total)	
cis-1,2-Dichloroethene	
trans-1,2-Dichloroethene	
Methyl tert butyl ether (MTBE)	
Carbon tetrachloride	
2-Hexanone	
Acetone	
Chloroform (Trichloromethane)	
Benzene	
1,1,1-Trichloroethane	
Bromomethane (Methyl bromide)	
Chloromethane (Methyl chloride)	
Chloroethane	
Vinyl chloride	
Methylene chloride	
Carbon disulfide	
Bromoform	
Bromodichloromethane	
1,1-Dichloroethane	
1,1-Dichloroethene	
1,2-Dichloropropane	
2-Butanone (Methyl ethyl ketone) (MEK)	
1,1,2-Trichloroethane	
Trichloroethene	
1,1,2,2-Tetrachloroethane	

Notes:

VOCs - Volatile Organic Compounds.

TABLE 2B

TARGET COMPOUND SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

SVOCs

4-Nitrophenol
2,4-Dimethylphenol
Phenol
bis(2-Chloroethoxy)methane
bis(2-Ethylhexyl)phthalate (DEHP)
Anthracene
2,4-Dinitrotoluene
1,2-Diphenylhydrazine
Pyrene
Dibenzofuran
Fluoranthene
Acenaphthylene
Chrysene
Benzo(a)pyrene
4,6-Dinitro-2-methylphenol
Benzo(a)anthracene
2,6-Dinitrotoluene
Acenaphthene
Di-n-butylphthalate (DBP)
Phenanthrene
N-Nitrosodiphenylamine
Fluorene
Pentachlorophenol
Naphthalene
2-Methylnaphthalene
2-Chloronaphthalene
Nitrobenzene

Notes:

SVOCs - Semi-Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
SVOCs	01/13/10	bis(2-Ethylhexyl)phthalate (DEHP)	0.48	WG-1620-FD01-011310	0.38	U	µg/L
				WG-1620-MW26A-011310	0.26	U	µg/L
				WG-1620-MW28A-011310	0.22	U	µg/L
				WG-1620-MW28C-011310	0.46	U	µg/L
				WG-1620-MW33A-011310	0.30	U	µg/L
				WG-1620-MW36A-011310	0.33	U	µg/L
				WG-1620-MW44A-011310	0.31	U	µg/L
				WG-1620-MW53C-011310	0.24	U	µg/L
				WG-1620-MW63B-011310	0.36	U	µg/L
SVOCs	01/13/10	Naphthalene	0.21	WG-1620-MW26A-011310	0.51	U	µg/L
				WG-1620-MW28A-011310	0.10	U	µg/L
				WG-1620-MW44A-011310	1.1	U	µg/L
				WG-1620-MW53C-011310	0.27	U	µg/L
SVOCs	01/14/10	bis(2-Ethylhexyl)phthalate (DEHP)	0.31	WG-1620-MW24AR-011410	0.29	U	µg/L
				WG-1620-MW35A-011410	0.45	U	µg/L
				WG-1620-MW35B-011410	0.29	U	µg/L
				WG-1620-MW38A-011410	0.49	U	µg/L
				WG-1620-MW38B-011410	0.39	U	µg/L
				WG-1620-MW24B-011410	2.1	U	µg/L
				WG-1620-MW27C-011410	1.6	U	µg/L
				WG-1620-MW32A-011410	1.8	U	µg/L
SVOCs	01/14/10	Naphthalene	0.17	WG-1620-MW24C-011410	0.26	U	µg/L
				WG-1620-MW27C-011410	0.13	U	µg/L
				WG-1620-MW38B-011410	0.14	U	µg/L

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
SVOCs	01/18/10	bis(2-Ethylhexyl)phthalate (DEHP)	0.52	WG-1620-MW15A-011810	0.73	U	µg/L
				WG-1620-MW15C-011810	0.65	U	µg/L
				WG-1620-MW16-011810	1.2	U	µg/L
				WG-1620-MW17C-011810	3.9	U	µg/L
				WG-1620-MW19C-011810	2.8	U	µg/L
				WG-1620-MW23C-011810	1.1	U	µg/L
				WG-1620-MW52A-011810	0.32	U	µg/L
				WG-1620-MW55A-011810	3.1	U	µg/L
SVOCs	01/18/10	Naphthalene	0.61	WG-1620-MW15A-011810	1.8	U	µg/L
				WG-1620-MW15C-011810	0.57	U	µg/L
SVOCs	01/20/10	bis(2-Ethylhexyl)phthalate (DEHP)	1.2	WG-1620-MW47C-012010	0.65	U	µg/L
				WG-1620-MW49B-012010	0.53	U	µg/L
				WG-1620-MW51A-012010	1.9	U	µg/L
				WG-1620-MW57A-012010	0.40	U	µg/L
				WG-1620-MW59A-012010	0.65	U	µg/L
				WG-1620-MW59D-012010	0.23	U	µg/L
				WG-1620-MW60A-012010	2.5	U	µg/L
				WG-1620-MW61A-012010	2.0	U	µg/L
				WG-1620-MW66D-012010	2.8	U	µg/L
				WG-1620-TW56A-012010	0.25	U	µg/L
				WG-1620-FD03-012010	0.87	U	µg/L
SVOCs	01/21/10	bis(2-Ethylhexyl)phthalate (DEHP)	0.34	WG-1620-FD04-012110	0.54	U	µg/L
				WG-1620-MW21C-012110	0.72	U	µg/L
				WG-1620-MW62B-012110	0.98	U	µg/L
				WG-1620-MW64A-012110	1.6	U	µg/L
				WG-1620-P11-012110	0.51	U	µg/L

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
SVOCs	01/21/10	bis(2-Ethylhexyl)phthalate (DEHP)	0.34	WG-1620-MW48C-012110	1.8	U	µg/L
				WG-1620-MW49A-012110	1.5	U	µg/L
				WG-1620-MW54C-012110	0.77	U	µg/L
				WG-1620-MW65D-012110	2.7	U	µg/L

Notes:

SVOCs Semi-Volatile Organic Compounds.
U Not detected.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Sample ID*	*IS*	*IS Area Count*	*Control Limits (percent)*	*Analytes*	*Qualified Sample Results*		*Units*
Semi-Volatiles	WG-1620-MW25C-011510	1,4-Dichlorobenzene	116079	164623-658492	1,2-Diphenylhydrazine	0.10	UJ	µg/L
		Naphthalene-d8	493801	528336-2113342	2,4-Dimethylphenol	0.080	UJ	µg/L
		Acenaphthene-d10	232974	295003-1180010	2,4-Dinitrotoluene	0.090	UJ	µg/L
		Phenenthrene-d10	246105	406349-1625394	2,6-Dinitrotoluene	0.070	UJ	µg/L
		Chrysene-d12	317055	375392-1501566	2-Chloronaphthalene	0.10	UJ	µg/L
		Perylene-d12	229472	369527-1478108	4,6-Dinitro-2-methylphenol	0.080	UJ	µg/L
					4-Nitrophenol	0.070	UJ	µg/L
					Acenaphthylene	2.7	JH	µg/L
					Benzo(a)anthracene	2.7	JH	µg/L
					Benzo(a)pyrene	1.4	JH	µg/L
					bis(2-Chloroethoxy)methane	0.090	UJ	µg/L
					bis(2-Ethylhexyl)phthalate (DEHP)	0.20	UJ	µg/L
					Chrysene	2.5	JH	µg/L
					Di-n-butylphthalate (DBP)	0.070	UJ	µg/L
					N-Nitrosodiphenylamine	0.090	UJ	µg/L
					Nitrobenzene	0.090	UJ	µg/L
					Pentachlorophenol	0.080	UJ	µg/L
					Phenol	0.070	UJ	µg/L
								µg/L
Semi-Volatiles	WG-1620-MW55A-011810	Naphthalene-d8	435059	476477-1905908	bis(2-Chloroethoxy)methane	0.090	UJ	µg/L
					Nitrobenzene	0.090	UJ	µg/L
Semi-Volatiles	WG-1620-MW55A-011810	1,4-Dichlorobenzene	173879	177023-708090	Phenol	25	J	µg/L
Semi-Volatiles	WG-1620-MW17-011810	1,4-Dichlorobenzene	140172	177023-708090	4-Nitrophenol	0.70	UJ	µg/L
		Naphthalene-d8	652896	692743-2770972	bis(2-Chloroethoxy)methane	0.90	UJ	µg/L
		Acenaphthene-d10	273675	348573-1394286	bis(2-Ethylhexyl)phthalate (DEHP)	2.0	UJ	µg/L
		Phenenthrene-d10	371982	458478-1833912	Anthracene	13	J	µg/L
		Chrysene-d12	281280	348486-1393944	2,4-Dinitrotoluene	0.90	UJ	µg/L

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Sample ID*	*IS*	*IS Area Count*	*Control Limits (percent)*	*Analytes*	*Qualified Sample Results*		*Units*
		Perylene-d12	277078	329886-1319542	1,2-Diphenylhydrazine	1.0	UJ	µg/L
					Pyrene	2.1	J	µg/L
					Fluoranthene	3.7	J	µg/L
					Acenaphthylene	6.7	J	µg/L
					Chrysene	0.70	UJ	µg/L
					Benzo(a)pyrene	0.80	UJ	µg/L
					4,6-Dinitro-2-methylphenol	0.80	UJ	µg/L
					Benzo(a)anthracene	0.70	UJ	µg/L
					2,6-Dinitrotoluene	0.70	UJ	µg/L
					Di-n-butylphthalate (DBP)	0.70	UJ	µg/L
					Phenanthrene	60	J	µg/L
					N-Nitrosodiphenylamine	0.90	UJ	µg/L
					Fluorene	76	J	µg/L
					Pentachlorophenol	0.80	UJ	µg/L
					2-Chloronaphthalene	1.0	UJ	µg/L
					Nitrobenzene	0.90	UJ	µg/L
Semi-Volatiles	WG-1620-MW17-011810	1,4-Dichlorobenzene	159450	177023-708090	Dibenzofuran	150	J	µg/L
		Naphthalene-d8	677412	692743-2770972	Acenaphthene	170	J	µg/L
		Acenaphthene-d10	317047	348572-1394286	2-Methylnaphthalene	560	J	µg/L
		Phenenthrene-d10	442509	458478-1833912			J	µg/L
		Chrysene-d12	317101	348483-1393944			J	µg/L
		Perylene-d12	307375	329886-1319542			J	µg/L

Notes:

UJ Not detected, estimated reporting limit.
JH Estimated concentration, high bias.
J Estimated concentration.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Qualified Sample Result*		*Units*
						Recovery (percent)	*RPD (percent)*			
SVOCs	WG-1620-MW22A-011510	4-Nitrophenol	72	53	31	30-130	20	0.070	UJ	µg/L
		bis(2-Ethylhexyl)phthalate (DEHP)	134	61	60	40-139	20	1.3	J	µg/L
		Pentachlorophenol	85	66	26	10-121	20	0.080	UJ	µg/L
SVOCs	WG-1620-TW41B-011910	bis(2-Ethylhexyl)phthalate (DEHP)	65.7	87.9	22.4	40-139	20	1.1	J	µg/L

Notes:

SVOCs Semi-Volatile Organic Compounds.
MS Matrix Spike.
MSD Matrix Spike Duplicate.
RPD Relative Percent Difference.
UJ Not detected, estimated reporting limit.
J Estimated concentration.

TABLE 6

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample Location:	*MW-14*						*MW-21C*					
	Orig		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*
Volatiles												
1,2-Dichloroethane	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Benzene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Chlorobenzene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Ethylbenzene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Methylene chloride	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Toluene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Xylene (total)	1.0	U	1.0	U	NA	µg/L	1.0	U	1.0	U	NA	µg/L
Semi-volatiles												
1,2-Diphenylhydrazine	0.10	U	0.10	U	NA	µg/L	0.10	U	0.10	U	NA	µg/L
2,4-Dimethylphenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
2,4-Dinitrotoluene	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
2,6-Dinitrotoluene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
2-Chloronaphthalene	0.10	U	0.10	U	NA	µg/L	0.10	U	0.10	U	NA	µg/L
2-Methylnaphthalene	0.64		0.60		6.45	µg/L	0.070	U	0.070	U	NA	µg/L
4,6-Dinitro-2-methylphenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
4-Nitrophenol	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Acenaphthene	0.43		0.43		0.00	µg/L	0.41		0.35		15.79	µg/L
Acenaphthylene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Anthracene	0.070	U	0.13	J	60.00	µg/L	0.070	U	0.070	U	NA	µg/L
Benzo(a)anthracene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Benzo(a)pyrene	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
bis(2-Chloroethoxy)methane	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
bis(2-Ethylhexyl)phthalate (DEHP)	5.4	J	0.37	J	174.35	µg/L	0.72	U	0.54	U	NA	µg/L
Chrysene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Dibenzofuran	0.40		0.44		9.52	µg/L	0.080	U	0.080	U	NA	µg/L
Di-n-butylphthalate (DBP)	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Fluoranthene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Fluorene	0.13	J	0.10	J	26.09	µg/L	0.070	U	0.070	U	NA	µg/L
Naphthalene	3.0		2.6		14.29	µg/L	0.10	U	0.10	U	NA	µg/L
Nitrobenzene	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
N-Nitrosodiphenylamine	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
Pentachlorophenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L

TABLE 6

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample Location:	*MW-14*						*MW-21C*					
	Orig		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*
Phenanthrene	0.41		0.43		4.76	µg/L	0.070	U	0.10	J	35.29	µg/L
Phenol	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Pyrene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L

TABLE 6

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample Location:	*MW-33A*						*MW-59D*					
	Orig		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*
Volatiles												
1,2-Dichloroethane	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Benzene	2.5	J	2.4	J	4.08	µg/L	0.50	U	0.50	U	NA	µg/L
Chlorobenzene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Ethylbenzene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Methylene chloride	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Toluene	0.50	U	0.50	U	NA	µg/L	0.50	U	0.50	U	NA	µg/L
Xylene (total)	1.0	U	1.0	U	NA	µg/L	1.0	U	1.0	U	NA	µg/L
Semi-volatiles												
1,2-Diphenylhydrazine	0.10	U	0.10	U	NA	µg/L	0.10	U	0.10	U	NA	µg/L
2,4-Dimethylphenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
2,4-Dinitrotoluene	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
2,6-Dinitrotoluene	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
2-Chloronaphthalene	0.10	U	0.10	U	NA	µg/L	0.10	U	0.10	U	NA	µg/L
2-Methylnaphthalene	0.90	J	0.51	J	55.32	µg/L	0.070	U	0.070	U	NA	µg/L
4,6-Dinitro-2-methylphenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
4-Nitrophenol	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Acenaphthene	28		26		7.41	µg/L	0.090	U	0.090	U	NA	µg/L
Acenaphthylene	0.15	J	0.14	J	6.90	µg/L	0.070	U	0.070	U	NA	µg/L
Anthracene	0.28		0.24		15.38	µg/L	0.070	U	0.070	U	NA	µg/L
Benzo(a)anthracene	0.17	J	0.17	J	0.00	µg/L	0.070	U	0.070	U	NA	µg/L
Benzo(a)pyrene	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L
bis(2-Chloroethoxy)methane	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
bis(2-Ethylhexyl)phthalate (DEHP)	0.30	U	0.38	U	NA	µg/L	0.23	U	0.87	U	NA	µg/L
Chrysene	0.12	J	0.089	J	29.67	µg/L	0.070	U	0.070	U	NA	µg/L
Dibenzofuran	1.9		1.7		11.11	µg/L	0.080	U	0.080	U	NA	µg/L
Di-n-butylphthalate (DBP)	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Fluoranthene	1.3		1.2		8.00	µg/L	0.070	U	0.070	U	NA	µg/L
Fluorene	1.5		1.3		14.29	µg/L	0.070	U	0.070	U	NA	µg/L
Naphthalene	20	J	9.0	J	75.86	µg/L	0.10	U	0.10	U	NA	µg/L
Nitrobenzene	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
N-Nitrosodiphenylamine	0.090	U	0.090	U	NA	µg/L	0.090	U	0.090	U	NA	µg/L
Pentachlorophenol	0.080	U	0.080	U	NA	µg/L	0.080	U	0.080	U	NA	µg/L

TABLE 6

ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Sample Location:	*MW-33A*						*MW-59D*					
	Orig		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*
Phenanthrene	0.32		0.24		28.57	µg/L	0.070	U	0.070	U	NA	µg/L
Phenol	0.070	U	0.070	U	NA	µg/L	0.070	U	0.070	U	NA	µg/L
Pyrene	1.9		1.8		5.41	µg/L	0.070	U	0.070	U	NA	µg/L

Notes:

RPD - Relative Percent Difference.
NA - Not Applicable.
U - Not detected.
J - Estimated.

TABLE 7

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
SEMI-ANNUAL GROUNDWATER MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JANUARY 2010

Parameter	*Analyte*	*Original Sample ID*	*Qualified Sample Result*		*Duplicate Sample ID*	*Qualified Sample Result*		*RPD*	*Units*
SVOCs	Naphthalene	WG-1620-MW33A-011310	20	J	WG-1620-FD01-011310	9.0	J	76	µg/L
SVOCs	2-Methylnaphthalene		0.90	J		0.51	J	55	µg/L
SVOCs	bis(2-Ethylhexyl)phthalate (DEHP)	WG-1620-MW14-011910	5.4	J	WG-1620-FD02-011910	0.37	J	174	µg/L

Notes:

1 The qualifier applies to both the original and duplicate results.
SVOCs Semi-Volatile Organic Compounds
J Estimated concentration
RPD Relative Percent Difference.

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

26-Jan-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: UPRR HWPW GW Work Order: **1001258**

Dear Eric,

ALS Laboratory Group received 12 samples on 14-Jan-2010 07:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 45.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: 1001258

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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.

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Re Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 01/25/2010
Project Name: UPRR HWPW GW	Laboratory Job Number: 0912458
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40532, R85942, R85992, R86055, R86101

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				4

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 01/25/2010					
Project Name: UPRR HWPW GW			Laboratory Job Number: 0912458					
Reviewer Name: Lora Terrill			Prep Batch Number(s): : 40532, R85942, R85992, R86055, R86101					
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]	
S1	OI	**INITIAL CALIBRATION (ICAL)**						
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X					
		2) Were percent RSDs or correlation coefficient criteria met?	X					
		3) Was the number of standards recommended in the method used for all analytes?	X					
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X					
		5) Are ICAL data available for all instruments used?	X					
		6) 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**						
		1) Was the CCV analyzed at the method-required frequency?	X					
		2) Were percent differences for each analyte within the method-required QC limits?	X					
		3) Was the ICAL curve verified for each analyte?	X					
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X			
S3	O	**MASS SPECTRAL TUNING:**						
		1) Was the appropriate compound for the method used for tuning?	X					
		2) 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**						
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X					
		2) 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**						
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X			
S10	OI	**PROFICIENCY TEST REPORTS:**						
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X					
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**						
		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**						
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X					
		2) Is documentation of the analyst's competency up-to-date and on file?	X					
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**						
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 01/25/2010
Project Name: UPRR HWPW GW	Laboratory Job Number: 0912458
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40532, R85942, R85992, R86055, R86101

ER #[1]	DESCRIPTION
1	Some Semivolatile surrogate recoveries are diluted out.
2	Batch R85942 Volatiles MS/MSD is an unrelated sample.
3	Batch R85942 Volatiles MS/MSD RPD is an unrelated sample.
4	Volatiles sample WG-1620-MW-33B-011310 could not be analyzed at a lower dilution due to the nature of the sample.

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

ALS Laboratory Group

Date: 26-Jan-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: **1001258**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001258-01	WG-1620-MW53C-011310	Water		1/13/2010 07:05	1/14/2010 07:15	☐
1001258-02	WG-1620-MW44A-011310	Water		1/13/2010 08:00	1/14/2010 07:15	☐
1001258-03	WG-1620-MW36A-011310	Water		1/13/2010 08:45	1/14/2010 07:15	☐
1001258-04	WG-1620-MW28A-011310	Water		1/13/2010 10:05	1/14/2010 07:15	☐
1001258-05	WG-1620-MW28C-011310	Water		1/13/2010 11:15	1/14/2010 07:15	☐
1001258-06	WG-1620-MW33A-011310	Water		1/13/2010 13:30	1/14/2010 07:15	☐
1001258-07	WG-1620-FD01-011310	Water		1/13/2010 13:30	1/14/2010 07:15	☐
1001258-08	WG-1620-MW-33B-011310	Water		1/13/2010 14:35	1/14/2010 07:15	☐
1001258-09	WG-1620-MW26A-011310	Water		1/13/2010 15:30	1/14/2010 07:15	☐
1001258-10	WG-1620-MW63B-011310	Water		1/13/2010 16:45	1/14/2010 07:15	☐
1001258-11	WG-1620-FB01-011310	Water		1/13/2010 17:05	1/14/2010 07:15	☐
1001258-12	WG-1620-TB01-011310	Water		1/13/2010	1/14/2010 07:15	☐

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW53C-011310
Collection Date: 1/13/2010 07:05 AM

Work Order: 1001258
Lab ID: 1001258-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/19/2010 03:37
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/19/2010 03:37
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/19/2010 03:37
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/19/2010 03:37
2-Methylnaphthalene	**0.071**	J	**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:37
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/19/2010 03:37
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/19/2010 03:37
Acenaphthene	**0.20**		**0.090**	**0.20**	**µg/L**	1	1/19/2010 03:37
Acenaphthylene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Anthracene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/19/2010 03:37
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/19/2010 03:37
Bis(2-ethylhexyl)phthalate	**0.24**		**0.20**	**0.20**	**µg/L**	1	1/19/2010 03:37
Chrysene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Dibenzofuran	U		0.080	0.20	µg/L	1	1/19/2010 03:37
Fluoranthene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Fluorene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/19/2010 03:37
Naphthalene	**0.27**		**0.10**	**0.20**	**µg/L**	1	1/19/2010 03:37
Nitrobenzene	U		0.090	0.20	µg/L	1	1/19/2010 03:37
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/19/2010 03:37
Phenanthrene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Phenol	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Pyrene	U		0.070	0.20	µg/L	1	1/19/2010 03:37
Surr: 2,4,6-Tribromophenol	*63.3*			*34-129*	*%REC*	1	1/19/2010 03:37
Surr: 2-Fluorobiphenyl	*68.0*			*40-125*	*%REC*	1	1/19/2010 03:37
Surr: 2-Fluorophenol	*63.5*			*20-120*	*%REC*	1	1/19/2010 03:37
Surr: 4-Terphenyl-d14	*68.4*			*40-135*	*%REC*	1	1/19/2010 03:37
Surr: Nitrobenzene-d5	*67.6*			*41-120*	*%REC*	1	1/19/2010 03:37
Surr: Phenol-d6	*68.0*			*20-120*	*%REC*	1	1/19/2010 03:37
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 19:07
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 19:07
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:07
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 19:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW53C-011310
Collection Date: 1/13/2010 07:05 AM

Work Order: 1001258
Lab ID: 1001258-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:07
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 19:07
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 19:07
Surr: 1,2-Dichloroethane-d4	*92.5*			*70-125*	*%REC*	1	1/14/2010 19:07
Surr: 4-Bromofluorobenzene	*89.4*			*72-125*	*%REC*	1	1/14/2010 19:07
Surr: Dibromofluoromethane	*92.4*			*71-125*	*%REC*	1	1/14/2010 19:07
Surr: Toluene-d8	*98.3*			*75-125*	*%REC*	1	1/14/2010 19:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW44A-011310
Collection Date: 1/13/2010 08:00 AM

Work Order: 1001258
Lab ID: 1001258-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/19/2010 03:57
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/19/2010 03:57
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/19/2010 03:57
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/19/2010 03:57
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/19/2010 03:57
2-Methylnaphthalene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/19/2010 03:57
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/19/2010 03:57
Acenaphthene	**130**		**2.2**	**5.0**	**µg/L**	25	1/20/2010 17:08
Acenaphthylene	**0.79**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
Anthracene	**7.7**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/19/2010 03:57
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/19/2010 03:57
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/19/2010 03:57
Bis(2-ethylhexyl)phthalate	**0.31**		**0.20**	**0.20**	**µg/L**	1	1/19/2010 03:57
Chrysene	U		0.070	0.20	µg/L	1	1/19/2010 03:57
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/19/2010 03:57
Dibenzofuran	**8.7**		**0.080**	**0.20**	**µg/L**	1	1/19/2010 03:57
Fluoranthene	**5.6**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
Fluorene	**69**		**1.8**	**5.0**	**µg/L**	25	1/20/2010 17:08
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/19/2010 03:57
Naphthalene	**1.1**		**0.10**	**0.20**	**µg/L**	1	1/19/2010 03:57
Nitrobenzene	U		0.090	0.20	µg/L	1	1/19/2010 03:57
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/19/2010 03:57
Phenanthrene	**5.5**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
Phenol	U		0.070	0.20	µg/L	1	1/19/2010 03:57
Pyrene	**3.2**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 03:57
Surr: 2,4,6-Tribromophenol	*66.2*			*34-129*	*%REC*	1	1/19/2010 03:57
Surr: 2,4,6-Tribromophenol	*46.7*	J		*34-129*	*%REC*	25	1/20/2010 17:08
Surr: 2-Fluorobiphenyl	*69.3*			*40-125*	*%REC*	1	1/19/2010 03:57
Surr: 2-Fluorobiphenyl	*84.2*	J		*40-125*	*%REC*	25	1/20/2010 17:08
Surr: 2-Fluorophenol	*68.5*			*20-120*	*%REC*	1	1/19/2010 03:57
Surr: 2-Fluorophenol	*30.9*	J		*20-120*	*%REC*	25	1/20/2010 17:08
Surr: 4-Terphenyl-d14	*69.0*			*40-135*	*%REC*	1	1/19/2010 03:57
Surr: 4-Terphenyl-d14	*78.5*	J		*40-135*	*%REC*	25	1/20/2010 17:08
Surr: Nitrobenzene-d5	*68.6*			*41-120*	*%REC*	1	1/19/2010 03:57
Surr: Nitrobenzene-d5	*79.6*	J		*41-120*	*%REC*	25	1/20/2010 17:08
Surr: Phenol-d6	*74.3*			*20-120*	*%REC*	1	1/19/2010 03:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW44A-011310
Collection Date: 1/13/2010 08:00 AM

Work Order: 1001258
Lab ID: 1001258-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*32.9*	J		*20-120*	*%REC*	25	1/20/2010 17:08
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 19:32
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 19:32
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:32
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 19:32
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:32
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 19:32
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 19:32
Surr: 1,2-Dichloroethane-d4	*90.1*			*70-125*	*%REC*	1	1/14/2010 19:32
Surr: 4-Bromofluorobenzene	*96.0*			*72-125*	*%REC*	1	1/14/2010 19:32
Surr: Dibromofluoromethane	*88.9*			*71-125*	*%REC*	1	1/14/2010 19:32
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/14/2010 19:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW36A-011310
Collection Date: 1/13/2010 08:45 AM

Work Order: 1001258
Lab ID: 1001258-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/19/2010 04:18
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/19/2010 04:18
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/19/2010 04:18
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/19/2010 04:18
2-Methylnaphthalene	**0.30**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 04:18
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/19/2010 04:18
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/19/2010 04:18
Acenaphthene	**0.36**		**0.090**	**0.20**	**µg/L**	1	1/19/2010 04:18
Acenaphthylene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Anthracene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/19/2010 04:18
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/19/2010 04:18
Bis(2-ethylhexyl)phthalate	**0.33**		**0.20**	**0.20**	**µg/L**	1	1/19/2010 04:18
Chrysene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Dibenzofuran	**0.30**		**0.080**	**0.20**	**µg/L**	1	1/19/2010 04:18
Fluoranthene	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Fluorene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 04:18
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/19/2010 04:18
Naphthalene	**1.3**		**0.10**	**0.20**	**µg/L**	1	1/19/2010 04:18
Nitrobenzene	U		0.090	0.20	µg/L	1	1/19/2010 04:18
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/19/2010 04:18
Phenanthrene	**0.39**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 04:18
Phenol	U		0.070	0.20	µg/L	1	1/19/2010 04:18
Pyrene	**0.21**		**0.070**	**0.20**	**µg/L**	1	1/19/2010 04:18
Surr: 2,4,6-Tribromophenol	*48.3*			*34-129*	*%REC*	1	1/19/2010 04:18
Surr: 2-Fluorobiphenyl	*65.8*			*40-125*	*%REC*	1	1/19/2010 04:18
Surr: 2-Fluorophenol	*55.3*			*20-120*	*%REC*	1	1/19/2010 04:18
Surr: 4-Terphenyl-d14	*66.2*			*40-135*	*%REC*	1	1/19/2010 04:18
Surr: Nitrobenzene-d5	*65.5*			*41-120*	*%REC*	1	1/19/2010 04:18
Surr: Phenol-d6	*67.2*			*20-120*	*%REC*	1	1/19/2010 04:18
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 19:57
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 19:57
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:57
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 19:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW36A-011310
Collection Date: 1/13/2010 08:45 AM

Work Order: 1001258
Lab ID: 1001258-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 19:57
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 19:57
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 19:57
Surr: 1,2-Dichloroethane-d4	*88.5*			*70-125*	*%REC*	1	1/14/2010 19:57
Surr: 4-Bromofluorobenzene	*91.5*			*72-125*	*%REC*	1	1/14/2010 19:57
Surr: Dibromofluoromethane	*88.7*			*71-125*	*%REC*	1	1/14/2010 19:57
Surr: Toluene-d8	*97.7*			*75-125*	*%REC*	1	1/14/2010 19:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW28A-011310
Collection Date: 1/13/2010 10:05 AM

Work Order: 1001258
Lab ID: 1001258-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/19/2010 04:38
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/19/2010 04:38
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/19/2010 04:38
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/19/2010 04:38
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/19/2010 04:38
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/19/2010 04:38
Acenaphthene	U		0.090	0.20	µg/L	1	1/19/2010 04:38
Acenaphthylene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Anthracene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/19/2010 04:38
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/19/2010 04:38
Bis(2-ethylhexyl)phthalate	**0.22**		**0.20**	**0.20**	**µg/L**	1	1/19/2010 04:38
Chrysene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Dibenzofuran	U		0.080	0.20	µg/L	1	1/19/2010 04:38
Fluoranthene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Fluorene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/19/2010 04:38
Naphthalene	**0.10**	J	**0.10**	**0.20**	**µg/L**	1	1/19/2010 04:38
Nitrobenzene	U		0.090	0.20	µg/L	1	1/19/2010 04:38
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/19/2010 04:38
Phenanthrene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Phenol	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Pyrene	U		0.070	0.20	µg/L	1	1/19/2010 04:38
Surr: 2,4,6-Tribromophenol	*47.4*			*34-129*	*%REC*	1	1/19/2010 04:38
Surr: 2-Fluorobiphenyl	*66.2*			*40-125*	*%REC*	1	1/19/2010 04:38
Surr: 2-Fluorophenol	*67.7*			*20-120*	*%REC*	1	1/19/2010 04:38
Surr: 4-Terphenyl-d14	*66.4*			*40-135*	*%REC*	1	1/19/2010 04:38
Surr: Nitrobenzene-d5	*65.9*			*41-120*	*%REC*	1	1/19/2010 04:38
Surr: Phenol-d6	*66.4*			*20-120*	*%REC*	1	1/19/2010 04:38
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 20:22
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 20:22
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 20:22
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 20:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW28A-011310
Collection Date: 1/13/2010 10:05 AM

Work Order: 1001258
Lab ID: 1001258-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 20:22
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 20:22
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 20:22
Surr: 1,2-Dichloroethane-d4	*91.7*			*70-125*	*%REC*	1	1/14/2010 20:22
Surr: 4-Bromofluorobenzene	*90.6*			*72-125*	*%REC*	1	1/14/2010 20:22
Surr: Dibromofluoromethane	*90.3*			*71-125*	*%REC*	1	1/14/2010 20:22
Surr: Toluene-d8	*96.1*			*75-125*	*%REC*	1	1/14/2010 20:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW28C-011310
Collection Date: 1/13/2010 11:15 AM

Work Order: 1001258
Lab ID: 1001258-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 20:13
2,4-Dimethylphenol	**0.20**		**0.080**	**0.20**	**µg/L**	1	1/20/2010 20:13
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 20:13
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 20:13
2-Methylnaphthalene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:13
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 20:13
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 20:13
Acenaphthene	**0.18**	J	**0.090**	**0.20**	**µg/L**	1	1/20/2010 20:13
Acenaphthylene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Anthracene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 20:13
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 20:13
Bis(2-ethylhexyl)phthalate	**0.46**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 20:13
Chrysene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Dibenzofuran	**0.18**	J	**0.080**	**0.20**	**µg/L**	1	1/20/2010 20:13
Fluoranthene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Fluorene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:13
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 20:13
Naphthalene	**1.4**		**0.10**	**0.20**	**µg/L**	1	1/20/2010 20:13
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 20:13
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 20:13
Phenanthrene	**0.33**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:13
Phenol	**2.7**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:13
Pyrene	U		0.070	0.20	µg/L	1	1/20/2010 20:13
Surr: 2,4,6-Tribromophenol	*68.8*			*34-129*	*%REC*	1	1/20/2010 20:13
Surr: 2-Fluorobiphenyl	*69.4*			*40-125*	*%REC*	1	1/20/2010 20:13
Surr: 2-Fluorophenol	*51.5*			*20-120*	*%REC*	1	1/20/2010 20:13
Surr: 4-Terphenyl-d14	*67.0*			*40-135*	*%REC*	1	1/20/2010 20:13
Surr: Nitrobenzene-d5	*71.4*			*41-120*	*%REC*	1	1/20/2010 20:13
Surr: Phenol-d6	*87.5*			*20-120*	*%REC*	1	1/20/2010 20:13
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 20:47
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 20:47
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 20:47
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 20:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW28C-011310
Collection Date: 1/13/2010 11:15 AM

Work Order: 1001258
Lab ID: 1001258-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 20:47
Toluene	**1.3**	J	**0.50**	**5.0**	**µg/L**	1	1/14/2010 20:47
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 20:47
Surr: 1,2-Dichloroethane-d4	*88.7*			*70-125*	*%REC*	1	1/14/2010 20:47
Surr: 4-Bromofluorobenzene	*95.0*			*72-125*	*%REC*	1	1/14/2010 20:47
Surr: Dibromofluoromethane	*91.1*			*71-125*	*%REC*	1	1/14/2010 20:47
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	1	1/14/2010 20:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW33A-011310
Collection Date: 1/13/2010 01:30 PM

Work Order: 1001258
Lab ID: 1001258-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 20:33
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/20/2010 20:33
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 20:33
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 20:33
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 20:33
2-Methylnaphthalene	**0.90**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 20:33
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 20:33
Acenaphthene	**28**		**0.45**	**1.0**	**µg/L**	5	1/20/2010 19:32
Acenaphthylene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Anthracene	**0.28**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Benz(a)anthracene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 20:33
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 20:33
Bis(2-ethylhexyl)phthalate	**0.30**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 20:33
Chrysene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/20/2010 20:33
Dibenzofuran	**1.9**		**0.080**	**0.20**	**µg/L**	1	1/20/2010 20:33
Fluoranthene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Fluorene	**1.5**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 20:33
Naphthalene	**20**		**0.50**	**1.0**	**µg/L**	5	1/20/2010 19:32
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 20:33
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 20:33
Phenanthrene	**0.32**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Phenol	U		0.070	0.20	µg/L	1	1/20/2010 20:33
Pyrene	**1.9**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:33
Surr: 2,4,6-Tribromophenol	*41.1*			*34-129*	*%REC*	5	1/20/2010 19:32
Surr: 2,4,6-Tribromophenol	*52.9*			*34-129*	*%REC*	1	1/20/2010 20:33
Surr: 2-Fluorobiphenyl	*60.6*			*40-125*	*%REC*	5	1/20/2010 19:32
Surr: 2-Fluorobiphenyl	*65.4*			*40-125*	*%REC*	1	1/20/2010 20:33
Surr: 2-Fluorophenol	*62.3*			*20-120*	*%REC*	5	1/20/2010 19:32
Surr: 2-Fluorophenol	*60.5*			*20-120*	*%REC*	1	1/20/2010 20:33
Surr: 4-Terphenyl-d14	*66.7*			*40-135*	*%REC*	5	1/20/2010 19:32
Surr: 4-Terphenyl-d14	*68.1*			*40-135*	*%REC*	1	1/20/2010 20:33
Surr: Nitrobenzene-d5	*64.9*			*41-120*	*%REC*	5	1/20/2010 19:32
Surr: Nitrobenzene-d5	*68.0*			*41-120*	*%REC*	1	1/20/2010 20:33
Surr: Phenol-d6	*44.1*			*20-120*	*%REC*	5	1/20/2010 19:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW33A-011310
Collection Date: 1/13/2010 01:30 PM

Work Order: 1001258
Lab ID: 1001258-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*63.0*			*20-120*	*%REC*	1	1/20/2010 20:33
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 21:12
Benzene	**2.5**	J	**0.50**	**5.0**	**µg/L**	1	1/14/2010 21:12
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 21:12
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 21:12
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 21:12
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 21:12
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 21:12
Surr: 1,2-Dichloroethane-d4	*82.8*			*70-125*	*%REC*	1	1/14/2010 21:12
Surr: 4-Bromofluorobenzene	*95.9*			*72-125*	*%REC*	1	1/14/2010 21:12
Surr: Dibromofluoromethane	*87.0*			*71-125*	*%REC*	1	1/14/2010 21:12
Surr: Toluene-d8	*96.6*			*75-125*	*%REC*	1	1/14/2010 21:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FD01-011310
Collection Date: 1/13/2010 01:30 PM

Work Order: 1001258
Lab ID: 1001258-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 15:23
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/20/2010 15:23
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 15:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 15:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 15:23
2-Methylnaphthalene	**0.51**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 15:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 15:23
Acenaphthene	**26**		**0.36**	**0.80**	**µg/L**	4	1/20/2010 19:52
Acenaphthylene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Anthracene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Benz(a)anthracene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 15:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 15:23
Bis(2-ethylhexyl)phthalate	**0.38**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 15:23
Chrysene	**0.089**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/20/2010 15:23
Dibenzofuran	**1.7**		**0.080**	**0.20**	**µg/L**	1	1/20/2010 15:23
Fluoranthene	**1.2**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Fluorene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 15:23
Naphthalene	**9.0**		**0.10**	**0.20**	**µg/L**	1	1/20/2010 15:23
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 15:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 15:23
Phenanthrene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Phenol	U		0.070	0.20	µg/L	1	1/20/2010 15:23
Pyrene	**1.8**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:23
Surr: 2,4,6-Tribromophenol	*40.6*			*34-129*	*%REC*	1	1/20/2010 15:23
Surr: 2,4,6-Tribromophenol	*39.1*			*34-129*	*%REC*	4	1/20/2010 19:52
Surr: 2-Fluorobiphenyl	*71.5*			*40-125*	*%REC*	1	1/20/2010 15:23
Surr: 2-Fluorobiphenyl	*70.0*			*40-125*	*%REC*	4	1/20/2010 19:52
Surr: 2-Fluorophenol	*57.3*			*20-120*	*%REC*	1	1/20/2010 15:23
Surr: 2-Fluorophenol	*56.4*			*20-120*	*%REC*	4	1/20/2010 19:52
Surr: 4-Terphenyl-d14	*70.4*			*40-135*	*%REC*	1	1/20/2010 15:23
Surr: 4-Terphenyl-d14	*69.6*			*40-135*	*%REC*	4	1/20/2010 19:52
Surr: Nitrobenzene-d5	*68.3*			*41-120*	*%REC*	1	1/20/2010 15:23
Surr: Nitrobenzene-d5	*72.7*			*41-120*	*%REC*	4	1/20/2010 19:52
Surr: Phenol-d6	*55.7*			*20-120*	*%REC*	1	1/20/2010 15:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FD01-011310
Collection Date: 1/13/2010 01:30 PM

Work Order: 1001258
Lab ID: 1001258-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*54.0*			*20-120*	*%REC*	4	1/20/2010 19:52
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 22:02
Benzene	**2.4**	J	**0.50**	**5.0**	**µg/L**	1	1/14/2010 22:02
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 22:02
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 22:02
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 22:02
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 22:02
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 22:02
Surr: 1,2-Dichloroethane-d4	*86.7*			*70-125*	*%REC*	1	1/14/2010 22:02
Surr: 4-Bromofluorobenzene	*89.2*			*72-125*	*%REC*	1	1/14/2010 22:02
Surr: Dibromofluoromethane	*88.9*			*71-125*	*%REC*	1	1/14/2010 22:02
Surr: Toluene-d8	*94.0*			*75-125*	*%REC*	1	1/14/2010 22:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW-33B-011310
Collection Date: 1/13/2010 02:35 PM

Work Order: 1001258
Lab ID: 1001258-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 15:46
2,4-Dimethylphenol	**3.5**		**0.080**	**0.20**	**µg/L**	1	1/20/2010 15:46
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 15:46
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 15:46
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 15:46
2-Methylnaphthalene	**710**		**7.0**	**20**	**µg/L**	100	1/25/2010 17:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 15:46
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 15:46
Acenaphthene	**170**		**9.0**	**20**	**µg/L**	100	1/25/2010 17:15
Acenaphthylene	**1.6**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:46
Anthracene	**15**		**0.70**	**2.0**	**µg/L**	10	1/20/2010 17:29
Benz(a)anthracene	**0.19**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:46
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 15:46
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 15:46
Bis(2-ethylhexyl)phthalate	**8.0**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 15:46
Chrysene	**0.18**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:46
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/20/2010 15:46
Dibenzofuran	**180**		**8.0**	**20**	**µg/L**	100	1/25/2010 17:15
Fluoranthene	**3.3**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:46
Fluorene	**68**		**0.70**	**2.0**	**µg/L**	10	1/20/2010 17:29
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 15:46
Naphthalene	**10,000**		**100**	**200**	**µg/L**	1000	1/20/2010 19:11
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 15:46
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 15:46
Phenanthrene	**66**		**0.70**	**2.0**	**µg/L**	10	1/20/2010 17:29
Phenol	U		0.070	0.20	µg/L	1	1/20/2010 15:46
Pyrene	**1.6**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 15:46
Surr: 2,4,6-Tribromophenol	*53.8*			*34-129*	*%REC*	1	1/20/2010 15:46
Surr: 2,4,6-Tribromophenol	*91.5*			*34-129*	*%REC*	10	1/20/2010 17:29
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/20/2010 19:11
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/25/2010 17:15
Surr: 2-Fluorobiphenyl	*54.7*			*40-125*	*%REC*	1	1/20/2010 15:46
Surr: 2-Fluorobiphenyl	*86.6*			*40-125*	*%REC*	10	1/20/2010 17:29
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/20/2010 19:11
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/25/2010 17:15
Surr: 2-Fluorophenol	*95.5*			*20-120*	*%REC*	1	1/20/2010 15:46
Surr: 2-Fluorophenol	*120*			*20-120*	*%REC*	10	1/20/2010 17:29
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/20/2010 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW-33B-011310
Collection Date: 1/13/2010 02:35 PM

Work Order: 1001258
Lab ID: 1001258-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/25/2010 17:15
Surr: 4-Terphenyl-d14	*65.4*			*40-135*	*%REC*	1	1/20/2010 15:46
Surr: 4-Terphenyl-d14	*96.7*			*40-135*	*%REC*	10	1/20/2010 17:29
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/20/2010 19:11
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/25/2010 17:15
Surr: Nitrobenzene-d5	*49.5*			*41-120*	*%REC*	1	1/20/2010 15:46
Surr: Nitrobenzene-d5	*67.6*			*41-120*	*%REC*	10	1/20/2010 17:29
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/20/2010 19:11
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/25/2010 17:15
Surr: Phenol-d6	*70.2*			*20-120*	*%REC*	1	1/20/2010 15:46
Surr: Phenol-d6	*75.2*			*20-120*	*%REC*	10	1/20/2010 17:29
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/20/2010 19:11
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/25/2010 17:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	1/19/2010 20:42
Benzene	**1,200**		**5.0**	**50**	**µg/L**	10	1/19/2010 20:42
Chlorobenzene	U		5.0	50	µg/L	10	1/19/2010 20:42
Dichloromethane	U		5.0	100	µg/L	10	1/19/2010 20:42
Ethylbenzene	**410**		**5.0**	**50**	**µg/L**	10	1/19/2010 20:42
Toluene	**19**	J	**5.0**	**50**	**µg/L**	10	1/19/2010 20:42
Xylenes, Total	**1,200**		**10**	**150**	**µg/L**	10	1/19/2010 20:42
Surr: 1,2-Dichloroethane-d4	*98.6*			*70-125*	*%REC*	10	1/19/2010 20:42
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	10	1/19/2010 20:42
Surr: Dibromofluoromethane	*93.5*			*71-125*	*%REC*	10	1/19/2010 20:42
Surr: Toluene-d8	*108*			*75-125*	*%REC*	10	1/19/2010 20:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW26A-011310
Collection Date: 1/13/2010 03:30 PM

Work Order: 1001258
Lab ID: 1001258-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 20:54
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/20/2010 20:54
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 20:54
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 20:54
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 20:54
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/20/2010 20:54
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 20:54
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 20:54
Acenaphthene	**9.7**		**0.090**	**0.20**	**µg/L**	1	1/20/2010 20:54
Acenaphthylene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:54
Anthracene	U		0.070	0.20	µg/L	1	1/20/2010 20:54
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/20/2010 20:54
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 20:54
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 20:54
Bis(2-ethylhexyl)phthalate	**0.26**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 20:54
Chrysene	U		0.070	0.20	µg/L	1	1/20/2010 20:54
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/20/2010 20:54
Dibenzofuran	**0.78**		**0.080**	**0.20**	**µg/L**	1	1/20/2010 20:54
Fluoranthene	**0.30**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:54
Fluorene	**0.28**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:54
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 20:54
Naphthalene	**0.51**		**0.10**	**0.20**	**µg/L**	1	1/20/2010 20:54
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 20:54
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 20:54
Phenanthrene	**0.21**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:54
Phenol	U		0.070	0.20	µg/L	1	1/20/2010 20:54
Pyrene	**0.092**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 20:54
Surr: 2,4,6-Tribromophenol	*48.4*			*34-129*	*%REC*	1	1/20/2010 20:54
Surr: 2-Fluorobiphenyl	*66.4*			*40-125*	*%REC*	1	1/20/2010 20:54
Surr: 2-Fluorophenol	*57.0*			*20-120*	*%REC*	1	1/20/2010 20:54
Surr: 4-Terphenyl-d14	*70.2*			*40-135*	*%REC*	1	1/20/2010 20:54
Surr: Nitrobenzene-d5	*67.2*			*41-120*	*%REC*	1	1/20/2010 20:54
Surr: Phenol-d6	*60.7*			*20-120*	*%REC*	1	1/20/2010 20:54
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 21:37
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 21:37
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 21:37
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 21:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW26A-011310
Collection Date: 1/13/2010 03:30 PM

Work Order: 1001258
Lab ID: 1001258-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 21:37
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 21:37
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 21:37
Surr: 1,2-Dichloroethane-d4	*92.1*			*70-125*	*%REC*	1	1/14/2010 21:37
Surr: 4-Bromofluorobenzene	*92.0*			*72-125*	*%REC*	1	1/14/2010 21:37
Surr: Dibromofluoromethane	*90.6*			*71-125*	*%REC*	1	1/14/2010 21:37
Surr: Toluene-d8	*96.8*			*75-125*	*%REC*	1	1/14/2010 21:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW63B-011310
Collection Date: 1/13/2010 04:45 PM

Work Order: 1001258
Lab ID: 1001258-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/20/2010 16:27
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/20/2010 16:27
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/20/2010 16:27
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/20/2010 16:27
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/20/2010 16:27
2-Methylnaphthalene	**110**		**1.8**	**5.0**	**µg/L**	25	1/20/2010 18:30
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/20/2010 16:27
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/20/2010 16:27
Acenaphthene	**28**		**0.45**	**1.0**	**µg/L**	5	1/20/2010 17:49
Acenaphthylene	**0.51**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 16:27
Anthracene	**0.68**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 16:27
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/20/2010 16:27
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/20/2010 16:27
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/20/2010 16:27
Bis(2-ethylhexyl)phthalate	**0.36**		**0.20**	**0.20**	**µg/L**	1	1/20/2010 16:27
Chrysene	U		0.070	0.20	µg/L	1	1/20/2010 16:27
Di-n-butyl phthalate	**0.19**	J	**0.070**	**0.20**	**µg/L**	1	1/20/2010 16:27
Dibenzofuran	**22**		**0.40**	**1.0**	**µg/L**	5	1/20/2010 17:49
Fluoranthene	U		0.070	0.20	µg/L	1	1/20/2010 16:27
Fluorene	**7.8**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 16:27
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/20/2010 16:27
Naphthalene	**3,100**		**50**	**100**	**µg/L**	500	1/25/2010 17:36
Nitrobenzene	U		0.090	0.20	µg/L	1	1/20/2010 16:27
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/20/2010 16:27
Phenanthrene	**3.4**		**0.070**	**0.20**	**µg/L**	1	1/20/2010 16:27
Phenol	U		0.070	0.20	µg/L	1	1/20/2010 16:27
Pyrene	U		0.070	0.20	µg/L	1	1/20/2010 16:27
Surr: 2,4,6-Tribromophenol	*72.9*			*34-129*	*%REC*	1	1/20/2010 16:27
Surr: 2,4,6-Tribromophenol	*84.2*			*34-129*	*%REC*	5	1/20/2010 17:49
Surr: 2,4,6-Tribromophenol	*68.7*	J		*34-129*	*%REC*	25	1/20/2010 18:30
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	1/25/2010 17:36
Surr: 2-Fluorobiphenyl	*67.4*			*40-125*	*%REC*	1	1/20/2010 16:27
Surr: 2-Fluorobiphenyl	*86.8*			*40-125*	*%REC*	5	1/20/2010 17:49
Surr: 2-Fluorobiphenyl	*82.6*	J		*40-125*	*%REC*	25	1/20/2010 18:30
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	1/25/2010 17:36
Surr: 2-Fluorophenol	*97.0*			*20-120*	*%REC*	1	1/20/2010 16:27
Surr: 2-Fluorophenol	*84.2*			*20-120*	*%REC*	5	1/20/2010 17:49
Surr: 2-Fluorophenol	*94.1*	J		*20-120*	*%REC*	25	1/20/2010 18:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW63B-011310
Collection Date: 1/13/2010 04:45 PM

Work Order: 1001258
Lab ID: 1001258-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	1/25/2010 17:36
Surr: 4-Terphenyl-d14	*78.8*			*40-135*	*%REC*	1	1/20/2010 16:27
Surr: 4-Terphenyl-d14	*86.8*			*40-135*	*%REC*	5	1/20/2010 17:49
Surr: 4-Terphenyl-d14	*81.7*	J		*40-135*	*%REC*	25	1/20/2010 18:30
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	1/25/2010 17:36
Surr: Nitrobenzene-d5	*93.8*			*41-120*	*%REC*	1	1/20/2010 16:27
Surr: Nitrobenzene-d5	*77.4*			*41-120*	*%REC*	5	1/20/2010 17:49
Surr: Nitrobenzene-d5	*73.3*	J		*41-120*	*%REC*	25	1/20/2010 18:30
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	1/25/2010 17:36
Surr: Phenol-d6	*74.3*			*20-120*	*%REC*	1	1/20/2010 16:27
Surr: Phenol-d6	*55.8*			*20-120*	*%REC*	5	1/20/2010 17:49
Surr: Phenol-d6	*51.7*	J		*20-120*	*%REC*	25	1/20/2010 18:30
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	1/25/2010 17:36
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 15:17
Benzene	**210**		**0.50**	**5.0**	**µg/L**	1	1/16/2010 15:17
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 15:17
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 15:17
Ethylbenzene	**200**		**2.5**	**25**	**µg/L**	5	1/19/2010 16:26
Toluene	**15**		**0.50**	**5.0**	**µg/L**	1	1/16/2010 15:17
Xylenes, Total	**82**		**1.0**	**15**	**µg/L**	1	1/16/2010 15:17
Surr: 1,2-Dichloroethane-d4	*110*			*70-125*	*%REC*	1	1/16/2010 15:17
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	5	1/19/2010 16:26
Surr: 4-Bromofluorobenzene	*99.1*			*72-125*	*%REC*	1	1/16/2010 15:17
Surr: 4-Bromofluorobenzene	*95.9*			*72-125*	*%REC*	5	1/19/2010 16:26
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	1/16/2010 15:17
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	5	1/19/2010 16:26
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/16/2010 15:17
Surr: Toluene-d8	*98.6*			*75-125*	*%REC*	5	1/19/2010 16:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB01-011310
Collection Date: 1/13/2010 05:05 PM

Work Order: 1001258
Lab ID: 1001258-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 17:56
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 17:56
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 17:56
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 17:56
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 17:56
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 17:56
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 17:56
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 17:56
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 17:56
Bis(2-ethylhexyl)phthalate	**0.48**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 17:56
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 17:56
Fluoranthene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 17:56
Naphthalene	**0.21**		**0.10**	**0.20**	**µg/L**	1	1/25/2010 17:56
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 17:56
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 17:56
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 17:56
Surr: 2,4,6-Tribromophenol	*43.8*			*34-129*	*%REC*	1	1/25/2010 17:56
Surr: 2-Fluorobiphenyl	*70.1*			*40-125*	*%REC*	1	1/25/2010 17:56
Surr: 2-Fluorophenol	*48.5*			*20-120*	*%REC*	1	1/25/2010 17:56
Surr: 4-Terphenyl-d14	*69.2*			*40-135*	*%REC*	1	1/25/2010 17:56
Surr: Nitrobenzene-d5	*58.4*			*41-120*	*%REC*	1	1/25/2010 17:56
Surr: Phenol-d6	*60.2*			*20-120*	*%REC*	1	1/25/2010 17:56
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 18:42
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 18:42
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 18:42
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 18:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB01-011310
Collection Date: 1/13/2010 05:05 PM

Work Order: 1001258
Lab ID: 1001258-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 18:42
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 18:42
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 18:42
Surr: 1,2-Dichloroethane-d4	*93.3*			*70-125*	*%REC*	1	1/14/2010 18:42
Surr: 4-Bromofluorobenzene	*91.9*			*72-125*	*%REC*	1	1/14/2010 18:42
Surr: Dibromofluoromethane	*93.0*			*71-125*	*%REC*	1	1/14/2010 18:42
Surr: Toluene-d8	*95.9*			*75-125*	*%REC*	1	1/14/2010 18:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-TB01-011310
Collection Date: 1/13/2010

Work Order: 1001258
Lab ID: 1001258-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/14/2010 18:16
Benzene	U		0.50	5.0	µg/L	1	1/14/2010 18:16
Chlorobenzene	U		0.50	5.0	µg/L	1	1/14/2010 18:16
Dichloromethane	U		0.50	10	µg/L	1	1/14/2010 18:16
Ethylbenzene	U		0.50	5.0	µg/L	1	1/14/2010 18:16
Toluene	U		0.50	5.0	µg/L	1	1/14/2010 18:16
Xylenes, Total	U		1.0	15	µg/L	1	1/14/2010 18:16
Surr: 1,2-Dichloroethane-d4	*91.6*			*70-125*	*%REC*	1	1/14/2010 18:16
Surr: 4-Bromofluorobenzene	*91.8*			*72-125*	*%REC*	1	1/14/2010 18:16
Surr: Dibromofluoromethane	*92.0*			*71-125*	*%REC*	1	1/14/2010 18:16
Surr: Toluene-d8	*95.8*			*75-125*	*%REC*	1	1/14/2010 18:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 26-Jan-10

WorkOrder: 1001258
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 26-Jan-10

WorkOrder: 1001258
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **40532** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100116-40532** Units: **µg/L** Analysis Date: **1/18/2010 05:42 PM**

Client ID: Run ID: **SV-4_100118B** SeqNo: **1857855** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.91*	0.20	*5*	0	*78.2*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.046*	0.20	*5*	0	*80.9*	*40-125*	0			
Surr: 2-Fluorophenol	*3.85*	0.20	*5*	0	*77*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.046*	0.20	*5*	0	*80.9*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.091*	0.20	*5*	0	*81.8*	*41-120*	0			
Surr: Phenol-d6	*4.251*	0.20	*5*	0	*85*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40532** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW1-100116-40532** Units: **µg/L** Analysis Date: **1/18/2010 06:02 PM**

Client ID: Run ID: **SV-4_100118B** SeqNo: **1857856** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.505	0.20	5	0	90.1	39-127	0			
2,4-Dimethylphenol	3.741	0.20	5	0	74.8	35-120	0			
2,4-Dinitrotoluene	4.304	0.20	5	0	86.1	50-122	0			
2,6-Dinitrotoluene	4.403	0.20	5	0	88.1	50-120	0			
2-Chloronaphthalene	4.981	0.20	5	0	99.6	50-120	0			
2-Methylnaphthalene	4.181	0.20	5	0	83.6	50-120	0			
4,6-Dinitro-2-methylphenol	4.349	0.20	5	0	87	25-121	0			
4-Nitrophenol	4.612	1.0	5	0	92.2	30-130	0			
Acenaphthene	4.119	0.20	5	0	82.4	45-120	0			
Acenaphthylene	4.326	0.20	5	0	86.5	47-120	0			
Anthracene	4.232	0.20	5	0	84.6	45-120	0			
Benz(a)anthracene	4.454	0.20	5	0	89.1	40-120	0			
Benzo(a)pyrene	4.359	0.20	5	0	87.2	45-120	0			
Bis(2-chloroethoxy)methane	4.369	0.20	5	0	87.4	45-120	0			
Bis(2-ethylhexyl)phthalate	4.826	0.20	5	0	96.5	40-139	0			
Chrysene	4.408	0.20	5	0	88.2	43-120	0			
Di-n-butyl phthalate	4.256	0.20	5	0	85.1	45-123	0			
Dibenzofuran	4.217	0.20	5	0	84.3	50-120	0			
Fluoranthene	4.128	0.20	5	0	82.6	45-125	0			
Fluorene	4.225	0.20	5	0	84.5	49-120	0			
N-Nitrosodiphenylamine	4.286	0.20	5	0	85.7	40-125	0			
Naphthalene	4.302	0.20	5	0	86	45-120	0			
Nitrobenzene	4.385	0.20	5	0	87.7	44-120	0			
Pentachlorophenol	3.876	0.20	5	0	77.5	19-121	0			
Phenanthrene	4.303	0.20	5	0	86.1	45-121	0			
Phenol	4.756	0.20	5	0	95.1	20-124	0			
Pyrene	4.497	0.20	5	0	89.9	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.053*	0.20	*5*	0	*81.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.051*	0.20	*5*	0	*81*	*40-125*	0			
Surr: 2-Fluorophenol	*4.146*	0.20	*5*	0	*82.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.978*	0.20	*5*	0	*79.6*	*40-135*	0			
Surr: Nitrobenzene-d5	*4.146*	0.20	*5*	0	*82.9*	*41-120*	0			
Surr: Phenol-d6	*4.389*	0.20	*5*	0	*87.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40532** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW1-100116-40532** Units: **µg/L** Analysis Date: **1/18/2010 06:23 PM**

Client ID: Run ID: **SV-4_100118B** SeqNo: **1857857** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.241	0.20	5	0	84.8	39-127	4.505	6.04	20	
2,4-Dimethylphenol	3.806	0.20	5	0	76.1	35-120	3.741	1.73	20	
2,4-Dinitrotoluene	4.319	0.20	5	0	86.4	50-122	4.304	0.359	20	
2,6-Dinitrotoluene	4.362	0.20	5	0	87.2	50-120	4.403	0.926	20	
2-Chloronaphthalene	5.669	0.20	5	0	113	50-120	4.981	12.9	20	
2-Methylnaphthalene	4.158	0.20	5	0	83.2	50-120	4.181	0.567	20	
4,6-Dinitro-2-methylphenol	4.025	0.20	5	0	80.5	25-121	4.349	7.73	20	
4-Nitrophenol	4.615	1.0	5	0	92.3	30-130	4.612	0.0506	20	
Acenaphthene	4.111	0.20	5	0	82.2	45-120	4.119	0.195	20	
Acenaphthylene	4.339	0.20	5	0	86.8	47-120	4.326	0.313	20	
Anthracene	4.071	0.20	5	0	81.4	45-120	4.232	3.87	20	
Benz(a)anthracene	4.25	0.20	5	0	85	40-120	4.454	4.69	20	
Benzo(a)pyrene	4.439	0.20	5	0	88.8	45-120	4.359	1.83	20	
Bis(2-chloroethoxy)methane	4.321	0.20	5	0	86.4	45-120	4.369	1.12	20	
Bis(2-ethylhexyl)phthalate	4.637	0.20	5	0	92.7	40-139	4.826	4	20	
Chrysene	4.268	0.20	5	0	85.4	43-120	4.408	3.23	20	
Di-n-butyl phthalate	4.106	0.20	5	0	82.1	45-123	4.256	3.6	20	
Dibenzofuran	4.199	0.20	5	0	84	50-120	4.217	0.432	20	
Fluoranthene	4.001	0.20	5	0	80	45-125	4.128	3.12	20	
Fluorene	4.269	0.20	5	0	85.4	49-120	4.225	1.03	20	
N-Nitrosodiphenylamine	4.181	0.20	5	0	83.6	40-125	4.286	2.48	20	
Naphthalene	4.286	0.20	5	0	85.7	45-120	4.302	0.378	20	
Nitrobenzene	4.358	0.20	5	0	87.2	44-120	4.385	0.625	20	
Pentachlorophenol	3.64	0.20	5	0	72.8	19-121	3.876	6.28	20	
Phenanthrene	4.176	0.20	5	0	83.5	45-121	4.303	2.99	20	
Phenol	4.707	0.20	5	0	94.1	20-124	4.756	1.03	20	
Pyrene	4.433	0.20	5	0	88.7	40-130	4.497	1.43	20	
Surr: 2,4,6-Tribromophenol	*3.833*	0.20	*5*	0	*76.7*	*34-129*	4.053	*5.56*	*20*	
Surr: 2-Fluorobiphenyl	*3.988*	0.20	*5*	0	*79.8*	*40-125*	4.051	*1.58*	*20*	
Surr: 2-Fluorophenol	*3.931*	0.20	*5*	0	*78.6*	*20-120*	4.146	*5.33*	*20*	
Surr: 4-Terphenyl-d14	*3.837*	0.20	*5*	0	*76.7*	*40-135*	3.978	*3.6*	*20*	
Surr: Nitrobenzene-d5	*4.04*	0.20	*5*	0	*80.8*	*41-120*	4.146	*2.6*	*20*	
Surr: Phenol-d6	*4.42*	0.20	*5*	0	*88.4*	*20-120*	4.389	*0.719*	*20*	

The following samples were analyzed in this batch:

1001258-01B	1001258-02B	1001258-03B
1001258-04B	1001258-05B	1001258-06B
1001258-07B	1001258-08B	1001258-09B
1001258-10B	1001258-11B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85942** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-011410-R85942** Units: **µg/L** Analysis Date: **1/14/2010 12:47 PM**

Client ID: Run ID: **VOA1_100114A** SeqNo: **1855941** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*44.66*	5.0	*50*	0	*89.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*44.91*	5.0	*50*	0	*89.8*	*72-125*	0			
Surr: Dibromofluoromethane	*45.75*	5.0	*50*	0	*91.5*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-011410-R85942** Units: **µg/L** Analysis Date: **1/14/2010 11:56 AM**

Client ID: Run ID: **VOA1_100114A** SeqNo: **1855940** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	45.27	5.0	50	0	90.5	78-120	0			
Benzene	52.85	5.0	50	0	106	73-121	0			
Chlorobenzene	47.31	5.0	50	0	94.6	80-120	0			
Dichloromethane	53.61	10	50	0	107	65-133	0			
Ethylbenzene	49.53	5.0	50	0	99.1	80-120	0			
Toluene	48.62	5.0	50	0	97.2	80-120	0			
Xylenes, Total	142.1	15	150	0	94.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*43.61*	5.0	*50*	0	*87.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*45.07*	5.0	*50*	0	*90.1*	*72-125*	0			
Surr: Dibromofluoromethane	*45.9*	5.0	*50*	0	*91.8*	*71-125*	0			
Surr: Toluene-d8	*48.24*	5.0	*50*	0	*96.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85942** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1001197-01AMS** Units: **µg/L** Analysis Date: **1/14/2010 02:28 PM**

Client ID: Run ID: **VOA1_100114A** SeqNo: **1855943** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	244.2	25	250	0	97.7	78-120	0			
Benzene	268.8	25	250	0	108	73-121	0			
Chlorobenzene	244.6	25	250	0	97.8	80-120	0			
Dichloromethane	271.7	50	250	0	109	65-133	0			
Ethylbenzene	201.3	25	250	0	80.5	80-120	0			
Toluene	227.8	25	250	0	91.1	80-120	0			
Xylenes, Total	242.8	75	750	0	32.4	80-120	0			S
Surr: 1,2-Dichloroethane-d4	*218.9*	25	*250*	0	*87.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*241.4*	25	*250*	0	*96.6*	*72-125*	0			
Surr: Dibromofluoromethane	*232.6*	25	*250*	0	*93*	*71-125*	0			
Surr: Toluene-d8	*254.8*	25	*250*	0	*102*	*75-125*	0			

MSD Sample ID: **1001197-01AMSD** Units: **µg/L** Analysis Date: **1/14/2010 02:53 PM**

Client ID: Run ID: **VOA1_100114A** SeqNo: **1855944** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	240.2	25	250	0	96.1	78-120	244.2	1.65	20	
Benzene	262.5	25	250	0	105	73-121	268.8	2.39	20	
Chlorobenzene	248	25	250	0	99.2	80-120	244.6	1.4	20	
Dichloromethane	270.6	50	250	0	108	65-133	271.7	0.38	20	
Ethylbenzene	177.7	25	250	0	71.1	80-120	201.3	12.5	20	S
Toluene	205.3	25	250	0	82.1	80-120	227.8	10.4	20	
Xylenes, Total	149.2	75	750	0	19.9	80-120	242.8	47.7	20	SR
Surr: 1,2-Dichloroethane-d4	*208.6*	25	*250*	0	*83.5*	*70-125*	218.9	*4.82*	*20*	
Surr: 4-Bromofluorobenzene	*234.3*	25	*250*	0	*93.7*	*72-125*	241.4	*2.98*	*20*	
Surr: Dibromofluoromethane	*228.9*	25	*250*	0	*91.6*	*71-125*	232.6	*1.58*	*20*	
Surr: Toluene-d8	*230.5*	25	*250*	0	*92.2*	*75-125*	254.8	*10*	*20*	

The following samples were analyzed in this batch:

1001258-01A	1001258-02A	1001258-03A
1001258-04A	1001258-05A	1001258-06A
1001258-07A	1001258-09A	1001258-11A
1001258-12A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85992** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-011610-R85992** Units: **µg/L** Analysis Date: **1/16/2010 02:00 PM**
Client ID: Run ID: **VOA2_100116A** SeqNo: **1857053** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.77*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.28*	5.0	*50*	0	*94.6*	*72-125*	0			
Surr: Dibromofluoromethane	*51.06*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*49.17*	5.0	*50*	0	*98.3*	*75-125*	0			

LCS Sample ID: **VLCSW-011610-R85992** Units: **µg/L** Analysis Date: **1/16/2010 01:35 PM**
Client ID: Run ID: **VOA2_100116A** SeqNo: **1857051** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.03	5.0	50	0	96.1	78-120	0			
Benzene	50.7	5.0	50	0	101	73-121	0			
Chlorobenzene	46.72	5.0	50	0	93.4	80-120	0			
Dichloromethane	46.01	10	50	0	92	65-133	0			
Toluene	47.98	5.0	50	0	96	80-120	0			
Xylenes, Total	143.2	15	150	0	95.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.48*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.29*	5.0	*50*	0	*98.6*	*72-125*	0			
Surr: Dibromofluoromethane	*53.92*	5.0	*50*	0	*108*	*71-125*	0			
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	0			

MS Sample ID: **1001319-10AMS** Units: **µg/L** Analysis Date: **1/16/2010 04:06 PM**
Client ID: Run ID: **VOA2_100116A** SeqNo: **1857056** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.28	5.0	50	0	94.6	78-120	0			
Benzene	48.74	5.0	50	0	97.5	73-121	0			
Chlorobenzene	45.16	5.0	50	0	90.3	80-120	0			
Dichloromethane	46.27	10	50	0	92.5	65-133	0			
Toluene	46.26	5.0	50	0	92.5	80-120	0			
Xylenes, Total	132.9	15	150	0	88.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	*54.3*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.5*	5.0	*50*	0	*99*	*72-125*	0			
Surr: Dibromofluoromethane	*54.57*	5.0	*50*	0	*109*	*71-125*	0			
Surr: Toluene-d8	*50.68*	5.0	*50*	0	*101*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85992** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1001319-10AMSD** Units: **µg/L** Analysis Date: **1/16/2010 04:31 PM**

Client ID: Run ID: **VOA2_100116A** SeqNo: **1857057** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.7	5.0	50	0	99.4	78-120	47.28	5	20	
Benzene	50.23	5.0	50	0	100	73-121	48.74	3.02	20	
Chlorobenzene	46.73	5.0	50	0	93.5	80-120	45.16	3.42	20	
Dichloromethane	47.14	10	50	0	94.3	65-133	46.27	1.86	20	
Toluene	47.13	5.0	50	0	94.3	80-120	46.26	1.85	20	
Xylenes, Total	138.3	15	150	0	92.2	80-120	132.9	3.96	20	
Surr: 1,2-Dichloroethane-d4	*55.14*	5.0	*50*	0	*110*	*70-125*	54.3	*1.54*	*20*	
Surr: 4-Bromofluorobenzene	*49.9*	5.0	*50*	0	*99.8*	*72-125*	49.5	*0.804*	*20*	
Surr: Dibromofluoromethane	*54.67*	5.0	*50*	0	*109*	*71-125*	54.57	*0.17*	*20*	
Surr: Toluene-d8	*51.36*	5.0	*50*	0	*103*	*75-125*	50.68	*1.32*	*20*	

The following samples were analyzed in this batch: 1001258-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86055** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-011910-R86055** Units: **µg/L** Analysis Date: **1/19/2010 12:43 PM**

Client ID: Run ID: **VOA1_100119A** SeqNo: **1858242** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.843	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.36*	5.0	*50*	0	*98.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.51*	5.0	*50*	0	*99*	*72-125*	0			
Surr: Dibromofluoromethane	*46.58*	5.0	*50*	0	*93.2*	*71-125*	0			
Surr: Toluene-d8	*53.52*	5.0	*50*	0	*107*	*75-125*	0			

LCS Sample ID: **VLCSW-011910-R86055** Units: **µg/L** Analysis Date: **1/19/2010 11:27 AM**

Client ID: Run ID: **VOA1_100119A** SeqNo: **1858237** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	45.88	5.0	50	0	91.8	78-120	0			
Benzene	50.93	5.0	50	0	102	73-121	0			
Chlorobenzene	47.85	5.0	50	0	95.7	80-120	0			
Dichloromethane	46.31	10	50	0	92.6	65-133	0			
Ethylbenzene	48.48	5.0	50	0	97	80-120	0			
Toluene	51.16	5.0	50	0	102	80-120	0			
Xylenes, Total	152.4	15	150	0	102	80-120	0			
Surr: 1,2-Dichloroethane-d4	*43.81*	5.0	*50*	0	*87.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.05*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*45.85*	5.0	*50*	0	*91.7*	*71-125*	0			
Surr: Toluene-d8	*52.32*	5.0	*50*	0	*105*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86055** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1001280-13AMS** Units: **µg/L** Analysis Date: **1/19/2010 02:49 PM**

Client ID: Run ID: **VOA1_100119A** SeqNo: **1858251** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	241.7	25	250	0	96.7	78-120	0			
Benzene	248	25	250	0	99.2	73-121	0			
Chlorobenzene	249.3	25	250	0	99.7	80-120	0			
Dichloromethane	222.3	50	250	6.026	86.5	65-133	0			
Ethylbenzene	238.6	25	250	7.967	92.3	80-120	0			
Toluene	251.2	25	250	0	100	80-120	0			
Xylenes, Total	789.8	75	750	45.99	99.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*227.1*	25	*250*	0	*90.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*274*	25	*250*	0	*110*	*72-125*	0			
Surr: Dibromofluoromethane	*230.9*	25	*250*	0	*92.4*	*71-125*	0			
Surr: Toluene-d8	*268.4*	25	*250*	0	*107*	*75-125*	0			

MSD Sample ID: **1001280-13AMSD** Units: **µg/L** Analysis Date: **1/19/2010 03:14 PM**

Client ID: Run ID: **VOA1_100119A** SeqNo: **1858253** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	223.2	25	250	0	89.3	78-120	241.7	7.98	20	
Benzene	239.4	25	250	0	95.8	73-121	248	3.51	20	
Chlorobenzene	240.8	25	250	0	96.3	80-120	249.3	3.46	20	
Dichloromethane	209.5	50	250	6.026	81.4	65-133	222.3	5.93	20	
Ethylbenzene	234.6	25	250	7.967	90.7	80-120	238.6	1.69	20	
Toluene	232.5	25	250	0	93	80-120	251.2	7.75	20	
Xylenes, Total	726.8	75	750	45.99	90.8	80-120	789.8	8.3	20	
Surr: 1,2-Dichloroethane-d4	*226.9*	25	*250*	0	*90.8*	*70-125*	227.1	*0.0836*	*20*	
Surr: 4-Bromofluorobenzene	*252.5*	25	*250*	0	*101*	*72-125*	274	*8.2*	*20*	
Surr: Dibromofluoromethane	*227.7*	25	*250*	0	*91.1*	*71-125*	230.9	*1.41*	*20*	
Surr: Toluene-d8	*262.7*	25	*250*	0	*105*	*75-125*	268.4	*2.13*	*20*	

The following samples were analyzed in this batch: 1001258-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001258
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86101** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-011910-R86101** Units: **µg/L** Analysis Date: **1/19/2010 12:46 PM**
Client ID: Run ID: **VOA2_100119A** SeqNo: **1859240** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	U	5.0								
Surr: 1,2-Dichloroethane-d4	*54.5*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.72*	5.0	*50*	0	*97.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.7*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*50.04*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-011910-R86101** Units: **µg/L** Analysis Date: **1/19/2010 11:33 AM**
Client ID: Run ID: **VOA2_100119A** SeqNo: **1859238** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	46.46	5.0	50	0	92.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.44*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.66*	5.0	*50*	0	*95.3*	*72-125*	0			
Surr: Dibromofluoromethane	*45.41*	5.0	*50*	0	*90.8*	*71-125*	0			
Surr: Toluene-d8	*49.39*	5.0	*50*	0	*98.8*	*75-125*	0			

MS Sample ID: **1001280-02AMS** Units: **µg/L** Analysis Date: **1/19/2010 01:59 PM**
Client ID: Run ID: **VOA2_100119A** SeqNo: **1859246** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	223.7	25	250	0	89.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*280.5*	25	*250*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*243.2*	25	*250*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*230.1*	25	*250*	0	*92*	*71-125*	0			
Surr: Toluene-d8	*250.8*	25	*250*	0	*100*	*75-125*	0			

MSD Sample ID: **1001280-02AMSD** Units: **µg/L** Analysis Date: **1/19/2010 02:24 PM**
Client ID: Run ID: **VOA2_100119A** SeqNo: **1859248** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	211.5	25	250	0	84.6	80-120	223.7	5.59	20	
Surr: 1,2-Dichloroethane-d4	*260*	25	*250*	0	*104*	*70-125*	280.5	*7.6*	*20*	
Surr: 4-Bromofluorobenzene	*239*	25	*250*	0	*95.6*	*72-125*	243.2	*1.72*	*20*	
Surr: Dibromofluoromethane	*261.2*	25	*250*	0	*104*	*71-125*	230.1	*12.7*	*20*	
Surr: Toluene-d8	*247.2*	25	*250*	0	*98.9*	*75-125*	250.8	*1.45*	*20*	

The following samples were analyzed in this batch: 1001258-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 26-Jan-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
WorkOrder: **1001258**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

☒ ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 2

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 100 1258

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW53C-011310	1-13-10	0705	GW		5	X	X									
2	WG-1620-MW44A-011310	1-13-10	0800	GW		5	X	X									
3	WG-1620-MW36A-011310	1-13-10	0845	GW		5	X	X									
4	WG-1620-MW28A-011310	1-13-10	1005	GW		5	X	X									
5	WG-1620-MW28C-011310	1-13-10	1115	GW		5	X	X									
6	WG-1620-MW33A-011310	1-13-10	1330	GW		5	X	X									
7	WG-1620-FD01-011310	1-13-10	1330	GW		5	X	X									
8	WG-1620-MW-33B-011310	1-13-10	1435	GW		5	X	X									
9	WG-1620-MW26A-011310	1-13-10	1530	GW		5	X	X									
10	WG-1620-MW63B-011310	1-13-10	1645	GW		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: | Date: 1-14-10 | Time: 1515 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 1-14-10/1515

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager:

ALS Work Order #: 1001258

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-FBD1-011310	1-13-10	1705	GW		5	X	X									
2	WG-1620-TBD1-011310	1-13-10				2	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 1-14-10 Time: 0915

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 1-14-10/0915

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **14-Jan-10 07:15**

Work Order: **1001258** Received by: **RSZ**

Checklist completed by Lora Terrill (eSignature) 14-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 15-Jan-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 and 2.7	002	
Cooler(s)/Kit(s):	3290,1918		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

27-Jan-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: UPRR HWPW GW Work Order: **1001319**

Dear Eric,

ALS Laboratory Group received 15 samples on 15-Jan-2010 12:15 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 54.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: 1001319

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Re Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 01/27/2010
Project Name: UPRR HWPW GW	Laboratory Job Number: 1001319
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40540, 40543, 40579, R86055, R86126, R86156, R86217, R86253, R86271, R86273, R86320

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				3

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 01/27/2010
Project Name: UPRR HWPW GW	Laboratory Job Number: 1001319
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40540, 40543, 40579, R86055, R86126, R86156, R86217, R86253, R86271, R86273, R86320

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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			4
S5	OI	**RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 01/27/2010
Project Name: UPRR HWPW GW	Laboratory Job Number: 1001319
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40540, 40543, 40579, R86055, R86126, R86156, R86217, R86253, R86271, R86273, R86320

ER #[1]	DESCRIPTION
1	Some Semivolatile surrogate recoveries are diluted out. Semivolatile surrogate recovery for sample WG-1620-MW38A-011410 is below control limit.
2	Batch 40533 Semivolatiles (sample WG-1620-MW22A-011510) MS/MSD RPD above control limit for 3 compounds where the MS/MSD recoveries are in control.
3	Volatiles sample WG-1620-MW25C-011510 could not be analyzed at a lower dilution due to the nature of the sample.
4	All int stds have low area counts in 1001319-14B(DF1) due to matrix interference. Sample was not reanalyzed at a DF1 due to the matrix.

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

ALS Laboratory Group

Date: 27-Jan-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: **1001319**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001319-01	WG-1620-MW32A-011410	Water		1/14/2010 08:30	1/15/2010 12:15	☐
1001319-02	WG-1620-MW38A-011410	Water		1/14/2010 09:15	1/15/2010 12:15	☐
1001319-03	WG-1620-MW38B-011410	Water		1/14/2010 10:10	1/15/2010 12:15	☐
1001319-04	WG-1620-MW24C-011410	Water		1/14/2010 11:10	1/15/2010 12:15	☐
1001319-05	WG-1620-MW24B-011410	Water		1/14/2010 12:00	1/15/2010 12:15	☐
1001319-06	WG-1620-MW27C-011410	Water		1/14/2010 13:20	1/15/2010 12:15	☐
1001319-07	WG-1620-MW35A-011410	Water		1/14/2010 14:20	1/15/2010 12:15	☐
1001319-08	WG-1620-MW35B-011410	Water		1/14/2010 15:20	1/15/2010 12:15	☐
1001319-09	WG-1620-MW24AR-011410	Water		1/14/2010 16:15	1/15/2010 12:15	☐
1001319-10	WG-1620-MW22A-011510	Water		1/15/2010 08:00	1/15/2010 12:15	☐
1001319-11	WG-1620-FB02-011410	Water		1/14/2010 16:45	1/15/2010 12:15	☐
1001319-12	WG-1620-MW22B-011510	Water		1/15/2010 09:00	1/15/2010 12:15	☐
1001319-13	WG-1620-MW25A-011510	Water		1/15/2010 10:05	1/15/2010 12:15	☐
1001319-14	WG-1620-MW25C-011510	Water		1/15/2010 11:15	1/15/2010 12:15	☐
1001319-15	WG-1620-TB02-011510	Water		1/15/2010	1/15/2010 12:15	☐

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW32A-011410
Collection Date: 1/14/2010 08:30 AM

Work Order: 1001319
Lab ID: 1001319-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 22:10
2,4-Dimethylphenol	**2,100**		**40**	**100**	**µg/L**	500	1/26/2010 13:54
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 22:10
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 22:10
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 22:10
2-Methylnaphthalene	**300**		**7.0**	**20**	**µg/L**	100	1/26/2010 12:31
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 22:10
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 22:10
Acenaphthene	**130**		**9.0**	**20**	**µg/L**	100	1/26/2010 12:31
Acenaphthylene	**1.9**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:10
Anthracene	**51**		**0.70**	**2.0**	**µg/L**	10	1/25/2010 23:54
Benz(a)anthracene	**6.7**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:10
Benzo(a)pyrene	**2.3**		**0.080**	**0.20**	**µg/L**	1	1/25/2010 22:10
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 22:10
Bis(2-ethylhexyl)phthalate	**1.8**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 22:10
Chrysene	**6.4**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:10
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 22:10
Dibenzofuran	**140**		**8.0**	**20**	**µg/L**	100	1/26/2010 12:31
Fluoranthene	**70**		**0.70**	**2.0**	**µg/L**	10	1/25/2010 23:54
Fluorene	**87**		**0.70**	**2.0**	**µg/L**	10	1/25/2010 23:54
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 22:10
Naphthalene	**3,500**		**50**	**100**	**µg/L**	500	1/26/2010 13:54
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 22:10
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 22:10
Phenanthrene	**250**		**7.0**	**20**	**µg/L**	100	1/26/2010 12:31
Phenol	**1,300**		**35**	**100**	**µg/L**	500	1/26/2010 13:54
Pyrene	**43**		**0.70**	**2.0**	**µg/L**	10	1/25/2010 23:54
Surr: 2,4,6-Tribromophenol	*58.2*			*34-129*	*%REC*	1	1/25/2010 22:10
Surr: 2,4,6-Tribromophenol	*73.4*			*34-129*	*%REC*	10	1/25/2010 23:54
Surr: 2,4,6-Tribromophenol	*90.6*	J		*34-129*	*%REC*	100	1/26/2010 12:31
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	1/26/2010 13:54
Surr: 2-Fluorobiphenyl	*49.2*			*40-125*	*%REC*	1	1/25/2010 22:10
Surr: 2-Fluorobiphenyl	*71.4*			*40-125*	*%REC*	10	1/25/2010 23:54
Surr: 2-Fluorobiphenyl	*92.4*	J		*40-125*	*%REC*	100	1/26/2010 12:31
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	1/26/2010 13:54
Surr: 2-Fluorophenol	*49.3*			*20-120*	*%REC*	1	1/25/2010 22:10
Surr: 2-Fluorophenol	*75.6*			*20-120*	*%REC*	10	1/25/2010 23:54
Surr: 2-Fluorophenol	*50.1*	J		*20-120*	*%REC*	100	1/26/2010 12:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW32A-011410
Collection Date: 1/14/2010 08:30 AM

Work Order: 1001319
Lab ID: 1001319-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	1/26/2010 13:54
Surr: 4-Terphenyl-d14	*59.4*			*40-135*	*%REC*	1	1/25/2010 22:10
Surr: 4-Terphenyl-d14	*80.0*			*40-135*	*%REC*	10	1/25/2010 23:54
Surr: 4-Terphenyl-d14	*78.3*	J		*40-135*	*%REC*	100	1/26/2010 12:31
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	1/26/2010 13:54
Surr: Nitrobenzene-d5	*68.9*			*41-120*	*%REC*	1	1/25/2010 22:10
Surr: Nitrobenzene-d5	*67.1*			*41-120*	*%REC*	10	1/25/2010 23:54
Surr: Nitrobenzene-d5	*85.3*	J		*41-120*	*%REC*	100	1/26/2010 12:31
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	1/26/2010 13:54
Surr: Phenol-d6	*32.3*			*20-120*	*%REC*	1	1/25/2010 22:10
Surr: Phenol-d6	*62.5*			*20-120*	*%REC*	10	1/25/2010 23:54
Surr: Phenol-d6	*87.3*	J		*20-120*	*%REC*	100	1/26/2010 12:31
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	1/26/2010 13:54
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/19/2010 18:04
Benzene	**340**		**5.0**	**50**	**µg/L**	10	1/20/2010 16:42
Chlorobenzene	U		0.50	5.0	µg/L	1	1/19/2010 18:04
Dichloromethane	U		0.50	10	µg/L	1	1/19/2010 18:04
Ethylbenzene	**76**		**0.50**	**5.0**	**µg/L**	1	1/19/2010 18:04
Toluene	**360**		**5.0**	**50**	**µg/L**	10	1/20/2010 16:42
Xylenes, Total	**350**		**1.0**	**15**	**µg/L**	1	1/19/2010 18:04
Surr: 1,2-Dichloroethane-d4	*117*			*70-125*	*%REC*	1	1/19/2010 18:04
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	10	1/20/2010 16:42
Surr: 4-Bromofluorobenzene	*102*			*72-125*	*%REC*	1	1/19/2010 18:04
Surr: 4-Bromofluorobenzene	*98.1*			*72-125*	*%REC*	10	1/20/2010 16:42
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	1/19/2010 18:04
Surr: Dibromofluoromethane	*84.8*			*71-125*	*%REC*	10	1/20/2010 16:42
Surr: Toluene-d8	*104*			*75-125*	*%REC*	1	1/19/2010 18:04
Surr: Toluene-d8	*100*			*75-125*	*%REC*	10	1/20/2010 16:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW38A-011410
Collection Date: 1/14/2010 09:15 AM

Work Order: 1001319
Lab ID: 1001319-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 18:20
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 18:20
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 18:20
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 18:20
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 18:20
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 18:20
Acenaphthene	**0.24**		**0.090**	**0.20**	**µg/L**	1	1/25/2010 18:20
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 18:20
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 18:20
Bis(2-ethylhexyl)phthalate	**0.49**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 18:20
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 18:20
Fluoranthene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 18:20
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 18:20
Naphthalene	U		0.10	0.20	µg/L	1	1/25/2010 18:20
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 18:20
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 18:20
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 18:20
Pyrene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 18:20
Surr: 2,4,6-Tribromophenol	*45.1*			*34-129*	*%REC*	1	1/25/2010 18:20
Surr: 2-Fluorobiphenyl	*41.4*			*40-125*	*%REC*	1	1/25/2010 18:20
Surr: 2-Fluorophenol	*24.1*			*20-120*	*%REC*	1	1/25/2010 18:20
Surr: 4-Terphenyl-d14	*60.4*			*40-135*	*%REC*	1	1/25/2010 18:20
Surr: Nitrobenzene-d5	*38.5*	S		*41-120*	*%REC*	1	1/25/2010 18:20
Surr: Phenol-d6	*31.9*			*20-120*	*%REC*	1	1/25/2010 18:20
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 22:02
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 22:02
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:02
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 22:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW38A-011410
Collection Date: 1/14/2010 09:15 AM

Work Order: 1001319
Lab ID: 1001319-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:02
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 22:02
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 22:02
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	1	1/15/2010 22:02
Surr: 4-Bromofluorobenzene	*95.1*			*72-125*	*%REC*	1	1/15/2010 22:02
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/15/2010 22:02
Surr: Toluene-d8	*98.0*			*75-125*	*%REC*	1	1/15/2010 22:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW38B-011410
Collection Date: 1/14/2010 10:10 AM

Work Order: 1001319
Lab ID: 1001319-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 18:41
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 18:41
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 18:41
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 18:41
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 18:41
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 18:41
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 18:41
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 18:41
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 18:41
Bis(2-ethylhexyl)phthalate	**0.39**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 18:41
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 18:41
Fluoranthene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 18:41
Naphthalene	**0.14**	J	**0.10**	**0.20**	**µg/L**	1	1/25/2010 18:41
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 18:41
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 18:41
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 18:41
Surr: 2,4,6-Tribromophenol	*43.1*			*34-129*	*%REC*	1	1/25/2010 18:41
Surr: 2-Fluorobiphenyl	*46.2*			*40-125*	*%REC*	1	1/25/2010 18:41
Surr: 2-Fluorophenol	*35.7*			*20-120*	*%REC*	1	1/25/2010 18:41
Surr: 4-Terphenyl-d14	*51.9*			*40-135*	*%REC*	1	1/25/2010 18:41
Surr: Nitrobenzene-d5	*41.1*			*41-120*	*%REC*	1	1/25/2010 18:41
Surr: Phenol-d6	*40.6*			*20-120*	*%REC*	1	1/25/2010 18:41
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 22:27
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 22:27
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:27
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 22:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW38B-011410
Collection Date: 1/14/2010 10:10 AM

Work Order: 1001319
Lab ID: 1001319-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:27
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 22:27
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 22:27
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	1/15/2010 22:27
Surr: 4-Bromofluorobenzene	*96.2*			*72-125*	*%REC*	1	1/15/2010 22:27
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	1/15/2010 22:27
Surr: Toluene-d8	*100*			*75-125*	*%REC*	1	1/15/2010 22:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24C-011410
Collection Date: 1/14/2010 11:10 AM

Work Order: 1001319
Lab ID: 1001319-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 19:02
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:02
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 19:02
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 19:02
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:02
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 19:02
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 19:02
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 19:02
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 19:02
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/25/2010 19:02
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 19:02
Fluoranthene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 19:02
Naphthalene	**0.26**		**0.10**	**0.20**	**µg/L**	1	1/25/2010 19:02
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 19:02
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 19:02
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 19:02
Surr: 2,4,6-Tribromophenol	*62.8*			*34-129*	*%REC*	1	1/25/2010 19:02
Surr: 2-Fluorobiphenyl	*61.0*			*40-125*	*%REC*	1	1/25/2010 19:02
Surr: 2-Fluorophenol	*49.6*			*20-120*	*%REC*	1	1/25/2010 19:02
Surr: 4-Terphenyl-d14	*56.3*			*40-135*	*%REC*	1	1/25/2010 19:02
Surr: Nitrobenzene-d5	*51.0*			*41-120*	*%REC*	1	1/25/2010 19:02
Surr: Phenol-d6	*50.0*			*20-120*	*%REC*	1	1/25/2010 19:02
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 22:52
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 22:52
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:52
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 22:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24C-011410
Collection Date: 1/14/2010 11:10 AM

Work Order: 1001319
Lab ID: 1001319-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 22:52
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 22:52
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 22:52
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	1	1/15/2010 22:52
Surr: 4-Bromofluorobenzene	*92.9*			*72-125*	*%REC*	1	1/15/2010 22:52
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/15/2010 22:52
Surr: Toluene-d8	*97.6*			*75-125*	*%REC*	1	1/15/2010 22:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24B-011410
Collection Date: 1/14/2010 12:00 PM

Work Order: 1001319
Lab ID: 1001319-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 19:23
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:23
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 19:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 19:23
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 19:23
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 19:23
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 19:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 19:23
Bis(2-ethylhexyl)phthalate	**2.1**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 19:23
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 19:23
Fluoranthene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 19:23
Naphthalene	U		0.10	0.20	µg/L	1	1/25/2010 19:23
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 19:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 19:23
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 19:23
Surr: 2,4,6-Tribromophenol	*55.1*			*34-129*	*%REC*	1	1/25/2010 19:23
Surr: 2-Fluorobiphenyl	*50.3*			*40-125*	*%REC*	1	1/25/2010 19:23
Surr: 2-Fluorophenol	*41.8*			*20-120*	*%REC*	1	1/25/2010 19:23
Surr: 4-Terphenyl-d14	*68.5*			*40-135*	*%REC*	1	1/25/2010 19:23
Surr: Nitrobenzene-d5	*42.2*			*41-120*	*%REC*	1	1/25/2010 19:23
Surr: Phenol-d6	*45.0*			*20-120*	*%REC*	1	1/25/2010 19:23
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 23:17
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 23:17
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 23:17
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 23:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24B-011410
Collection Date: 1/14/2010 12:00 PM

Work Order: 1001319
Lab ID: 1001319-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 23:17
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 23:17
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 23:17
Surr: 1,2-Dichloroethane-d4	*111*			*70-125*	*%REC*	1	1/15/2010 23:17
Surr: 4-Bromofluorobenzene	*95.3*			*72-125*	*%REC*	1	1/15/2010 23:17
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/15/2010 23:17
Surr: Toluene-d8	*105*			*75-125*	*%REC*	1	1/15/2010 23:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW27C-011410
Collection Date: 1/14/2010 01:20 PM

Work Order: 1001319
Lab ID: 1001319-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 19:44
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:44
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 19:44
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 19:44
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 19:44
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 19:44
Acenaphthene	**0.15**	J	**0.090**	**0.20**	**µg/L**	1	1/25/2010 19:44
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 19:44
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 19:44
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 19:44
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 19:44
Fluoranthene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 19:44
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 19:44
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 19:44
Naphthalene	**0.13**	J	**0.10**	**0.20**	**µg/L**	1	1/25/2010 19:44
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 19:44
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 19:44
Phenanthrene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 19:44
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 19:44
Pyrene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 19:44
Surr: 2,4,6-Tribromophenol	*66.6*			*34-129*	*%REC*	1	1/25/2010 19:44
Surr: 2-Fluorobiphenyl	*67.5*			*40-125*	*%REC*	1	1/25/2010 19:44
Surr: 2-Fluorophenol	*58.5*			*20-120*	*%REC*	1	1/25/2010 19:44
Surr: 4-Terphenyl-d14	*70.1*			*40-135*	*%REC*	1	1/25/2010 19:44
Surr: Nitrobenzene-d5	*59.2*			*41-120*	*%REC*	1	1/25/2010 19:44
Surr: Phenol-d6	*55.8*			*20-120*	*%REC*	1	1/25/2010 19:44
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 23:42
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 23:42
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 23:42
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 23:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW27C-011410
Collection Date: 1/14/2010 01:20 PM

Work Order: 1001319
Lab ID: 1001319-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 23:42
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 23:42
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 23:42
Surr: 1,2-Dichloroethane-d4	*110*			*70-125*	*%REC*	1	1/15/2010 23:42
Surr: 4-Bromofluorobenzene	*92.2*			*72-125*	*%REC*	1	1/15/2010 23:42
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/15/2010 23:42
Surr: Toluene-d8	*99.4*			*75-125*	*%REC*	1	1/15/2010 23:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW35A-011410
Collection Date: 1/14/2010 02:20 PM

Work Order: 1001319
Lab ID: 1001319-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 20:05
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:05
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 20:05
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 20:05
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 20:05
2-Methylnaphthalene	**0.61**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:05
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 20:05
Acenaphthene	**17**		**0.90**	**2.0**	**µg/L**	10	1/26/2010 11:49
Acenaphthylene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Anthracene	**0.43**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 20:05
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 20:05
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 20:05
Bis(2-ethylhexyl)phthalate	**0.45**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 20:05
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 20:05
Di-n-butyl phthalate	**0.092**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Dibenzofuran	**5.0**		**0.080**	**0.20**	**µg/L**	1	1/25/2010 20:05
Fluoranthene	**1.1**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Fluorene	**2.8**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 20:05
Naphthalene	**190**		**4.0**	**8.0**	**µg/L**	40	1/26/2010 14:36
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 20:05
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 20:05
Phenanthrene	**0.39**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 20:05
Pyrene	**0.92**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:05
Surr: 2,4,6-Tribromophenol	*57.7*			*34-129*	*%REC*	1	1/25/2010 20:05
Surr: 2,4,6-Tribromophenol	*59.1*			*34-129*	*%REC*	10	1/26/2010 11:49
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	40	1/26/2010 14:36
Surr: 2-Fluorobiphenyl	*58.4*			*40-125*	*%REC*	1	1/25/2010 20:05
Surr: 2-Fluorobiphenyl	*81.6*			*40-125*	*%REC*	10	1/26/2010 11:49
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	40	1/26/2010 14:36
Surr: 2-Fluorophenol	*49.9*			*20-120*	*%REC*	1	1/25/2010 20:05
Surr: 2-Fluorophenol	*67.0*			*20-120*	*%REC*	10	1/26/2010 11:49
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	40	1/26/2010 14:36
Surr: 4-Terphenyl-d14	*58.7*			*40-135*	*%REC*	1	1/25/2010 20:05
Surr: 4-Terphenyl-d14	*75.2*			*40-135*	*%REC*	10	1/26/2010 11:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW35A-011410
Collection Date: 1/14/2010 02:20 PM

Work Order: 1001319
Lab ID: 1001319-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	40	1/26/2010 14:36
Surr: Nitrobenzene-d5	*51.2*			*41-120*	*%REC*	1	1/25/2010 20:05
Surr: Nitrobenzene-d5	*65.2*			*41-120*	*%REC*	10	1/26/2010 11:49
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	40	1/26/2010 14:36
Surr: Phenol-d6	*49.0*			*20-120*	*%REC*	1	1/25/2010 20:05
Surr: Phenol-d6	*50.1*			*20-120*	*%REC*	10	1/26/2010 11:49
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	40	1/26/2010 14:36
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 00:07
Benzene	U		0.50	5.0	µg/L	1	1/16/2010 00:07
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 00:07
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 00:07
Ethylbenzene	**1.5**	J	**0.50**	**5.0**	**µg/L**	1	1/16/2010 00:07
Toluene	U		0.50	5.0	µg/L	1	1/16/2010 00:07
Xylenes, Total	U		1.0	15	µg/L	1	1/16/2010 00:07
Surr: 1,2-Dichloroethane-d4	*114*			*70-125*	*%REC*	1	1/16/2010 00:07
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	1/16/2010 00:07
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	1/16/2010 00:07
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/16/2010 00:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW35B-011410
Collection Date: 1/14/2010 03:20 PM

Work Order: 1001319
Lab ID: 1001319-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 20:25
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:25
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 20:25
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 20:25
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 20:25
2-Methylnaphthalene	**470**		**7.0**	**20**	**µg/L**	100	1/26/2010 14:56
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:25
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 20:25
Acenaphthene	**220**		**9.0**	**20**	**µg/L**	100	1/26/2010 14:56
Acenaphthylene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Anthracene	**8.0**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Benz(a)anthracene	**0.32**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Benzo(a)pyrene	**0.14**	J	**0.080**	**0.20**	**µg/L**	1	1/25/2010 20:25
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 20:25
Bis(2-ethylhexyl)phthalate	**0.29**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 20:25
Chrysene	**0.28**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 20:25
Dibenzofuran	**230**		**8.0**	**20**	**µg/L**	100	1/26/2010 14:56
Fluoranthene	**5.3**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Fluorene	**92**		**0.70**	**2.0**	**µg/L**	10	1/26/2010 12:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 20:25
Naphthalene	**14,000**		**200**	**400**	**µg/L**	2000	1/26/2010 15:40
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 20:25
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 20:25
Phenanthrene	**86**		**0.70**	**2.0**	**µg/L**	10	1/26/2010 12:10
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 20:25
Pyrene	**2.7**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:25
Surr: 2,4,6-Tribromophenol	*57.9*			*34-129*	*%REC*	1	1/25/2010 20:25
Surr: 2,4,6-Tribromophenol	*87.0*			*34-129*	*%REC*	10	1/26/2010 12:10
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/26/2010 14:56
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	1/26/2010 15:40
Surr: 2-Fluorobiphenyl	*57.4*			*40-125*	*%REC*	1	1/25/2010 20:25
Surr: 2-Fluorobiphenyl	*82.7*			*40-125*	*%REC*	10	1/26/2010 12:10
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/26/2010 14:56
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	1/26/2010 15:40
Surr: 2-Fluorophenol	*94.6*			*20-120*	*%REC*	1	1/25/2010 20:25
Surr: 2-Fluorophenol	*96.5*			*20-120*	*%REC*	10	1/26/2010 12:10
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/26/2010 14:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW35B-011410
Collection Date: 1/14/2010 03:20 PM

Work Order: 1001319
Lab ID: 1001319-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	1/26/2010 15:40
Surr: 4-Terphenyl-d14	*70.6*			*40-135*	*%REC*	1	1/25/2010 20:25
Surr: 4-Terphenyl-d14	*83.5*			*40-135*	*%REC*	10	1/26/2010 12:10
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/26/2010 14:56
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	1/26/2010 15:40
Surr: Nitrobenzene-d5	*47.8*			*41-120*	*%REC*	1	1/25/2010 20:25
Surr: Nitrobenzene-d5	*68.6*			*41-120*	*%REC*	10	1/26/2010 12:10
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/26/2010 14:56
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	1/26/2010 15:40
Surr: Phenol-d6	*63.0*			*20-120*	*%REC*	1	1/25/2010 20:25
Surr: Phenol-d6	*80.3*			*20-120*	*%REC*	10	1/26/2010 12:10
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/26/2010 14:56
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	1/26/2010 15:40
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	1/16/2010 18:57
Benzene	**64**		**5.0**	**50**	**µg/L**	10	1/16/2010 18:57
Chlorobenzene	U		5.0	50	µg/L	10	1/16/2010 18:57
Dichloromethane	U		5.0	100	µg/L	10	1/16/2010 18:57
Ethylbenzene	**200**		**5.0**	**50**	**µg/L**	10	1/16/2010 18:57
Toluene	U		5.0	50	µg/L	10	1/16/2010 18:57
Xylenes, Total	**150**	J	**10**	**150**	**µg/L**	10	1/16/2010 18:57
Surr: 1,2-Dichloroethane-d4	*113*			*70-125*	*%REC*	10	1/16/2010 18:57
Surr: 4-Bromofluorobenzene	*99.6*			*72-125*	*%REC*	10	1/16/2010 18:57
Surr: Dibromofluoromethane	*110*			*71-125*	*%REC*	10	1/16/2010 18:57
Surr: Toluene-d8	*102*			*75-125*	*%REC*	10	1/16/2010 18:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24AR-011410
Collection Date: 1/14/2010 04:15 PM

Work Order: 1001319
Lab ID: 1001319-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 20:46
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:46
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 20:46
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 20:46
2-Methylnaphthalene	**0.23**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:46
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 20:46
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 20:46
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 20:46
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 20:46
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 20:46
Bis(2-ethylhexyl)phthalate	**0.29**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 20:46
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Di-n-butyl phthalate	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:46
Dibenzofuran	**0.084**	J	**0.080**	**0.20**	**µg/L**	1	1/25/2010 20:46
Fluoranthene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:46
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 20:46
Naphthalene	**2.3**		**0.10**	**0.20**	**µg/L**	1	1/25/2010 20:46
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 20:46
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 20:46
Phenanthrene	**0.18**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 20:46
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 20:46
Surr: 2,4,6-Tribromophenol	*72.5*			*34-129*	*%REC*	1	1/25/2010 20:46
Surr: 2-Fluorobiphenyl	*68.6*			*40-125*	*%REC*	1	1/25/2010 20:46
Surr: 2-Fluorophenol	*63.2*			*20-120*	*%REC*	1	1/25/2010 20:46
Surr: 4-Terphenyl-d14	*65.9*			*40-135*	*%REC*	1	1/25/2010 20:46
Surr: Nitrobenzene-d5	*59.4*			*41-120*	*%REC*	1	1/25/2010 20:46
Surr: Phenol-d6	*61.8*			*20-120*	*%REC*	1	1/25/2010 20:46
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 18:33
Benzene	U		0.50	5.0	µg/L	1	1/16/2010 18:33
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 18:33
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 18:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW24AR-011410
Collection Date: 1/14/2010 04:15 PM

Work Order: 1001319
Lab ID: 1001319-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/16/2010 18:33
Toluene	U		0.50	5.0	µg/L	1	1/16/2010 18:33
Xylenes, Total	U		1.0	15	µg/L	1	1/16/2010 18:33
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	1/16/2010 18:33
Surr: 4-Bromofluorobenzene	*97.1*			*72-125*	*%REC*	1	1/16/2010 18:33
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	1/16/2010 18:33
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/16/2010 18:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW22A-011510
Collection Date: 1/15/2010 08:00 AM

Work Order: 1001319
Lab ID: 1001319-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/19/2010 15:24
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/19/2010 15:24
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/19/2010 15:24
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/19/2010 15:24
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/19/2010 15:24
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/19/2010 15:24
Acenaphthene	U		0.090	0.20	µg/L	1	1/19/2010 15:24
Acenaphthylene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Anthracene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/19/2010 15:24
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/19/2010 15:24
Bis(2-ethylhexyl)phthalate	**1.3**		**0.20**	**0.20**	**µg/L**	1	1/19/2010 15:24
Chrysene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Dibenzofuran	U		0.080	0.20	µg/L	1	1/19/2010 15:24
Fluoranthene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Fluorene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/19/2010 15:24
Naphthalene	U		0.10	0.20	µg/L	1	1/19/2010 15:24
Nitrobenzene	U		0.090	0.20	µg/L	1	1/19/2010 15:24
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/19/2010 15:24
Phenanthrene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Phenol	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Pyrene	U		0.070	0.20	µg/L	1	1/19/2010 15:24
Surr: 2,4,6-Tribromophenol	*67.2*			*34-129*	*%REC*	1	1/19/2010 15:24
Surr: 2-Fluorobiphenyl	*67.5*			*40-125*	*%REC*	1	1/19/2010 15:24
Surr: 2-Fluorophenol	*64.9*			*20-120*	*%REC*	1	1/19/2010 15:24
Surr: 4-Terphenyl-d14	*69.1*			*40-135*	*%REC*	1	1/19/2010 15:24
Surr: Nitrobenzene-d5	*65.5*			*41-120*	*%REC*	1	1/19/2010 15:24
Surr: Phenol-d6	*66.0*			*20-120*	*%REC*	1	1/19/2010 15:24
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 14:49
Benzene	U		0.50	5.0	µg/L	1	1/16/2010 14:49
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 14:49
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 14:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW22A-011510
Collection Date: 1/15/2010 08:00 AM

Work Order: 1001319
Lab ID: 1001319-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/16/2010 14:49
Toluene	U		0.50	5.0	µg/L	1	1/16/2010 14:49
Xylenes, Total	U		1.0	15	µg/L	1	1/16/2010 14:49
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	1/16/2010 14:49
Surr: 4-Bromofluorobenzene	*98.0*			*72-125*	*%REC*	1	1/16/2010 14:49
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/16/2010 14:49
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/16/2010 14:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB02-011410
Collection Date: 1/14/2010 04:45 PM

Work Order: 1001319
Lab ID: 1001319-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 21:07
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:07
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 21:07
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 21:07
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:07
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 21:07
Acenaphthene	U		0.090	0.20	µg/L	1	1/25/2010 21:07
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 21:07
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 21:07
Bis(2-ethylhexyl)phthalate	**0.31**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 21:07
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 21:07
Fluoranthene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 21:07
Naphthalene	**0.17**	J	**0.10**	**0.20**	**µg/L**	1	1/25/2010 21:07
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 21:07
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 21:07
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 21:07
Surr: 2,4,6-Tribromophenol	*62.2*			*34-129*	*%REC*	1	1/25/2010 21:07
Surr: 2-Fluorobiphenyl	*71.4*			*40-125*	*%REC*	1	1/25/2010 21:07
Surr: 2-Fluorophenol	*60.1*			*20-120*	*%REC*	1	1/25/2010 21:07
Surr: 4-Terphenyl-d14	*70.8*			*40-135*	*%REC*	1	1/25/2010 21:07
Surr: Nitrobenzene-d5	*62.8*			*41-120*	*%REC*	1	1/25/2010 21:07
Surr: Phenol-d6	*61.0*			*20-120*	*%REC*	1	1/25/2010 21:07
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/15/2010 19:06
Benzene	U		0.50	5.0	µg/L	1	1/15/2010 19:06
Chlorobenzene	U		0.50	5.0	µg/L	1	1/15/2010 19:06
Dichloromethane	U		0.50	10	µg/L	1	1/15/2010 19:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB02-011410
Collection Date: 1/14/2010 04:45 PM

Work Order: 1001319
Lab ID: 1001319-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/15/2010 19:06
Toluene	U		0.50	5.0	µg/L	1	1/15/2010 19:06
Xylenes, Total	U		1.0	15	µg/L	1	1/15/2010 19:06
Surr: 1,2-Dichloroethane-d4	*96.3*			*70-125*	*%REC*	1	1/15/2010 19:06
Surr: 4-Bromofluorobenzene	*95.9*			*72-125*	*%REC*	1	1/15/2010 19:06
Surr: Dibromofluoromethane	*95.1*			*71-125*	*%REC*	1	1/15/2010 19:06
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	1/15/2010 19:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW22B-011510
Collection Date: 1/15/2010 09:00 AM

Work Order: 1001319
Lab ID: 1001319-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 21:28
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:28
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 21:28
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 21:28
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:28
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 21:28
Acenaphthene	**0.16**	J	**0.090**	**0.20**	**µg/L**	1	1/25/2010 21:28
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 21:28
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 21:28
Bis(2-ethylhexyl)phthalate	**0.22**		**0.20**	**0.20**	**µg/L**	1	1/25/2010 21:28
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Dibenzofuran	**0.26**		**0.080**	**0.20**	**µg/L**	1	1/25/2010 21:28
Fluoranthene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 21:28
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 21:28
Naphthalene	**0.12**	J	**0.10**	**0.20**	**µg/L**	1	1/25/2010 21:28
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 21:28
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 21:28
Phenanthrene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 21:28
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Pyrene	U		0.070	0.20	µg/L	1	1/25/2010 21:28
Surr: 2,4,6-Tribromophenol	*80.5*			*34-129*	*%REC*	1	1/25/2010 21:28
Surr: 2-Fluorobiphenyl	*70.6*			*40-125*	*%REC*	1	1/25/2010 21:28
Surr: 2-Fluorophenol	*59.2*			*20-120*	*%REC*	1	1/25/2010 21:28
Surr: 4-Terphenyl-d14	*71.9*			*40-135*	*%REC*	1	1/25/2010 21:28
Surr: Nitrobenzene-d5	*59.6*			*41-120*	*%REC*	1	1/25/2010 21:28
Surr: Phenol-d6	*58.9*			*20-120*	*%REC*	1	1/25/2010 21:28
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 16:55
Benzene	U		0.50	5.0	µg/L	1	1/16/2010 16:55
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 16:55
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 16:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW22B-011510
Collection Date: 1/15/2010 09:00 AM

Work Order: 1001319
Lab ID: 1001319-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/16/2010 16:55
Toluene	U		0.50	5.0	µg/L	1	1/16/2010 16:55
Xylenes, Total	U		1.0	15	µg/L	1	1/16/2010 16:55
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	1	1/16/2010 16:55
Surr: 4-Bromofluorobenzene	*97.6*			*72-125*	*%REC*	1	1/16/2010 16:55
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/16/2010 16:55
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/16/2010 16:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW25A-011510
Collection Date: 1/15/2010 10:05 AM

Work Order: 1001319
Lab ID: 1001319-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 21:49
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:49
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 21:49
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 21:49
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 21:49
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 21:49
Acenaphthene	**1.4**		**0.090**	**0.20**	**µg/L**	1	1/25/2010 21:49
Acenaphthylene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/25/2010 21:49
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 21:49
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/25/2010 21:49
Chrysene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Dibenzofuran	U		0.080	0.20	µg/L	1	1/25/2010 21:49
Fluoranthene	**0.084**	J	**0.070**	**0.20**	**µg/L**	1	1/25/2010 21:49
Fluorene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 21:49
Naphthalene	U		0.10	0.20	µg/L	1	1/25/2010 21:49
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 21:49
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 21:49
Phenanthrene	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 21:49
Pyrene	**0.47**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 21:49
Surr: 2,4,6-Tribromophenol	*75.1*			*34-129*	*%REC*	1	1/25/2010 21:49
Surr: 2-Fluorobiphenyl	*72.8*			*40-125*	*%REC*	1	1/25/2010 21:49
Surr: 2-Fluorophenol	*65.9*			*20-120*	*%REC*	1	1/25/2010 21:49
Surr: 4-Terphenyl-d14	*70.5*			*40-135*	*%REC*	1	1/25/2010 21:49
Surr: Nitrobenzene-d5	*61.1*			*41-120*	*%REC*	1	1/25/2010 21:49
Surr: Phenol-d6	*62.9*			*20-120*	*%REC*	1	1/25/2010 21:49
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/16/2010 18:08
Benzene	U		0.50	5.0	µg/L	1	1/16/2010 18:08
Chlorobenzene	U		0.50	5.0	µg/L	1	1/16/2010 18:08
Dichloromethane	U		0.50	10	µg/L	1	1/16/2010 18:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW25A-011510
Collection Date: 1/15/2010 10:05 AM

Work Order: 1001319
Lab ID: 1001319-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/16/2010 18:08
Toluene	U		0.50	5.0	µg/L	1	1/16/2010 18:08
Xylenes, Total	U		1.0	15	µg/L	1	1/16/2010 18:08
Surr: 1,2-Dichloroethane-d4	*110*			*70-125*	*%REC*	1	1/16/2010 18:08
Surr: 4-Bromofluorobenzene	*97.1*			*72-125*	*%REC*	1	1/16/2010 18:08
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	1/16/2010 18:08
Surr: Toluene-d8	*100*			*75-125*	*%REC*	1	1/16/2010 18:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW25C-011510
Collection Date: 1/15/2010 11:15 AM

Work Order: 1001319
Lab ID: 1001319-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/16/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/25/2010 22:31
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/25/2010 22:31
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/25/2010 22:31
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/25/2010 22:31
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/25/2010 22:31
2-Methylnaphthalene	**760**		**18**	**50**	**µg/L**	250	1/26/2010 14:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/25/2010 22:31
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/25/2010 22:31
Acenaphthene	**210**		**4.5**	**10**	**µg/L**	50	1/26/2010 12:52
Acenaphthylene	**2.7**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:31
Anthracene	**35**		**0.70**	**2.0**	**µg/L**	10	1/26/2010 00:15
Benz(a)anthracene	**2.7**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:31
Benzo(a)pyrene	**1.4**		**0.080**	**0.20**	**µg/L**	1	1/25/2010 22:31
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/25/2010 22:31
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/25/2010 22:31
Chrysene	**2.5**		**0.070**	**0.20**	**µg/L**	1	1/25/2010 22:31
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/25/2010 22:31
Dibenzofuran	**220**		**4.0**	**10**	**µg/L**	50	1/26/2010 12:52
Fluoranthene	**41**		**0.70**	**2.0**	**µg/L**	10	1/26/2010 00:15
Fluorene	**120**		**3.5**	**10**	**µg/L**	50	1/26/2010 12:52
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/25/2010 22:31
Naphthalene	**9,800**		**100**	**200**	**µg/L**	1000	1/26/2010 15:19
Nitrobenzene	U		0.090	0.20	µg/L	1	1/25/2010 22:31
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/25/2010 22:31
Phenanthrene	**190**		**3.5**	**10**	**µg/L**	50	1/26/2010 12:52
Phenol	U		0.070	0.20	µg/L	1	1/25/2010 22:31
Pyrene	**22**		**0.70**	**2.0**	**µg/L**	10	1/26/2010 00:15
Surr: 2,4,6-Tribromophenol	*61.5*			*34-129*	*%REC*	1	1/25/2010 22:31
Surr: 2,4,6-Tribromophenol	*84.7*			*34-129*	*%REC*	10	1/26/2010 00:15
Surr: 2,4,6-Tribromophenol	*87.7*	J		*34-129*	*%REC*	50	1/26/2010 12:52
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	250	1/26/2010 14:15
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/26/2010 15:19
Surr: 2-Fluorobiphenyl	*64.9*			*40-125*	*%REC*	1	1/25/2010 22:31
Surr: 2-Fluorobiphenyl	*85.4*			*40-125*	*%REC*	10	1/26/2010 00:15
Surr: 2-Fluorobiphenyl	*96.7*	J		*40-125*	*%REC*	50	1/26/2010 12:52
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	250	1/26/2010 14:15
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/26/2010 15:19
Surr: 2-Fluorophenol	*111*			*20-120*	*%REC*	1	1/25/2010 22:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *27-Jan-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW25C-011510
Collection Date: 1/15/2010 11:15 AM

Work Order: 1001319
Lab ID: 1001319-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*84.3*			*20-120*	*%REC*	10	1/26/2010 00:15
Surr: 2-Fluorophenol	*62.0*	J		*20-120*	*%REC*	50	1/26/2010 12:52
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	250	1/26/2010 14:15
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/26/2010 15:19
Surr: 4-Terphenyl-d14	*50.6*			*40-135*	*%REC*	1	1/25/2010 22:31
Surr: 4-Terphenyl-d14	*73.2*			*40-135*	*%REC*	10	1/26/2010 00:15
Surr: 4-Terphenyl-d14	*94.0*	J		*40-135*	*%REC*	50	1/26/2010 12:52
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	250	1/26/2010 14:15
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/26/2010 15:19
Surr: Nitrobenzene-d5	*55.9*			*41-120*	*%REC*	1	1/25/2010 22:31
Surr: Nitrobenzene-d5	*74.0*			*41-120*	*%REC*	10	1/26/2010 00:15
Surr: Nitrobenzene-d5	*104*	J		*41-120*	*%REC*	50	1/26/2010 12:52
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	250	1/26/2010 14:15
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/26/2010 15:19
Surr: Phenol-d6	*63.5*			*20-120*	*%REC*	1	1/25/2010 22:31
Surr: Phenol-d6	*67.2*			*20-120*	*%REC*	10	1/26/2010 00:15
Surr: Phenol-d6	*76.6*	J		*20-120*	*%REC*	50	1/26/2010 12:52
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	250	1/26/2010 14:15
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/26/2010 15:19
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		25	250	µg/L	50	1/19/2010 17:39
Benzene	**110**	J	**25**	**250**	**µg/L**	50	1/19/2010 17:39
Chlorobenzene	U		25	250	µg/L	50	1/19/2010 17:39
Dichloromethane	U		25	500	µg/L	50	1/19/2010 17:39
Ethylbenzene	**470**		**25**	**250**	**µg/L**	50	1/19/2010 17:39
Toluene	**520**		**25**	**250**	**µg/L**	50	1/19/2010 17:39
Xylenes, Total	**1,200**		**50**	**750**	**µg/L**	50	1/19/2010 17:39
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	50	1/19/2010 17:39
Surr: 4-Bromofluorobenzene	*97.8*			*72-125*	*%REC*	50	1/19/2010 17:39
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	50	1/19/2010 17:39
Surr: Toluene-d8	*101*			*75-125*	*%REC*	50	1/19/2010 17:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 27-Jan-10

WorkOrder: 1001319
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 27-Jan-10

WorkOrder: 1001319
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **40533** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100116-40533** Units: **µg/L** Analysis Date: **1/19/2010 02:43 PM**

Client ID: Run ID: **SV-4_100119C** SeqNo: **1863544** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.152*	0.20	*5*	0	*63*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.433*	0.20	*5*	0	*68.7*	*40-125*	0			
Surr: 2-Fluorophenol	*3.161*	0.20	*5*	0	*63.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.795*	0.20	*5*	0	*75.9*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.473*	0.20	*5*	0	*69.5*	*41-120*	0			
Surr: Phenol-d6	*3.503*	0.20	*5*	0	*70.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40533** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW2-100116-40533** Units: **µg/L** Analysis Date: **1/19/2010 03:03 PM**

Client ID: Run ID: **SV-4_100119C** SeqNo: **1863546** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.452	0.20	5	0	89	39-127	0			
2,4-Dimethylphenol	3.55	0.20	5	0	71	35-120	0			
2,4-Dinitrotoluene	4.099	0.20	5	0	82	50-122	0			
2,6-Dinitrotoluene	4.146	0.20	5	0	82.9	50-120	0			
2-Chloronaphthalene	5.085	0.20	5	0	102	50-120	0			
2-Methylnaphthalene	4.008	0.20	5	0	80.2	50-120	0			
4,6-Dinitro-2-methylphenol	4.52	0.20	5	0	90.4	25-121	0			
4-Nitrophenol	4.2	1.0	5	0	84	30-130	0			
Acenaphthene	3.888	0.20	5	0	77.8	45-120	0			
Acenaphthylene	4.099	0.20	5	0	82	47-120	0			
Anthracene	4.201	0.20	5	0	84	45-120	0			
Benz(a)anthracene	4.284	0.20	5	0	85.7	40-120	0			
Benzo(a)pyrene	4.148	0.20	5	0	83	45-120	0			
Bis(2-chloroethoxy)methane	4.103	0.20	5	0	82.1	45-120	0			
Bis(2-ethylhexyl)phthalate	4.654	0.20	5	0	93.1	40-139	0			
Chrysene	4.221	0.20	5	0	84.4	43-120	0			
Di-n-butyl phthalate	4.419	0.20	5	0	88.4	45-123	0			
Dibenzofuran	3.978	0.20	5	0	79.6	50-120	0			
Fluoranthene	4.161	0.20	5	0	83.2	45-125	0			
Fluorene	4.057	0.20	5	0	81.1	49-120	0			
N-Nitrosodiphenylamine	4.396	0.20	5	0	87.9	40-125	0			
Naphthalene	4.097	0.20	5	0	81.9	45-120	0			
Nitrobenzene	4.157	0.20	5	0	83.1	44-120	0			
Pentachlorophenol	3.285	0.20	5	0	65.7	19-121	0			
Phenanthrene	4.11	0.20	5	0	82.2	45-121	0			
Phenol	4.466	0.20	5	0	89.3	20-124	0			
Pyrene	4.379	0.20	5	0	87.6	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.701*	0.20	*5*	0	*74*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.921*	0.20	*5*	0	*78.4*	*40-125*	0			
Surr: 2-Fluorophenol	*3.941*	0.20	*5*	0	*78.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.839*	0.20	*5*	0	*76.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.92*	0.20	*5*	0	*78.4*	*41-120*	0			
Surr: Phenol-d6	*4.309*	0.20	*5*	0	*86.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40533** Instrument ID **SV-4** Method: **SW8270**

MS Sample ID: **1001319-10BMS** Units: **µg/L** Analysis Date: **1/20/2010 10:35 AM**

Client ID: **WG-1620-MW22A-011510** Run ID: **SV-4_100119C** SeqNo: **1863556** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.889	0.20	5	0	77.8	39-127	0			
2,4-Dimethylphenol	2.897	0.20	5	0	57.9	35-120	0			
2,4-Dinitrotoluene	3.776	0.20	5	0	75.5	50-122	0			
2,6-Dinitrotoluene	3.687	0.20	5	0	73.7	50-120	0			
2-Chloronaphthalene	3.694	0.20	5	0	73.9	50-120	0			
2-Methylnaphthalene	2.671	0.20	5	0	53.4	50-120	0			
4,6-Dinitro-2-methylphenol	4.297	0.20	5	0	85.9	25-121	0			
4-Nitrophenol	3.58	1.0	5	0	71.6	30-130	0			
Acenaphthene	2.981	0.20	5	0	59.6	45-120	0			
Acenaphthylene	3.107	0.20	5	0	62.1	47-120	0			
Anthracene	3.674	0.20	5	0	73.5	45-120	0			
Benz(a)anthracene	3.87	0.20	5	0	77.4	40-120	0			
Benzo(a)pyrene	3.781	0.20	5	0	75.6	45-120	0			
Bis(2-chloroethoxy)methane	2.608	0.20	5	0	52.2	45-120	0			
Bis(2-ethylhexyl)phthalate	8.006	0.20	5	1.286	134	40-139	0			
Chrysene	3.969	0.20	5	0	79.4	43-120	0			
Di-n-butyl phthalate	3.974	0.20	5	0	79.5	45-123	0			
Dibenzofuran	3.178	0.20	5	0	63.6	50-120	0			
Fluoranthene	3.659	0.20	5	0	73.2	45-125	0			
Fluorene	3.369	0.20	5	0	67.4	49-120	0			
N-Nitrosodiphenylamine	4.111	0.20	5	0	82.2	40-125	0			
Naphthalene	2.715	0.20	5	0	54.3	45-120	0			
Nitrobenzene	2.602	0.20	5	0	52	44-120	0			
Pentachlorophenol	4.255	0.20	5	0	85.1	19-121	0			
Phenanthrene	3.641	0.20	5	0	72.8	45-121	0			
Phenol	3.211	0.20	5	0	64.2	20-124	0			
Pyrene	3.926	0.20	5	0	78.5	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.567*	0.20	*5*	0	*71.3*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*2.809*	0.20	*5*	0	*56.2*	*40-125*	0			
Surr: 2-Fluorophenol	*2.174*	0.20	*5*	0	*43.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.612*	0.20	*5*	0	*72.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*2.584*	0.20	*5*	0	*51.7*	*41-120*	0			
Surr: Phenol-d6	*2.792*	0.20	*5*	0	*55.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40533** Instrument ID **SV-4** Method: **SW8270**

MSD Sample ID: **1001319-10BMSD** Units: **µg/L** Analysis Date: **1/20/2010 10:56 AM**

Client ID: **WG-1620-MW22A-011510** Run ID: **SV-4_100119C** SeqNo: **1863559** Prep Date: **1/16/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.394	0.20	5	0	67.9	39-127	3.889	13.6	20	
2,4-Dimethylphenol	2.692	0.20	5	0	53.8	35-120	2.897	7.34	20	
2,4-Dinitrotoluene	3.34	0.20	5	0	66.8	50-122	3.776	12.2	20	
2,6-Dinitrotoluene	3.301	0.20	5	0	66	50-120	3.687	11.1	20	
2-Chloronaphthalene	3.173	0.20	5	0	63.5	50-120	3.694	15.2	20	
2-Methylnaphthalene	2.628	0.20	5	0	52.6	50-120	2.671	1.63	20	
4,6-Dinitro-2-methylphenol	3.783	0.20	5	0	75.7	25-121	4.297	12.7	20	
4-Nitrophenol	2.624	1.0	5	0	52.5	30-130	3.58	30.8	20	R
Acenaphthene	2.778	0.20	5	0	55.6	45-120	2.981	7.06	20	
Acenaphthylene	2.858	0.20	5	0	57.2	47-120	3.107	8.34	20	
Anthracene	3.325	0.20	5	0	66.5	45-120	3.674	9.97	20	
Benz(a)anthracene	3.766	0.20	5	0	75.3	40-120	3.87	2.74	20	
Benzo(a)pyrene	3.712	0.20	5	0	74.2	45-120	3.781	1.84	20	
Bis(2-chloroethoxy)methane	2.65	0.20	5	0	53	45-120	2.608	1.6	20	
Bis(2-ethylhexyl)phthalate	4.336	0.20	5	1.286	61	40-139	8.006	59.5	20	R
Chrysene	3.641	0.20	5	0	72.8	43-120	3.969	8.62	20	
Di-n-butyl phthalate	3.632	0.20	5	0	72.6	45-123	3.974	9.01	20	
Dibenzofuran	2.897	0.20	5	0	57.9	50-120	3.178	9.26	20	
Fluoranthene	3.436	0.20	5	0	68.7	45-125	3.659	6.3	20	
Fluorene	3.017	0.20	5	0	60.3	49-120	3.369	11	20	
N-Nitrosodiphenylamine	3.711	0.20	5	0	74.2	40-125	4.111	10.2	20	
Naphthalene	2.658	0.20	5	0	53.2	45-120	2.715	2.11	20	
Nitrobenzene	2.669	0.20	5	0	53.4	44-120	2.602	2.52	20	
Pentachlorophenol	3.283	0.20	5	0	65.7	19-121	4.255	25.8	20	R
Phenanthrene	3.329	0.20	5	0	66.6	45-121	3.641	8.96	20	
Phenol	3.067	0.20	5	0	61.3	20-124	3.211	4.6	20	
Pyrene	3.763	0.20	5	0	75.3	40-130	3.926	4.24	20	
Surr: 2,4,6-Tribromophenol	*3.158*	0.20	*5*	0	*63.2*	*34-129*	3.567	*12.2*	*20*	
Surr: 2-Fluorobiphenyl	*2.586*	0.20	*5*	0	*51.7*	*40-125*	2.809	*8.25*	*20*	
Surr: 2-Fluorophenol	*2.329*	0.20	*5*	0	*46.6*	*20-120*	2.174	*6.88*	*20*	
Surr: 4-Terphenyl-d14	*3.401*	0.20	*5*	0	*68*	*40-135*	3.612	*6.02*	*20*	
Surr: Nitrobenzene-d5	*2.54*	0.20	*5*	0	*50.8*	*41-120*	2.584	*1.72*	*20*	
Surr: Phenol-d6	*2.841*	0.20	*5*	0	*56.8*	*20-120*	2.792	*1.74*	*20*	

The following samples were analyzed in this batch:

1001319-01B	1001319-02B	1001319-03B
1001319-04B	1001319-05B	1001319-06B
1001319-07B	1001319-08B	1001319-09B
1001319-10B	1001319-11B	1001319-12B
1001319-13B	1001319-14B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85975** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-011510-R85975** Units: **µg/L** Analysis Date: **1/15/2010 05:00 PM**

Client ID: Run ID: **VOA1_100115A** SeqNo: **1856629** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.25*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.83*	5.0	*50*	0	*99.7*	*72-125*	0			
Surr: Dibromofluoromethane	*48.28*	5.0	*50*	0	*96.6*	*71-125*	0			
Surr: Toluene-d8	*52.59*	5.0	*50*	0	*105*	*75-125*	0			

LCS Sample ID: **VLCSW-011510-R85975** Units: **µg/L** Analysis Date: **1/15/2010 03:45 PM**

Client ID: Run ID: **VOA1_100115A** SeqNo: **1856627** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.63	5.0	50	0	97.3	78-120	0			
Benzene	50.63	5.0	50	0	101	73-121	0			
Chlorobenzene	49.1	5.0	50	0	98.2	80-120	0			
Dichloromethane	47.13	10	50	0	94.3	65-133	0			
Ethylbenzene	47.99	5.0	50	0	96	80-120	0			
Toluene	52.25	5.0	50	0	104	80-120	0			
Xylenes, Total	154.2	15	150	0	103	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.06*	5.0	*50*	0	*94.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.13*	5.0	*50*	0	*98.3*	*72-125*	0			
Surr: Dibromofluoromethane	*47.65*	5.0	*50*	0	*95.3*	*71-125*	0			
Surr: Toluene-d8	*52.16*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85975** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1001239-01AMS** Units: **µg/L** Analysis Date: **1/15/2010 05:50 PM**

Client ID: Run ID: **VOA1_100115A** SeqNo: **1856632** Prep Date: DF: **100**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	4459	500	5000	0	89.2	78-120	0			
Benzene	4513	500	5000	0	90.3	73-121	0			
Chlorobenzene	4645	500	5000	0	92.9	80-120	0			
Dichloromethane	4854	1,000	5000	0	97.1	65-133	0			
Ethylbenzene	4740	500	5000	0	94.8	80-120	0			
Toluene	4672	500	5000	0	93.4	80-120	0			
Xylenes, Total	14360	1,500	15000	0	95.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*5146*	500	*5000*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*5148*	500	*5000*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*5006*	500	*5000*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*5155*	500	*5000*	0	*103*	*75-125*	0			

MSD Sample ID: **1001239-01AMSD** Units: **µg/L** Analysis Date: **1/15/2010 06:15 PM**

Client ID: Run ID: **VOA1_100115A** SeqNo: **1856633** Prep Date: DF: **100**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	4732	500	5000	0	94.6	78-120	4459	5.95	20	
Benzene	4518	500	5000	0	90.4	73-121	4513	0.121	20	
Chlorobenzene	4725	500	5000	0	94.5	80-120	4645	1.72	20	
Dichloromethane	4746	1,000	5000	0	94.9	65-133	4854	2.25	20	
Ethylbenzene	4502	500	5000	0	90	80-120	4740	5.14	20	
Toluene	4519	500	5000	0	90.4	80-120	4672	3.32	20	
Xylenes, Total	13900	1,500	15000	0	92.7	80-120	14360	3.29	20	
Surr: 1,2-Dichloroethane-d4	*4965*	500	*5000*	0	*99.3*	*70-125*	5146	*3.58*	*20*	
Surr: 4-Bromofluorobenzene	*5033*	500	*5000*	0	*101*	*72-125*	5148	*2.26*	*20*	
Surr: Dibromofluoromethane	*5149*	500	*5000*	0	*103*	*71-125*	5006	*2.81*	*20*	
Surr: Toluene-d8	*4994*	500	*5000*	0	*99.9*	*75-125*	5155	*3.18*	*20*	

The following samples were analyzed in this batch:

1001319-02A	1001319-03A	1001319-04A
1001319-05A	1001319-06A	1001319-07A
1001319-11A	1001319-15A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85992** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-011610-R85992** Units: **µg/L** Analysis Date: **1/16/2010 02:00 PM**

Client ID: Run ID: **VOA2_100116A** SeqNo: **1857053** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.77*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.28*	5.0	*50*	0	*94.6*	*72-125*	0			
Surr: Dibromofluoromethane	*51.06*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*49.17*	5.0	*50*	0	*98.3*	*75-125*	0			

LCS Sample ID: **VLCSW-011610-R85992** Units: **µg/L** Analysis Date: **1/16/2010 01:35 PM**

Client ID: Run ID: **VOA2_100116A** SeqNo: **1857051** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.03	5.0	50	0	96.1	78-120	0			
Benzene	50.7	5.0	50	0	101	73-121	0			
Chlorobenzene	46.72	5.0	50	0	93.4	80-120	0			
Dichloromethane	46.01	10	50	0	92	65-133	0			
Ethylbenzene	47.95	5.0	50	0	95.9	80-120	0			
Toluene	47.98	5.0	50	0	96	80-120	0			
Xylenes, Total	143.2	15	150	0	95.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.48*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.29*	5.0	*50*	0	*98.6*	*72-125*	0			
Surr: Dibromofluoromethane	*53.92*	5.0	*50*	0	*108*	*71-125*	0			
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R85992** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001319-10AMS** Units: **µg/L** Analysis Date: **1/16/2010 04:06 PM**

Client ID: **WG-1620-MW22A-011510** Run ID: **VOA2_100116A** SeqNo: **1857056** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.28	5.0	50	0	94.6	78-120	0			
Benzene	48.74	5.0	50	0	97.5	73-121	0			
Chlorobenzene	45.16	5.0	50	0	90.3	80-120	0			
Dichloromethane	46.27	10	50	0	92.5	65-133	0			
Ethylbenzene	44.15	5.0	50	0	88.3	80-120	0			
Toluene	46.26	5.0	50	0	92.5	80-120	0			
Xylenes, Total	132.9	15	150	0	88.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	*54.3*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.5*	5.0	*50*	0	*99*	*72-125*	0			
Surr: Dibromofluoromethane	*54.57*	5.0	*50*	0	*109*	*71-125*	0			
Surr: Toluene-d8	*50.68*	5.0	*50*	0	*101*	*75-125*	0			

MSD Sample ID: **1001319-10AMSD** Units: **µg/L** Analysis Date: **1/16/2010 04:31 PM**

Client ID: **WG-1620-MW22A-011510** Run ID: **VOA2_100116A** SeqNo: **1857057** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.7	5.0	50	0	99.4	78-120	47.28	5	20	
Benzene	50.23	5.0	50	0	100	73-121	48.74	3.02	20	
Chlorobenzene	46.73	5.0	50	0	93.5	80-120	45.16	3.42	20	
Dichloromethane	47.14	10	50	0	94.3	65-133	46.27	1.86	20	
Ethylbenzene	46.09	5.0	50	0	92.2	80-120	44.15	4.29	20	
Toluene	47.13	5.0	50	0	94.3	80-120	46.26	1.85	20	
Xylenes, Total	138.3	15	150	0	92.2	80-120	132.9	3.96	20	
Surr: 1,2-Dichloroethane-d4	*55.14*	5.0	*50*	0	*110*	*70-125*	54.3	*1.54*	*20*	
Surr: 4-Bromofluorobenzene	*49.9*	5.0	*50*	0	*99.8*	*72-125*	49.5	*0.804*	*20*	
Surr: Dibromofluoromethane	*54.67*	5.0	*50*	0	*109*	*71-125*	54.57	*0.17*	*20*	
Surr: Toluene-d8	*51.36*	5.0	*50*	0	*103*	*75-125*	50.68	*1.32*	*20*	

The following samples were analyzed in this batch:

1001319-08A	1001319-09A	1001319-10A
1001319-12A	1001319-13A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86101** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-011910-R86101** Units: **µg/L** Analysis Date: **1/19/2010 12:46 PM**

Client ID: Run ID: **VOA2_100119A** SeqNo: **1859240** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.8452	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*54.5*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.72*	5.0	*50*	0	*97.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.7*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*50.04*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-011910-R86101** Units: **µg/L** Analysis Date: **1/19/2010 11:33 AM**

Client ID: Run ID: **VOA2_100119A** SeqNo: **1859238** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.87	5.0	50	0	93.7	78-120	0			
Benzene	49.47	5.0	50	0	98.9	73-121	0			
Chlorobenzene	45.46	5.0	50	0	90.9	80-120	0			
Dichloromethane	46.77	10	50	0	93.5	65-133	0			
Ethylbenzene	46.46	5.0	50	0	92.9	80-120	0			
Toluene	46.64	5.0	50	0	93.3	80-120	0			
Xylenes, Total	137.5	15	150	0	91.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.44*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.66*	5.0	*50*	0	*95.3*	*72-125*	0			
Surr: Dibromofluoromethane	*45.41*	5.0	*50*	0	*90.8*	*71-125*	0			
Surr: Toluene-d8	*49.39*	5.0	*50*	0	*98.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86101** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001280-02AMS** Units: **µg/L** Analysis Date: **1/19/2010 01:59 PM**

Client ID: Run ID: **VOA2_100119A** SeqNo: **1859246** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	245	25	250	0	98	78-120	0			
Benzene	244	25	250	0	97.6	73-121	0			
Chlorobenzene	226.8	25	250	0	90.7	80-120	0			
Dichloromethane	253.1	50	250	6.691	98.6	65-133	0			
Ethylbenzene	223.7	25	250	0	89.5	80-120	0			
Toluene	227.1	25	250	0	90.8	80-120	0			
Xylenes, Total	671	75	750	0	89.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*280.5*	25	*250*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*243.2*	25	*250*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*230.1*	25	*250*	0	*92*	*71-125*	0			
Surr: Toluene-d8	*250.8*	25	*250*	0	*100*	*75-125*	0			

MSD Sample ID: **1001280-02AMSD** Units: **µg/L** Analysis Date: **1/19/2010 02:24 PM**

Client ID: Run ID: **VOA2_100119A** SeqNo: **1859248** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	232.2	25	250	0	92.9	78-120	245	5.37	20	
Benzene	231.7	25	250	0	92.7	73-121	244	5.16	20	
Chlorobenzene	215.6	25	250	0	86.2	80-120	226.8	5.07	20	
Dichloromethane	229.1	50	250	6.691	89	65-133	253.1	9.94	20	
Ethylbenzene	211.5	25	250	0	84.6	80-120	223.7	5.59	20	
Toluene	216.5	25	250	0	86.6	80-120	227.1	4.75	20	
Xylenes, Total	637.3	75	750	0	85	80-120	671	5.16	20	
Surr: 1,2-Dichloroethane-d4	*260*	25	*250*	0	*104*	*70-125*	280.5	*7.6*	*20*	
Surr: 4-Bromofluorobenzene	*239*	25	*250*	0	*95.6*	*72-125*	243.2	*1.72*	*20*	
Surr: Dibromofluoromethane	*261.2*	25	*250*	0	*104*	*71-125*	230.1	*12.7*	*20*	
Surr: Toluene-d8	*247.2*	25	*250*	0	*98.9*	*75-125*	250.8	*1.45*	*20*	

The following samples were analyzed in this batch: 1001319-01A 1001319-14A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001319
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86140** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012010-R86140** Units: **µg/L** Analysis Date: **1/20/2010 01:27 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860112** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	5.0								
Toluene	U	5.0								
Surr: 1,2-Dichloroethane-d4	*53.93*	5.0	*50*	0	*108*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.4*	5.0	*50*	0	*96.8*	*72-125*	0			
Surr: Dibromofluoromethane	*51.6*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*49.84*	5.0	*50*	0	*99.7*	*75-125*	0			

LCS Sample ID: **VLCSW-012010-R86140** Units: **µg/L** Analysis Date: **1/20/2010 12:13 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860111** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.73	5.0	50	0	101	73-121	0			
Toluene	47.97	5.0	50	0	95.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.35*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.07*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*48.29*	5.0	*50*	0	*96.6*	*71-125*	0			
Surr: Toluene-d8	*51.34*	5.0	*50*	0	*103*	*75-125*	0			

MS Sample ID: **1001370-08AMS** Units: **µg/L** Analysis Date: **1/20/2010 03:54 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860114** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2413	250	2500	0	96.5	73-121	0			
Toluene	2261	250	2500	0	90.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*2641*	250	*2500*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*2432*	250	*2500*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*2656*	250	*2500*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*2493*	250	*2500*	0	*99.7*	*75-125*	0			

MSD Sample ID: **1001370-08AMSD** Units: **µg/L** Analysis Date: **1/20/2010 04:18 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860115** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2585	250	2500	0	103	73-121	2413	6.86	20	
Toluene	2419	250	2500	0	96.8	80-120	2261	6.77	20	
Surr: 1,2-Dichloroethane-d4	*2772*	250	*2500*	0	*111*	*70-125*	2641	*4.86*	*20*	
Surr: 4-Bromofluorobenzene	*2537*	250	*2500*	0	*101*	*72-125*	2432	*4.22*	*20*	
Surr: Dibromofluoromethane	*2820*	250	*2500*	0	*113*	*71-125*	2656	*5.98*	*20*	
Surr: Toluene-d8	*2631*	250	*2500*	0	*105*	*75-125*	2493	*5.4*	*20*	

The following samples were analyzed in this batch: 1001319-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

ALS Laboratory Group

Date: 27-Jan-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
WorkOrder: **1001319**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Chain of Custody Form

Page ___ of ___

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ALS Project Manager: | **ALS Work Order #:** 1009810

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW32A-011410	1-14-10	0830	GW		5	X	X									
2	WG-1620-MW38A-011410	1-14-10	0915	GW		5	X	X									
3	WG-1620-MW38B-011410	1-14-10	1010	GW		5	X	X									
4	WG-1620-MW24C-011410	1-14-10	1110	GW		5	X	X									
5	WG-1620-MW24B-011410	1-14-10	1200	GW		5	X	X									
6	WG-1620-MW27C-011410	1-14-10	1320	GW		5	X	X									
7	WG-1620-MW35A-011410	1-14-10	1420	GW		5	X	X									
8	WG-1620-MW35B-011410	1-14-10	1520	GW		5	X	X									
9	WG-1620-MW24A-011410	1-14-10	1615	GW		5	X	X									
10	WG-1620-MW22A-011510	1-15-10	0800	GW		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 1/15/10 Time: 12:15

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 1/15/10 12:15

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 2 of ____

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | **ALS Work Order #:** 1003I9

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW22A-011510-MS	1-15-10	0800	GW		5	X	X									
2	WG-1620-MW22A-011510-MSD	1-15-10	0800	GW		5	X	X									
3	WG-1620-FB02-011410	1-14-10	1645	GW		5	X	X									
4	WG-1620-MW22B-011510	1-15-10	0900	GW		5	X	X									
5	WG-1620-MW25A-011510	1-15-10	1005	GW		5	X	X									
6	WG-1620-MW25C-011510	1-15-10	1115	GW		5	X	X									
7	WG-1620 TB02-011510	1-15-10				2	X										
8																	
9																	
10																	

Sampler(s) Please Print & Sign: John Brayton JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: John Brayton	Date: 1/15/10	Time: 12:15	Received by:	Notes: 10 Work Days TAT.	
Relinquished by:	Date:	Time:	Received by (Laboratory): 1/15/10 12:15	Cooler ID	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **15-Jan-10 12:15**

Work Order: **1001319** Received by: **RNG**

Checklist completed by Richard Sanchez (eSignature) 15-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 18-Jan-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.2c, 1.7c, 1.9c	002	
Cooler(s)/Kit(s):	2444,2933,1938		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Lora Terrill

From: Eric C. Matzner [eric.matzner@pbwllc.com]
Sent: Monday, January 18, 2010 10:11 AM
To: Lora Terrill
Subject: RE: 1001319 UPRR HWPW GW Ack

Lora,
Could you change the sample ID for lab sample 1001319-09 to be "WG-1620-MW24AR-011410"? The rest of the WOA looks good.

Thanks,
Eric C. Matzner, P.G.
Pastor, Behling & Wheeler, LLC
512-671-3434

From: Lora Terrill [mailto:Lora.Terrill@ALSEnviro.com]
Sent: Monday, January 18, 2010 8:14 AM
To: Eric C. Matzner
Subject: 1001319 UPRR HWPW GW Ack

Lora Terrill
ALS Laboratory Group
10450 Stancliff Rd, Suite 210
Houston, Texas 77099-4338
(281) 530-5656
http://www.alsglobal.com

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

01-Feb-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW GW

Work Order: **1001396**

Dear Eric,

ALS Laboratory Group received 12 samples on 19-Jan-2010 05:35 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 51.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Work Order: 1001396

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Re Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40614, R86140, R86180, R86190

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				4

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40614, R86140, R86180, R86190

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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			5
S5	OI	**RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40614, R86140, R86180, R86190

ER #[1]	DESCRIPTION
1	Some Semivolatile surrogate recoveries are diluted out.
2	Batch 40614 Semivolatiles MS/MSD is an unrelated sample.
	Batch R86180 Volatiles MS/MSD is an unrelated sample.
	Batch R86190 Volatiles MS/MSD is an unrelated sample.
3	Batch 40614 Semivolatiles MS/MSD RPD is an unrelated sample.
4	Some Semivolatile and Volatiles samples could not be analyzed at a lower dilution due to the nature of the sample.
5	Int std naphthalene-d8 has marginally low area counts in 1001396-06B due to matrix interference. Int std 1,4-dichlorobenzene-d4 has marginally low area counts in 1001396-06B(DF10) due to matrix interference. All int stds have low area counts in 1001396-04B. Reanalysis at a further dilution confirms matrix interference

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

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Work Order: **1001396**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001396-01	WG-1620-MW15A-011810	Water		1/18/2010 09:40	1/19/2010 17:35	☐
1001396-02	WG-1620-MW15C-011810	Water		1/18/2010 10:25	1/19/2010 17:35	☐
1001396-03	WG-1620-MW17C-011810	Water		1/18/2010 11:25	1/19/2010 17:35	☐
1001396-04	WG-1620-MW17-011810	Water		1/18/2010 12:20	1/19/2010 17:35	☐
1001396-05	WG-1620-MW16-011810	Water		1/18/2010 13:25	1/19/2010 17:35	☐
1001396-06	WG-1620-MW55A-011810	Water		1/18/2010 14:15	1/19/2010 17:35	☐
1001396-07	WG-1620-MW19C-011810	Water		1/18/2010 15:10	1/19/2010 17:35	☐
1001396-08	WG-1620-MW52A-011810	Water		1/18/2010 16:00	1/19/2010 17:35	☐
1001396-09	WG-1620-MW23C-011810	Water		1/18/2010 16:50	1/19/2010 17:35	☐
1001396-10	WG-1620-MW18A-011810	Water		1/18/2010 17:50	1/19/2010 17:35	☐
1001396-11	WG-1620-FB03-011810	Water		1/18/2010 18:15	1/19/2010 17:35	☐
1001396-12	WG-1620-TB03-011810	Water		1/18/2010	1/19/2010 17:35	☐

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW15A-011810
Collection Date: 1/18/2010 09:40 AM

Work Order: 1001396
Lab ID: 1001396-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 00:18
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 00:18
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 00:18
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 00:18
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 00:18
2-Methylnaphthalene	**33**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:08
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 00:18
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 00:18
Acenaphthene	**170**		**3.6**	**8.0**	**µg/L**	40	1/28/2010 17:15
Acenaphthylene	**1.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Anthracene	**3.6**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 00:18
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 00:18
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 00:18
Bis(2-ethylhexyl)phthalate	**0.73**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 00:18
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 00:18
Di-n-butyl phthalate	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Dibenzofuran	**43**		**0.80**	**2.0**	**µg/L**	10	1/28/2010 14:08
Fluoranthene	**1.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Fluorene	**60**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:08
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 00:18
Naphthalene	**1.8**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 00:18
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 00:18
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 00:18
Phenanthrene	**7.4**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 00:18
Pyrene	**0.62**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:18
Surr: 2,4,6-Tribromophenol	*57.2*			*34-129*	*%REC*	1	1/27/2010 00:18
Surr: 2,4,6-Tribromophenol	*71.0*			*34-129*	*%REC*	10	1/28/2010 14:08
Surr: 2,4,6-Tribromophenol	*68.3*	J		*34-129*	*%REC*	40	1/28/2010 17:15
Surr: 2-Fluorobiphenyl	*57.4*			*40-125*	*%REC*	1	1/27/2010 00:18
Surr: 2-Fluorobiphenyl	*79.2*			*40-125*	*%REC*	10	1/28/2010 14:08
Surr: 2-Fluorobiphenyl	*83.2*	J		*40-125*	*%REC*	40	1/28/2010 17:15
Surr: 2-Fluorophenol	*62.5*			*20-120*	*%REC*	1	1/27/2010 00:18
Surr: 2-Fluorophenol	*70.5*			*20-120*	*%REC*	10	1/28/2010 14:08
Surr: 2-Fluorophenol	*81.3*	J		*20-120*	*%REC*	40	1/28/2010 17:15
Surr: 4-Terphenyl-d14	*60.6*			*40-135*	*%REC*	1	1/27/2010 00:18
Surr: 4-Terphenyl-d14	*75.9*			*40-135*	*%REC*	10	1/28/2010 14:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW15A-011810
Collection Date: 1/18/2010 09:40 AM

Work Order: 1001396
Lab ID: 1001396-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*81.2*	J		*40-135*	*%REC*	40	1/28/2010 17:15
Surr: Nitrobenzene-d5	*54.7*			*41-120*	*%REC*	1	1/27/2010 00:18
Surr: Nitrobenzene-d5	*64.9*			*41-120*	*%REC*	10	1/28/2010 14:08
Surr: Nitrobenzene-d5	*82.7*	J		*41-120*	*%REC*	40	1/28/2010 17:15
Surr: Phenol-d6	*55.9*			*20-120*	*%REC*	1	1/27/2010 00:18
Surr: Phenol-d6	*68.1*			*20-120*	*%REC*	10	1/28/2010 14:08
Surr: Phenol-d6	*80.0*	J		*20-120*	*%REC*	40	1/28/2010 17:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/20/2010 19:09
Benzene	**1.6**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:09
Dichloromethane	U		0.50	10	µg/L	1	1/20/2010 19:09
Ethylbenzene	**1.5**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:09
Toluene	U		0.50	5.0	µg/L	1	1/20/2010 19:09
Xylenes, Total	**1.5**	J	**1.0**	**15**	**µg/L**	1	1/20/2010 19:09
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	1	1/20/2010 19:09
Surr: 4-Bromofluorobenzene	*97.9*			*72-125*	*%REC*	1	1/20/2010 19:09
Surr: Dibromofluoromethane	*84.9*			*71-125*	*%REC*	1	1/20/2010 19:09
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/20/2010 19:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW15C-011810
Collection Date: 1/18/2010 10:25 AM

Work Order: 1001396
Lab ID: 1001396-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 00:38
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 00:38
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 00:38
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 00:38
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 00:38
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/27/2010 00:38
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 00:38
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 00:38
Acenaphthene	**9.7**		**0.090**	**0.20**	**µg/L**	1	1/27/2010 00:38
Acenaphthylene	**0.41**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
Anthracene	**0.31**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 00:38
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 00:38
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 00:38
Bis(2-ethylhexyl)phthalate	**0.65**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 00:38
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 00:38
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 00:38
Dibenzofuran	**7.5**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 00:38
Fluoranthene	**0.29**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
Fluorene	**1.1**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 00:38
Naphthalene	**0.57**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 00:38
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 00:38
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 00:38
Phenanthrene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 00:38
Pyrene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:38
Surr: 2,4,6-Tribromophenol	*56.6*			*34-129*	*%REC*	1	1/27/2010 00:38
Surr: 2-Fluorobiphenyl	*42.8*			*40-125*	*%REC*	1	1/27/2010 00:38
Surr: 2-Fluorophenol	*39.9*			*20-120*	*%REC*	1	1/27/2010 00:38
Surr: 4-Terphenyl-d14	*59.5*			*40-135*	*%REC*	1	1/27/2010 00:38
Surr: Nitrobenzene-d5	*41.6*			*41-120*	*%REC*	1	1/27/2010 00:38
Surr: Phenol-d6	*40.0*			*20-120*	*%REC*	1	1/27/2010 00:38
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/20/2010 19:34
Benzene	**1.2**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:34
Dichloromethane	U		0.50	10	µg/L	1	1/20/2010 19:34
Ethylbenzene	**0.58**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW15C-011810
Collection Date: 1/18/2010 10:25 AM

Work Order: 1001396
Lab ID: 1001396-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Toluene	U		0.50	5.0	µg/L	1	1/20/2010 19:34
Xylenes, Total	U		1.0	15	µg/L	1	1/20/2010 19:34
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	1/20/2010 19:34
Surr: 4-Bromofluorobenzene	*97.0*			*72-125*	*%REC*	1	1/20/2010 19:34
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	1/20/2010 19:34
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	1	1/20/2010 19:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW17C-011810
Collection Date: 1/18/2010 11:25 AM

Work Order: 1001396
Lab ID: 1001396-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 00:59
2,4-Dimethylphenol	**44**		**0.80**	**2.0**	**µg/L**	10	1/28/2010 14:29
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 00:59
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 00:59
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 00:59
2-Methylnaphthalene	**63**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:29
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 00:59
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 00:59
Acenaphthene	**130**		**4.5**	**10**	**µg/L**	50	1/28/2010 17:35
Acenaphthylene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Anthracene	**5.7**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Benz(a)anthracene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 00:59
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 00:59
Bis(2-ethylhexyl)phthalate	**3.9**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 00:59
Chrysene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 00:59
Dibenzofuran	**110**		**4.0**	**10**	**µg/L**	50	1/28/2010 17:35
Fluoranthene	**4.4**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Fluorene	**55**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:29
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 00:59
Naphthalene	**2,200**		**25**	**50**	**µg/L**	250	1/29/2010 11:02
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 00:59
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 00:59
Phenanthrene	**58**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:29
Phenol	**140**		**3.5**	**10**	**µg/L**	50	1/28/2010 17:35
Pyrene	**2.8**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 00:59
Surr: 2,4,6-Tribromophenol	*56.1*			*34-129*	*%REC*	1	1/27/2010 00:59
Surr: 2,4,6-Tribromophenol	*72.1*			*34-129*	*%REC*	10	1/28/2010 14:29
Surr: 2,4,6-Tribromophenol	*67.4*	J		*34-129*	*%REC*	50	1/28/2010 17:35
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	250	1/29/2010 11:02
Surr: 2-Fluorobiphenyl	*58.8*			*40-125*	*%REC*	1	1/27/2010 00:59
Surr: 2-Fluorobiphenyl	*82.3*			*40-125*	*%REC*	10	1/28/2010 14:29
Surr: 2-Fluorobiphenyl	*85.9*	J		*40-125*	*%REC*	50	1/28/2010 17:35
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	250	1/29/2010 11:02
Surr: 2-Fluorophenol	*77.3*			*20-120*	*%REC*	1	1/27/2010 00:59
Surr: 2-Fluorophenol	*94.0*			*20-120*	*%REC*	10	1/28/2010 14:29
Surr: 2-Fluorophenol	*112*	J		*20-120*	*%REC*	50	1/28/2010 17:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW17C-011810
Collection Date: 1/18/2010 11:25 AM

Work Order: 1001396
Lab ID: 1001396-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	250	1/29/2010 11:02
Surr: 4-Terphenyl-d14	*64.0*			*40-135*	*%REC*	1	1/27/2010 00:59
Surr: 4-Terphenyl-d14	*71.0*			*40-135*	*%REC*	10	1/28/2010 14:29
Surr: 4-Terphenyl-d14	*73.1*	J		*40-135*	*%REC*	50	1/28/2010 17:35
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	250	1/29/2010 11:02
Surr: Nitrobenzene-d5	*74.8*			*41-120*	*%REC*	1	1/27/2010 00:59
Surr: Nitrobenzene-d5	*76.5*			*41-120*	*%REC*	10	1/28/2010 14:29
Surr: Nitrobenzene-d5	*80.6*	J		*41-120*	*%REC*	50	1/28/2010 17:35
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	250	1/29/2010 11:02
Surr: Phenol-d6	*63.8*			*20-120*	*%REC*	1	1/27/2010 00:59
Surr: Phenol-d6	*77.1*			*20-120*	*%REC*	10	1/28/2010 14:29
Surr: Phenol-d6	*87.8*	J		*20-120*	*%REC*	50	1/28/2010 17:35
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	250	1/29/2010 11:02
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/20/2010 20:47
Benzene	**8.3**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:47
Dichloromethane	U		0.50	10	µg/L	1	1/20/2010 20:47
Ethylbenzene	**53**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:47
Toluene	**4.2**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:47
Xylenes, Total	**46**		**1.0**	**15**	**µg/L**	1	1/20/2010 20:47
Surr: 1,2-Dichloroethane-d4	*115*			*70-125*	*%REC*	1	1/20/2010 20:47
Surr: 4-Bromofluorobenzene	*102*			*72-125*	*%REC*	1	1/20/2010 20:47
Surr: Dibromofluoromethane	*111*			*71-125*	*%REC*	1	1/20/2010 20:47
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	1/20/2010 20:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW17-011810
Collection Date: 1/18/2010 12:20 PM

Work Order: 1001396
Lab ID: 1001396-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		1.0	2.0	µg/L	10	1/28/2010 16:33
2,4-Dimethylphenol	**3,700**		**80**	**200**	**µg/L**	1000	1/29/2010 10:21
2,4-Dinitrotoluene	U		0.90	2.0	µg/L	10	1/28/2010 16:33
2,6-Dinitrotoluene	U		0.70	2.0	µg/L	10	1/28/2010 16:33
2-Chloronaphthalene	U		1.0	2.0	µg/L	10	1/28/2010 16:33
2-Methylnaphthalene	**560**		**7.0**	**20**	**µg/L**	100	1/28/2010 16:54
4,6-Dinitro-2-methylphenol	U		0.80	2.0	µg/L	10	1/28/2010 16:33
4-Nitrophenol	U		0.70	10	µg/L	10	1/28/2010 16:33
Acenaphthene	**170**		**9.0**	**20**	**µg/L**	100	1/28/2010 16:54
Acenaphthylene	**6.7**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
Anthracene	**13**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
Benz(a)anthracene	U		0.70	2.0	µg/L	10	1/28/2010 16:33
Benzo(a)pyrene	U		0.80	2.0	µg/L	10	1/28/2010 16:33
Bis(2-chloroethoxy)methane	U		0.90	2.0	µg/L	10	1/28/2010 16:33
Bis(2-ethylhexyl)phthalate	U		2.0	2.0	µg/L	10	1/28/2010 16:33
Chrysene	U		0.70	2.0	µg/L	10	1/28/2010 16:33
Di-n-butyl phthalate	U		0.70	2.0	µg/L	10	1/28/2010 16:33
Dibenzofuran	**150**		**8.0**	**20**	**µg/L**	100	1/28/2010 16:54
Fluoranthene	**3.7**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
Fluorene	**76**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
N-Nitrosodiphenylamine	U		0.90	2.0	µg/L	10	1/28/2010 16:33
Naphthalene	**16,000**		**400**	**800**	**µg/L**	4000	1/29/2010 13:29
Nitrobenzene	U		0.90	2.0	µg/L	10	1/28/2010 16:33
Pentachlorophenol	U		0.80	2.0	µg/L	10	1/28/2010 16:33
Phenanthrene	**60**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
Phenol	**7,700**		**70**	**200**	**µg/L**	1000	1/29/2010 10:21
Pyrene	**2.1**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:33
Surr: 2,4,6-Tribromophenol	*61.6*			*34-129*	*%REC*	10	1/28/2010 16:33
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/28/2010 16:54
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 10:21
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	4000	1/29/2010 13:29
Surr: 2-Fluorobiphenyl	*71.9*			*40-125*	*%REC*	10	1/28/2010 16:33
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/28/2010 16:54
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 10:21
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	4000	1/29/2010 13:29
Surr: 2-Fluorophenol	*103*			*20-120*	*%REC*	10	1/28/2010 16:33
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/28/2010 16:54
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 10:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW17-011810
Collection Date: 1/18/2010 12:20 PM

Work Order: 1001396
Lab ID: 1001396-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	4000	1/29/2010 13:29
Surr: 4-Terphenyl-d14	*64.2*			*40-135*	*%REC*	10	1/28/2010 16:33
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/28/2010 16:54
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 10:21
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	4000	1/29/2010 13:29
Surr: Nitrobenzene-d5	*63.9*			*41-120*	*%REC*	10	1/28/2010 16:33
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/28/2010 16:54
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 10:21
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	4000	1/29/2010 13:29
Surr: Phenol-d6	*79.4*			*20-120*	*%REC*	10	1/28/2010 16:33
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/28/2010 16:54
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 10:21
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	4000	1/29/2010 13:29
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/20/2010 21:11
Benzene	**590**		**2.5**	**25**	**µg/L**	5	1/20/2010 21:11
Dichloromethane	U		2.5	50	µg/L	5	1/20/2010 21:11
Ethylbenzene	**260**		**2.5**	**25**	**µg/L**	5	1/20/2010 21:11
Toluene	**1,000**		**2.5**	**25**	**µg/L**	5	1/20/2010 21:11
Xylenes, Total	**720**		**5.0**	**75**	**µg/L**	5	1/20/2010 21:11
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	5	1/20/2010 21:11
Surr: 4-Bromofluorobenzene	*97.4*			*72-125*	*%REC*	5	1/20/2010 21:11
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	5	1/20/2010 21:11
Surr: Toluene-d8	*101*			*75-125*	*%REC*	5	1/20/2010 21:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW16-011810
Collection Date: 1/18/2010 01:25 PM

Work Order: 1001396
Lab ID: 1001396-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 13:26
2,4-Dimethylphenol	**2.5**		**0.080**	**0.20**	**µg/L**	1	1/28/2010 13:26
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 13:26
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 13:26
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 13:26
2-Methylnaphthalene	**79**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:49
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 13:26
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 13:26
Acenaphthene	**210**		**4.5**	**10**	**µg/L**	50	1/28/2010 17:56
Acenaphthylene	**4.1**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Anthracene	**8.4**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Benz(a)anthracene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 13:26
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 13:26
Bis(2-ethylhexyl)phthalate	**1.2**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 13:26
Chrysene	**0.088**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 13:26
Dibenzofuran	**120**		**4.0**	**10**	**µg/L**	50	1/28/2010 17:56
Fluoranthene	**3.7**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Fluorene	**96**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:49
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 13:26
Naphthalene	**1,900**		**50**	**100**	**µg/L**	500	1/29/2010 11:23
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 13:26
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 13:26
Phenanthrene	**38**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 14:49
Phenol	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Pyrene	**2.7**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:26
Surr: 2,4,6-Tribromophenol	*55.8*			*34-129*	*%REC*	1	1/28/2010 13:26
Surr: 2,4,6-Tribromophenol	*74.4*			*34-129*	*%REC*	10	1/28/2010 14:49
Surr: 2,4,6-Tribromophenol	*54.3*	J		*34-129*	*%REC*	50	1/28/2010 17:56
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	1/29/2010 11:23
Surr: 2-Fluorobiphenyl	*58.4*			*40-125*	*%REC*	1	1/28/2010 13:26
Surr: 2-Fluorobiphenyl	*77.8*			*40-125*	*%REC*	10	1/28/2010 14:49
Surr: 2-Fluorobiphenyl	*82.3*	J		*40-125*	*%REC*	50	1/28/2010 17:56
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	1/29/2010 11:23
Surr: 2-Fluorophenol	*60.8*			*20-120*	*%REC*	1	1/28/2010 13:26
Surr: 2-Fluorophenol	*89.3*			*20-120*	*%REC*	10	1/28/2010 14:49
Surr: 2-Fluorophenol	*109*	J		*20-120*	*%REC*	50	1/28/2010 17:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW16-011810
Collection Date: 1/18/2010 01:25 PM

Work Order: 1001396
Lab ID: 1001396-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	1/29/2010 11:23
Surr: 4-Terphenyl-d14	*65.2*			*40-135*	*%REC*	1	1/28/2010 13:26
Surr: 4-Terphenyl-d14	*73.5*			*40-135*	*%REC*	10	1/28/2010 14:49
Surr: 4-Terphenyl-d14	*77.6*	J		*40-135*	*%REC*	50	1/28/2010 17:56
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	1/29/2010 11:23
Surr: Nitrobenzene-d5	*83.2*			*41-120*	*%REC*	1	1/28/2010 13:26
Surr: Nitrobenzene-d5	*65.8*			*41-120*	*%REC*	10	1/28/2010 14:49
Surr: Nitrobenzene-d5	*66.3*	J		*41-120*	*%REC*	50	1/28/2010 17:56
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	1/29/2010 11:23
Surr: Phenol-d6	*68.3*			*20-120*	*%REC*	1	1/28/2010 13:26
Surr: Phenol-d6	*71.6*			*20-120*	*%REC*	10	1/28/2010 14:49
Surr: Phenol-d6	*78.6*	J		*20-120*	*%REC*	50	1/28/2010 17:56
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	1/29/2010 11:23
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/20/2010 21:36
Benzene	**31**		**2.5**	**25**	**µg/L**	5	1/20/2010 21:36
Dichloromethane	U		2.5	50	µg/L	5	1/20/2010 21:36
Ethylbenzene	**21**	J	**2.5**	**25**	**µg/L**	5	1/20/2010 21:36
Toluene	**3.4**	J	**2.5**	**25**	**µg/L**	5	1/20/2010 21:36
Xylenes, Total	**27**	J	**5.0**	**75**	**µg/L**	5	1/20/2010 21:36
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	5	1/20/2010 21:36
Surr: 4-Bromofluorobenzene	*99.8*			*72-125*	*%REC*	5	1/20/2010 21:36
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	5	1/20/2010 21:36
Surr: Toluene-d8	*102*			*75-125*	*%REC*	5	1/20/2010 21:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW55A-011810
Collection Date: 1/18/2010 02:15 PM

Work Order: 1001396
Lab ID: 1001396-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 02:01
2,4-Dimethylphenol	**280**		**8.0**	**20**	**µg/L**	100	1/29/2010 10:00
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 02:01
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 02:01
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 02:01
2-Methylnaphthalene	**390**		**7.0**	**20**	**µg/L**	100	1/29/2010 10:00
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 02:01
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 02:01
Acenaphthene	**190**		**9.0**	**20**	**µg/L**	100	1/29/2010 10:00
Acenaphthylene	**2.8**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:01
Anthracene	**21**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:12
Benz(a)anthracene	**1.8**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:01
Benzo(a)pyrene	**0.81**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 02:01
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 02:01
Bis(2-ethylhexyl)phthalate	**3.1**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 02:01
Chrysene	**1.7**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:01
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 02:01
Dibenzofuran	**130**		**8.0**	**20**	**µg/L**	100	1/29/2010 10:00
Fluoranthene	**8.1**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:01
Fluorene	**83**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:12
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 02:01
Naphthalene	**11,000**		**200**	**400**	**µg/L**	2000	1/29/2010 13:08
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 02:01
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 02:01
Phenanthrene	**84**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:12
Phenol	**25**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 16:12
Pyrene	**5.2**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:01
Surr: 2,4,6-Tribromophenol	*51.2*			*34-129*	*%REC*	1	1/27/2010 02:01
Surr: 2,4,6-Tribromophenol	*75.0*			*34-129*	*%REC*	10	1/28/2010 16:12
Surr: 2,4,6-Tribromophenol	*86.3*	J		*34-129*	*%REC*	100	1/29/2010 10:00
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	1/29/2010 13:08
Surr: 2-Fluorobiphenyl	*45.9*			*40-125*	*%REC*	1	1/27/2010 02:01
Surr: 2-Fluorobiphenyl	*81.8*			*40-125*	*%REC*	10	1/28/2010 16:12
Surr: 2-Fluorobiphenyl	*90.8*	J		*40-125*	*%REC*	100	1/29/2010 10:00
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	1/29/2010 13:08
Surr: 2-Fluorophenol	*52.7*			*20-120*	*%REC*	1	1/27/2010 02:01
Surr: 2-Fluorophenol	*76.5*			*20-120*	*%REC*	10	1/28/2010 16:12
Surr: 2-Fluorophenol	*98.2*	J		*20-120*	*%REC*	100	1/29/2010 10:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW55A-011810
Collection Date: 1/18/2010 02:15 PM

Work Order: 1001396
Lab ID: 1001396-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	1/29/2010 13:08
Surr: 4-Terphenyl-d14	*67.3*			*40-135*	*%REC*	1	1/27/2010 02:01
Surr: 4-Terphenyl-d14	*78.1*			*40-135*	*%REC*	10	1/28/2010 16:12
Surr: 4-Terphenyl-d14	*73.7*	J		*40-135*	*%REC*	100	1/29/2010 10:00
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	1/29/2010 13:08
Surr: Nitrobenzene-d5	*97.7*			*41-120*	*%REC*	1	1/27/2010 02:01
Surr: Nitrobenzene-d5	*79.6*			*41-120*	*%REC*	10	1/28/2010 16:12
Surr: Nitrobenzene-d5	*74.8*	J		*41-120*	*%REC*	100	1/29/2010 10:00
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	1/29/2010 13:08
Surr: Phenol-d6	*69.0*			*20-120*	*%REC*	1	1/27/2010 02:01
Surr: Phenol-d6	*92.2*			*20-120*	*%REC*	10	1/28/2010 16:12
Surr: Phenol-d6	*80.9*	J		*20-120*	*%REC*	100	1/29/2010 10:00
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	1/29/2010 13:08
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/20/2010 22:00
Benzene	**72**		**2.5**	**25**	**µg/L**	5	1/20/2010 22:00
Dichloromethane	U		2.5	50	µg/L	5	1/20/2010 22:00
Ethylbenzene	**200**		**2.5**	**25**	**µg/L**	5	1/20/2010 22:00
Toluene	**290**		**2.5**	**25**	**µg/L**	5	1/20/2010 22:00
Xylenes, Total	**470**		**5.0**	**75**	**µg/L**	5	1/20/2010 22:00
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	5	1/20/2010 22:00
Surr: 4-Bromofluorobenzene	*97.3*			*72-125*	*%REC*	5	1/20/2010 22:00
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	5	1/20/2010 22:00
Surr: Toluene-d8	*99.7*			*75-125*	*%REC*	5	1/20/2010 22:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW19C-011810
Collection Date: 1/18/2010 03:10 PM

Work Order: 1001396
Lab ID: 1001396-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 13:05
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 13:05
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 13:05
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 13:05
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 13:05
2-Methylnaphthalene	**1.7**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 13:05
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 13:05
Acenaphthene	**1.0**		**0.090**	**0.20**	**µg/L**	1	1/28/2010 13:05
Acenaphthylene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
Anthracene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 13:05
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 13:05
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 13:05
Bis(2-ethylhexyl)phthalate	**2.8**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 13:05
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 13:05
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 13:05
Dibenzofuran	**0.51**		**0.080**	**0.20**	**µg/L**	1	1/28/2010 13:05
Fluoranthene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
Fluorene	**0.32**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 13:05
Naphthalene	**90**		**1.0**	**2.0**	**µg/L**	10	1/28/2010 13:47
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 13:05
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 13:05
Phenanthrene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 13:05
Pyrene	**0.20**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 13:05
Surr: 2,4,6-Tribromophenol	*64.2*			*34-129*	*%REC*	1	1/28/2010 13:05
Surr: 2,4,6-Tribromophenol	*55.1*			*34-129*	*%REC*	10	1/28/2010 13:47
Surr: 2-Fluorobiphenyl	*64.5*			*40-125*	*%REC*	1	1/28/2010 13:05
Surr: 2-Fluorobiphenyl	*77.1*			*40-125*	*%REC*	10	1/28/2010 13:47
Surr: 2-Fluorophenol	*58.2*			*20-120*	*%REC*	1	1/28/2010 13:05
Surr: 2-Fluorophenol	*71.9*			*20-120*	*%REC*	10	1/28/2010 13:47
Surr: 4-Terphenyl-d14	*65.7*			*40-135*	*%REC*	1	1/28/2010 13:05
Surr: 4-Terphenyl-d14	*74.1*			*40-135*	*%REC*	10	1/28/2010 13:47
Surr: Nitrobenzene-d5	*55.1*			*41-120*	*%REC*	1	1/28/2010 13:05
Surr: Nitrobenzene-d5	*69.4*			*41-120*	*%REC*	10	1/28/2010 13:47
Surr: Phenol-d6	*60.1*			*20-120*	*%REC*	1	1/28/2010 13:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW19C-011810
Collection Date: 1/18/2010 03:10 PM

Work Order: 1001396
Lab ID: 1001396-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*73.3*			*20-120*	*%REC*	10	1/28/2010 13:47
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/20/2010 19:58
Benzene	**5.6**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:58
Dichloromethane	U		0.50	10	µg/L	1	1/20/2010 19:58
Ethylbenzene	**1.8**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:58
Toluene	**7.6**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 19:58
Xylenes, Total	**4.3**	J	**1.0**	**15**	**µg/L**	1	1/20/2010 19:58
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	1/20/2010 19:58
Surr: 4-Bromofluorobenzene	*97.0*			*72-125*	*%REC*	1	1/20/2010 19:58
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	1/20/2010 19:58
Surr: Toluene-d8	*99.2*			*75-125*	*%REC*	1	1/20/2010 19:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW52A-011810
Collection Date: 1/18/2010 04:00 PM

Work Order: 1001396
Lab ID: 1001396-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 02:42
2,4-Dimethylphenol	**4.6**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 02:42
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 02:42
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 02:42
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 02:42
2-Methylnaphthalene	**540**		**7.0**	**20**	**µg/L**	100	1/29/2010 11:43
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 02:42
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 02:42
Acenaphthene	**360**		**9.0**	**20**	**µg/L**	100	1/29/2010 11:43
Acenaphthylene	**4.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:42
Anthracene	**22**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 08:57
Benz(a)anthracene	**0.47**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:42
Benzo(a)pyrene	**0.13**	J	**0.080**	**0.20**	**µg/L**	1	1/27/2010 02:42
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 02:42
Bis(2-ethylhexyl)phthalate	**0.32**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 02:42
Chrysene	**0.41**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:42
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 02:42
Dibenzofuran	**280**		**8.0**	**20**	**µg/L**	100	1/29/2010 11:43
Fluoranthene	**15**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 08:57
Fluorene	**230**		**7.0**	**20**	**µg/L**	100	1/29/2010 11:43
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 02:42
Naphthalene	**3,900**		**100**	**200**	**µg/L**	1000	1/29/2010 12:04
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 02:42
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 02:42
Phenanthrene	**240**		**7.0**	**20**	**µg/L**	100	1/29/2010 11:43
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 02:42
Pyrene	**6.6**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 02:42
Surr: 2,4,6-Tribromophenol	*51.8*			*34-129*	*%REC*	1	1/27/2010 02:42
Surr: 2,4,6-Tribromophenol	*69.6*			*34-129*	*%REC*	10	1/29/2010 08:57
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 11:43
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 12:04
Surr: 2-Fluorobiphenyl	*47.1*			*40-125*	*%REC*	1	1/27/2010 02:42
Surr: 2-Fluorobiphenyl	*72.9*			*40-125*	*%REC*	10	1/29/2010 08:57
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 11:43
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 12:04
Surr: 2-Fluorophenol	*60.5*			*20-120*	*%REC*	1	1/27/2010 02:42
Surr: 2-Fluorophenol	*72.1*			*20-120*	*%REC*	10	1/29/2010 08:57
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 11:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW52A-011810
Collection Date: 1/18/2010 04:00 PM

Work Order: 1001396
Lab ID: 1001396-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 12:04
Surr: 4-Terphenyl-d14	*59.2*			*40-135*	*%REC*	1	1/27/2010 02:42
Surr: 4-Terphenyl-d14	*69.8*			*40-135*	*%REC*	10	1/29/2010 08:57
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 11:43
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 12:04
Surr: Nitrobenzene-d5	*90.1*			*41-120*	*%REC*	1	1/27/2010 02:42
Surr: Nitrobenzene-d5	*74.6*			*41-120*	*%REC*	10	1/29/2010 08:57
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 11:43
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 12:04
Surr: Phenol-d6	*57.9*			*20-120*	*%REC*	1	1/27/2010 02:42
Surr: Phenol-d6	*79.9*			*20-120*	*%REC*	10	1/29/2010 08:57
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 11:43
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 12:04
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/20/2010 22:25
Benzene	**4.7**	J	**2.5**	**25**	**µg/L**	5	1/20/2010 22:25
Dichloromethane	U		2.5	50	µg/L	5	1/20/2010 22:25
Ethylbenzene	**14**	J	**2.5**	**25**	**µg/L**	5	1/20/2010 22:25
Toluene	**12**	J	**2.5**	**25**	**µg/L**	5	1/20/2010 22:25
Xylenes, Total	**44**	J	**5.0**	**75**	**µg/L**	5	1/20/2010 22:25
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	5	1/20/2010 22:25
Surr: 4-Bromofluorobenzene	*96.1*			*72-125*	*%REC*	5	1/20/2010 22:25
Surr: Dibromofluoromethane	*100*			*71-125*	*%REC*	5	1/20/2010 22:25
Surr: Toluene-d8	*99.3*			*75-125*	*%REC*	5	1/20/2010 22:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW23C-011810
Collection Date: 1/18/2010 04:50 PM

Work Order: 1001396
Lab ID: 1001396-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 03:03
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 03:03
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 03:03
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 03:03
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 03:03
2-Methylnaphthalene	**750**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 03:03
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 03:03
Acenaphthene	**1,200**		**45**	**100**	**µg/L**	500	1/29/2010 12:26
Acenaphthylene	**10**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 15:31
Anthracene	**360**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
Benz(a)anthracene	**120**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
Benzo(a)pyrene	**29**		**0.80**	**2.0**	**µg/L**	10	1/28/2010 15:31
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 03:03
Bis(2-ethylhexyl)phthalate	**1.1**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 03:03
Chrysene	**93**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 15:31
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 03:03
Dibenzofuran	**1,200**		**40**	**100**	**µg/L**	500	1/29/2010 12:26
Fluoranthene	**770**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
Fluorene	**820**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 03:03
Naphthalene	**3,900**		**50**	**100**	**µg/L**	500	1/29/2010 12:26
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 03:03
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 03:03
Phenanthrene	**2,700**		**35**	**100**	**µg/L**	500	1/29/2010 12:26
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 03:03
Pyrene	**590**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:18
Surr: 2,4,6-Tribromophenol	*74.4*			*34-129*	*%REC*	1	1/27/2010 03:03
Surr: 2,4,6-Tribromophenol	*59.3*			*34-129*	*%REC*	10	1/28/2010 15:31
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 09:18
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	1/29/2010 12:26
Surr: 2-Fluorobiphenyl	*68.1*			*40-125*	*%REC*	1	1/27/2010 03:03
Surr: 2-Fluorobiphenyl	*54.3*			*40-125*	*%REC*	10	1/28/2010 15:31
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 09:18
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	1/29/2010 12:26
Surr: 2-Fluorophenol	*54.9*			*20-120*	*%REC*	1	1/27/2010 03:03
Surr: 2-Fluorophenol	*62.8*			*20-120*	*%REC*	10	1/28/2010 15:31
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 09:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW23C-011810
Collection Date: 1/18/2010 04:50 PM

Work Order: 1001396
Lab ID: 1001396-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	1/29/2010 12:26
Surr: 4-Terphenyl-d14	*82.5*			*40-135*	*%REC*	1	1/27/2010 03:03
Surr: 4-Terphenyl-d14	*97.3*			*40-135*	*%REC*	10	1/28/2010 15:31
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 09:18
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	1/29/2010 12:26
Surr: Nitrobenzene-d5	*61.8*			*41-120*	*%REC*	1	1/27/2010 03:03
Surr: Nitrobenzene-d5	*84.9*			*41-120*	*%REC*	10	1/28/2010 15:31
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 09:18
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	1/29/2010 12:26
Surr: Phenol-d6	*48.5*			*20-120*	*%REC*	1	1/27/2010 03:03
Surr: Phenol-d6	*66.9*			*20-120*	*%REC*	10	1/28/2010 15:31
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 09:18
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	1/29/2010 12:26
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/20/2010 20:22
Benzene	**12**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:22
Dichloromethane	U		0.50	10	µg/L	1	1/20/2010 20:22
Ethylbenzene	**74**		**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:22
Toluene	**1.2**	J	**0.50**	**5.0**	**µg/L**	1	1/20/2010 20:22
Xylenes, Total	**44**		**1.0**	**15**	**µg/L**	1	1/20/2010 20:22
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/20/2010 20:22
Surr: 4-Bromofluorobenzene	*95.3*			*72-125*	*%REC*	1	1/20/2010 20:22
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	1/20/2010 20:22
Surr: Toluene-d8	*97.3*			*75-125*	*%REC*	1	1/20/2010 20:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW18A-011810
Collection Date: 1/18/2010 05:50 PM

Work Order: 1001396
Lab ID: 1001396-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/21/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 03:23
2,4-Dimethylphenol	**4,500**		**80**	**200**	**µg/L**	1000	1/29/2010 12:47
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 03:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 03:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 03:23
2-Methylnaphthalene	**360**		**7.0**	**20**	**µg/L**	100	1/29/2010 09:39
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 03:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 03:23
Acenaphthene	**230**		**9.0**	**20**	**µg/L**	100	1/29/2010 09:39
Acenaphthylene	**6.2**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 03:23
Anthracene	**6.9**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 03:23
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 03:23
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 03:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 03:23
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/27/2010 03:23
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 03:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 03:23
Dibenzofuran	**150**		**8.0**	**20**	**µg/L**	100	1/29/2010 09:39
Fluoranthene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 03:23
Fluorene	**96**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 15:52
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 03:23
Naphthalene	**4,300**		**100**	**200**	**µg/L**	1000	1/29/2010 12:47
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 03:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 03:23
Phenanthrene	**67**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 15:52
Phenol	**43**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 15:52
Pyrene	**0.75**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 03:23
Surr: 2,4,6-Tribromophenol	*61.8*			*34-129*	*%REC*	1	1/27/2010 03:23
Surr: 2,4,6-Tribromophenol	*70.0*			*34-129*	*%REC*	10	1/28/2010 15:52
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 09:39
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 12:47
Surr: 2-Fluorobiphenyl	*48.0*			*40-125*	*%REC*	1	1/27/2010 03:23
Surr: 2-Fluorobiphenyl	*76.2*			*40-125*	*%REC*	10	1/28/2010 15:52
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 09:39
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 12:47
Surr: 2-Fluorophenol	*62.0*			*20-120*	*%REC*	1	1/27/2010 03:23
Surr: 2-Fluorophenol	*79.1*			*20-120*	*%REC*	10	1/28/2010 15:52
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 09:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW18A-011810
Collection Date: 1/18/2010 05:50 PM

Work Order: 1001396
Lab ID: 1001396-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 12:47
Surr: 4-Terphenyl-d14	*64.7*			*40-135*	*%REC*	1	1/27/2010 03:23
Surr: 4-Terphenyl-d14	*71.7*			*40-135*	*%REC*	10	1/28/2010 15:52
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 09:39
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 12:47
Surr: Nitrobenzene-d5	*77.0*			*41-120*	*%REC*	1	1/27/2010 03:23
Surr: Nitrobenzene-d5	*55.6*			*41-120*	*%REC*	10	1/28/2010 15:52
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 09:39
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 12:47
Surr: Phenol-d6	*63.2*			*20-120*	*%REC*	1	1/27/2010 03:23
Surr: Phenol-d6	*72.0*			*20-120*	*%REC*	10	1/28/2010 15:52
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 09:39
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 12:47
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
1,1,2,2-Tetrachloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
1,1,2-Trichloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
1,1-Dichloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
1,1-Dichloroethene	U		5.0	50	µg/L	10	1/22/2010 22:14
1,2-Dichloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
1,2-Dichloropropane	U		5.0	50	µg/L	10	1/22/2010 22:14
2-Butanone	U		8.0	100	µg/L	10	1/22/2010 22:14
2-Hexanone	U		10	100	µg/L	10	1/22/2010 22:14
4-Methyl-2-pentanone	U		10	100	µg/L	10	1/22/2010 22:14
Acetone	U		10	100	µg/L	10	1/22/2010 22:14
Benzene	**510**		**5.0**	**50**	**µg/L**	10	1/22/2010 22:14
Bromodichloromethane	U		5.0	50	µg/L	10	1/22/2010 22:14
Bromoform	U		5.0	50	µg/L	10	1/22/2010 22:14
Bromomethane	U		9.0	50	µg/L	10	1/22/2010 22:14
Carbon disulfide	U		5.0	100	µg/L	10	1/22/2010 22:14
Carbon tetrachloride	U		5.0	50	µg/L	10	1/22/2010 22:14
Chlorobenzene	U		5.0	50	µg/L	10	1/22/2010 22:14
Chloroethane	U		5.0	50	µg/L	10	1/22/2010 22:14
Chloroform	U		5.0	50	µg/L	10	1/22/2010 22:14
Chloromethane	U		5.0	50	µg/L	10	1/22/2010 22:14
cis-1,2-Dichloroethene	**20**	J	**5.0**	**50**	**µg/L**	10	1/22/2010 22:14
cis-1,3-Dichloropropene	U		5.0	50	µg/L	10	1/22/2010 22:14
Dibromochloromethane	U		5.0	50	µg/L	10	1/22/2010 22:14
Dichloromethane	U		5.0	100	µg/L	10	1/22/2010 22:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW18A-011810
Collection Date: 1/18/2010 05:50 PM

Work Order: 1001396
Lab ID: 1001396-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	**480**		**5.0**	**50**	**µg/L**	10	1/22/2010 22:14
Methyl tert-butyl ether	U		5.0	50	µg/L	10	1/22/2010 22:14
Styrene	U		5.0	50	µg/L	10	1/22/2010 22:14
Tetrachloroethene	U		6.0	50	µg/L	10	1/22/2010 22:14
Toluene	**320**		**5.0**	**50**	**µg/L**	10	1/22/2010 22:14
trans-1,2-Dichloroethene	U		5.0	50	µg/L	10	1/22/2010 22:14
trans-1,3-Dichloropropene	U		5.0	50	µg/L	10	1/22/2010 22:14
Trichloroethene	U		5.0	50	µg/L	10	1/22/2010 22:14
Vinyl chloride	**59**		**5.0**	**20**	**µg/L**	10	1/22/2010 22:14
Xylenes, Total	**1,200**		**10**	**150**	**µg/L**	10	1/22/2010 22:14
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	10	1/22/2010 22:14
Surr: 4-Bromofluorobenzene	*94.1*			*72-125*	*%REC*	10	1/22/2010 22:14
Surr: Dibromofluoromethane	*99.8*			*71-125*	*%REC*	10	1/22/2010 22:14
Surr: Toluene-d8	*97.0*			*75-125*	*%REC*	10	1/22/2010 22:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FB03-011810
Collection Date: 1/18/2010 06:15 PM

Work Order: 1001396
Lab ID: 1001396-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**		Prep: SW3510 / 1/21/10			Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 12:45
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:45
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 12:45
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 12:45
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:45
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 12:45
Acenaphthene	U		0.090	0.20	µg/L	1	1/28/2010 12:45
Acenaphthylene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 12:45
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 12:45
Bis(2-ethylhexyl)phthalate	**0.52**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 12:45
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Dibenzofuran	U		0.080	0.20	µg/L	1	1/28/2010 12:45
Fluoranthene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Fluorene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 12:45
Naphthalene	**0.61**		**0.10**	**0.20**	**µg/L**	1	1/28/2010 12:45
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 12:45
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 12:45
Phenanthrene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Pyrene	U		0.070	0.20	µg/L	1	1/28/2010 12:45
Surr: 2,4,6-Tribromophenol	*43.3*			*34-129*	*%REC*	1	1/28/2010 12:45
Surr: 2-Fluorobiphenyl	*45.6*			*40-125*	*%REC*	1	1/28/2010 12:45
Surr: 2-Fluorophenol	*43.6*			*20-120*	*%REC*	1	1/28/2010 12:45
Surr: 4-Terphenyl-d14	*60.4*			*40-135*	*%REC*	1	1/28/2010 12:45
Surr: Nitrobenzene-d5	*42.5*			*41-120*	*%REC*	1	1/28/2010 12:45
Surr: Phenol-d6	*45.2*			*20-120*	*%REC*	1	1/28/2010 12:45
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 13:41
Benzene	U		0.50	5.0	µg/L	1	1/22/2010 13:41
Dichloromethane	U		0.50	10	µg/L	1	1/22/2010 13:41
Ethylbenzene	U		0.50	5.0	µg/L	1	1/22/2010 13:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FB03-011810
Collection Date: 1/18/2010 06:15 PM

Work Order: 1001396
Lab ID: 1001396-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Toluene	U		0.50	5.0	µg/L	1	1/22/2010 13:41
Xylenes, Total	U		1.0	15	µg/L	1	1/22/2010 13:41
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/22/2010 13:41
Surr: 4-Bromofluorobenzene	*95.4*			*72-125*	*%REC*	1	1/22/2010 13:41
Surr: Dibromofluoromethane	*97.7*			*71-125*	*%REC*	1	1/22/2010 13:41
Surr: Toluene-d8	*98.3*			*75-125*	*%REC*	1	1/22/2010 13:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TB03-011810
Collection Date: 1/18/2010

Work Order: 1001396
Lab ID: 1001396-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,1,2,2-Tetrachloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,1,2-Trichloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,1-Dichloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,1-Dichloroethene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
1,2-Dichloropropane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
2-Butanone	U		0.80	10	µg/L	1	1/21/2010 14:48
2-Hexanone	U		1.0	10	µg/L	1	1/21/2010 14:48
4-Methyl-2-pentanone	U		1.0	10	µg/L	1	1/21/2010 14:48
Acetone	U		1.0	10	µg/L	1	1/21/2010 14:48
Benzene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Bromodichloromethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Bromoform	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Bromomethane	U		0.90	5.0	µg/L	1	1/21/2010 14:48
Carbon disulfide	U		0.50	10	µg/L	1	1/21/2010 14:48
Carbon tetrachloride	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Chlorobenzene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Chloroethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Chloroform	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Chloromethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
cis-1,2-Dichloroethene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
cis-1,3-Dichloropropene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Dibromochloromethane	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Dichloromethane	U		0.50	10	µg/L	1	1/21/2010 14:48
Ethylbenzene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Methyl tert-butyl ether	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Styrene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Tetrachloroethene	U		0.60	5.0	µg/L	1	1/21/2010 14:48
Toluene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
trans-1,2-Dichloroethene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
trans-1,3-Dichloropropene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Trichloroethene	U		0.50	5.0	µg/L	1	1/21/2010 14:48
Vinyl chloride	U		0.50	2.0	µg/L	1	1/21/2010 14:48
Xylenes, Total	U		1.0	15	µg/L	1	1/21/2010 14:48
Surr: 1,2-Dichloroethane-d4	*123*			*70-125*	*%REC*	1	1/21/2010 14:48
Surr: 4-Bromofluorobenzene	*96.9*			*72-125*	*%REC*	1	1/21/2010 14:48
Surr: Dibromofluoromethane	*97.5*			*71-125*	*%REC*	1	1/21/2010 14:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TB03-011810
Collection Date: 1/18/2010

Work Order: 1001396
Lab ID: 1001396-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Toluene-d8	*99.8*			*75-125*	*%REC*	1	1/21/2010 14:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001396
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1,1-Trichloroethane	71-55-6	0.5	5
A	1,1,2,2-Tetrachloroethane	79-34-5	0.5	5
A	1,1,2-Trichloroethane	79-00-5	0.5	5
A	1,1-Dichloroethane	75-34-3	0.5	5
A	1,1-Dichloroethene	75-35-4	0.5	5
A	1,2-Dichloroethane	107-06-2	0.5	5
A	1,2-Dichloropropane	78-87-5	0.5	5
A	2-Butanone	78-93-3	0.8	10
A	2-Hexanone	591-78-6	1	10
A	4-Methyl-2-pentanone	108-10-1	1	10
A	Acetone	67-64-1	1	10
A	Benzene	71-43-2	0.5	5
A	Bromodichloromethane	75-27-4	0.5	5
A	Bromoform	75-25-2	0.5	5
A	Bromomethane	74-83-9	0.9	5
A	Carbon disulfide	75-15-0	0.5	10
A	Carbon tetrachloride	56-23-5	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Chloroethane	75-00-3	0.5	5
A	Chloroform	67-66-3	0.5	5
A	Chloromethane	74-87-3	0.5	5
A	cis-1,2-Dichloroethene	156-59-2	0.5	5
A	cis-1,3-Dichloropropene	10061-01-5	0.5	5
A	Dibromochloromethane	124-48-1	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Methyl tert-butyl ether	1634-04-4	0.5	5
A	Styrene	100-42-5	0.5	5
A	Tetrachloroethene	127-18-4	0.6	5
A	Toluene	108-88-3	0.5	5
A	trans-1,2-Dichloroethene	156-60-5	0.5	5
A	trans-1,3-Dichloropropene	10061-02-6	0.5	5
A	Trichloroethene	79-01-6	0.5	5
A	Vinyl chloride	75-01-4	0.5	2
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001396
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **40614** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100121-40614** Units: **µg/L** Analysis Date: **1/26/2010 09:23 AM**

Client ID: Run ID: **SV-2_100126A** SeqNo: **1864630** Prep Date: **1/21/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.423*	0.20	*5*	0	*68.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.78*	0.20	*5*	0	*75.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.511*	0.20	*5*	0	*70.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.894*	0.20	*5*	0	*77.9*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.455*	0.20	*5*	0	*69.1*	*41-120*	0			
Surr: Phenol-d6	*3.563*	0.20	*5*	0	*71.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40614** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW1-100121-40614** Units: **µg/L** Analysis Date: **1/26/2010 09:44 AM**

Client ID: Run ID: **SV-2_100126A** SeqNo: **1864631** Prep Date: **1/21/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.539	0.20	5	0	90.8	39-127	0			
2,4-Dimethylphenol	3.661	0.20	5	0	73.2	35-120	0			
2,4-Dinitrotoluene	4.377	0.20	5	0	87.5	50-122	0			
2,6-Dinitrotoluene	4.719	0.20	5	0	94.4	50-120	0			
2-Chloronaphthalene	5.136	0.20	5	0	103	50-120	0			
2-Methylnaphthalene	4.467	0.20	5	0	89.3	50-120	0			
4,6-Dinitro-2-methylphenol	3.627	0.20	5	0	72.5	25-121	0			
4-Nitrophenol	4.231	1.0	5	0	84.6	30-130	0			
Acenaphthene	4.142	0.20	5	0	82.8	45-120	0			
Acenaphthylene	4.545	0.20	5	0	90.9	47-120	0			
Anthracene	4.464	0.20	5	0	89.3	45-120	0			
Benz(a)anthracene	4.474	0.20	5	0	89.5	40-120	0			
Benzo(a)pyrene	4.73	0.20	5	0	94.6	45-120	0			
Bis(2-chloroethoxy)methane	4.474	0.20	5	0	89.5	45-120	0			
Bis(2-ethylhexyl)phthalate	4.515	0.20	5	0	90.3	40-139	0			
Chrysene	4.431	0.20	5	0	88.6	43-120	0			
Di-n-butyl phthalate	4.423	0.20	5	0	88.5	45-123	0			
Dibenzofuran	4.367	0.20	5	0	87.3	50-120	0			
Fluoranthene	4.314	0.20	5	0	86.3	45-125	0			
Fluorene	4.7	0.20	5	0	94	49-120	0			
N-Nitrosodiphenylamine	4.343	0.20	5	0	86.9	40-125	0			
Naphthalene	4.601	0.20	5	0	92	45-120	0			
Nitrobenzene	4.207	0.20	5	0	84.1	44-120	0			
Pentachlorophenol	3.597	0.20	5	0	71.9	19-121	0			
Phenanthrene	4.428	0.20	5	0	88.6	45-121	0			
Phenol	4.203	0.20	5	0	84.1	20-124	0			
Pyrene	4.37	0.20	5	0	87.4	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.354*	0.20	*5*	0	*87.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.15*	0.20	*5*	0	*83*	*40-125*	0			
Surr: 2-Fluorophenol	*3.937*	0.20	*5*	0	*78.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.948*	0.20	*5*	0	*79*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.739*	0.20	*5*	0	*74.8*	*41-120*	0			
Surr: Phenol-d6	*4.007*	0.20	*5*	0	*80.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40614** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1001390-01AMS** Units: **µg/L** Analysis Date: **1/26/2010 10:26 AM**

Client ID: Run ID: **SV-2_100126A** SeqNo: **1864633** Prep Date: **1/21/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.787	0.20	5	0	75.7	39-127	0			
2,4-Dimethylphenol	3.292	0.20	5	0	65.8	35-120	0			
2,4-Dinitrotoluene	3.884	0.20	5	0	77.7	50-122	0			
2,6-Dinitrotoluene	4.157	0.20	5	0	83.1	50-120	0			
2-Chloronaphthalene	4.079	0.20	5	0	81.6	50-120	0			
2-Methylnaphthalene	3.961	0.20	5	0	79.2	50-120	0			
4,6-Dinitro-2-methylphenol	3.858	0.20	5	0	77.2	25-121	0			
4-Nitrophenol	3.972	1.0	5	0	79.4	30-130	0			
Acenaphthene	3.568	0.20	5	0	71.4	45-120	0			
Acenaphthylene	3.926	0.20	5	0	78.5	47-120	0			
Anthracene	3.863	0.20	5	0	77.3	45-120	0			
Benz(a)anthracene	4.034	0.20	5	0	80.7	40-120	0			
Benzo(a)pyrene	4.026	0.20	5	0	80.5	45-120	0			
Bis(2-chloroethoxy)methane	3.766	0.20	5	0	75.3	45-120	0			
Bis(2-ethylhexyl)phthalate	36.86	0.20	5	26.13	215	40-139	0			SEO
Chrysene	4.151	0.20	5	0	83	43-120	0			
Di-n-butyl phthalate	3.985	0.20	5	0.0973	77.7	45-123	0			
Dibenzofuran	3.786	0.20	5	0	75.7	50-120	0			
Fluoranthene	3.781	0.20	5	0	75.6	45-125	0			
Fluorene	4.063	0.20	5	0	81.3	49-120	0			
N-Nitrosodiphenylamine	3.744	0.20	5	0	74.9	40-125	0			
Naphthalene	3.947	0.20	5	0	78.9	45-120	0			
Nitrobenzene	3.539	0.20	5	0	70.8	44-120	0			
Pentachlorophenol	3.924	0.20	5	0.06558	77.2	19-121	0			
Phenanthrene	4.104	0.20	5	0	82.1	45-121	0			
Phenol	3.633	0.20	5	0	72.7	20-124	0			
Pyrene	3.996	0.20	5	0	79.9	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.793*	0.20	*5*	0	*75.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.663*	0.20	*5*	0	*73.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.363*	0.20	*5*	0	*67.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.67*	0.20	*5*	0	*73.4*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.094*	0.20	*5*	0	*61.9*	*41-120*	0			
Surr: Phenol-d6	*3.335*	0.20	*5*	0	*66.7*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40614** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1001390-01AMSD** Units: **µg/L** Analysis Date: **1/26/2010 10:46 AM**

Client ID: Run ID: **SV-2_100126A** SeqNo: **1864637** Prep Date: **1/21/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.238	0.20	5	0	84.8	39-127	3.787	11.2	20	
2,4-Dimethylphenol	3.365	0.20	5	0	67.3	35-120	3.292	2.18	20	
2,4-Dinitrotoluene	3.699	0.20	5	0	74	50-122	3.884	4.9	20	
2,6-Dinitrotoluene	3.821	0.20	5	0	76.4	50-120	4.157	8.43	20	
2-Chloronaphthalene	4.92	0.20	5	0	98.4	50-120	4.079	18.7	20	
2-Methylnaphthalene	3.9	0.20	5	0	78	50-120	3.961	1.54	20	
4,6-Dinitro-2-methylphenol	3.828	0.20	5	0	76.6	25-121	3.858	0.77	20	
4-Nitrophenol	3.775	1.0	5	0	75.5	30-130	3.972	5.08	20	
Acenaphthene	3.528	0.20	5	0	70.6	45-120	3.568	1.14	20	
Acenaphthylene	3.81	0.20	5	0	76.2	47-120	3.926	2.98	20	
Anthracene	3.825	0.20	5	0	76.5	45-120	3.863	0.977	20	
Benz(a)anthracene	3.858	0.20	5	0	77.2	40-120	4.034	4.45	20	
Benzo(a)pyrene	3.869	0.20	5	0	77.4	45-120	4.026	3.97	20	
Bis(2-chloroethoxy)methane	3.708	0.20	5	0	74.2	45-120	3.766	1.57	20	
Bis(2-ethylhexyl)phthalate	20.69	0.20	5	26.13	-109	40-139	36.86	56.2	20	SREO
Chrysene	4.056	0.20	5	0	81.1	43-120	4.151	2.33	20	
Di-n-butyl phthalate	3.988	0.20	5	0.0973	77.8	45-123	3.985	0.0909	20	
Dibenzofuran	3.7	0.20	5	0	74	50-120	3.786	2.29	20	
Fluoranthene	3.764	0.20	5	0	75.3	45-125	3.781	0.461	20	
Fluorene	3.862	0.20	5	0	77.2	49-120	4.063	5.07	20	
N-Nitrosodiphenylamine	3.833	0.20	5	0	76.7	40-125	3.744	2.33	20	
Naphthalene	3.908	0.20	5	0	78.2	45-120	3.947	0.978	20	
Nitrobenzene	3.435	0.20	5	0	68.7	44-120	3.539	2.99	20	
Pentachlorophenol	4.043	0.20	5	0.06558	79.6	19-121	3.924	2.98	20	
Phenanthrene	3.96	0.20	5	0	79.2	45-121	4.104	3.56	20	
Phenol	3.51	0.20	5	0	70.2	20-124	3.633	3.44	20	
Pyrene	3.773	0.20	5	0	75.5	40-130	3.996	5.73	20	
Surr: 2,4,6-Tribromophenol	*3.876*	0.20	*5*	0	*77.5*	*34-129*	3.793	*2.17*	*20*	
Surr: 2-Fluorobiphenyl	*3.495*	0.20	*5*	0	*69.9*	*40-125*	3.663	*4.7*	*20*	
Surr: 2-Fluorophenol	*3.298*	0.20	*5*	0	*66*	*20-120*	3.363	*1.96*	*20*	
Surr: 4-Terphenyl-d14	*3.395*	0.20	*5*	0	*67.9*	*40-135*	3.67	*7.77*	*20*	
Surr: Nitrobenzene-d5	*3.157*	0.20	*5*	0	*63.1*	*41-120*	3.094	*2.01*	*20*	
Surr: Phenol-d6	*3.385*	0.20	*5*	0	*67.7*	*20-120*	3.335	*1.48*	*20*	

The following samples were analyzed in this batch:

1001396-01B	1001396-02B	1001396-03B
1001396-04B	1001396-05B	1001396-06B
1001396-07B	1001396-08B	1001396-09B
1001396-10B	1001396-11B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86140** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012010-R86140** Units: **µg/L** Analysis Date: **1/20/2010 01:27 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860112** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*53.93*	5.0	*50*	0	*108*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.4*	5.0	*50*	0	*96.8*	*72-125*	0			
Surr: Dibromofluoromethane	*51.6*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*49.84*	5.0	*50*	0	*99.7*	*75-125*	0			

LCS Sample ID: **VLCSW-012010-R86140** Units: **µg/L** Analysis Date: **1/20/2010 12:13 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860111** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.34	5.0	50	0	94.7	78-120	0			
Benzene	50.73	5.0	50	0	101	73-121	0			
Dichloromethane	46.75	10	50	0	93.5	65-133	0			
Ethylbenzene	47.51	5.0	50	0	95	80-120	0			
Toluene	47.97	5.0	50	0	95.9	80-120	0			
Xylenes, Total	141.8	15	150	0	94.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.35*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.07*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*48.29*	5.0	*50*	0	*96.6*	*71-125*	0			
Surr: Toluene-d8	*51.34*	5.0	*50*	0	*103*	*75-125*	0			

MS Sample ID: **1001370-08AMS** Units: **µg/L** Analysis Date: **1/20/2010 03:54 PM**
Client ID: Run ID: **VOA2_100120A** SeqNo: **1860114** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	2363	250	2500	0	94.5	78-120	0			
Benzene	2413	250	2500	0	96.5	73-121	0			
Dichloromethane	2315	500	2500	39.94	91	65-133	0			
Ethylbenzene	2227	250	2500	0	89.1	80-120	0			
Toluene	2261	250	2500	0	90.4	80-120	0			
Xylenes, Total	6647	750	7500	0	88.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	*2641*	250	*2500*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*2432*	250	*2500*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*2656*	250	*2500*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*2493*	250	*2500*	0	*99.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86140** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1001370-08AMSD** Units: **µg/L** Analysis Date: **1/20/2010 04:18 PM**

Client ID: Run ID: **VOA2_100120A** SeqNo: **1860115** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	2455	250	2500	0	98.2	78-120	2363	3.84	20	
Benzene	2585	250	2500	0	103	73-121	2413	6.86	20	
Dichloromethane	2554	500	2500	39.94	101	65-133	2315	9.83	20	
Ethylbenzene	2393	250	2500	0	95.7	80-120	2227	7.2	20	
Toluene	2419	250	2500	0	96.8	80-120	2261	6.77	20	
Xylenes, Total	7085	750	7500	0	94.5	80-120	6647	6.38	20	
Surr: 1,2-Dichloroethane-d4	*2772*	250	*2500*	0	*111*	*70-125*	2641	*4.86*	*20*	
Surr: 4-Bromofluorobenzene	*2537*	250	*2500*	0	*101*	*72-125*	2432	*4.22*	*20*	
Surr: Dibromofluoromethane	*2820*	250	*2500*	0	*113*	*71-125*	2656	*5.98*	*20*	
Surr: Toluene-d8	*2631*	250	*2500*	0	*105*	*75-125*	2493	*5.4*	*20*	

The following samples were analyzed in this batch:

1001396-01A	1001396-02A	1001396-03A
1001396-04A	1001396-05A	1001396-06A
1001396-07A	1001396-08A	1001396-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86180** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012110-R86180** Units: **µg/L** Analysis Date: **1/21/2010 12:45 PM**

Client ID: Run ID: **VOA2_100121A** SeqNo: **1861079** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Methyl tert-butyl ether	U	5.0								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,2-Dichloroethene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*60.66*	5.0	*50*	0	*121*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.1*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*48.93*	5.0	*50*	0	*97.9*	*71-125*	0			
Surr: Toluene-d8	*53*	5.0	*50*	0	*106*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86180** Instrument ID **VOA2** Method: **SW8260**

LCS Sample ID: **VLCSW-012110-R86180** Units: **µg/L** Analysis Date: **1/21/2010 01:59 PM**

Client ID: Run ID: **VOA2_100121A** SeqNo: **1861080** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.77	5.0	50	0	99.5	80-120	0			
1,1,2,2-Tetrachloroethane	53.61	5.0	50	0	107	72-120	0			
1,1,2-Trichloroethane	49.65	5.0	50	0	99.3	80-120	0			
1,1-Dichloroethane	57.28	5.0	50	0	115	76-120	0			
1,1-Dichloroethene	55.01	5.0	50	0	110	73-124	0			
1,2-Dichloroethane	46.45	5.0	50	0	92.9	78-120	0			
1,2-Dichloropropane	50.75	5.0	50	0	102	80-120	0			
2-Butanone	123.6	10	100	0	124	58-132	0			
2-Hexanone	110.5	10	100	0	110	61-130	0			
4-Methyl-2-pentanone	114.4	10	100	0	114	65-127	0			
Acetone	117.7	10	100	0	118	59-137	0			
Benzene	49.37	5.0	50	0	98.7	73-121	0			
Bromodichloromethane	46.75	5.0	50	0	93.5	80-120	0			
Bromoform	49.38	5.0	50	0	98.8	79-120	0			
Bromomethane	53.55	5.0	50	0	107	66-137	0			
Carbon disulfide	113.1	10	100	0	113	68-141	0			
Carbon tetrachloride	39.93	5.0	50	0	79.9	75-124	0			
Chlorobenzene	44.67	5.0	50	0	89.3	80-120	0			
Chloroethane	54.35	5.0	50	0	109	76-121	0			
Chloroform	52.14	5.0	50	0	104	80-120	0			
Chloromethane	61.39	5.0	50	0	123	67-123	0			
cis-1,2-Dichloroethene	57.66	5.0	50	0	115	78-120	0			
cis-1,3-Dichloropropene	49.34	5.0	50	0	98.7	80-120	0			
Dibromochloromethane	45.65	5.0	50	0	91.3	80-120	0			
Dichloromethane	53.04	10	50	0	106	65-133	0			
Ethylbenzene	45.8	5.0	50	0	91.6	80-120	0			
Methyl tert-butyl ether	55.8	5.0	50	0	112	73-121	0			
Styrene	44.9	5.0	50	0	89.8	80-120	0			
Tetrachloroethene	44.19	5.0	50	0	88.4	79-120	0			
Toluene	46.69	5.0	50	0	93.4	80-120	0			
trans-1,2-Dichloroethene	54.07	5.0	50	0	108	78-120	0			
trans-1,3-Dichloropropene	47.53	5.0	50	0	95.1	80-120	0			
Trichloroethene	45.61	5.0	50	0	91.2	80-120	0			
Vinyl chloride	55.73	2.0	50	0	111	70-127	0			
Xylenes, Total	136	15	150	0	90.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*61.94*	5.0	*50*	0	*124*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.23*	5.0	*50*	0	*96.5*	*72-125*	0			
Surr: Dibromofluoromethane	*52.49*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.25*	5.0	*50*	0	*98.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86180** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001397-01AMS** Units: **µg/L** Analysis Date: **1/21/2010 06:03 PM**

Client ID: Run ID: **VOA2_100121A** SeqNo: **1861082** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	905.1	100	1000	0	90.5	80-120	0			
1,1,2,2-Tetrachloroethane	1133	100	1000	0	113	72-120	0			
1,1,2-Trichloroethane	1038	100	1000	0	104	80-120	0			
1,1-Dichloroethane	930.9	100	1000	0	93.1	76-120	0			
1,1-Dichloroethene	889.8	100	1000	0	89	73-124	0			
1,2-Dichloroethane	966.9	100	1000	0	96.7	78-120	0			
1,2-Dichloropropane	1028	100	1000	0	103	80-120	0			
2-Butanone	2228	200	2000	0	111	58-132	0			
2-Hexanone	2306	200	2000	0	115	61-130	0			
4-Methyl-2-pentanone	2353	200	2000	0	118	65-127	0			
Acetone	2204	200	2000	0	110	59-137	0			
Benzene	1003	100	1000	0	100	73-121	0			
Bromodichloromethane	958.5	100	1000	0	95.9	80-120	0			
Bromoform	993.6	100	1000	0	99.4	79-120	0			
Bromomethane	875.1	100	1000	0	87.5	66-137	0			
Carbon disulfide	1834	200	2000	0	91.7	68-141	0			
Carbon tetrachloride	772.2	100	1000	0	77.2	75-124	0			
Chlorobenzene	923.2	100	1000	0	92.3	80-120	0			
Chloroethane	906.8	100	1000	0	90.7	76-121	0			
Chloroform	893	100	1000	0	89.3	80-120	0			
Chloromethane	1034	100	1000	0	103	67-123	0			
cis-1,2-Dichloroethene	982.8	100	1000	0	98.3	78-120	0			
cis-1,3-Dichloropropene	1006	100	1000	0	101	80-120	0			
Dibromochloromethane	928.1	100	1000	0	92.8	80-120	0			
Dichloromethane	966.3	200	1000	18.94	94.7	65-133	0			
Ethylbenzene	923.5	100	1000	0	92.4	80-120	0			
Methyl tert-butyl ether	961.5	100	1000	0	96.1	73-121	0			
Styrene	932.3	100	1000	0	93.2	80-120	0			
Tetrachloroethene	858.9	100	1000	0	85.9	79-120	0			
Toluene	940.4	100	1000	0	94	80-120	0			
trans-1,2-Dichloroethene	922.4	100	1000	0	92.2	78-120	0			
trans-1,3-Dichloropropene	973.4	100	1000	0	97.3	80-120	0			
Trichloroethene	895.8	100	1000	0	89.6	80-120	0			
Vinyl chloride	897.2	40	1000	0	89.7	70-127	0			
Xylenes, Total	2757	300	3000	0	91.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1119*	100	*1000*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1028*	100	*1000*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*1119*	100	*1000*	0	*112*	*71-125*	0			
Surr: Toluene-d8	*1057*	100	*1000*	0	*106*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86180** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1001397-01AMSD** Units: **µg/L** Analysis Date: **1/21/2010 06:27 PM**

Client ID: Run ID: **VOA2_100121A** SeqNo: **1861083** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	757.3	100	1000	0	75.7	80-120	905.1	17.8	20	S
1,1,2,2-Tetrachloroethane	1135	100	1000	0	114	72-120	1133	0.218	20	
1,1,2-Trichloroethane	1044	100	1000	0	104	80-120	1038	0.511	20	
1,1-Dichloroethane	967	100	1000	0	96.7	76-120	930.9	3.81	20	
1,1-Dichloroethene	812.1	100	1000	0	81.2	73-124	889.8	9.12	20	
1,2-Dichloroethane	963.6	100	1000	0	96.4	78-120	966.9	0.34	20	
1,2-Dichloropropane	1031	100	1000	0	103	80-120	1028	0.298	20	
2-Butanone	2207	200	2000	0	110	58-132	2228	0.926	20	
2-Hexanone	2341	200	2000	0	117	61-130	2306	1.47	20	
4-Methyl-2-pentanone	2408	200	2000	0	120	65-127	2353	2.33	20	
Acetone	2305	200	2000	0	115	59-137	2204	4.47	20	
Benzene	972.1	100	1000	0	97.2	73-121	1003	3.09	20	
Bromodichloromethane	961	100	1000	0	96.1	80-120	958.5	0.253	20	
Bromoform	1038	100	1000	0	104	79-120	993.6	4.35	20	
Bromomethane	887.4	100	1000	0	88.7	66-137	875.1	1.4	20	
Carbon disulfide	1706	200	2000	0	85.3	68-141	1834	7.24	20	
Carbon tetrachloride	739.7	100	1000	0	74	75-124	772.2	4.29	20	S
Chlorobenzene	892.7	100	1000	0	89.3	80-120	923.2	3.36	20	
Chloroethane	850.9	100	1000	0	85.1	76-121	906.8	6.36	20	
Chloroform	902.7	100	1000	0	90.3	80-120	893	1.08	20	
Chloromethane	963.9	100	1000	0	96.4	67-123	1034	6.98	20	
cis-1,2-Dichloroethene	969.4	100	1000	0	96.9	78-120	982.8	1.38	20	
cis-1,3-Dichloropropene	1020	100	1000	0	102	80-120	1006	1.39	20	
Dibromochloromethane	941.8	100	1000	0	94.2	80-120	928.1	1.46	20	
Dichloromethane	982.6	200	1000	18.94	96.4	65-133	966.3	1.67	20	
Ethylbenzene	845	100	1000	0	84.5	80-120	923.5	8.88	20	
Methyl tert-butyl ether	1008	100	1000	0	101	73-121	961.5	4.7	20	
Styrene	888.6	100	1000	0	88.9	80-120	932.3	4.79	20	
Tetrachloroethene	744.9	100	1000	0	74.5	79-120	858.9	14.2	20	S
Toluene	894.8	100	1000	0	89.5	80-120	940.4	4.97	20	
trans-1,2-Dichloroethene	930.3	100	1000	0	93	78-120	922.4	0.855	20	
trans-1,3-Dichloropropene	988.3	100	1000	0	98.8	80-120	973.4	1.53	20	
Trichloroethene	863.4	100	1000	0	86.3	80-120	895.8	3.68	20	
Vinyl chloride	812.8	40	1000	0	81.3	70-127	897.2	9.87	20	
Xylenes, Total	2554	300	3000	0	85.1	80-120	2757	7.66	20	
Surr: 1,2-Dichloroethane-d4	*1086*	100	*1000*	0	*109*	*70-125*	1119	*3.05*	*20*	
Surr: 4-Bromofluorobenzene	*987.4*	100	*1000*	0	*98.7*	*72-125*	1028	*4.06*	*20*	
Surr: Dibromofluoromethane	*939.5*	100	*1000*	0	*94*	*71-125*	1119	*17.5*	*20*	
Surr: Toluene-d8	*1021*	100	*1000*	0	*102*	*75-125*	1057	*3.43*	*20*	

The following samples were analyzed in this batch: 1001396-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012210-R86190** Units: **µg/L** Analysis Date: **1/22/2010 12:26 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861243** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Methyl tert-butyl ether	U	5.0								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,2-Dichloroethene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.22*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.08*	5.0	*50*	0	*98.2*	*72-125*	0			
Surr: Dibromofluoromethane	*44.93*	5.0	*50*	0	*89.9*	*71-125*	0			
Surr: Toluene-d8	*50.11*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

LCS Sample ID: **VLCSW-012210-R86190** Units: **µg/L** Analysis Date: **1/22/2010 11:13 AM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861242** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.88	5.0	50	0	95.8	80-120	0			
1,1,2,2-Tetrachloroethane	54.65	5.0	50	0	109	72-120	0			
1,1,2-Trichloroethane	50.66	5.0	50	0	101	80-120	0			
1,1-Dichloroethane	50.84	5.0	50	0	102	76-120	0			
1,1-Dichloroethene	48.73	5.0	50	0	97.5	73-124	0			
1,2-Dichloroethane	46.38	5.0	50	0	92.8	78-120	0			
1,2-Dichloropropane	51.01	5.0	50	0	102	80-120	0			
2-Butanone	104.1	10	100	0	104	58-132	0			
2-Hexanone	113	10	100	0	113	61-130	0			
4-Methyl-2-pentanone	116.1	10	100	0	116	65-127	0			
Acetone	109.7	10	100	0	110	59-137	0			
Benzene	50.11	5.0	50	0	100	73-121	0			
Bromodichloromethane	47.07	5.0	50	0	94.1	80-120	0			
Bromoform	49.65	5.0	50	0	99.3	79-120	0			
Bromomethane	43.55	5.0	50	0	87.1	66-137	0			
Carbon disulfide	101.4	10	100	0	101	68-141	0			
Carbon tetrachloride	43.03	5.0	50	0	86.1	75-124	0			
Chlorobenzene	45.99	5.0	50	0	92	80-120	0			
Chloroethane	44.39	5.0	50	0	88.8	76-121	0			
Chloroform	42.66	5.0	50	0	85.3	80-120	0			
Chloromethane	50.86	5.0	50	0	102	67-123	0			
cis-1,2-Dichloroethene	48.33	5.0	50	0	96.7	78-120	0			
cis-1,3-Dichloropropene	50.19	5.0	50	0	100	80-120	0			
Dibromochloromethane	45.81	5.0	50	0	91.6	80-120	0			
Dichloromethane	44.8	10	50	0	89.6	65-133	0			
Ethylbenzene	47.41	5.0	50	0	94.8	80-120	0			
Methyl tert-butyl ether	49.64	5.0	50	0	99.3	73-121	0			
Styrene	46.14	5.0	50	0	92.3	80-120	0			
Tetrachloroethene	46.52	5.0	50	0	93	79-120	0			
Toluene	47.47	5.0	50	0	94.9	80-120	0			
trans-1,2-Dichloroethene	49.13	5.0	50	0	98.3	78-120	0			
trans-1,3-Dichloropropene	47.72	5.0	50	0	95.4	80-120	0			
Trichloroethene	46.84	5.0	50	0	93.7	80-120	0			
Vinyl chloride	45.67	2.0	50	0	91.3	70-127	0			
Xylenes, Total	139.4	15	150	0	93	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.43*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.19*	5.0	*50*	0	*98.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.54*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*50.17*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001418-34AMS** Units: **µg/L** Analysis Date: **1/22/2010 02:30 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861247** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.52	5.0	50	0	89	80-120	0			
1,1,2,2-Tetrachloroethane	51.82	5.0	50	0	104	72-120	0			
1,1,2-Trichloroethane	49.23	5.0	50	0	98.5	80-120	0			
1,1-Dichloroethane	48.16	5.0	50	0	96.3	76-120	0			
1,1-Dichloroethene	44.45	5.0	50	0	88.9	73-124	0			
1,2-Dichloroethane	46.2	5.0	50	0	92.4	78-120	0			
1,2-Dichloropropane	51.18	5.0	50	0	102	80-120	0			
2-Butanone	103.1	10	100	0	103	58-132	0			
2-Hexanone	102.9	10	100	0	103	61-130	0			
4-Methyl-2-pentanone	109.6	10	100	0	110	65-127	0			
Acetone	92.76	10	100	0	92.8	59-137	0			
Benzene	49.2	5.0	50	0	98.4	73-121	0			
Bromodichloromethane	46.67	5.0	50	0	93.3	80-120	0			
Bromoform	47.19	5.0	50	0	94.4	79-120	0			
Bromomethane	40.91	5.0	50	0	81.8	66-137	0			
Carbon disulfide	89.02	10	100	0	89	68-141	0			
Carbon tetrachloride	36.86	5.0	50	0	73.7	75-124	0			S
Chlorobenzene	45.06	5.0	50	0	90.1	80-120	0			
Chloroethane	45.58	5.0	50	0	91.2	76-121	0			
Chloroform	50.37	5.0	50	0	101	80-120	0			
Chloromethane	51.26	5.0	50	0	103	67-123	0			
cis-1,2-Dichloroethene	47.66	5.0	50	0	95.3	78-120	0			
cis-1,3-Dichloropropene	49.22	5.0	50	0	98.4	80-120	0			
Dibromochloromethane	44.87	5.0	50	0	89.7	80-120	0			
Dichloromethane	48.31	10	50	0	96.6	65-133	0			
Ethylbenzene	44.74	5.0	50	0	89.5	80-120	0			
Methyl tert-butyl ether	47.99	5.0	50	0	96	73-121	0			
Styrene	44.33	5.0	50	0	88.7	80-120	0			
Tetrachloroethene	41.56	5.0	50	0	83.1	79-120	0			
Toluene	47.3	5.0	50	0.543	93.5	80-120	0			
trans-1,2-Dichloroethene	47.42	5.0	50	0	94.8	78-120	0			
trans-1,3-Dichloropropene	46.59	5.0	50	0	93.2	80-120	0			
Trichloroethene	45.16	5.0	50	0	90.3	80-120	0			
Vinyl chloride	43.96	2.0	50	0	87.9	70-127	0			
Xylenes, Total	133.5	15	150	0	89	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.56*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.57*	5.0	*50*	0	*97.1*	*72-125*	0			
Surr: Dibromofluoromethane	*53.14*	5.0	*50*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*50.22*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001396
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1001418-34AMSD** Units: **µg/L** Analysis Date: **1/22/2010 02:54 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861249** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43.32	5.0	50	0	86.6	80-120	44.52	2.74	20	
1,1,2,2-Tetrachloroethane	53	5.0	50	0	106	72-120	51.82	2.25	20	
1,1,2-Trichloroethane	49.08	5.0	50	0	98.2	80-120	49.23	0.299	20	
1,1-Dichloroethane	47.03	5.0	50	0	94.1	76-120	48.16	2.38	20	
1,1-Dichloroethene	40.58	5.0	50	0	81.2	73-124	44.45	9.11	20	
1,2-Dichloroethane	45.4	5.0	50	0	90.8	78-120	46.2	1.74	20	
1,2-Dichloropropane	50.23	5.0	50	0	100	80-120	51.18	1.87	20	
2-Butanone	105.8	10	100	0	106	58-132	103.1	2.6	20	
2-Hexanone	108	10	100	0	108	61-130	102.9	4.83	20	
4-Methyl-2-pentanone	113.6	10	100	0	114	65-127	109.6	3.6	20	
Acetone	90.92	10	100	0	90.9	59-137	92.76	2.01	20	
Benzene	48.11	5.0	50	0	96.2	73-121	49.2	2.24	20	
Bromodichloromethane	46.48	5.0	50	0	93	80-120	46.67	0.41	20	
Bromoform	49.51	5.0	50	0	99	79-120	47.19	4.8	20	
Bromomethane	41.89	5.0	50	0	83.8	66-137	40.91	2.37	20	
Carbon disulfide	84.58	10	100	0	84.6	68-141	89.02	5.11	20	
Carbon tetrachloride	37.92	5.0	50	0	75.8	75-124	36.86	2.83	20	
Chlorobenzene	44.28	5.0	50	0	88.6	80-120	45.06	1.75	20	
Chloroethane	41.78	5.0	50	0	83.6	76-121	45.58	8.69	20	
Chloroform	46.15	5.0	50	0	92.3	80-120	50.37	8.75	20	
Chloromethane	47.93	5.0	50	0	95.9	67-123	51.26	6.72	20	
cis-1,2-Dichloroethene	46.74	5.0	50	0	93.5	78-120	47.66	1.94	20	
cis-1,3-Dichloropropene	49.66	5.0	50	0	99.3	80-120	49.22	0.889	20	
Dibromochloromethane	45.56	5.0	50	0	91.1	80-120	44.87	1.52	20	
Dichloromethane	47	10	50	0	94	65-133	48.31	2.75	20	
Ethylbenzene	44.04	5.0	50	0	88.1	80-120	44.74	1.58	20	
Methyl tert-butyl ether	49.08	5.0	50	0	98.2	73-121	47.99	2.24	20	
Styrene	42.73	5.0	50	0	85.5	80-120	44.33	3.68	20	
Tetrachloroethene	40.01	5.0	50	0	80	79-120	41.56	3.81	20	
Toluene	45.75	5.0	50	0.543	90.4	80-120	47.3	3.33	20	
trans-1,2-Dichloroethene	46.8	5.0	50	0	93.6	78-120	47.42	1.33	20	
trans-1,3-Dichloropropene	47.88	5.0	50	0	95.8	80-120	46.59	2.73	20	
Trichloroethene	43.53	5.0	50	0	87.1	80-120	45.16	3.67	20	
Vinyl chloride	39.09	2.0	50	0	78.2	70-127	43.96	11.7	20	
Xylenes, Total	131.8	15	150	0	87.9	80-120	133.5	1.28	20	
Surr: 1,2-Dichloroethane-d4	*50.67*	5.0	*50*	0	*101*	*70-125*	51.56	*1.74*	*20*	
Surr: 4-Bromofluorobenzene	*47.83*	5.0	*50*	0	*95.7*	*72-125*	48.57	*1.52*	*20*	
Surr: Dibromofluoromethane	*51.76*	5.0	*50*	0	*104*	*71-125*	53.14	*2.62*	*20*	
Surr: Toluene-d8	*49*	5.0	*50*	0	*98*	*75-125*	50.22	*2.46*	*20*	

The following samples were analyzed in this batch: 1001396-10A 1001396-11A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
WorkOrder: **1001396**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1007396

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	FULL VOC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW15A-011810	1-18-10	0940	W		5	X	X									
2	WG-1620-MW15C-011810	1-18-10	1025	W		5	X	X									
3	WG-1620-MW17C-011810	1-18-10	1125	W		5	X	X									
4	WG-1620-MW17-011810	1-18-10	1220	W		5	X	X									
5	WG-1620-MW16-011810	1-18-10	1325	W		5	X	X									
6	WG-1620-MW55A-011810	1-18-10	1415	W		5	X	X									
7	WG-1620-MW19C-011810	1-18-10	1510	W		5	X	X									
8	WG-1620-MW52A-011810	1-18-10	1600	W		5	X	X									
9	WG-1620-MW23C-011810	1-18-10	1650	W		5	X	X									
10	WG-1620-MW18A-011810	1-18-10	1750	W		5		X	X								

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: | Date: 1/19/10 | Time: 17:35 | Received by: | Date: 1/19/10 | Time: 17:35

Relinquished by: | Date: | Time: | Received by (Laboratory): | Date: | Time:

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1001396

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	FULL VOC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-FB03-011810	1-18-10	1815	W		5	X	X									
2	WG-1620-TB03-011810	1-18-10		W		JB ~~2~~	JB	JB	X								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRADFORD John Bradford

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: John Bradford Date: 1/19/10 Time: 17:35

Received by: R H Date: 1/19/10 Time: 17:35

Notes: 10 Work Days TAT.

Relinquished by: Date: Time:

Received by (Laboratory): Date: Time:

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **19-Jan-10 17:35**

Work Order: **1001396** Received by: **RDH**

Checklist completed by Raymond N Gamboa (eSignature) 20-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 20-Jan-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.7c, 2.2c	002	
Cooler(s)/Kit(s):	2500, 1926		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

01-Feb-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW GW

Work Order: **1001469**

Dear Eric,

ALS Laboratory Group received 15 samples on 20-Jan-2010 06:35 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 58.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Work Order: 1001469

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Re Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40614, R86140, R86180, R86190

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				4

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40614, R86140, R86180, R86190

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: HWPW GW	Laboratory Job Number: 1001396
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40614, R86140, R86180, R86190

ER #[1]	DESCRIPTION
1	Some Semivolatile surrogate recoveries are diluted out.
2	Batch R86235 Volatiles (sample WG-1620-TW41B-011910) MS/MSD recoveries below control limits for Tetrachloroethene. MS recovery below control limit for Carbon tetrachloride where the MSD is in control. All RPDs in control.
3	Batch 40662 Semivolatiles (sample WG-1620-TW41B-011910) MS/MSD RPD above control limit for Bis(2-ethylhexyl)phthalate.
4	Some Semivolatile and Volatile samples could not be analyzed at a lower dilution due to the nature of the sample.

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

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Work Order: **1001469**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001469-01	WG-1620-MW18C-011910	Water		1/19/2010 07:00	1/20/2010 18:35	☐
1001469-02	WG-1620-MW14-011910	Water		1/19/2010 08:10	1/20/2010 18:35	☐
1001469-03	WG-1620-FD02-011910	Water		1/19/2010 08:10	1/20/2010 18:35	☐
1001469-04	WG-1620-MW39B-011910	Water		1/19/2010 09:05	1/20/2010 18:35	☐
1001469-05	WG-1620-MW12C-011910	Water		1/19/2010 10:00	1/20/2010 18:35	☐
1001469-06	WG-1620-MW12A-011910	Water		1/19/2010 11:00	1/20/2010 18:35	☐
1001469-07	WG-1620-TW41B-011910	Water		1/19/2010 11:55	1/20/2010 18:35	☐
1001469-08	WG-1620-MW13-011910	Water		1/19/2010 13:40	1/20/2010 18:35	☐
1001469-09	WG-1620-MW40B-011910	Water		1/19/2010 14:35	1/20/2010 18:35	☐
1001469-10	WG-1620-MW42B-011910	Water		1/19/2010 15:40	1/20/2010 18:35	☐
1001469-11	WG-1620-FB04-011910	Water		1/19/2010 16:10	1/20/2010 18:35	☐
1001469-12	WG-1620-TB04-011910	Water		1/19/2010	1/20/2010 18:35	☐
1001469-13	WG-1620-MW57A-012010	Water		1/20/2010 07:00	1/20/2010 18:35	☐
1001469-14	WG-1620-MW58A-012010	Water		1/20/2010 08:00	1/20/2010 18:35	☐
1001469-15	WG-1620-TW56A-012010	Water		1/20/2010 09:00	1/20/2010 18:35	☐

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW18C-011910
Collection Date: 1/19/2010 07:00 AM

Work Order: 1001469
Lab ID: 1001469-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 14:09
2,4-Dimethylphenol	**8.1**		**0.80**	**2.0**	**µg/L**	10	1/29/2010 14:30
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 14:09
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 14:09
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 14:09
2-Methylnaphthalene	**460**		**7.0**	**20**	**µg/L**	100	1/29/2010 17:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 14:09
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 14:09
Acenaphthene	**170**		**9.0**	**20**	**µg/L**	100	1/29/2010 17:23
Acenaphthylene	**2.3**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 14:09
Anthracene	**14**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 14:30
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 14:09
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 14:09
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 14:09
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/29/2010 14:09
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 14:09
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 14:09
Dibenzofuran	**91**		**0.80**	**2.0**	**µg/L**	10	1/29/2010 14:30
Fluoranthene	**3.5**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 14:09
Fluorene	**52**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 14:30
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 14:09
Naphthalene	**12,000**		**200**	**400**	**µg/L**	2000	1/29/2010 19:32
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 14:09
Pentachlorophenol	**41**		**0.80**	**2.0**	**µg/L**	10	1/29/2010 14:30
Phenanthrene	**52**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 14:30
Phenol	**59**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 14:30
Pyrene	**2.0**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 14:09
Surr: 2,4,6-Tribromophenol	*75.3*			*34-129*	*%REC*	1	1/29/2010 14:09
Surr: 2,4,6-Tribromophenol	*71.7*			*34-129*	*%REC*	10	1/29/2010 14:30
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 17:23
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	1/29/2010 19:32
Surr: 2-Fluorobiphenyl	*67.1*			*40-125*	*%REC*	1	1/29/2010 14:09
Surr: 2-Fluorobiphenyl	*67.2*			*40-125*	*%REC*	10	1/29/2010 14:30
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 17:23
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	1/29/2010 19:32
Surr: 2-Fluorophenol	*75.0*			*20-120*	*%REC*	1	1/29/2010 14:09
Surr: 2-Fluorophenol	*110*			*20-120*	*%REC*	10	1/29/2010 14:30
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 17:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW18C-011910
Collection Date: 1/19/2010 07:00 AM

Work Order: 1001469
Lab ID: 1001469-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	1/29/2010 19:32
Surr: 4-Terphenyl-d14	*60.1*			*40-135*	*%REC*	1	1/29/2010 14:09
Surr: 4-Terphenyl-d14	*71.8*			*40-135*	*%REC*	10	1/29/2010 14:30
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 17:23
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	1/29/2010 19:32
Surr: Nitrobenzene-d5	*110*			*41-120*	*%REC*	1	1/29/2010 14:09
Surr: Nitrobenzene-d5	*49.2*			*41-120*	*%REC*	10	1/29/2010 14:30
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 17:23
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	1/29/2010 19:32
Surr: Phenol-d6	*66.5*			*20-120*	*%REC*	1	1/29/2010 14:09
Surr: Phenol-d6	*65.7*			*20-120*	*%REC*	10	1/29/2010 14:30
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 17:23
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	1/29/2010 19:32
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	1/23/2010 23:13
Benzene	**1,500**		**5.0**	**50**	**µg/L**	10	1/23/2010 23:13
Chlorobenzene	U		5.0	50	µg/L	10	1/23/2010 23:13
Dichloromethane	U		5.0	100	µg/L	10	1/23/2010 23:13
Ethylbenzene	**210**		**5.0**	**50**	**µg/L**	10	1/23/2010 23:13
Toluene	**960**		**5.0**	**50**	**µg/L**	10	1/23/2010 23:13
Xylenes, Total	**1,000**		**10**	**150**	**µg/L**	10	1/23/2010 23:13
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	10	1/23/2010 23:13
Surr: 4-Bromofluorobenzene	*96.0*			*72-125*	*%REC*	10	1/23/2010 23:13
Surr: Dibromofluoromethane	*90.9*			*71-125*	*%REC*	10	1/23/2010 23:13
Surr: Toluene-d8	*101*			*75-125*	*%REC*	10	1/23/2010 23:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW14-011910
Collection Date: 1/19/2010 08:10 AM

Work Order: 1001469
Lab ID: 1001469-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 04:05
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:05
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 04:05
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 04:05
2-Methylnaphthalene	**0.64**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:05
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:05
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 04:05
Acenaphthene	**0.43**		**0.090**	**0.20**	**µg/L**	1	1/27/2010 04:05
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Anthracene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 04:05
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 04:05
Bis(2-ethylhexyl)phthalate	**5.4**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 04:05
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Dibenzofuran	**0.40**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 04:05
Fluoranthene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Fluorene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:05
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 04:05
Naphthalene	**3.0**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 04:05
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 04:05
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 04:05
Phenanthrene	**0.41**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:05
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Pyrene	U		0.070	0.20	µg/L	1	1/27/2010 04:05
Surr: 2,4,6-Tribromophenol	*67.8*			*34-129*	*%REC*	1	1/27/2010 04:05
Surr: 2-Fluorobiphenyl	*54.6*			*40-125*	*%REC*	1	1/27/2010 04:05
Surr: 2-Fluorophenol	*53.9*			*20-120*	*%REC*	1	1/27/2010 04:05
Surr: 4-Terphenyl-d14	*64.3*			*40-135*	*%REC*	1	1/27/2010 04:05
Surr: Nitrobenzene-d5	*55.5*			*41-120*	*%REC*	1	1/27/2010 04:05
Surr: Phenol-d6	*60.3*			*20-120*	*%REC*	1	1/27/2010 04:05
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 18:44
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 18:44
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 18:44
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW14-011910
Collection Date: 1/19/2010 08:10 AM

Work Order: 1001469
Lab ID: 1001469-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 18:44
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 18:44
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 18:44
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	1	1/23/2010 18:44
Surr: 4-Bromofluorobenzene	*96.8*			*72-125*	*%REC*	1	1/23/2010 18:44
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/23/2010 18:44
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	1/23/2010 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FD02-011910
Collection Date: 1/19/2010 08:10 AM

Work Order: 1001469
Lab ID: 1001469-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 04:25
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:25
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 04:25
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 04:25
2-Methylnaphthalene	**0.60**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:25
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:25
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 04:25
Acenaphthene	**0.43**		**0.090**	**0.20**	**µg/L**	1	1/27/2010 04:25
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Anthracene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:25
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 04:25
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 04:25
Bis(2-ethylhexyl)phthalate	**0.37**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 04:25
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Dibenzofuran	**0.44**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 04:25
Fluoranthene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Fluorene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:25
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 04:25
Naphthalene	**2.6**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 04:25
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 04:25
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 04:25
Phenanthrene	**0.43**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:25
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Pyrene	U		0.070	0.20	µg/L	1	1/27/2010 04:25
Surr: 2,4,6-Tribromophenol	*72.9*			*34-129*	*%REC*	1	1/27/2010 04:25
Surr: 2-Fluorobiphenyl	*56.7*			*40-125*	*%REC*	1	1/27/2010 04:25
Surr: 2-Fluorophenol	*54.2*			*20-120*	*%REC*	1	1/27/2010 04:25
Surr: 4-Terphenyl-d14	*62.9*			*40-135*	*%REC*	1	1/27/2010 04:25
Surr: Nitrobenzene-d5	*61.0*			*41-120*	*%REC*	1	1/27/2010 04:25
Surr: Phenol-d6	*58.5*			*20-120*	*%REC*	1	1/27/2010 04:25
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 16:41
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 16:41
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 16:41
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 16:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FD02-011910
Collection Date: 1/19/2010 08:10 AM

Work Order: 1001469
Lab ID: 1001469-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 16:41
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 16:41
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 16:41
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/23/2010 16:41
Surr: 4-Bromofluorobenzene	*99.1*			*72-125*	*%REC*	1	1/23/2010 16:41
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/23/2010 16:41
Surr: Toluene-d8	*99.3*			*75-125*	*%REC*	1	1/23/2010 16:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW39B-011910
Collection Date: 1/19/2010 09:05 AM

Work Order: 1001469
Lab ID: 1001469-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 04:46
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:46
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 04:46
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 04:46
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 04:46
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 04:46
Acenaphthene	**0.14**	J	**0.090**	**0.20**	**µg/L**	1	1/27/2010 04:46
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Anthracene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 04:46
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 04:46
Bis(2-ethylhexyl)phthalate	**0.70**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 04:46
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Dibenzofuran	U		0.080	0.20	µg/L	1	1/27/2010 04:46
Fluoranthene	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Fluorene	**0.21**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:46
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 04:46
Naphthalene	**0.18**	J	**0.10**	**0.20**	**µg/L**	1	1/27/2010 04:46
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 04:46
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 04:46
Phenanthrene	**0.25**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:46
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 04:46
Pyrene	**0.18**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 04:46
Surr: 2,4,6-Tribromophenol	*64.1*			*34-129*	*%REC*	1	1/27/2010 04:46
Surr: 2-Fluorobiphenyl	*58.0*			*40-125*	*%REC*	1	1/27/2010 04:46
Surr: 2-Fluorophenol	*52.2*			*20-120*	*%REC*	1	1/27/2010 04:46
Surr: 4-Terphenyl-d14	*58.5*			*40-135*	*%REC*	1	1/27/2010 04:46
Surr: Nitrobenzene-d5	*55.4*			*41-120*	*%REC*	1	1/27/2010 04:46
Surr: Phenol-d6	*52.7*			*20-120*	*%REC*	1	1/27/2010 04:46
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 19:08
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 19:08
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 19:08
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 19:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW39B-011910
Collection Date: 1/19/2010 09:05 AM

Work Order: 1001469
Lab ID: 1001469-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 19:08
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 19:08
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 19:08
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/23/2010 19:08
Surr: 4-Bromofluorobenzene	*91.9*			*72-125*	*%REC*	1	1/23/2010 19:08
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	1/23/2010 19:08
Surr: Toluene-d8	*95.8*			*75-125*	*%REC*	1	1/23/2010 19:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW12C-011910
Collection Date: 1/19/2010 10:00 AM

Work Order: 1001469
Lab ID: 1001469-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 05:06
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 05:06
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 05:06
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 05:06
2-Methylnaphthalene	**0.24**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:06
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 05:06
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 05:06
Acenaphthene	**0.19**	J	**0.090**	**0.20**	**µg/L**	1	1/27/2010 05:06
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Anthracene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 05:06
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 05:06
Bis(2-ethylhexyl)phthalate	**0.77**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 05:06
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Dibenzofuran	**0.14**	J	**0.080**	**0.20**	**µg/L**	1	1/27/2010 05:06
Fluoranthene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Fluorene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:06
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 05:06
Naphthalene	**1.7**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 05:06
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 05:06
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 05:06
Phenanthrene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:06
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Pyrene	U		0.070	0.20	µg/L	1	1/27/2010 05:06
Surr: 2,4,6-Tribromophenol	*64.4*			*34-129*	*%REC*	1	1/27/2010 05:06
Surr: 2-Fluorobiphenyl	*53.7*			*40-125*	*%REC*	1	1/27/2010 05:06
Surr: 2-Fluorophenol	*54.5*			*20-120*	*%REC*	1	1/27/2010 05:06
Surr: 4-Terphenyl-d14	*60.0*			*40-135*	*%REC*	1	1/27/2010 05:06
Surr: Nitrobenzene-d5	*62.2*			*41-120*	*%REC*	1	1/27/2010 05:06
Surr: Phenol-d6	*55.6*			*20-120*	*%REC*	1	1/27/2010 05:06
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 19:57
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 19:57
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 19:57
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 19:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW12C-011910
Collection Date: 1/19/2010 10:00 AM

Work Order: 1001469
Lab ID: 1001469-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 19:57
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 19:57
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 19:57
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	1/23/2010 19:57
Surr: 4-Bromofluorobenzene	*93.3*			*72-125*	*%REC*	1	1/23/2010 19:57
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/23/2010 19:57
Surr: Toluene-d8	*97.9*			*75-125*	*%REC*	1	1/23/2010 19:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW12A-011910
Collection Date: 1/19/2010 11:00 AM

Work Order: 1001469
Lab ID: 1001469-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 05:27
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 05:27
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 05:27
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 05:27
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 05:27
2-Methylnaphthalene	**150**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 11:28
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 05:27
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 05:27
Acenaphthene	**190**		**1.8**	**4.0**	**µg/L**	20	1/29/2010 11:28
Acenaphthylene	**2.6**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:27
Anthracene	**9.3**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:27
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 05:27
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 05:27
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 05:27
Bis(2-ethylhexyl)phthalate	**0.60**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 05:27
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 05:27
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 05:27
Dibenzofuran	**140**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 11:28
Fluoranthene	**5.9**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:27
Fluorene	**130**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 11:28
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 05:27
Naphthalene	**1,700**		**20**	**40**	**µg/L**	200	1/29/2010 14:52
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 05:27
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 05:27
Phenanthrene	**87**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 11:28
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 05:27
Pyrene	**2.9**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 05:27
Surr: 2,4,6-Tribromophenol	*56.0*			*34-129*	*%REC*	1	1/27/2010 05:27
Surr: 2,4,6-Tribromophenol	*73.3*	J		*34-129*	*%REC*	20	1/29/2010 11:28
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	200	1/29/2010 14:52
Surr: 2-Fluorobiphenyl	*52.1*			*40-125*	*%REC*	1	1/27/2010 05:27
Surr: 2-Fluorobiphenyl	*72.0*	J		*40-125*	*%REC*	20	1/29/2010 11:28
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	200	1/29/2010 14:52
Surr: 2-Fluorophenol	*58.8*			*20-120*	*%REC*	1	1/27/2010 05:27
Surr: 2-Fluorophenol	*55.2*	J		*20-120*	*%REC*	20	1/29/2010 11:28
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	200	1/29/2010 14:52
Surr: 4-Terphenyl-d14	*60.9*			*40-135*	*%REC*	1	1/27/2010 05:27
Surr: 4-Terphenyl-d14	*61.3*	J		*40-135*	*%REC*	20	1/29/2010 11:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW12A-011910
Collection Date: 1/19/2010 11:00 AM

Work Order: 1001469
Lab ID: 1001469-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	200	1/29/2010 14:52
Surr: Nitrobenzene-d5	*85.4*			*41-120*	*%REC*	1	1/27/2010 05:27
Surr: Nitrobenzene-d5	*55.6*	J		*41-120*	*%REC*	20	1/29/2010 11:28
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	200	1/29/2010 14:52
Surr: Phenol-d6	*64.9*			*20-120*	*%REC*	1	1/27/2010 05:27
Surr: Phenol-d6	*65.0*	J		*20-120*	*%REC*	20	1/29/2010 11:28
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	200	1/29/2010 14:52
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 20:22
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 20:22
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 20:22
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 20:22
Ethylbenzene	**2.9**	J	**0.50**	**5.0**	**µg/L**	1	1/23/2010 20:22
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 20:22
Xylenes, Total	**5.6**	J	**1.0**	**15**	**µg/L**	1	1/23/2010 20:22
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	1/23/2010 20:22
Surr: 4-Bromofluorobenzene	*91.3*			*72-125*	*%REC*	1	1/23/2010 20:22
Surr: Dibromofluoromethane	*98.3*			*71-125*	*%REC*	1	1/23/2010 20:22
Surr: Toluene-d8	*96.4*			*75-125*	*%REC*	1	1/23/2010 20:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TW41B-011910
Collection Date: 1/19/2010 11:55 AM

Work Order: 1001469
Lab ID: 1001469-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/26/2010 19:48
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/26/2010 19:48
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/26/2010 19:48
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/26/2010 19:48
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/26/2010 19:48
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/26/2010 19:48
Acenaphthene	U		0.090	0.20	µg/L	1	1/26/2010 19:48
Acenaphthylene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Anthracene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/26/2010 19:48
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/26/2010 19:48
Bis(2-ethylhexyl)phthalate	**1.1**		**0.20**	**0.20**	**µg/L**	1	1/26/2010 19:48
Chrysene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Dibenzofuran	U		0.080	0.20	µg/L	1	1/26/2010 19:48
Fluoranthene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Fluorene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/26/2010 19:48
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/26/2010 19:48
Naphthalene	**0.14**	J	**0.10**	**0.20**	**µg/L**	1	1/26/2010 19:48
Nitrobenzene	U		0.090	0.20	µg/L	1	1/26/2010 19:48
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/26/2010 19:48
Phenanthrene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Phenol	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Pyrene	U		0.070	0.20	µg/L	1	1/26/2010 19:48
Surr: 2,4,6-Tribromophenol	*66.4*			*34-129*	*%REC*	1	1/26/2010 19:48
Surr: 2-Fluorobiphenyl	*62.5*			*40-125*	*%REC*	1	1/26/2010 19:48
Surr: 2-Fluorophenol	*57.4*			*20-120*	*%REC*	1	1/26/2010 19:48
Surr: 4-Terphenyl-d14	*60.9*			*40-135*	*%REC*	1	1/26/2010 19:48
Surr: Nitrobenzene-d5	*56.2*			*41-120*	*%REC*	1	1/26/2010 19:48
Surr: Phenol-d6	*62.4*			*20-120*	*%REC*	1	1/26/2010 19:48
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 15:03
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 15:03
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 15:03
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 15:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TW41B-011910
Collection Date: 1/19/2010 11:55 AM

Work Order: 1001469
Lab ID: 1001469-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 15:03
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 15:03
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 15:03
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/23/2010 15:03
Surr: 4-Bromofluorobenzene	*97.0*			*72-125*	*%REC*	1	1/23/2010 15:03
Surr: Dibromofluoromethane	*99.9*			*71-125*	*%REC*	1	1/23/2010 15:03
Surr: Toluene-d8	*98.9*			*75-125*	*%REC*	1	1/23/2010 15:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW13-011910
Collection Date: 1/19/2010 01:40 PM

Work Order: 1001469
Lab ID: 1001469-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 11:07
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 11:07
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 11:07
2,6-Dinitrotoluene	**0.66**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 11:07
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 11:07
2-Methylnaphthalene	**0.76**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 11:07
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 11:07
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 11:07
Acenaphthene	**0.11**	J	**0.090**	**0.20**	**µg/L**	1	1/29/2010 11:07
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Anthracene	**0.43**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 11:07
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 11:07
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 11:07
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 11:07
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Dibenzofuran	**0.19**	J	**0.080**	**0.20**	**µg/L**	1	1/29/2010 11:07
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 11:07
Naphthalene	**7.0**		**0.10**	**0.20**	**µg/L**	1	1/29/2010 11:07
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 11:07
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 11:07
Phenanthrene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 11:07
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 11:07
Surr: 2,4,6-Tribromophenol	*58.9*			*34-129*	*%REC*	1	1/29/2010 11:07
Surr: 2-Fluorobiphenyl	*58.3*			*40-125*	*%REC*	1	1/29/2010 11:07
Surr: 2-Fluorophenol	*52.7*			*20-120*	*%REC*	1	1/29/2010 11:07
Surr: 4-Terphenyl-d14	*55.3*			*40-135*	*%REC*	1	1/29/2010 11:07
Surr: Nitrobenzene-d5	*58.8*			*41-120*	*%REC*	1	1/29/2010 11:07
Surr: Phenol-d6	*57.2*			*20-120*	*%REC*	1	1/29/2010 11:07
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 21:11
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 21:11
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 21:11
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 21:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW13-011910
Collection Date: 1/19/2010 01:40 PM

Work Order: 1001469
Lab ID: 1001469-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 21:11
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 21:11
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 21:11
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	1/23/2010 21:11
Surr: 4-Bromofluorobenzene	*93.0*			*72-125*	*%REC*	1	1/23/2010 21:11
Surr: Dibromofluoromethane	*98.2*			*71-125*	*%REC*	1	1/23/2010 21:11
Surr: Toluene-d8	*96.8*			*75-125*	*%REC*	1	1/23/2010 21:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW40B-011910
Collection Date: 1/19/2010 02:35 PM

Work Order: 1001469
Lab ID: 1001469-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 06:08
2,4-Dimethylphenol	**14**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 11:50
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 06:08
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 06:08
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 06:08
2-Methylnaphthalene	**490**		**7.0**	**20**	**µg/L**	100	1/29/2010 15:13
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 06:08
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 06:08
Acenaphthene	**330**		**9.0**	**20**	**µg/L**	100	1/29/2010 15:13
Acenaphthylene	**2.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Anthracene	**9.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Benz(a)anthracene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 06:08
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 06:08
Bis(2-ethylhexyl)phthalate	**3.5**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 06:08
Chrysene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 06:08
Dibenzofuran	**170**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 11:50
Fluoranthene	**6.7**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Fluorene	**150**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 11:50
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 06:08
Naphthalene	**8,000**		**100**	**200**	**µg/L**	1000	1/29/2010 16:40
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 06:08
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 06:08
Phenanthrene	**120**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 11:50
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 06:08
Pyrene	**3.3**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 06:08
Surr: 2,4,6-Tribromophenol	*48.0*			*34-129*	*%REC*	1	1/27/2010 06:08
Surr: 2,4,6-Tribromophenol	*71.0*	J		*34-129*	*%REC*	20	1/29/2010 11:50
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 15:13
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 16:40
Surr: 2-Fluorobiphenyl	*44.6*			*40-125*	*%REC*	1	1/27/2010 06:08
Surr: 2-Fluorobiphenyl	*69.9*	J		*40-125*	*%REC*	20	1/29/2010 11:50
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 15:13
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 16:40
Surr: 2-Fluorophenol	*75.5*			*20-120*	*%REC*	1	1/27/2010 06:08
Surr: 2-Fluorophenol	*63.5*	J		*20-120*	*%REC*	20	1/29/2010 11:50
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 15:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW40B-011910
Collection Date: 1/19/2010 02:35 PM

Work Order: 1001469
Lab ID: 1001469-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 16:40
Surr: 4-Terphenyl-d14	*62.4*			*40-135*	*%REC*	1	1/27/2010 06:08
Surr: 4-Terphenyl-d14	*64.5*	J		*40-135*	*%REC*	20	1/29/2010 11:50
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 15:13
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 16:40
Surr: Nitrobenzene-d5	*54.2*			*41-120*	*%REC*	1	1/27/2010 06:08
Surr: Nitrobenzene-d5	*102*			*41-120*	*%REC*	20	1/29/2010 11:50
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 15:13
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 16:40
Surr: Phenol-d6	*64.9*			*20-120*	*%REC*	1	1/27/2010 06:08
Surr: Phenol-d6	*72.8*	J		*20-120*	*%REC*	20	1/29/2010 11:50
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 15:13
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 16:40
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 22:24
Benzene	**28**		**0.50**	**5.0**	**µg/L**	1	1/23/2010 22:24
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 22:24
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 22:24
Ethylbenzene	**120**		**0.50**	**5.0**	**µg/L**	1	1/23/2010 22:24
Toluene	**54**		**0.50**	**5.0**	**µg/L**	1	1/23/2010 22:24
Xylenes, Total	**220**		**1.0**	**15**	**µg/L**	1	1/23/2010 22:24
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	1/23/2010 22:24
Surr: 4-Bromofluorobenzene	*93.7*			*72-125*	*%REC*	1	1/23/2010 22:24
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/23/2010 22:24
Surr: Toluene-d8	*98.2*			*75-125*	*%REC*	1	1/23/2010 22:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW42B-011910
Collection Date: 1/19/2010 03:40 PM

Work Order: 1001469
Lab ID: 1001469-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 14:40
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 14:40
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 14:40
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 14:40
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 14:40
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 14:40
Acenaphthene	**0.21**		**0.090**	**0.20**	**µg/L**	1	1/27/2010 14:40
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Anthracene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 14:40
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 14:40
Bis(2-ethylhexyl)phthalate	**0.28**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 14:40
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Dibenzofuran	**0.37**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 14:40
Fluoranthene	**0.59**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 14:40
Fluorene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	1/27/2010 14:40
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 14:40
Naphthalene	**0.35**		**0.10**	**0.20**	**µg/L**	1	1/27/2010 14:40
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 14:40
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 14:40
Phenanthrene	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 14:40
Pyrene	**0.35**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 14:40
Surr: 2,4,6-Tribromophenol	*59.2*			*34-129*	*%REC*	1	1/27/2010 14:40
Surr: 2-Fluorobiphenyl	*61.7*			*40-125*	*%REC*	1	1/27/2010 14:40
Surr: 2-Fluorophenol	*55.9*			*20-120*	*%REC*	1	1/27/2010 14:40
Surr: 4-Terphenyl-d14	*63.8*			*40-135*	*%REC*	1	1/27/2010 14:40
Surr: Nitrobenzene-d5	*59.9*			*41-120*	*%REC*	1	1/27/2010 14:40
Surr: Phenol-d6	*61.5*			*20-120*	*%REC*	1	1/27/2010 14:40
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/23/2010 21:35
Benzene	U		0.50	5.0	µg/L	1	1/23/2010 21:35
Chlorobenzene	U		0.50	5.0	µg/L	1	1/23/2010 21:35
Dichloromethane	U		0.50	10	µg/L	1	1/23/2010 21:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW42B-011910
Collection Date: 1/19/2010 03:40 PM

Work Order: 1001469
Lab ID: 1001469-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/23/2010 21:35
Toluene	U		0.50	5.0	µg/L	1	1/23/2010 21:35
Xylenes, Total	U		1.0	15	µg/L	1	1/23/2010 21:35
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/23/2010 21:35
Surr: 4-Bromofluorobenzene	*93.0*			*72-125*	*%REC*	1	1/23/2010 21:35
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	1/23/2010 21:35
Surr: Toluene-d8	*97.9*			*75-125*	*%REC*	1	1/23/2010 21:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FB04-011910
Collection Date: 1/19/2010 04:10 PM

Work Order: 1001469
Lab ID: 1001469-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 15:23
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/27/2010 15:23
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 15:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 15:23
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 15:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 15:23
Acenaphthene	U		0.090	0.20	µg/L	1	1/27/2010 15:23
Acenaphthylene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Anthracene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/27/2010 15:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 15:23
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/27/2010 15:23
Chrysene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Dibenzofuran	U		0.080	0.20	µg/L	1	1/27/2010 15:23
Fluoranthene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Fluorene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 15:23
Naphthalene	U		0.10	0.20	µg/L	1	1/27/2010 15:23
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 15:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/27/2010 15:23
Phenanthrene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Phenol	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Pyrene	U		0.070	0.20	µg/L	1	1/27/2010 15:23
Surr: 2,4,6-Tribromophenol	*60.7*			*34-129*	*%REC*	1	1/27/2010 15:23
Surr: 2-Fluorobiphenyl	*66.3*			*40-125*	*%REC*	1	1/27/2010 15:23
Surr: 2-Fluorophenol	*59.8*			*20-120*	*%REC*	1	1/27/2010 15:23
Surr: 4-Terphenyl-d14	*70.8*			*40-135*	*%REC*	1	1/27/2010 15:23
Surr: Nitrobenzene-d5	*65.6*			*41-120*	*%REC*	1	1/27/2010 15:23
Surr: Phenol-d6	*62.8*			*20-120*	*%REC*	1	1/27/2010 15:23
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 18:46
Benzene	U		0.50	5.0	µg/L	1	1/22/2010 18:46
Chlorobenzene	U		0.50	5.0	µg/L	1	1/22/2010 18:46
Dichloromethane	U		0.50	10	µg/L	1	1/22/2010 18:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-FB04-011910
Collection Date: 1/19/2010 04:10 PM

Work Order: 1001469
Lab ID: 1001469-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/22/2010 18:46
Toluene	U		0.50	5.0	µg/L	1	1/22/2010 18:46
Xylenes, Total	U		1.0	15	µg/L	1	1/22/2010 18:46
Surr: 1,2-Dichloroethane-d4	*92.1*			*70-125*	*%REC*	1	1/22/2010 18:46
Surr: 4-Bromofluorobenzene	*107*			*72-125*	*%REC*	1	1/22/2010 18:46
Surr: Dibromofluoromethane	*93.9*			*71-125*	*%REC*	1	1/22/2010 18:46
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/22/2010 18:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TB04-011910
Collection Date: 1/19/2010

Work Order: 1001469
Lab ID: 1001469-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,1,2,2-Tetrachloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,1,2-Trichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,1-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,1-Dichloroethene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
1,2-Dichloropropane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
2-Butanone	U		0.80	10	µg/L	1	1/22/2010 19:11
2-Hexanone	U		1.0	10	µg/L	1	1/22/2010 19:11
4-Methyl-2-pentanone	U		1.0	10	µg/L	1	1/22/2010 19:11
Acetone	U		1.0	10	µg/L	1	1/22/2010 19:11
Benzene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Bromodichloromethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Bromoform	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Bromomethane	U		0.90	5.0	µg/L	1	1/22/2010 19:11
Carbon disulfide	U		0.50	10	µg/L	1	1/22/2010 19:11
Carbon tetrachloride	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Chlorobenzene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Chloroethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Chloroform	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Chloromethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
cis-1,2-Dichloroethene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
cis-1,3-Dichloropropene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Dibromochloromethane	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Dichloromethane	U		0.50	10	µg/L	1	1/22/2010 19:11
Ethylbenzene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Methyl tert-butyl ether	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Styrene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Tetrachloroethene	U		0.60	5.0	µg/L	1	1/22/2010 19:11
Toluene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
trans-1,2-Dichloroethene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
trans-1,3-Dichloropropene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Trichloroethene	U		0.50	5.0	µg/L	1	1/22/2010 19:11
Vinyl chloride	U		0.50	2.0	µg/L	1	1/22/2010 19:11
Xylenes, Total	U		1.0	15	µg/L	1	1/22/2010 19:11
Surr: 1,2-Dichloroethane-d4	*89.5*			*70-125*	*%REC*	1	1/22/2010 19:11
Surr: 4-Bromofluorobenzene	*96.7*			*72-125*	*%REC*	1	1/22/2010 19:11
Surr: Dibromofluoromethane	*93.0*			*71-125*	*%REC*	1	1/22/2010 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TB04-011910
Collection Date: 1/19/2010

Work Order: 1001469
Lab ID: 1001469-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Toluene-d8	*97.0*			*75-125*	*%REC*	1	1/22/2010 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW57A-012010
Collection Date: 1/20/2010 07:00 AM

Work Order: 1001469
Lab ID: 1001469-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 12:21
2,4-Dimethylphenol	**3,000**		**80**	**200**	**µg/L**	1000	1/29/2010 17:01
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 12:21
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 12:21
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 12:21
2-Methylnaphthalene	**890**		**14**	**40**	**µg/L**	200	1/29/2010 15:35
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 12:21
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 12:21
Acenaphthene	**310**		**18**	**40**	**µg/L**	200	1/29/2010 15:35
Acenaphthylene	**6.1**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Anthracene	**22**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 12:42
Benz(a)anthracene	**0.51**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Benzo(a)pyrene	**0.12**	J	**0.080**	**0.20**	**µg/L**	1	1/29/2010 12:21
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 12:21
Bis(2-ethylhexyl)phthalate	**0.40**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 12:21
Chrysene	**0.34**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 12:21
Dibenzofuran	**170**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 12:42
Fluoranthene	**6.3**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Fluorene	**110**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 12:42
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 12:21
Naphthalene	**7,400**		**100**	**200**	**µg/L**	1000	1/29/2010 17:01
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 12:21
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 12:21
Phenanthrene	**88**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 12:42
Phenol	**9.9**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Pyrene	**3.7**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 12:21
Surr: 2,4,6-Tribromophenol	*86.0*			*34-129*	*%REC*	1	1/29/2010 12:21
Surr: 2,4,6-Tribromophenol	*93.8*			*34-129*	*%REC*	20	1/29/2010 12:42
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	200	1/29/2010 15:35
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 17:01
Surr: 2-Fluorobiphenyl	*80.7*			*40-125*	*%REC*	1	1/29/2010 12:21
Surr: 2-Fluorobiphenyl	*84.4*			*40-125*	*%REC*	20	1/29/2010 12:42
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	200	1/29/2010 15:35
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 17:01
Surr: 2-Fluorophenol	*34.9*			*20-120*	*%REC*	1	1/29/2010 12:21
Surr: 2-Fluorophenol	*81.5*			*20-120*	*%REC*	20	1/29/2010 12:42
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	200	1/29/2010 15:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW57A-012010
Collection Date: 1/20/2010 07:00 AM

Work Order: 1001469
Lab ID: 1001469-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 17:01
Surr: 4-Terphenyl-d14	*61.6*			*40-135*	*%REC*	1	1/29/2010 12:21
Surr: 4-Terphenyl-d14	*62.7*	J		*40-135*	*%REC*	20	1/29/2010 12:42
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	200	1/29/2010 15:35
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 17:01
Surr: Nitrobenzene-d5	*48.9*			*41-120*	*%REC*	1	1/29/2010 12:21
Surr: Nitrobenzene-d5	*94.6*			*41-120*	*%REC*	20	1/29/2010 12:42
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	200	1/29/2010 15:35
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 17:01
Surr: Phenol-d6	*61.9*			*20-120*	*%REC*	1	1/29/2010 12:21
Surr: Phenol-d6	*78.7*	J		*20-120*	*%REC*	20	1/29/2010 12:42
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	200	1/29/2010 15:35
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 17:01
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
1,1,2,2-Tetrachloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
1,1,2-Trichloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
1,1-Dichloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
1,1-Dichloroethene	U		2.5	25	µg/L	5	1/23/2010 23:37
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
1,2-Dichloropropane	U		2.5	25	µg/L	5	1/23/2010 23:37
2-Butanone	U		4.0	50	µg/L	5	1/23/2010 23:37
2-Hexanone	U		5.0	50	µg/L	5	1/23/2010 23:37
4-Methyl-2-pentanone	U		5.0	50	µg/L	5	1/23/2010 23:37
Acetone	U		5.0	50	µg/L	5	1/23/2010 23:37
Benzene	**170**		**2.5**	**25**	**µg/L**	5	1/23/2010 23:37
Bromodichloromethane	U		2.5	25	µg/L	5	1/23/2010 23:37
Bromoform	U		2.5	25	µg/L	5	1/23/2010 23:37
Bromomethane	U		4.5	25	µg/L	5	1/23/2010 23:37
Carbon disulfide	U		2.5	50	µg/L	5	1/23/2010 23:37
Carbon tetrachloride	U		2.5	25	µg/L	5	1/23/2010 23:37
Chlorobenzene	U		2.5	25	µg/L	5	1/23/2010 23:37
Chloroethane	U		2.5	25	µg/L	5	1/23/2010 23:37
Chloroform	U		2.5	25	µg/L	5	1/23/2010 23:37
Chloromethane	U		2.5	25	µg/L	5	1/23/2010 23:37
cis-1,2-Dichloroethene	**5.1**	J	**2.5**	**25**	**µg/L**	5	1/23/2010 23:37
cis-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/23/2010 23:37
Dibromochloromethane	U		2.5	25	µg/L	5	1/23/2010 23:37
Dichloromethane	U		2.5	50	µg/L	5	1/23/2010 23:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW57A-012010
Collection Date: 1/20/2010 07:00 AM

Work Order: 1001469
Lab ID: 1001469-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	**320**		**2.5**	**25**	**µg/L**	5	1/23/2010 23:37
Methyl tert-butyl ether	U		2.5	25	µg/L	5	1/23/2010 23:37
Styrene	U		2.5	25	µg/L	5	1/23/2010 23:37
Tetrachloroethene	U		3.0	25	µg/L	5	1/23/2010 23:37
Toluene	**130**		**2.5**	**25**	**µg/L**	5	1/23/2010 23:37
trans-1,2-Dichloroethene	U		2.5	25	µg/L	5	1/23/2010 23:37
trans-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/23/2010 23:37
Trichloroethene	U		2.5	25	µg/L	5	1/23/2010 23:37
Vinyl chloride	U		2.5	10	µg/L	5	1/23/2010 23:37
Xylenes, Total	**600**		**5.0**	**75**	**µg/L**	5	1/23/2010 23:37
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	5	1/23/2010 23:37
Surr: 4-Bromofluorobenzene	*93.4*			*72-125*	*%REC*	5	1/23/2010 23:37
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	5	1/23/2010 23:37
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	5	1/23/2010 23:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW58A-012010
Collection Date: 1/20/2010 08:00 AM

Work Order: 1001469
Lab ID: 1001469-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 13:04
2,4-Dimethylphenol	**97**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 13:26
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 13:04
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 13:04
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 13:04
2-Methylnaphthalene	**100**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 13:26
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 13:04
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 13:04
Acenaphthene	**180**		**1.8**	**4.0**	**µg/L**	20	1/29/2010 13:26
Acenaphthylene	**1.3**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 13:04
Anthracene	**9.8**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 13:04
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 13:04
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 13:04
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 13:04
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/29/2010 13:04
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 13:04
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 13:04
Dibenzofuran	**140**		**1.6**	**4.0**	**µg/L**	20	1/29/2010 13:26
Fluoranthene	**5.8**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 13:04
Fluorene	**120**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 13:26
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 13:04
Naphthalene	**670**		**8.0**	**16**	**µg/L**	80	1/29/2010 15:56
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 13:04
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 13:04
Phenanthrene	**49**		**1.4**	**4.0**	**µg/L**	20	1/29/2010 13:26
Phenol	**7.4**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 13:04
Pyrene	**3.4**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 13:04
Surr: 2,4,6-Tribromophenol	*56.8*			*34-129*	*%REC*	1	1/29/2010 13:04
Surr: 2,4,6-Tribromophenol	*79.5*	J		*34-129*	*%REC*	20	1/29/2010 13:26
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	80	1/29/2010 15:56
Surr: 2-Fluorobiphenyl	*49.3*			*40-125*	*%REC*	1	1/29/2010 13:04
Surr: 2-Fluorobiphenyl	*68.6*	J		*40-125*	*%REC*	20	1/29/2010 13:26
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	80	1/29/2010 15:56
Surr: 2-Fluorophenol	*55.3*			*20-120*	*%REC*	1	1/29/2010 13:04
Surr: 2-Fluorophenol	*51.6*	J		*20-120*	*%REC*	20	1/29/2010 13:26
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	80	1/29/2010 15:56
Surr: 4-Terphenyl-d14	*55.9*			*40-135*	*%REC*	1	1/29/2010 13:04
Surr: 4-Terphenyl-d14	*60.3*	J		*40-135*	*%REC*	20	1/29/2010 13:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW58A-012010
Collection Date: 1/20/2010 08:00 AM

Work Order: 1001469
Lab ID: 1001469-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	80	1/29/2010 15:56
Surr: Nitrobenzene-d5	*107*			*41-120*	*%REC*	1	1/29/2010 13:04
Surr: Nitrobenzene-d5	*65.5*	J		*41-120*	*%REC*	20	1/29/2010 13:26
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	80	1/29/2010 15:56
Surr: Phenol-d6	*56.5*			*20-120*	*%REC*	1	1/29/2010 13:04
Surr: Phenol-d6	*56.0*	J		*20-120*	*%REC*	20	1/29/2010 13:26
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	80	1/29/2010 15:56
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
1,1,2,2-Tetrachloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
1,1,2-Trichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
1,1-Dichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
1,1-Dichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:02
1,2-Dichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
1,2-Dichloropropane	U		2.5	25	µg/L	5	1/24/2010 00:02
2-Butanone	U		4.0	50	µg/L	5	1/24/2010 00:02
2-Hexanone	U		5.0	50	µg/L	5	1/24/2010 00:02
4-Methyl-2-pentanone	U		5.0	50	µg/L	5	1/24/2010 00:02
Acetone	U		5.0	50	µg/L	5	1/24/2010 00:02
Benzene	**38**		**2.5**	**25**	**µg/L**	5	1/24/2010 00:02
Bromodichloromethane	U		2.5	25	µg/L	5	1/24/2010 00:02
Bromoform	U		2.5	25	µg/L	5	1/24/2010 00:02
Bromomethane	U		4.5	25	µg/L	5	1/24/2010 00:02
Carbon disulfide	U		2.5	50	µg/L	5	1/24/2010 00:02
Carbon tetrachloride	U		2.5	25	µg/L	5	1/24/2010 00:02
Chlorobenzene	**9.3**	J	**2.5**	**25**	**µg/L**	5	1/24/2010 00:02
Chloroethane	U		2.5	25	µg/L	5	1/24/2010 00:02
Chloroform	U		2.5	25	µg/L	5	1/24/2010 00:02
Chloromethane	U		2.5	25	µg/L	5	1/24/2010 00:02
cis-1,2-Dichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:02
cis-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/24/2010 00:02
Dibromochloromethane	U		2.5	25	µg/L	5	1/24/2010 00:02
Dichloromethane	U		2.5	50	µg/L	5	1/24/2010 00:02
Ethylbenzene	**63**		**2.5**	**25**	**µg/L**	5	1/24/2010 00:02
Methyl tert-butyl ether	U		2.5	25	µg/L	5	1/24/2010 00:02
Styrene	U		2.5	25	µg/L	5	1/24/2010 00:02
Tetrachloroethene	U		3.0	25	µg/L	5	1/24/2010 00:02
Toluene	**20**	J	**2.5**	**25**	**µg/L**	5	1/24/2010 00:02
trans-1,2-Dichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-MW58A-012010
Collection Date: 1/20/2010 08:00 AM

Work Order: 1001469
Lab ID: 1001469-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/24/2010 00:02
Trichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:02
Vinyl chloride	U		2.5	10	µg/L	5	1/24/2010 00:02
Xylenes, Total	**40**	J	**5.0**	**75**	**µg/L**	5	1/24/2010 00:02
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	5	1/24/2010 00:02
Surr: 4-Bromofluorobenzene	*92.7*			*72-125*	*%REC*	5	1/24/2010 00:02
Surr: Dibromofluoromethane	*99.5*			*71-125*	*%REC*	5	1/24/2010 00:02
Surr: Toluene-d8	*97.0*			*75-125*	*%REC*	5	1/24/2010 00:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TW56A-012010
Collection Date: 1/20/2010 09:00 AM

Work Order: 1001469
Lab ID: 1001469-15
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/27/2010 16:27
2,4-Dimethylphenol	**2,900**		**40**	**100**	**µg/L**	500	1/29/2010 17:44
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/27/2010 16:27
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/27/2010 16:27
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/27/2010 16:27
2-Methylnaphthalene	**150**		**7.0**	**20**	**µg/L**	100	1/29/2010 16:18
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/27/2010 16:27
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/27/2010 16:27
Acenaphthene	**77**		**0.90**	**2.0**	**µg/L**	10	1/29/2010 13:47
Acenaphthylene	**2.4**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Anthracene	**3.5**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Benz(a)anthracene	**0.99**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Benzo(a)pyrene	**0.31**		**0.080**	**0.20**	**µg/L**	1	1/27/2010 16:27
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/27/2010 16:27
Bis(2-ethylhexyl)phthalate	**0.25**		**0.20**	**0.20**	**µg/L**	1	1/27/2010 16:27
Chrysene	**0.84**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Di-n-butyl phthalate	**0.45**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Dibenzofuran	**43**		**0.80**	**2.0**	**µg/L**	10	1/29/2010 13:47
Fluoranthene	**10**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Fluorene	**33**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 13:47
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/27/2010 16:27
Naphthalene	**2,500**		**50**	**100**	**µg/L**	500	1/29/2010 17:44
Nitrobenzene	U		0.090	0.20	µg/L	1	1/27/2010 16:27
Pentachlorophenol	**0.13**	J	**0.080**	**0.20**	**µg/L**	1	1/27/2010 16:27
Phenanthrene	**60**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 13:47
Phenol	**14**		**0.70**	**2.0**	**µg/L**	10	1/29/2010 13:47
Pyrene	**6.7**		**0.070**	**0.20**	**µg/L**	1	1/27/2010 16:27
Surr: 2,4,6-Tribromophenol	*44.0*			*34-129*	*%REC*	1	1/27/2010 16:27
Surr: 2,4,6-Tribromophenol	*64.5*			*34-129*	*%REC*	10	1/29/2010 13:47
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 16:18
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	1/29/2010 17:44
Surr: 2-Fluorobiphenyl	*40.5*			*40-125*	*%REC*	1	1/27/2010 16:27
Surr: 2-Fluorobiphenyl	*51.9*			*40-125*	*%REC*	10	1/29/2010 13:47
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 16:18
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	1/29/2010 17:44
Surr: 2-Fluorophenol	*59.4*			*20-120*	*%REC*	1	1/27/2010 16:27
Surr: 2-Fluorophenol	*72.7*			*20-120*	*%REC*	10	1/29/2010 13:47
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 16:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TW56A-012010
Collection Date: 1/20/2010 09:00 AM

Work Order: 1001469
Lab ID: 1001469-15
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	1/29/2010 17:44
Surr: 4-Terphenyl-d14	*62.7*			*40-135*	*%REC*	1	1/27/2010 16:27
Surr: 4-Terphenyl-d14	*61.3*			*40-135*	*%REC*	10	1/29/2010 13:47
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 16:18
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	1/29/2010 17:44
Surr: Nitrobenzene-d5	*41.2*			*41-120*	*%REC*	1	1/27/2010 16:27
Surr: Nitrobenzene-d5	*57.0*			*41-120*	*%REC*	10	1/29/2010 13:47
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 16:18
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	1/29/2010 17:44
Surr: Phenol-d6	*75.6*			*20-120*	*%REC*	1	1/27/2010 16:27
Surr: Phenol-d6	*56.0*			*20-120*	*%REC*	10	1/29/2010 13:47
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 16:18
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	1/29/2010 17:44
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,1,1-Trichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:26
1,1,2,2-Tetrachloroethane	U		2.5	25	µg/L	5	1/24/2010 00:26
1,1,2-Trichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:26
1,1-Dichloroethane	U		2.5	25	µg/L	5	1/24/2010 00:26
1,1-Dichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:26
1,2-Dichloroethane	**23**	J	**2.5**	**25**	**µg/L**	5	1/24/2010 00:26
1,2-Dichloropropane	U		2.5	25	µg/L	5	1/24/2010 00:26
2-Butanone	U		4.0	50	µg/L	5	1/24/2010 00:26
2-Hexanone	U		5.0	50	µg/L	5	1/24/2010 00:26
4-Methyl-2-pentanone	U		5.0	50	µg/L	5	1/24/2010 00:26
Acetone	**69**		**5.0**	**50**	**µg/L**	5	1/24/2010 00:26
Benzene	**260**		**2.5**	**25**	**µg/L**	5	1/24/2010 00:26
Bromodichloromethane	U		2.5	25	µg/L	5	1/24/2010 00:26
Bromoform	U		2.5	25	µg/L	5	1/24/2010 00:26
Bromomethane	U		4.5	25	µg/L	5	1/24/2010 00:26
Carbon disulfide	U		2.5	50	µg/L	5	1/24/2010 00:26
Carbon tetrachloride	U		2.5	25	µg/L	5	1/24/2010 00:26
Chlorobenzene	U		2.5	25	µg/L	5	1/24/2010 00:26
Chloroethane	U		2.5	25	µg/L	5	1/24/2010 00:26
Chloroform	U		2.5	25	µg/L	5	1/24/2010 00:26
Chloromethane	U		2.5	25	µg/L	5	1/24/2010 00:26
cis-1,2-Dichloroethene	**14**	J	**2.5**	**25**	**µg/L**	5	1/24/2010 00:26
cis-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/24/2010 00:26
Dibromochloromethane	U		2.5	25	µg/L	5	1/24/2010 00:26
Dichloromethane	U		2.5	50	µg/L	5	1/24/2010 00:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
Sample ID: WG-1620-TW56A-012010
Collection Date: 1/20/2010 09:00 AM

Work Order: 1001469
Lab ID: 1001469-15
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	**360**		**2.5**	**25**	**µg/L**	5	1/24/2010 00:26
Methyl tert-butyl ether	U		2.5	25	µg/L	5	1/24/2010 00:26
Styrene	U		2.5	25	µg/L	5	1/24/2010 00:26
Tetrachloroethene	U		3.0	25	µg/L	5	1/24/2010 00:26
Toluene	**320**		**2.5**	**25**	**µg/L**	5	1/24/2010 00:26
trans-1,2-Dichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:26
trans-1,3-Dichloropropene	U		2.5	25	µg/L	5	1/24/2010 00:26
Trichloroethene	U		2.5	25	µg/L	5	1/24/2010 00:26
Vinyl chloride	U		2.5	10	µg/L	5	1/24/2010 00:26
Xylenes, Total	**980**		**5.0**	**75**	**µg/L**	5	1/24/2010 00:26
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	5	1/24/2010 00:26
Surr: 4-Bromofluorobenzene	*93.5*			*72-125*	*%REC*	5	1/24/2010 00:26
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	5	1/24/2010 00:26
Surr: Toluene-d8	*101*			*75-125*	*%REC*	5	1/24/2010 00:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001469
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1,1-Trichloroethane	71-55-6	0.5	5
A	1,1,2,2-Tetrachloroethane	79-34-5	0.5	5
A	1,1,2-Trichloroethane	79-00-5	0.5	5
A	1,1-Dichloroethane	75-34-3	0.5	5
A	1,1-Dichloroethene	75-35-4	0.5	5
A	1,2-Dichloroethane	107-06-2	0.5	5
A	1,2-Dichloropropane	78-87-5	0.5	5
A	2-Butanone	78-93-3	0.8	10
A	2-Hexanone	591-78-6	1	10
A	4-Methyl-2-pentanone	108-10-1	1	10
A	Acetone	67-64-1	1	10
A	Benzene	71-43-2	0.5	5
A	Bromodichloromethane	75-27-4	0.5	5
A	Bromoform	75-25-2	0.5	5
A	Bromomethane	74-83-9	0.9	5
A	Carbon disulfide	75-15-0	0.5	10
A	Carbon tetrachloride	56-23-5	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Chloroethane	75-00-3	0.5	5
A	Chloroform	67-66-3	0.5	5
A	Chloromethane	74-87-3	0.5	5
A	cis-1,2-Dichloroethene	156-59-2	0.5	5
A	cis-1,3-Dichloropropene	10061-01-5	0.5	5
A	Dibromochloromethane	124-48-1	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Methyl tert-butyl ether	1634-04-4	0.5	5
A	Styrene	100-42-5	0.5	5
A	Tetrachloroethene	127-18-4	0.6	5
A	Toluene	108-88-3	0.5	5
A	trans-1,2-Dichloroethene	156-60-5	0.5	5
A	trans-1,3-Dichloropropene	10061-02-6	0.5	5
A	Trichloroethene	79-01-6	0.5	5
A	Vinyl chloride	75-01-4	0.5	2
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001469
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **40662** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100123-40662** Units: **µg/L** Analysis Date: **1/26/2010 07:06 PM**

Client ID: Run ID: **SV-2_100126C** SeqNo: **1867476** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.168*	0.20	*5*	0	*63.4*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.296*	0.20	*5*	0	*65.9*	*40-125*	0			
Surr: 2-Fluorophenol	*2.909*	0.20	*5*	0	*58.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.607*	0.20	*5*	0	*72.1*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.165*	0.20	*5*	0	*63.3*	*41-120*	0			
Surr: Phenol-d6	*3.159*	0.20	*5*	0	*63.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40662** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW1-100123-40662** Units: **µg/L** Analysis Date: **1/26/2010 07:27 PM**

Client ID: Run ID: **SV-2_100126C** SeqNo: **1867482** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.962	0.20	5	0	79.2	39-127	0			
2,4-Dimethylphenol	3.194	0.20	5	0	63.9	35-120	0			
2,4-Dinitrotoluene	3.65	0.20	5	0	73	50-122	0			
2,6-Dinitrotoluene	3.847	0.20	5	0	76.9	50-120	0			
2-Chloronaphthalene	4.498	0.20	5	0	90	50-120	0			
2-Methylnaphthalene	3.617	0.20	5	0	72.3	50-120	0			
4,6-Dinitro-2-methylphenol	3.559	0.20	5	0	71.2	25-121	0			
4-Nitrophenol	3.56	1.0	5	0	71.2	30-130	0			
Acenaphthene	3.532	0.20	5	0	70.6	45-120	0			
Acenaphthylene	3.75	0.20	5	0	75	47-120	0			
Anthracene	3.623	0.20	5	0	72.5	45-120	0			
Benz(a)anthracene	3.707	0.20	5	0	74.1	40-120	0			
Benzo(a)pyrene	3.796	0.20	5	0	75.9	45-120	0			
Bis(2-chloroethoxy)methane	3.75	0.20	5	0	75	45-120	0			
Bis(2-ethylhexyl)phthalate	3.789	0.20	5	0	75.8	40-139	0			
Chrysene	3.576	0.20	5	0	71.5	43-120	0			
Di-n-butyl phthalate	3.614	0.20	5	0	72.3	45-123	0			
Dibenzofuran	3.648	0.20	5	0	73	50-120	0			
Fluoranthene	3.49	0.20	5	0	69.8	45-125	0			
Fluorene	3.743	0.20	5	0	74.9	49-120	0			
N-Nitrosodiphenylamine	3.424	0.20	5	0	68.5	40-125	0			
Naphthalene	3.685	0.20	5	0	73.7	45-120	0			
Nitrobenzene	3.684	0.20	5	0	73.7	44-120	0			
Pentachlorophenol	3.757	0.20	5	0	75.1	19-121	0			
Phenanthrene	3.849	0.20	5	0	77	45-121	0			
Phenol	3.756	0.20	5	0	75.1	20-124	0			
Pyrene	3.659	0.20	5	0	73.2	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.752*	0.20	*5*	0	*75*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.546*	0.20	*5*	0	*70.9*	*40-125*	0			
Surr: 2-Fluorophenol	*3.687*	0.20	*5*	0	*73.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.318*	0.20	*5*	0	*66.4*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.335*	0.20	*5*	0	*66.7*	*41-120*	0			
Surr: Phenol-d6	*3.842*	0.20	*5*	0	*76.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40662** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1001469-07BMS** Units: **µg/L** Analysis Date: **1/26/2010 08:09 PM**

Client ID: **WG-1620-TW41B-011910** Run ID: **SV-2_100126C** SeqNo: **1867486** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.589	0.20	5	0	71.8	39-127	0			
2,4-Dimethylphenol	4.002	0.20	5	0	80	35-120	0			
2,4-Dinitrotoluene	3.45	0.20	5	0	69	50-122	0			
2,6-Dinitrotoluene	4.409	0.20	5	0	88.2	50-120	0			
2-Chloronaphthalene	4.05	0.20	5	0	81	50-120	0			
2-Methylnaphthalene	3.328	0.20	5	0	66.6	50-120	0			
4,6-Dinitro-2-methylphenol	3.394	0.20	5	0	67.9	25-121	0			
4-Nitrophenol	5.275	1.0	5	0	105	30-130	0			
Acenaphthene	3.11	0.20	5	0	62.2	45-120	0			
Acenaphthylene	3.406	0.20	5	0	68.1	47-120	0			
Anthracene	3.341	0.20	5	0	66.8	45-120	0			
Benz(a)anthracene	3.606	0.20	5	0	72.1	40-120	0			
Benzo(a)pyrene	3.57	0.20	5	0	71.4	45-120	0			
Bis(2-chloroethoxy)methane	3.471	0.20	5	0	69.4	45-120	0			
Bis(2-ethylhexyl)phthalate	4.409	0.20	5	1.126	65.7	40-139	0			
Chrysene	3.217	0.20	5	0	64.3	43-120	0			
Di-n-butyl phthalate	3.223	0.20	5	0	64.5	45-123	0			
Dibenzofuran	3.296	0.20	5	0	65.9	50-120	0			
Fluoranthene	3.122	0.20	5	0	62.4	45-125	0			
Fluorene	3.562	0.20	5	0.1458	68.3	49-120	0			
N-Nitrosodiphenylamine	3.292	0.20	5	0	65.8	40-125	0			
Naphthalene	3.331	0.20	5	0.142	63.8	45-120	0			
Nitrobenzene	3.083	0.20	5	0	61.7	44-120	0			
Pentachlorophenol	3.679	0.20	5	0	73.6	19-121	0			
Phenanthrene	3.587	0.20	5	0	71.7	45-121	0			
Phenol	3.257	0.20	5	0	65.1	20-124	0			
Pyrene	3.35	0.20	5	0	67	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.33*	0.20	*5*	0	*66.6*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.167*	0.20	*5*	0	*63.3*	*40-125*	0			
Surr: 2-Fluorophenol	*2.918*	0.20	*5*	0	*58.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.152*	0.20	*5*	0	*63*	*40-135*	0			
Surr: Nitrobenzene-d5	*2.78*	0.20	*5*	0	*55.6*	*41-120*	0			
Surr: Phenol-d6	*3.262*	0.20	*5*	0	*65.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **40662** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1001469-07BMSD** Units: **µg/L** Analysis Date: **1/26/2010 08:30 PM**

Client ID: **WG-1620-TW41B-011910** Run ID: **SV-2_100126C** SeqNo: **1867487** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.678	0.20	5	0	73.6	39-127	3.589	2.44	20	
2,4-Dimethylphenol	3.494	0.20	5	0	69.9	35-120	4.002	13.6	20	
2,4-Dinitrotoluene	3.594	0.20	5	0	71.9	50-122	3.45	4.08	20	
2,6-Dinitrotoluene	4.576	0.20	5	0	91.5	50-120	4.409	3.7	20	
2-Chloronaphthalene	4.5	0.20	5	0	90	50-120	4.05	10.5	20	
2-Methylnaphthalene	3.489	0.20	5	0	69.8	50-120	3.328	4.71	20	
4,6-Dinitro-2-methylphenol	3.439	0.20	5	0	68.8	25-121	3.394	1.33	20	
4-Nitrophenol	4.914	1.0	5	0	98.3	30-130	5.275	7.08	20	
Acenaphthene	3.353	0.20	5	0	67.1	45-120	3.11	7.53	20	
Acenaphthylene	3.649	0.20	5	0	73	47-120	3.406	6.89	20	
Anthracene	3.435	0.20	5	0	68.7	45-120	3.341	2.78	20	
Benz(a)anthracene	3.88	0.20	5	0	77.6	40-120	3.606	7.32	20	
Benzo(a)pyrene	3.504	0.20	5	0	70.1	45-120	3.57	1.88	20	
Bis(2-chloroethoxy)methane	3.52	0.20	5	0	70.4	45-120	3.471	1.4	20	
Bis(2-ethylhexyl)phthalate	5.522	0.20	5	1.126	87.9	40-139	4.409	22.4	20	R
Chrysene	3.426	0.20	5	0	68.5	43-120	3.217	6.3	20	
Di-n-butyl phthalate	3.374	0.20	5	0	67.5	45-123	3.223	4.57	20	
Dibenzofuran	3.457	0.20	5	0	69.1	50-120	3.296	4.77	20	
Fluoranthene	3.191	0.20	5	0	63.8	45-125	3.122	2.17	20	
Fluorene	3.724	0.20	5	0.1458	71.6	49-120	3.562	4.44	20	
N-Nitrosodiphenylamine	3.449	0.20	5	0	69	40-125	3.292	4.66	20	
Naphthalene	3.478	0.20	5	0.142	66.7	45-120	3.331	4.34	20	
Nitrobenzene	3.377	0.20	5	0	67.5	44-120	3.083	9.1	20	
Pentachlorophenol	3.702	0.20	5	0	74	19-121	3.679	0.642	20	
Phenanthrene	3.592	0.20	5	0	71.8	45-121	3.587	0.152	20	
Phenol	3.343	0.20	5	0	66.9	20-124	3.257	2.63	20	
Pyrene	3.624	0.20	5	0	72.5	40-130	3.35	7.87	20	
Surr: 2,4,6-Tribromophenol	*3.562*	0.20	*5*	0	*71.2*	*34-129*	3.33	*6.75*	*20*	
Surr: 2-Fluorobiphenyl	*3.295*	0.20	*5*	0	*65.9*	*40-125*	3.167	*3.97*	*20*	
Surr: 2-Fluorophenol	*3.043*	0.20	*5*	0	*60.9*	*20-120*	2.918	*4.2*	*20*	
Surr: 4-Terphenyl-d14	*3.241*	0.20	*5*	0	*64.8*	*40-135*	3.152	*2.78*	*20*	
Surr: Nitrobenzene-d5	*2.756*	0.20	*5*	0	*55.1*	*41-120*	2.78	*0.876*	*20*	
Surr: Phenol-d6	*3.337*	0.20	*5*	0	*66.7*	*20-120*	3.262	*2.27*	*20*	

The following samples were analyzed in this batch:

1001469-01B	1001469-02B	1001469-03B
1001469-04B	1001469-05B	1001469-06B
1001469-07B	1001469-08B	1001469-09B
1001469-10B	1001469-11B	1001469-13B
1001469-14B	1001469-15B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86206** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-012210-R86206** Units: **µg/L** Analysis Date: **1/22/2010 05:05 PM**

Client ID: Run ID: **VOA1_100122A** SeqNo: **1861472** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Methyl tert-butyl ether	U	5.0								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,2-Dichloroethene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*44.42*	5.0	*50*	0	*88.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.71*	5.0	*50*	0	*95.4*	*72-125*	0			
Surr: Dibromofluoromethane	*43.33*	5.0	*50*	0	*86.7*	*71-125*	0			
Surr: Toluene-d8	*46.19*	5.0	*50*	0	*92.4*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86206** Instrument ID **VOA1** Method: **SW8260**

LCS Sample ID: **VLCSW-012210-R86206** Units: **µg/L** Analysis Date: **1/22/2010 03:49 PM**

Client ID: Run ID: **VOA1_100122A** SeqNo: **1861471** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.6	5.0	50	0	97.2	80-120	0			
1,1,2,2-Tetrachloroethane	53.4	5.0	50	0	107	72-120	0			
1,1,2-Trichloroethane	49.82	5.0	50	0	99.6	80-120	0			
1,1-Dichloroethane	44.94	5.0	50	0	89.9	76-120	0			
1,1-Dichloroethene	46.09	5.0	50	0	92.2	73-124	0			
1,2-Dichloroethane	47.95	5.0	50	0	95.9	78-120	0			
1,2-Dichloropropane	49.62	5.0	50	0	99.2	80-120	0			
2-Butanone	97.41	10	100	0	97.4	58-132	0			
2-Hexanone	107.3	10	100	0	107	61-130	0			
4-Methyl-2-pentanone	106.5	10	100	0	106	65-127	0			
Acetone	95.26	10	100	0	95.3	59-137	0			
Benzene	49.75	5.0	50	0	99.5	73-121	0			
Bromodichloromethane	48.07	5.0	50	0	96.1	80-120	0			
Bromoform	49.82	5.0	50	0	99.6	79-120	0			
Bromomethane	49.1	5.0	50	0	98.2	66-137	0			
Carbon disulfide	97.83	10	100	0	97.8	68-141	0			
Carbon tetrachloride	49.08	5.0	50	0	98.2	75-124	0			
Chlorobenzene	49.42	5.0	50	0	98.8	80-120	0			
Chloroethane	45.88	5.0	50	0	91.8	76-121	0			
Chloroform	46.35	5.0	50	0	92.7	80-120	0			
Chloromethane	45.65	5.0	50	0	91.3	67-123	0			
cis-1,2-Dichloroethene	48.26	5.0	50	0	96.5	78-120	0			
cis-1,3-Dichloropropene	49.48	5.0	50	0	99	80-120	0			
Dibromochloromethane	52.07	5.0	50	0	104	80-120	0			
Dichloromethane	44.45	10	50	0	88.9	65-133	0			
Ethylbenzene	49.36	5.0	50	0	98.7	80-120	0			
Methyl tert-butyl ether	55.28	5.0	50	0	111	73-121	0			
Styrene	52	5.0	50	0	104	80-120	0			
Tetrachloroethene	49.22	5.0	50	0	98.4	79-120	0			
Toluene	48.42	5.0	50	0	96.8	80-120	0			
trans-1,2-Dichloroethene	46.11	5.0	50	0	92.2	78-120	0			
trans-1,3-Dichloropropene	49.55	5.0	50	0	99.1	80-120	0			
Trichloroethene	49.69	5.0	50	0	99.4	80-120	0			
Vinyl chloride	43.79	2.0	50	0	87.6	70-127	0			
Xylenes, Total	153.9	15	150	0	103	80-120	0			
Surr: 1,2-Dichloroethane-d4	*43.56*	5.0	*50*	0	*87.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.84*	5.0	*50*	0	*95.7*	*72-125*	0			
Surr: Dibromofluoromethane	*45.98*	5.0	*50*	0	*92*	*71-125*	0			
Surr: Toluene-d8	*47.55*	5.0	*50*	0	*95.1*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86206** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1001424-01AMS** Units: **µg/L** Analysis Date: **1/22/2010 05:55 PM**

Client ID: Run ID: **VOA1_100122A** SeqNo: **1861474** Prep Date: DF: **100**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	4378	500	5000	0	87.6	80-120	0			
1,1,2,2-Tetrachloroethane	4804	500	5000	0	96.1	72-120	0			
1,1,2-Trichloroethane	4851	500	5000	0	97	80-120	0			
1,1-Dichloroethane	4489	500	5000	0	89.8	76-120	0			
1,1-Dichloroethene	4117	500	5000	0	82.3	73-124	0			
1,2-Dichloroethane	4725	500	5000	0	94.5	78-120	0			
1,2-Dichloropropane	4756	500	5000	0	95.1	80-120	0			
2-Butanone	9493	1,000	10000	0	94.9	58-132	0			
2-Hexanone	10280	1,000	10000	0	103	61-130	0			
4-Methyl-2-pentanone	10490	1,000	10000	0	105	65-127	0			
Acetone	9363	1,000	10000	0	93.6	59-137	0			
Benzene	4774	500	5000	0	95.5	73-121	0			
Bromodichloromethane	5115	500	5000	0	102	80-120	0			
Bromoform	4725	500	5000	0	94.5	79-120	0			
Bromomethane	4808	500	5000	0	96.2	66-137	0			
Carbon disulfide	7796	1,000	10000	0	78	68-141	0			
Carbon tetrachloride	4057	500	5000	0	81.1	75-124	0			
Chlorobenzene	4766	500	5000	0	95.3	80-120	0			
Chloroethane	4693	500	5000	0	93.9	76-121	0			
Chloroform	5648	500	5000	789.6	97.2	80-120	0			
Chloromethane	4802	500	5000	0	96	67-123	0			
cis-1,2-Dichloroethene	4802	500	5000	0	96	78-120	0			
cis-1,3-Dichloropropene	4971	500	5000	0	99.4	80-120	0			
Dibromochloromethane	5025	500	5000	0	100	80-120	0			
Dichloromethane	4412	1,000	5000	0	88.2	65-133	0			
Ethylbenzene	4965	500	5000	0	99.3	80-120	0			
Methyl tert-butyl ether	4871	500	5000	0	97.4	73-121	0			
Styrene	4650	500	5000	0	93	80-120	0			
Tetrachloroethene	5149	500	5000	0	103	79-120	0			
Toluene	4657	500	5000	0	93.1	80-120	0			
trans-1,2-Dichloroethene	4324	500	5000	0	86.5	78-120	0			
trans-1,3-Dichloropropene	4647	500	5000	0	92.9	80-120	0			
Trichloroethene	4410	500	5000	0	88.2	80-120	0			
Vinyl chloride	4165	200	5000	0	83.3	70-127	0			
Xylenes, Total	14920	1,500	15000	0	99.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*4638*	500	*5000*	0	*92.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*4875*	500	*5000*	0	*97.5*	*72-125*	0			
Surr: Dibromofluoromethane	*4715*	500	*5000*	0	*94.3*	*71-125*	0			
Surr: Toluene-d8	*4759*	500	*5000*	0	*95.2*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86206** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1001424-01AMSD** Units: **µg/L** Analysis Date: **1/22/2010 06:20 PM**

Client ID: Run ID: **VOA1_100122A** SeqNo: **1861476** Prep Date: DF: **100**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	4312	500	5000	0	86.2	80-120	4378	1.51	20	
1,1,2,2-Tetrachloroethane	5226	500	5000	0	105	72-120	4804	8.41	20	
1,1,2-Trichloroethane	5227	500	5000	0	105	80-120	4851	7.46	20	
1,1-Dichloroethane	4552	500	5000	0	91	76-120	4489	1.39	20	
1,1-Dichloroethene	4177	500	5000	0	83.5	73-124	4117	1.46	20	
1,2-Dichloroethane	4822	500	5000	0	96.4	78-120	4725	2.03	20	
1,2-Dichloropropane	4916	500	5000	0	98.3	80-120	4756	3.3	20	
2-Butanone	10340	1,000	10000	0	103	58-132	9493	8.49	20	
2-Hexanone	11810	1,000	10000	0	118	61-130	10280	13.9	20	
4-Methyl-2-pentanone	11580	1,000	10000	0	116	65-127	10490	9.92	20	
Acetone	10650	1,000	10000	0	107	59-137	9363	12.9	20	
Benzene	4641	500	5000	0	92.8	73-121	4774	2.84	20	
Bromodichloromethane	5039	500	5000	0	101	80-120	5115	1.49	20	
Bromoform	5238	500	5000	0	105	79-120	4725	10.3	20	
Bromomethane	4801	500	5000	0	96	66-137	4808	0.145	20	
Carbon disulfide	7440	1,000	10000	0	74.4	68-141	7796	4.67	20	
Carbon tetrachloride	3823	500	5000	0	76.5	75-124	4057	5.95	20	
Chlorobenzene	4710	500	5000	0	94.2	80-120	4766	1.18	20	
Chloroethane	4354	500	5000	0	87.1	76-121	4693	7.49	20	
Chloroform	5380	500	5000	789.6	91.8	80-120	5648	4.86	20	
Chloromethane	4355	500	5000	0	87.1	67-123	4802	9.76	20	
cis-1,2-Dichloroethene	4693	500	5000	0	93.9	78-120	4802	2.31	20	
cis-1,3-Dichloropropene	4960	500	5000	0	99.2	80-120	4971	0.219	20	
Dibromochloromethane	5564	500	5000	0	111	80-120	5025	10.2	20	
Dichloromethane	4555	1,000	5000	0	91.1	65-133	4412	3.18	20	
Ethylbenzene	4874	500	5000	0	97.5	80-120	4965	1.84	20	
Methyl tert-butyl ether	5392	500	5000	0	108	73-121	4871	10.1	20	
Styrene	4752	500	5000	0	95	80-120	4650	2.16	20	
Tetrachloroethene	5673	500	5000	0	113	79-120	5149	9.68	20	
Toluene	5014	500	5000	0	100	80-120	4657	7.39	20	
trans-1,2-Dichloroethene	4561	500	5000	0	91.2	78-120	4324	5.32	20	
trans-1,3-Dichloropropene	4750	500	5000	0	95	80-120	4647	2.18	20	
Trichloroethene	4576	500	5000	0	91.5	80-120	4410	3.69	20	
Vinyl chloride	4051	200	5000	0	81	70-127	4165	2.79	20	
Xylenes, Total	15530	1,500	15000	0	104	80-120	14920	4.01	20	
Surr: 1,2-Dichloroethane-d4	*4442*	500	*5000*	0	*88.8*	*70-125*	4638	*4.31*	*20*	
Surr: 4-Bromofluorobenzene	*4831*	500	*5000*	0	*96.6*	*72-125*	4875	*0.908*	*20*	
Surr: Dibromofluoromethane	*4550*	500	*5000*	0	*91*	*71-125*	4715	*3.57*	*20*	
Surr: Toluene-d8	*4942*	500	*5000*	0	*98.8*	*75-125*	4759	*3.76*	*20*	

The following samples were analyzed in this batch: 1001469-11A 1001469-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86235** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012310-R86235** Units: **µg/L** Analysis Date: **1/23/2010 02:39 PM**

Client ID: Run ID: **VOA2_100123B** SeqNo: **1862065** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Methyl tert-butyl ether	U	5.0								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,2-Dichloroethene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*61.8*	5.0	*50*	0	*124*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.62*	5.0	*50*	0	*97.2*	*72-125*	0			
Surr: Dibromofluoromethane	*50.28*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*49.63*	5.0	*50*	0	*99.3*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86235** Instrument ID **VOA2** Method: **SW8260**

LCS Sample ID: **VLCSW-012310-R86235** Units: **µg/L** Analysis Date: **1/23/2010 01:25 PM**

Client ID: Run ID: **VOA2_100123B** SeqNo: **1862064** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.69	5.0	50	0	101	80-120	0			
1,1,2,2-Tetrachloroethane	58.2	5.0	50	0	116	72-120	0			
1,1,2-Trichloroethane	53.33	5.0	50	0	107	80-120	0			
1,1-Dichloroethane	51.33	5.0	50	0	103	76-120	0			
1,1-Dichloroethene	51.29	5.0	50	0	103	73-124	0			
1,2-Dichloroethane	49.1	5.0	50	0	98.2	78-120	0			
1,2-Dichloropropane	54.69	5.0	50	0	109	80-120	0			
2-Butanone	109.1	10	100	0	109	58-132	0			
2-Hexanone	119.9	10	100	0	120	61-130	0			
4-Methyl-2-pentanone	123.1	10	100	0	123	65-127	0			
Acetone	113.4	10	100	0	113	59-137	0			
Benzene	53.04	5.0	50	0	106	73-121	0			
Bromodichloromethane	49.37	5.0	50	0	98.7	80-120	0			
Bromoform	52.33	5.0	50	0	105	79-120	0			
Bromomethane	43.4	5.0	50	0	86.8	66-137	0			
Carbon disulfide	106.6	10	100	0	107	68-141	0			
Carbon tetrachloride	46.57	5.0	50	0	93.1	75-124	0			
Chlorobenzene	48.4	5.0	50	0	96.8	80-120	0			
Chloroethane	47.57	5.0	50	0	95.1	76-121	0			
Chloroform	45.24	5.0	50	0	90.5	80-120	0			
Chloromethane	53.53	5.0	50	0	107	67-123	0			
cis-1,2-Dichloroethene	51.05	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	52.65	5.0	50	0	105	80-120	0			
Dibromochloromethane	47.99	5.0	50	0	96	80-120	0			
Dichloromethane	48.45	10	50	0	96.9	65-133	0			
Ethylbenzene	49.47	5.0	50	0	98.9	80-120	0			
Methyl tert-butyl ether	51.44	5.0	50	0	103	73-121	0			
Styrene	48.52	5.0	50	0	97	80-120	0			
Tetrachloroethene	48.78	5.0	50	0	97.6	79-120	0			
Toluene	50.37	5.0	50	0	101	80-120	0			
trans-1,2-Dichloroethene	51.26	5.0	50	0	103	78-120	0			
trans-1,3-Dichloropropene	50.24	5.0	50	0	100	80-120	0			
Trichloroethene	49.16	5.0	50	0	98.3	80-120	0			
Vinyl chloride	48.24	2.0	50	0	96.5	70-127	0			
Xylenes, Total	146.8	15	150	0	97.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.52*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.53*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*54.85*	5.0	*50*	0	*110*	*71-125*	0			
Surr: Toluene-d8	*52.54*	5.0	*50*	0	*105*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86235** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001469-07AMS** Units: **µg/L** Analysis Date: **1/23/2010 03:52 PM**

Client ID: **WG-1620-TW41B-011910** Run ID: **VOA2_100123B** SeqNo: **1862073** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	42.01	5.0	50	0	84	80-120	0			
1,1,2,2-Tetrachloroethane	54.52	5.0	50	0	109	72-120	0			
1,1,2-Trichloroethane	49.82	5.0	50	0	99.6	80-120	0			
1,1-Dichloroethane	48.36	5.0	50	0	96.7	76-120	0			
1,1-Dichloroethene	42.02	5.0	50	0	84	73-124	0			
1,2-Dichloroethane	45.13	5.0	50	0	90.3	78-120	0			
1,2-Dichloropropane	49.67	5.0	50	0	99.3	80-120	0			
2-Butanone	113	10	100	0	113	58-132	0			
2-Hexanone	117	10	100	0	117	61-130	0			
4-Methyl-2-pentanone	120	10	100	0	120	65-127	0			
Acetone	108	10	100	0	108	59-137	0			
Benzene	47.22	5.0	50	0	94.4	73-121	0			
Bromodichloromethane	45.55	5.0	50	0	91.1	80-120	0			
Bromoform	49.4	5.0	50	0	98.8	79-120	0			
Bromomethane	42.11	5.0	50	0	84.2	66-137	0			
Carbon disulfide	92.51	10	100	0	92.5	68-141	0			
Carbon tetrachloride	35.52	5.0	50	0	71	75-124	0			S
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Chloroethane	44.38	5.0	50	0	88.8	76-121	0			
Chloroform	44.9	5.0	50	0	89.8	80-120	0			
Chloromethane	52.74	5.0	50	0	105	67-123	0			
cis-1,2-Dichloroethene	49.4	5.0	50	0	98.8	78-120	0			
cis-1,3-Dichloropropene	47.88	5.0	50	0	95.8	80-120	0			
Dibromochloromethane	44.38	5.0	50	0	88.8	80-120	0			
Dichloromethane	50.44	10	50	0	101	65-133	0			
Ethylbenzene	42.87	5.0	50	0	85.7	80-120	0			
Methyl tert-butyl ether	47.47	5.0	50	0	94.9	73-121	0			
Styrene	43.43	5.0	50	0	86.9	80-120	0			
Tetrachloroethene	38.3	5.0	50	0	76.6	79-120	0			S
Toluene	44.62	5.0	50	0	89.2	80-120	0			
trans-1,2-Dichloroethene	44.8	5.0	50	0	89.6	78-120	0			
trans-1,3-Dichloropropene	46.45	5.0	50	0	92.9	80-120	0			
Trichloroethene	42.87	5.0	50	0	85.7	80-120	0			
Vinyl chloride	42.7	2.0	50	0	85.4	70-127	0			
Xylenes, Total	127.2	15	150	0	84.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.09*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*46.41*	5.0	*50*	0	*92.8*	*72-125*	0			
Surr: Dibromofluoromethane	*49.64*	5.0	*50*	0	*99.3*	*71-125*	0			
Surr: Toluene-d8	*47.33*	5.0	*50*	0	*94.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86235** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1001469-07AMSD** Units: **µg/L** Analysis Date: **1/23/2010 04:17 PM**

Client ID: **WG-1620-TW41B-011910** Run ID: **VOA2_100123B** SeqNo: **1862074** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43.34	5.0	50	0	86.7	80-120	42.01	3.1	20	
1,1,2,2-Tetrachloroethane	54.03	5.0	50	0	108	72-120	54.52	0.916	20	
1,1,2-Trichloroethane	49.73	5.0	50	0	99.5	80-120	49.82	0.175	20	
1,1-Dichloroethane	46.52	5.0	50	0	93	76-120	48.36	3.86	20	
1,1-Dichloroethene	39.81	5.0	50	0	79.6	73-124	42.02	5.41	20	
1,2-Dichloroethane	46.63	5.0	50	0	93.3	78-120	45.13	3.28	20	
1,2-Dichloropropane	51.23	5.0	50	0	102	80-120	49.67	3.09	20	
2-Butanone	102.7	10	100	0	103	58-132	113	9.53	20	
2-Hexanone	108.8	10	100	0	109	61-130	117	7.29	20	
4-Methyl-2-pentanone	113.8	10	100	0	114	65-127	120	5.38	20	
Acetone	88.51	10	100	0	88.5	59-137	108	19.9	20	
Benzene	48.73	5.0	50	0	97.5	73-121	47.22	3.16	20	
Bromodichloromethane	47.82	5.0	50	0	95.6	80-120	45.55	4.85	20	
Bromoform	51.17	5.0	50	0	102	79-120	49.4	3.53	20	
Bromomethane	43.54	5.0	50	0	87.1	66-137	42.11	3.34	20	
Carbon disulfide	89.7	10	100	0	89.7	68-141	92.51	3.09	20	
Carbon tetrachloride	41.8	5.0	50	0	83.6	75-124	35.52	16.3	20	
Chlorobenzene	44.42	5.0	50	0	88.8	80-120	43.5	2.08	20	
Chloroethane	41.87	5.0	50	0	83.7	76-121	44.38	5.83	20	
Chloroform	50.01	5.0	50	0	100	80-120	44.9	10.7	20	
Chloromethane	49.34	5.0	50	0	98.7	67-123	52.74	6.65	20	
cis-1,2-Dichloroethene	47.54	5.0	50	0	95.1	78-120	49.4	3.85	20	
cis-1,3-Dichloropropene	50.08	5.0	50	0	100	80-120	47.88	4.49	20	
Dibromochloromethane	46.27	5.0	50	0	92.5	80-120	44.38	4.17	20	
Dichloromethane	48.52	10	50	0	97	65-133	50.44	3.86	20	
Ethylbenzene	43.35	5.0	50	0	86.7	80-120	42.87	1.12	20	
Methyl tert-butyl ether	45.31	5.0	50	0	90.6	73-121	47.47	4.66	20	
Styrene	44.09	5.0	50	0	88.2	80-120	43.43	1.52	20	
Tetrachloroethene	39.3	5.0	50	0	78.6	79-120	38.3	2.58	20	S
Toluene	45.23	5.0	50	0	90.5	80-120	44.62	1.36	20	
trans-1,2-Dichloroethene	43.13	5.0	50	0	86.3	78-120	44.8	3.78	20	
trans-1,3-Dichloropropene	47.76	5.0	50	0	95.5	80-120	46.45	2.79	20	
Trichloroethene	42.98	5.0	50	0	86	80-120	42.87	0.246	20	
Vinyl chloride	40.42	2.0	50	0	80.8	70-127	42.7	5.48	20	
Xylenes, Total	130.1	15	150	0	86.8	80-120	127.2	2.24	20	
Surr: 1,2-Dichloroethane-d4	*50.64*	5.0	*50*	0	*101*	*70-125*	50.09	*1.08*	*20*	
Surr: 4-Bromofluorobenzene	*49.16*	5.0	*50*	0	*98.3*	*72-125*	46.41	*5.75*	*20*	
Surr: Dibromofluoromethane	*52.86*	5.0	*50*	0	*106*	*71-125*	49.64	*6.3*	*20*	
Surr: Toluene-d8	*49.71*	5.0	*50*	0	*99.4*	*75-125*	47.33	*4.92*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001469
Project: HWPW GW

QC BATCH REPORT

Batch ID: **R86235** Instrument ID **VOA2** Method: **SW8260**

The following samples were analyzed in this batch:

1001469-01A	1001469-02A	1001469-03A
1001469-04A	1001469-05A	1001469-06A
1001469-07A	1001469-08A	1001469-09A
1001469-10A	1001469-13A	1001469-14A
1001469-15A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW GW
WorkOrder: **1001469**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Chain of Custody Form

Page 1 of 2

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ALS Project Manager: | **ALS Work Order #:** 1001469

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW18C-011910	1-19-10	0700	W		5	X	X									
2	WG-1620-MW14-011910	1-19-10	0810	W		5	X	X									
3	WG-1620 FD02-011910	1-19-10	0810	W		5	X	X									
4	WG-1620-MW39B-011910	1-19-10	0905	W		5	X	X									
5	WG-1620-MW12C-011910	1-19-10	1000	W		5	X	X									
6	WG-1620-MW12A-011910	1-19-10	1100	W		5	X	X									
7	WG-1620-TW41B-011910	1-19-10	1155	W		5	X	X									
8	WG-1620-TW41BMS-011910	1-19-10	1155	W		5	X	X									
9	WG-1620-TW41BMSD-011910	1-19-10	1155	W		5	X	X									
10	WG-1620-MW13-011910	1-19-10	1340	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYDEN John Brayden

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: John Brayden	Date: 1/20/10	Time: 18:35	Received by:	Notes: 10 Work Days TAT.
Relinquished by:	Date:	Time:	Received by (Laboratory): 1/20/10 18:35	Cooler ID / Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager:

ALS Work Order #: 1101459

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	FULL VOC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW40B-011910	1-19-10	1435	W		5	X	X									
2	WG-1620-MW42B-011910	1-19-10	1540	W		5	X	X									
3	WG-1620-FB04-011910	1-19-10	1610	W		5	X	X									
4	WG-1620-TB04-011910	1-19-10		W		2			X								
5	WG-1620-MW57A-012010	1-20-10	0700	W		5	JB	X	X								
6	WG-1620-MW58A-012010	1-20-10	0800	W		5		X	X								
7	WG-1620-TW56A-012010	1-20-10	0900	W		5		X	X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method:

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: Date: 1/20/10 Time: 18:35

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 1/20/10 18:35

Notes: 10 Work Days TAT.

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **20-Jan-10 18:35**

Work Order: **1001469** Received by: **RNG**

Checklist completed by Raymond N Gamboa (eSignature) 21-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 22-Jan-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9c, 2.3c, 2.0c	002	
Cooler(s)/Kit(s):	1933, 3289, 3307		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

01-Feb-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: UPRR HWPGW GW Work Order: **1001482**

Dear Eric,

ALS Laboratory Group received 16 samples on 21-Jan-2010 06:11 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 54.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Work Order: 1001482

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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.

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Rev Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: UPRR HWPGW GW	Laboratory Job Number: 1001482
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40663, R86190, R86246, R86300, R86428

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 02/01/2010					
Project Name: UPRR HWPGW GW			Laboratory Job Number: 1001482					
Reviewer Name: Lora Terrill			Prep Batch Number(s): : 40663, R86190, R86246, R86300, R86428					
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]	
S1	OI	**INITIAL CALIBRATION (ICAL)**						
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X					
		2) Were percent RSDs or correlation coefficient criteria met?	X					
		3) Was the number of standards recommended in the method used for all analytes?	X					
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X					
		5) Are ICAL data available for all instruments used?	X					
		6) 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**						
		1) Was the CCV analyzed at the method-required frequency?	X					
		2) Were percent differences for each analyte within the method-required QC limits?	X					
		3) Was the ICAL curve verified for each analyte?	X					
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X			
S3	O	**MASS SPECTRAL TUNING:**						
		1) Was the appropriate compound for the method used for tuning?	X					
		2) 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**						
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X					
		2) 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**						
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X			
S10	OI	**PROFICIENCY TEST REPORTS:**						
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X					
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**						
		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**						
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X					
		2) Is documentation of the analyst's competency up-to-date and on file?	X					
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**						
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: UPRR HWPGW GW	Laboratory Job Number: 1001482
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40663, R86190, R86246, R86300, R86428

ER #[1]	DESCRIPTION
1	Some Semivolatile surrogate recoveries are diluted out.

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

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Work Order: **1001482**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001482-01	WG-1620-MW66D-012010	Water		1/20/2010 10:10	1/21/2010 18:11	☐
1001482-02	WG-1620-MW49B-012010	Water		1/20/2010 11:00	1/21/2010 18:11	☐
1001482-03	WG-1620-MW59D-012010	Water		1/20/2010 12:05	1/21/2010 18:11	☐
1001482-04	WG-1620-FD03-012010	Water		1/20/2010 12:05	1/21/2010 18:11	☐
1001482-05	WG-1620-MW50A-012010	Water		1/20/2010 13:45	1/21/2010 18:11	☐
1001482-06	WG-1620-MW59A-012010	Water		1/20/2010 12:55	1/21/2010 18:11	☐
1001482-07	WG-1620-MW51A-012010	Water		1/20/2010 14:45	1/21/2010 18:11	☐
1001482-08	WG-1620-MW47C-012010	Water		1/20/2010 15:45	1/21/2010 18:11	☐
1001482-09	WG-1620-MW61A-012010	Water		1/20/2010 16:30	1/21/2010 18:11	☐
1001482-10	WG-1620-MW60A-012010	Water		1/20/2010 17:10	1/21/2010 18:11	☐
1001482-11	WG-1620-MW49A-012110	Water		1/21/2010 06:40	1/21/2010 18:11	☐
1001482-12	WG-1620-MW48C-012110	Water		1/21/2010 07:35	1/21/2010 18:11	☐
1001482-13	WG-1620-MW54C-012110	Water		1/21/2010 08:30	1/21/2010 18:11	☐
1001482-14	WG-1620-MW65D-012110	Water		1/21/2010 09:40	1/21/2010 18:11	☐
1001482-15	WG-1620-FB05-012010	Water		1/20/2010 16:45	1/21/2010 18:11	☐
1001482-16	WG-1620-TB05-012010	Water		1/20/2010	1/21/2010 18:11	☐

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW66D-012010
Collection Date: 1/20/2010 10:10 AM

Work Order: 1001482
Lab ID: 1001482-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 15:33
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 15:33
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 15:33
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 15:33
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 15:33
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 15:33
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 15:33
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 15:33
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 15:33
Bis(2-ethylhexyl)phthalate	**2.8**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 15:33
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Di-n-butyl phthalate	**0.086**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 15:33
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 15:33
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 15:33
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 15:33
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 15:33
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 15:33
Phenanthrene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 15:33
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 15:33
Surr: 2,4,6-Tribromophenol	*65.2*			*34-129*	*%REC*	1	1/29/2010 15:33
Surr: 2-Fluorobiphenyl	*66.7*			*40-125*	*%REC*	1	1/29/2010 15:33
Surr: 2-Fluorophenol	*65.2*			*20-120*	*%REC*	1	1/29/2010 15:33
Surr: 4-Terphenyl-d14	*66.3*			*40-135*	*%REC*	1	1/29/2010 15:33
Surr: Nitrobenzene-d5	*65.0*			*41-120*	*%REC*	1	1/29/2010 15:33
Surr: Phenol-d6	*61.9*			*20-120*	*%REC*	1	1/29/2010 15:33
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 13:55
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 13:55
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:55
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 13:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW66D-012010
Collection Date: 1/20/2010 10:10 AM

Work Order: 1001482
Lab ID: 1001482-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:55
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 13:55
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 13:55
Surr: 1,2-Dichloroethane-d4	*100*			*70-125*	*%REC*	1	1/25/2010 13:55
Surr: 4-Bromofluorobenzene	*92.0*			*72-125*	*%REC*	1	1/25/2010 13:55
Surr: Dibromofluoromethane	*98.6*			*71-125*	*%REC*	1	1/25/2010 13:55
Surr: Toluene-d8	*96.7*			*75-125*	*%REC*	1	1/25/2010 13:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW49B-012010
Collection Date: 1/20/2010 11:00 AM

Work Order: 1001482
Lab ID: 1001482-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 18:58
2,4-Dimethylphenol	**13**		**0.80**	**2.0**	**µg/L**	10	1/28/2010 21:02
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 18:58
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 18:58
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:58
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 18:58
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:58
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 18:58
Acenaphthene	**17**		**0.90**	**2.0**	**µg/L**	10	1/28/2010 21:02
Acenaphthylene	**0.70**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Anthracene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:58
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 18:58
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 18:58
Bis(2-ethylhexyl)phthalate	**0.53**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 18:58
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 18:58
Di-n-butyl phthalate	**0.083**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Dibenzofuran	**2.4**		**0.080**	**0.20**	**µg/L**	1	1/29/2010 18:58
Fluoranthene	**0.23**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Fluorene	**3.6**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 18:58
Naphthalene	**0.44**		**0.10**	**0.20**	**µg/L**	1	1/29/2010 18:58
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 18:58
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 18:58
Phenanthrene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 18:58
Pyrene	**0.20**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 18:58
Surr: 2,4,6-Tribromophenol	*68.8*			*34-129*	*%REC*	10	1/28/2010 21:02
Surr: 2,4,6-Tribromophenol	*61.5*			*34-129*	*%REC*	1	1/29/2010 18:58
Surr: 2-Fluorobiphenyl	*72.2*			*40-125*	*%REC*	10	1/28/2010 21:02
Surr: 2-Fluorobiphenyl	*63.6*			*40-125*	*%REC*	1	1/29/2010 18:58
Surr: 2-Fluorophenol	*67.2*			*20-120*	*%REC*	10	1/28/2010 21:02
Surr: 2-Fluorophenol	*74.2*			*20-120*	*%REC*	1	1/29/2010 18:58
Surr: 4-Terphenyl-d14	*71.9*			*40-135*	*%REC*	10	1/28/2010 21:02
Surr: 4-Terphenyl-d14	*60.8*			*40-135*	*%REC*	1	1/29/2010 18:58
Surr: Nitrobenzene-d5	*67.6*			*41-120*	*%REC*	10	1/28/2010 21:02
Surr: Nitrobenzene-d5	*66.5*			*41-120*	*%REC*	1	1/29/2010 18:58
Surr: Phenol-d6	*76.1*			*20-120*	*%REC*	10	1/28/2010 21:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW49B-012010
Collection Date: 1/20/2010 11:00 AM

Work Order: 1001482
Lab ID: 1001482-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*63.9*			*20-120*	*%REC*	1	1/29/2010 18:58
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 20:25
Benzene	**13**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:25
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 20:25
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 20:25
Ethylbenzene	**24**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:25
Toluene	**45**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:25
Xylenes, Total	**70**		**1.0**	**15**	**µg/L**	1	1/25/2010 20:25
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	1/25/2010 20:25
Surr: 4-Bromofluorobenzene	*97.2*			*72-125*	*%REC*	1	1/25/2010 20:25
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/25/2010 20:25
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/25/2010 20:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW59D-012010
Collection Date: 1/20/2010 12:05 PM

Work Order: 1001482
Lab ID: 1001482-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**		Prep: SW3510 / 1/23/10			Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 17:35
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 17:35
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 17:35
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 17:35
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 17:35
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 17:35
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 17:35
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 17:35
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 17:35
Bis(2-ethylhexyl)phthalate	**0.23**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 17:35
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 17:35
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 17:35
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 17:35
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 17:35
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 17:35
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 17:35
Surr: 2,4,6-Tribromophenol	*53.8*			*34-129*	*%REC*	1	1/29/2010 17:35
Surr: 2-Fluorobiphenyl	*63.9*			*40-125*	*%REC*	1	1/29/2010 17:35
Surr: 2-Fluorophenol	*55.5*			*20-120*	*%REC*	1	1/29/2010 17:35
Surr: 4-Terphenyl-d14	*60.2*			*40-135*	*%REC*	1	1/29/2010 17:35
Surr: Nitrobenzene-d5	*59.9*			*41-120*	*%REC*	1	1/29/2010 17:35
Surr: Phenol-d6	*59.2*			*20-120*	*%REC*	1	1/29/2010 17:35
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 14:19
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 14:19
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 14:19
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 14:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW59D-012010
Collection Date: 1/20/2010 12:05 PM

Work Order: 1001482
Lab ID: 1001482-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 14:19
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 14:19
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 14:19
Surr: 1,2-Dichloroethane-d4	*100*			*70-125*	*%REC*	1	1/25/2010 14:19
Surr: 4-Bromofluorobenzene	*90.9*			*72-125*	*%REC*	1	1/25/2010 14:19
Surr: Dibromofluoromethane	*99.2*			*71-125*	*%REC*	1	1/25/2010 14:19
Surr: Toluene-d8	*96.1*			*75-125*	*%REC*	1	1/25/2010 14:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-FD03-012010
Collection Date: 1/20/2010 12:05 PM

Work Order: 1001482
Lab ID: 1001482-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 15:54
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 15:54
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 15:54
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 15:54
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 15:54
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 15:54
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 15:54
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 15:54
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 15:54
Bis(2-ethylhexyl)phthalate	**0.87**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 15:54
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 15:54
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 15:54
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 15:54
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 15:54
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 15:54
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 15:54
Surr: 2,4,6-Tribromophenol	*61.1*			*34-129*	*%REC*	1	1/29/2010 15:54
Surr: 2-Fluorobiphenyl	*63.7*			*40-125*	*%REC*	1	1/29/2010 15:54
Surr: 2-Fluorophenol	*61.5*			*20-120*	*%REC*	1	1/29/2010 15:54
Surr: 4-Terphenyl-d14	*64.9*			*40-135*	*%REC*	1	1/29/2010 15:54
Surr: Nitrobenzene-d5	*60.5*			*41-120*	*%REC*	1	1/29/2010 15:54
Surr: Phenol-d6	*63.9*			*20-120*	*%REC*	1	1/29/2010 15:54
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 14:44
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 14:44
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 14:44
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 14:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-FD03-012010
Collection Date: 1/20/2010 12:05 PM

Work Order: 1001482
Lab ID: 1001482-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 14:44
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 14:44
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 14:44
Surr: 1,2-Dichloroethane-d4	*111*			*70-125*	*%REC*	1	1/25/2010 14:44
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	1/25/2010 14:44
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/25/2010 14:44
Surr: Toluene-d8	*105*			*75-125*	*%REC*	1	1/25/2010 14:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW50A-012010
Collection Date: 1/20/2010 01:45 PM

Work Order: 1001482
Lab ID: 1001482-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 18:16
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:16
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 18:16
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:16
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:16
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 18:16
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 18:16
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 18:16
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 18:16
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	1/29/2010 18:16
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 18:16
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 18:16
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:16
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 18:16
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 18:16
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 18:16
Surr: 2,4,6-Tribromophenol	*54.9*			*34-129*	*%REC*	1	1/29/2010 18:16
Surr: 2-Fluorobiphenyl	*64.0*			*40-125*	*%REC*	1	1/29/2010 18:16
Surr: 2-Fluorophenol	*49.7*			*20-120*	*%REC*	1	1/29/2010 18:16
Surr: 4-Terphenyl-d14	*65.3*			*40-135*	*%REC*	1	1/29/2010 18:16
Surr: Nitrobenzene-d5	*61.5*			*41-120*	*%REC*	1	1/29/2010 18:16
Surr: Phenol-d6	*53.1*			*20-120*	*%REC*	1	1/29/2010 18:16
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 15:08
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 15:08
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:08
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 15:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW50A-012010
Collection Date: 1/20/2010 01:45 PM

Work Order: 1001482
Lab ID: 1001482-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:08
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 15:08
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 15:08
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	1/25/2010 15:08
Surr: 4-Bromofluorobenzene	*93.8*			*72-125*	*%REC*	1	1/25/2010 15:08
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/25/2010 15:08
Surr: Toluene-d8	*98.5*			*75-125*	*%REC*	1	1/25/2010 15:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW59A-012010
Collection Date: 1/20/2010 12:55 PM

Work Order: 1001482
Lab ID: 1001482-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 16:15
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:15
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 16:15
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:15
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:15
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 16:15
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 16:15
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 16:15
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 16:15
Bis(2-ethylhexyl)phthalate	**0.65**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 16:15
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 16:15
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 16:15
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:15
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 16:15
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 16:15
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 16:15
Surr: 2,4,6-Tribromophenol	*60.1*			*34-129*	*%REC*	1	1/29/2010 16:15
Surr: 2-Fluorobiphenyl	*64.2*			*40-125*	*%REC*	1	1/29/2010 16:15
Surr: 2-Fluorophenol	*56.5*			*20-120*	*%REC*	1	1/29/2010 16:15
Surr: 4-Terphenyl-d14	*64.6*			*40-135*	*%REC*	1	1/29/2010 16:15
Surr: Nitrobenzene-d5	*62.4*			*41-120*	*%REC*	1	1/29/2010 16:15
Surr: Phenol-d6	*60.6*			*20-120*	*%REC*	1	1/29/2010 16:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 15:32
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 15:32
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:32
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 15:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW59A-012010
Collection Date: 1/20/2010 12:55 PM

Work Order: 1001482
Lab ID: 1001482-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:32
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 15:32
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 15:32
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/25/2010 15:32
Surr: 4-Bromofluorobenzene	*93.3*			*72-125*	*%REC*	1	1/25/2010 15:32
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	1/25/2010 15:32
Surr: Toluene-d8	*98.7*			*75-125*	*%REC*	1	1/25/2010 15:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW51A-012010
Collection Date: 1/20/2010 02:45 PM

Work Order: 1001482
Lab ID: 1001482-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**		Prep: SW3510 / 1/23/10			Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 16:36
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:36
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 16:36
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:36
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:36
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 16:36
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 16:36
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 16:36
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 16:36
Bis(2-ethylhexyl)phthalate	**1.9**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 16:36
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 16:36
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 16:36
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:36
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 16:36
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 16:36
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 16:36
Surr: 2,4,6-Tribromophenol	*61.2*			*34-129*	*%REC*	1	1/29/2010 16:36
Surr: 2-Fluorobiphenyl	*64.2*			*40-125*	*%REC*	1	1/29/2010 16:36
Surr: 2-Fluorophenol	*55.9*			*20-120*	*%REC*	1	1/29/2010 16:36
Surr: 4-Terphenyl-d14	*62.9*			*40-135*	*%REC*	1	1/29/2010 16:36
Surr: Nitrobenzene-d5	*60.0*			*41-120*	*%REC*	1	1/29/2010 16:36
Surr: Phenol-d6	*59.6*			*20-120*	*%REC*	1	1/29/2010 16:36
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 15:57
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 15:57
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:57
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW51A-012010
Collection Date: 1/20/2010 02:45 PM

Work Order: 1001482
Lab ID: 1001482-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 15:57
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 15:57
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 15:57
Surr: 1,2-Dichloroethane-d4	*100*			*70-125*	*%REC*	1	1/25/2010 15:57
Surr: 4-Bromofluorobenzene	*92.5*			*72-125*	*%REC*	1	1/25/2010 15:57
Surr: Dibromofluoromethane	*99.7*			*71-125*	*%REC*	1	1/25/2010 15:57
Surr: Toluene-d8	*96.8*			*75-125*	*%REC*	1	1/25/2010 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW47C-012010
Collection Date: 1/20/2010 03:45 PM

Work Order: 1001482
Lab ID: 1001482-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**		Prep: SW3510 / 1/23/10			Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 11:22
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 11:22
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 11:22
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 11:22
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 11:22
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 11:22
Acenaphthene	U		0.090	0.20	µg/L	1	1/28/2010 11:22
Acenaphthylene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Anthracene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Benzo(a)pyrene	**0.099**	J	**0.080**	**0.20**	**µg/L**	1	1/28/2010 11:22
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 11:22
Bis(2-ethylhexyl)phthalate	**0.65**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 11:22
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Dibenzofuran	U		0.080	0.20	µg/L	1	1/28/2010 11:22
Fluoranthene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Fluorene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 11:22
Naphthalene	U		0.10	0.20	µg/L	1	1/28/2010 11:22
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 11:22
Pentachlorophenol	**0.40**		**0.080**	**0.20**	**µg/L**	1	1/28/2010 11:22
Phenanthrene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Pyrene	U		0.070	0.20	µg/L	1	1/28/2010 11:22
Surr: 2,4,6-Tribromophenol	*61.3*			*34-129*	*%REC*	1	1/28/2010 11:22
Surr: 2-Fluorobiphenyl	*63.5*			*40-125*	*%REC*	1	1/28/2010 11:22
Surr: 2-Fluorophenol	*63.8*			*20-120*	*%REC*	1	1/28/2010 11:22
Surr: 4-Terphenyl-d14	*63.9*			*40-135*	*%REC*	1	1/28/2010 11:22
Surr: Nitrobenzene-d5	*59.4*			*41-120*	*%REC*	1	1/28/2010 11:22
Surr: Phenol-d6	*65.8*			*20-120*	*%REC*	1	1/28/2010 11:22
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 13:44
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 13:44
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:44
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 13:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW47C-012010
Collection Date: 1/20/2010 03:45 PM

Work Order: 1001482
Lab ID: 1001482-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:44
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 13:44
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 13:44
Surr: 1,2-Dichloroethane-d4	*96.2*			*70-125*	*%REC*	1	1/25/2010 13:44
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	1	1/25/2010 13:44
Surr: Dibromofluoromethane	*89.7*			*71-125*	*%REC*	1	1/25/2010 13:44
Surr: Toluene-d8	*95.2*			*75-125*	*%REC*	1	1/25/2010 13:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW61A-012010
Collection Date: 1/20/2010 04:30 PM

Work Order: 1001482
Lab ID: 1001482-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 11:42
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 11:42
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 11:42
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 11:42
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 11:42
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 11:42
Acenaphthene	U		0.090	0.20	µg/L	1	1/28/2010 11:42
Acenaphthylene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Anthracene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 11:42
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 11:42
Bis(2-ethylhexyl)phthalate	**2.0**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 11:42
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Dibenzofuran	U		0.080	0.20	µg/L	1	1/28/2010 11:42
Fluoranthene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Fluorene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 11:42
Naphthalene	U		0.10	0.20	µg/L	1	1/28/2010 11:42
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 11:42
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 11:42
Phenanthrene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Pyrene	U		0.070	0.20	µg/L	1	1/28/2010 11:42
Surr: 2,4,6-Tribromophenol	*65.2*			*34-129*	*%REC*	1	1/28/2010 11:42
Surr: 2-Fluorobiphenyl	*66.0*			*40-125*	*%REC*	1	1/28/2010 11:42
Surr: 2-Fluorophenol	*63.3*			*20-120*	*%REC*	1	1/28/2010 11:42
Surr: 4-Terphenyl-d14	*63.2*			*40-135*	*%REC*	1	1/28/2010 11:42
Surr: Nitrobenzene-d5	*61.8*			*41-120*	*%REC*	1	1/28/2010 11:42
Surr: Phenol-d6	*64.7*			*20-120*	*%REC*	1	1/28/2010 11:42
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 13:19
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 13:19
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:19
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 13:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW61A-012010
Collection Date: 1/20/2010 04:30 PM

Work Order: 1001482
Lab ID: 1001482-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 13:19
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 13:19
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 13:19
Surr: 1,2-Dichloroethane-d4	*92.1*			*70-125*	*%REC*	1	1/25/2010 13:19
Surr: 4-Bromofluorobenzene	*99.2*			*72-125*	*%REC*	1	1/25/2010 13:19
Surr: Dibromofluoromethane	*84.8*			*71-125*	*%REC*	1	1/25/2010 13:19
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/25/2010 13:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW60A-012010
Collection Date: 1/20/2010 05:10 PM

Work Order: 1001482
Lab ID: 1001482-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**		Prep: SW3510 / 1/23/10			Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 12:03
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:03
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 12:03
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 12:03
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:03
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 12:03
Acenaphthene	U		0.090	0.20	µg/L	1	1/28/2010 12:03
Acenaphthylene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 12:03
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 12:03
Bis(2-ethylhexyl)phthalate	**2.5**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 12:03
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Dibenzofuran	U		0.080	0.20	µg/L	1	1/28/2010 12:03
Fluoranthene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Fluorene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 12:03
Naphthalene	U		0.10	0.20	µg/L	1	1/28/2010 12:03
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 12:03
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 12:03
Phenanthrene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Pyrene	U		0.070	0.20	µg/L	1	1/28/2010 12:03
Surr: 2,4,6-Tribromophenol	*70.2*			*34-129*	*%REC*	1	1/28/2010 12:03
Surr: 2-Fluorobiphenyl	*71.4*			*40-125*	*%REC*	1	1/28/2010 12:03
Surr: 2-Fluorophenol	*64.8*			*20-120*	*%REC*	1	1/28/2010 12:03
Surr: 4-Terphenyl-d14	*68.3*			*40-135*	*%REC*	1	1/28/2010 12:03
Surr: Nitrobenzene-d5	*66.4*			*41-120*	*%REC*	1	1/28/2010 12:03
Surr: Phenol-d6	*64.7*			*20-120*	*%REC*	1	1/28/2010 12:03
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 19:12
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 19:12
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 19:12
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 19:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW60A-012010
Collection Date: 1/20/2010 05:10 PM

Work Order: 1001482
Lab ID: 1001482-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 19:12
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 19:12
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 19:12
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	1/25/2010 19:12
Surr: 4-Bromofluorobenzene	*91.2*			*72-125*	*%REC*	1	1/25/2010 19:12
Surr: Dibromofluoromethane	*99.9*			*71-125*	*%REC*	1	1/25/2010 19:12
Surr: Toluene-d8	*95.6*			*75-125*	*%REC*	1	1/25/2010 19:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW49A-012110
Collection Date: 1/21/2010 06:40 AM

Work Order: 1001482
Lab ID: 1001482-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 19:40
2,4-Dimethylphenol	**860**		**8.0**	**20**	**µg/L**	100	1/29/2010 14:31
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 19:40
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 19:40
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 19:40
2-Methylnaphthalene	**350**		**7.0**	**20**	**µg/L**	100	1/29/2010 14:31
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 19:40
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 19:40
Acenaphthene	**200**		**9.0**	**20**	**µg/L**	100	1/29/2010 14:31
Acenaphthylene	**3.2**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 19:40
Anthracene	**7.1**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 19:40
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 19:40
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 19:40
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 19:40
Bis(2-ethylhexyl)phthalate	**1.5**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 19:40
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 19:40
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 19:40
Dibenzofuran	**140**		**8.0**	**20**	**µg/L**	100	1/29/2010 14:31
Fluoranthene	**2.5**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 19:40
Fluorene	**110**		**7.0**	**20**	**µg/L**	100	1/29/2010 14:31
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 19:40
Naphthalene	**5,100**		**100**	**200**	**µg/L**	1000	1/29/2010 14:52
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 19:40
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 19:40
Phenanthrene	**72**		**0.70**	**2.0**	**µg/L**	10	1/28/2010 20:01
Phenol	**0.77**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 19:40
Pyrene	**1.7**		**0.070**	**0.20**	**µg/L**	1	1/28/2010 19:40
Surr: 2,4,6-Tribromophenol	*53.7*			*34-129*	*%REC*	1	1/28/2010 19:40
Surr: 2,4,6-Tribromophenol	*70.5*			*34-129*	*%REC*	10	1/28/2010 20:01
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	1/29/2010 14:31
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	1/29/2010 14:52
Surr: 2-Fluorobiphenyl	*51.6*			*40-125*	*%REC*	1	1/28/2010 19:40
Surr: 2-Fluorobiphenyl	*69.1*			*40-125*	*%REC*	10	1/28/2010 20:01
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	1/29/2010 14:31
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	1/29/2010 14:52
Surr: 2-Fluorophenol	*83.3*			*20-120*	*%REC*	1	1/28/2010 19:40
Surr: 2-Fluorophenol	*85.1*			*20-120*	*%REC*	10	1/28/2010 20:01
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	1/29/2010 14:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW49A-012110
Collection Date: 1/21/2010 06:40 AM

Work Order: 1001482
Lab ID: 1001482-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	1/29/2010 14:52
Surr: 4-Terphenyl-d14	*60.8*			*40-135*	*%REC*	1	1/28/2010 19:40
Surr: 4-Terphenyl-d14	*68.5*			*40-135*	*%REC*	10	1/28/2010 20:01
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	1/29/2010 14:31
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	1/29/2010 14:52
Surr: Nitrobenzene-d5	*54.3*			*41-120*	*%REC*	1	1/28/2010 19:40
Surr: Nitrobenzene-d5	*59.3*			*41-120*	*%REC*	10	1/28/2010 20:01
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	1/29/2010 14:31
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	1/29/2010 14:52
Surr: Phenol-d6	*74.7*			*20-120*	*%REC*	1	1/28/2010 19:40
Surr: Phenol-d6	*69.9*			*20-120*	*%REC*	10	1/28/2010 20:01
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	1/29/2010 14:31
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	1/29/2010 14:52
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 20:50
Benzene	**200**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:50
Chlorobenzene	**2.4**	J	**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:50
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 20:50
Ethylbenzene	**85**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:50
Toluene	**83**		**0.50**	**5.0**	**µg/L**	1	1/25/2010 20:50
Xylenes, Total	**210**		**1.0**	**15**	**µg/L**	1	1/25/2010 20:50
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	1	1/25/2010 20:50
Surr: 4-Bromofluorobenzene	*96.6*			*72-125*	*%REC*	1	1/25/2010 20:50
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/25/2010 20:50
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/25/2010 20:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW48C-012110
Collection Date: 1/21/2010 07:35 AM

Work Order: 1001482
Lab ID: 1001482-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/28/2010 12:24
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:24
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/28/2010 12:24
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/28/2010 12:24
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/28/2010 12:24
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/28/2010 12:24
Acenaphthene	U		0.090	0.20	µg/L	1	1/28/2010 12:24
Acenaphthylene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/28/2010 12:24
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/28/2010 12:24
Bis(2-ethylhexyl)phthalate	**1.8**		**0.20**	**0.20**	**µg/L**	1	1/28/2010 12:24
Chrysene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Dibenzofuran	U		0.080	0.20	µg/L	1	1/28/2010 12:24
Fluoranthene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 12:24
Fluorene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/28/2010 12:24
Naphthalene	**0.20**	J	**0.10**	**0.20**	**µg/L**	1	1/28/2010 12:24
Nitrobenzene	U		0.090	0.20	µg/L	1	1/28/2010 12:24
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/28/2010 12:24
Phenanthrene	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Phenol	U		0.070	0.20	µg/L	1	1/28/2010 12:24
Pyrene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/28/2010 12:24
Surr: 2,4,6-Tribromophenol	*57.8*			*34-129*	*%REC*	1	1/28/2010 12:24
Surr: 2-Fluorobiphenyl	*64.0*			*40-125*	*%REC*	1	1/28/2010 12:24
Surr: 2-Fluorophenol	*62.1*			*20-120*	*%REC*	1	1/28/2010 12:24
Surr: 4-Terphenyl-d14	*63.5*			*40-135*	*%REC*	1	1/28/2010 12:24
Surr: Nitrobenzene-d5	*60.8*			*41-120*	*%REC*	1	1/28/2010 12:24
Surr: Phenol-d6	*62.6*			*20-120*	*%REC*	1	1/28/2010 12:24
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 19:37
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 19:37
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 19:37
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 19:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW48C-012110
Collection Date: 1/21/2010 07:35 AM

Work Order: 1001482
Lab ID: 1001482-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 19:37
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 19:37
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 19:37
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/25/2010 19:37
Surr: 4-Bromofluorobenzene	*94.4*			*72-125*	*%REC*	1	1/25/2010 19:37
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	1/25/2010 19:37
Surr: Toluene-d8	*99.6*			*75-125*	*%REC*	1	1/25/2010 19:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW54C-012110
Collection Date: 1/21/2010 08:30 AM

Work Order: 1001482
Lab ID: 1001482-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 18:37
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:37
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 18:37
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:37
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:37
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 18:37
Acenaphthene	**0.16**	J	**0.090**	**0.20**	**µg/L**	1	1/29/2010 18:37
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 18:37
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 18:37
Bis(2-ethylhexyl)phthalate	**0.77**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 18:37
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 18:37
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 18:37
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:37
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 18:37
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 18:37
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 18:37
Surr: 2,4,6-Tribromophenol	*57.5*			*34-129*	*%REC*	1	1/29/2010 18:37
Surr: 2-Fluorobiphenyl	*60.7*			*40-125*	*%REC*	1	1/29/2010 18:37
Surr: 2-Fluorophenol	*60.2*			*20-120*	*%REC*	1	1/29/2010 18:37
Surr: 4-Terphenyl-d14	*59.2*			*40-135*	*%REC*	1	1/29/2010 18:37
Surr: Nitrobenzene-d5	*59.6*			*41-120*	*%REC*	1	1/29/2010 18:37
Surr: Phenol-d6	*55.7*			*20-120*	*%REC*	1	1/29/2010 18:37
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 20:01
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 20:01
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 20:01
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW54C-012110
Collection Date: 1/21/2010 08:30 AM

Work Order: 1001482
Lab ID: 1001482-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 20:01
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 20:01
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 20:01
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/25/2010 20:01
Surr: 4-Bromofluorobenzene	*93.8*			*72-125*	*%REC*	1	1/25/2010 20:01
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	1/25/2010 20:01
Surr: Toluene-d8	*99.1*			*75-125*	*%REC*	1	1/25/2010 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW65D-012110
Collection Date: 1/21/2010 09:40 AM

Work Order: 1001482
Lab ID: 1001482-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 17:56
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 17:56
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 17:56
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 17:56
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 17:56
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 17:56
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 17:56
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 17:56
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 17:56
Bis(2-ethylhexyl)phthalate	**2.7**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 17:56
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Dibenzofuran	**0.12**	J	**0.080**	**0.20**	**µg/L**	1	1/29/2010 17:56
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 17:56
Naphthalene	**0.26**		**0.10**	**0.20**	**µg/L**	1	1/29/2010 17:56
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 17:56
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 17:56
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Phenol	**1.5**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 17:56
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 17:56
Surr: 2,4,6-Tribromophenol	*65.6*			*34-129*	*%REC*	1	1/29/2010 17:56
Surr: 2-Fluorobiphenyl	*67.4*			*40-125*	*%REC*	1	1/29/2010 17:56
Surr: 2-Fluorophenol	*70.7*			*20-120*	*%REC*	1	1/29/2010 17:56
Surr: 4-Terphenyl-d14	*63.8*			*40-135*	*%REC*	1	1/29/2010 17:56
Surr: Nitrobenzene-d5	*62.3*			*41-120*	*%REC*	1	1/29/2010 17:56
Surr: Phenol-d6	*52.5*			*20-120*	*%REC*	1	1/29/2010 17:56
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/28/2010 02:31
Benzene	U		0.50	5.0	µg/L	1	1/28/2010 02:31
Chlorobenzene	U		0.50	5.0	µg/L	1	1/28/2010 02:31
Dichloromethane	U		0.50	10	µg/L	1	1/28/2010 02:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-MW65D-012110
Collection Date: 1/21/2010 09:40 AM

Work Order: 1001482
Lab ID: 1001482-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/28/2010 02:31
Toluene	U		0.50	5.0	µg/L	1	1/28/2010 02:31
Xylenes, Total	U		1.0	15	µg/L	1	1/28/2010 02:31
Surr: 1,2-Dichloroethane-d4	*118*			*70-125*	*%REC*	1	1/28/2010 02:31
Surr: 4-Bromofluorobenzene	*103*			*72-125*	*%REC*	1	1/28/2010 02:31
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	1/28/2010 02:31
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/28/2010 02:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-FB05-012010
Collection Date: 1/20/2010 04:45 PM

Work Order: 1001482
Lab ID: 1001482-15
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/23/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 16:57
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:57
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 16:57
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:57
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 16:57
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 16:57
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 16:57
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 16:57
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 16:57
Bis(2-ethylhexyl)phthalate	**1.2**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 16:57
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 16:57
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 16:57
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 16:57
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 16:57
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 16:57
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 16:57
Surr: 2,4,6-Tribromophenol	*61.9*			*34-129*	*%REC*	1	1/29/2010 16:57
Surr: 2-Fluorobiphenyl	*64.7*			*40-125*	*%REC*	1	1/29/2010 16:57
Surr: 2-Fluorophenol	*60.6*			*20-120*	*%REC*	1	1/29/2010 16:57
Surr: 4-Terphenyl-d14	*60.3*			*40-135*	*%REC*	1	1/29/2010 16:57
Surr: Nitrobenzene-d5	*59.1*			*41-120*	*%REC*	1	1/29/2010 16:57
Surr: Phenol-d6	*60.2*			*20-120*	*%REC*	1	1/29/2010 16:57
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 14:05
Benzene	U		0.50	5.0	µg/L	1	1/22/2010 14:05
Chlorobenzene	U		0.50	5.0	µg/L	1	1/22/2010 14:05
Dichloromethane	U		0.50	10	µg/L	1	1/22/2010 14:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-FB05-012010
Collection Date: 1/20/2010 04:45 PM

Work Order: 1001482
Lab ID: 1001482-15
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/22/2010 14:05
Toluene	U		0.50	5.0	µg/L	1	1/22/2010 14:05
Xylenes, Total	U		1.0	15	µg/L	1	1/22/2010 14:05
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/22/2010 14:05
Surr: 4-Bromofluorobenzene	*97.1*			*72-125*	*%REC*	1	1/22/2010 14:05
Surr: Dibromofluoromethane	*83.5*			*71-125*	*%REC*	1	1/22/2010 14:05
Surr: Toluene-d8	*99.1*			*75-125*	*%REC*	1	1/22/2010 14:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
Sample ID: WG-1620-TB05-012010
Collection Date: 1/20/2010

Work Order: 1001482
Lab ID: 1001482-16
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/22/2010 15:19
Benzene	U		0.50	5.0	µg/L	1	1/22/2010 15:19
Chlorobenzene	U		0.50	5.0	µg/L	1	1/22/2010 15:19
Dichloromethane	U		0.50	10	µg/L	1	1/22/2010 15:19
Ethylbenzene	U		0.50	5.0	µg/L	1	1/22/2010 15:19
Toluene	U		0.50	5.0	µg/L	1	1/22/2010 15:19
Xylenes, Total	U		1.0	15	µg/L	1	1/22/2010 15:19
Surr: 1,2-Dichloroethane-d4	*111*			*70-125*	*%REC*	1	1/22/2010 15:19
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	1	1/22/2010 15:19
Surr: Dibromofluoromethane	*86.9*			*71-125*	*%REC*	1	1/22/2010 15:19
Surr: Toluene-d8	*104*			*75-125*	*%REC*	1	1/22/2010 15:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001482
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001482
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

QC BATCH REPORT

Batch ID: **40663** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100123-40663** Units: **µg/L** Analysis Date: **1/27/2010 09:22 AM**

Client ID: Run ID: **SV-4_100127A** SeqNo: **1866039** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.177*	0.20	*5*	0	*63.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.087*	0.20	*5*	0	*61.7*	*40-125*	0			
Surr: 2-Fluorophenol	*2.795*	0.20	*5*	0	*55.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.43*	0.20	*5*	0	*68.6*	*40-135*	0			
Surr: Nitrobenzene-d5	*2.986*	0.20	*5*	0	*59.7*	*41-120*	0			
Surr: Phenol-d6	*3.083*	0.20	*5*	0	*61.7*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **40663** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW2-100123-40663** Units: **µg/L** Analysis Date: **1/27/2010 09:43 AM**

Client ID: Run ID: **SV-4_100127A** SeqNo: **1866042** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.41	0.20	5	0	68.2	39-127	0			
2,4-Dimethylphenol	2.894	0.20	5	0	57.9	35-120	0			
2,4-Dinitrotoluene	3.721	0.20	5	0	74.4	50-122	0			
2,6-Dinitrotoluene	3.624	0.20	5	0	72.5	50-120	0			
2-Chloronaphthalene	3.632	0.20	5	0	72.6	50-120	0			
2-Methylnaphthalene	3.392	0.20	5	0	67.8	50-120	0			
4,6-Dinitro-2-methylphenol	3.574	0.20	5	0	71.5	25-121	0			
4-Nitrophenol	3.54	1.0	5	0	70.8	30-130	0			
Acenaphthene	3.329	0.20	5	0	66.6	45-120	0			
Acenaphthylene	3.57	0.20	5	0	71.4	47-120	0			
Anthracene	3.696	0.20	5	0	73.9	45-120	0			
Benz(a)anthracene	3.775	0.20	5	0	75.5	40-120	0			
Benzo(a)pyrene	3.827	0.20	5	0	76.5	45-120	0			
Bis(2-chloroethoxy)methane	3.38	0.20	5	0	67.6	45-120	0			
Bis(2-ethylhexyl)phthalate	4.017	0.20	5	0	80.3	40-139	0			
Chrysene	3.814	0.20	5	0	76.3	43-120	0			
Di-n-butyl phthalate	3.679	0.20	5	0	73.6	45-123	0			
Dibenzofuran	3.525	0.20	5	0	70.5	50-120	0			
Fluoranthene	3.62	0.20	5	0	72.4	45-125	0			
Fluorene	3.598	0.20	5	0	72	49-120	0			
N-Nitrosodiphenylamine	3.584	0.20	5	0	71.7	40-125	0			
Naphthalene	3.465	0.20	5	0	69.3	45-120	0			
Nitrobenzene	3.283	0.20	5	0	65.7	44-120	0			
Pentachlorophenol	3.704	0.20	5	0	74.1	19-121	0			
Phenanthrene	3.611	0.20	5	0	72.2	45-121	0			
Phenol	3.462	0.20	5	0	69.2	20-124	0			
Pyrene	4.059	0.20	5	0	81.2	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.526*	0.20	*5*	0	*70.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.418*	0.20	*5*	0	*68.4*	*40-125*	0			
Surr: 2-Fluorophenol	*3.272*	0.20	*5*	0	*65.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.637*	0.20	*5*	0	*72.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.143*	0.20	*5*	0	*62.9*	*41-120*	0			
Surr: Phenol-d6	*3.471*	0.20	*5*	0	*69.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **40663** Instrument ID **SV-4** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-100123-40663** Units: **µg/L** Analysis Date: **1/27/2010 10:04 AM**

Client ID: Run ID: **SV-4_100127A** SeqNo: **1866045** Prep Date: **1/23/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.361	0.20	5	0	67.2	39-127	3.41	1.45	20	
2,4-Dimethylphenol	2.81	0.20	5	0	56.2	35-120	2.894	2.94	20	
2,4-Dinitrotoluene	3.789	0.20	5	0	75.8	50-122	3.721	1.82	20	
2,6-Dinitrotoluene	3.652	0.20	5	0	73	50-120	3.624	0.78	20	
2-Chloronaphthalene	3.945	0.20	5	0	78.9	50-120	3.632	8.26	20	
2-Methylnaphthalene	3.344	0.20	5	0	66.9	50-120	3.392	1.42	20	
4,6-Dinitro-2-methylphenol	3.448	0.20	5	0	69	25-121	3.574	3.57	20	
4-Nitrophenol	3.547	1.0	5	0	70.9	30-130	3.54	0.211	20	
Acenaphthene	3.276	0.20	5	0	65.5	45-120	3.329	1.59	20	
Acenaphthylene	3.588	0.20	5	0	71.8	47-120	3.57	0.497	20	
Anthracene	3.668	0.20	5	0	73.4	45-120	3.696	0.74	20	
Benz(a)anthracene	3.912	0.20	5	0	78.2	40-120	3.775	3.58	20	
Benzo(a)pyrene	3.916	0.20	5	0	78.3	45-120	3.827	2.28	20	
Bis(2-chloroethoxy)methane	3.311	0.20	5	0	66.2	45-120	3.38	2.07	20	
Bis(2-ethylhexyl)phthalate	4.128	0.20	5	0	82.6	40-139	4.017	2.74	20	
Chrysene	3.855	0.20	5	0	77.1	43-120	3.814	1.06	20	
Di-n-butyl phthalate	3.762	0.20	5	0	75.2	45-123	3.679	2.24	20	
Dibenzofuran	3.538	0.20	5	0	70.8	50-120	3.525	0.386	20	
Fluoranthene	3.72	0.20	5	0	74.4	45-125	3.62	2.75	20	
Fluorene	3.565	0.20	5	0	71.3	49-120	3.598	0.91	20	
N-Nitrosodiphenylamine	3.556	0.20	5	0	71.1	40-125	3.584	0.778	20	
Naphthalene	3.411	0.20	5	0	68.2	45-120	3.465	1.56	20	
Nitrobenzene	3.226	0.20	5	0	64.5	44-120	3.283	1.75	20	
Pentachlorophenol	3.703	0.20	5	0	74.1	19-121	3.704	0.0104	20	
Phenanthrene	3.677	0.20	5	0	73.5	45-121	3.611	1.81	20	
Phenol	3.413	0.20	5	0	68.3	20-124	3.462	1.41	20	
Pyrene	4.112	0.20	5	0	82.2	40-130	4.059	1.31	20	
Surr: 2,4,6-Tribromophenol	*3.592*	0.20	*5*	0	*71.8*	*34-129*	3.526	*1.85*	*20*	
Surr: 2-Fluorobiphenyl	*3.364*	0.20	*5*	0	*67.3*	*40-125*	3.418	*1.6*	*20*	
Surr: 2-Fluorophenol	*3.234*	0.20	*5*	0	*64.7*	*20-120*	3.272	*1.16*	*20*	
Surr: 4-Terphenyl-d14	*3.715*	0.20	*5*	0	*74.3*	*40-135*	3.637	*2.13*	*20*	
Surr: Nitrobenzene-d5	*3.122*	0.20	*5*	0	*62.4*	*41-120*	3.143	*0.677*	*20*	
Surr: Phenol-d6	*3.453*	0.20	*5*	0	*69.1*	*20-120*	3.471	*0.516*	*20*	

The following samples were analyzed in this batch:

1001482-01B	1001482-02B	1001482-03B
1001482-04B	1001482-05B	1001482-06B
1001482-07B	1001482-08B	1001482-09B
1001482-10B	1001482-11B	1001482-12B
1001482-13B	1001482-14B	1001482-15B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012210-R86190** Units: **µg/L** Analysis Date: **1/22/2010 12:26 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861243** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.22*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.08*	5.0	*50*	0	*98.2*	*72-125*	0			
Surr: Dibromofluoromethane	*44.93*	5.0	*50*	0	*89.9*	*71-125*	0			
Surr: Toluene-d8	*50.11*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-012210-R86190** Units: **µg/L** Analysis Date: **1/22/2010 11:13 AM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861242** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.38	5.0	50	0	92.8	78-120	0			
Benzene	50.11	5.0	50	0	100	73-121	0			
Chlorobenzene	45.99	5.0	50	0	92	80-120	0			
Dichloromethane	44.8	10	50	0	89.6	65-133	0			
Ethylbenzene	47.41	5.0	50	0	94.8	80-120	0			
Toluene	47.47	5.0	50	0	94.9	80-120	0			
Xylenes, Total	139.4	15	150	0	93	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.43*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.19*	5.0	*50*	0	*98.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.54*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*50.17*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86190** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001418-34AMS** Units: **µg/L** Analysis Date: **1/22/2010 02:30 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861247** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.2	5.0	50	0	92.4	78-120	0			
Benzene	49.2	5.0	50	0	98.4	73-121	0			
Chlorobenzene	45.06	5.0	50	0	90.1	80-120	0			
Dichloromethane	48.31	10	50	0	96.6	65-133	0			
Ethylbenzene	44.74	5.0	50	0	89.5	80-120	0			
Toluene	47.3	5.0	50	0.543	93.5	80-120	0			
Xylenes, Total	133.5	15	150	0	89	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.56*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.57*	5.0	*50*	0	*97.1*	*72-125*	0			
Surr: Dibromofluoromethane	*53.14*	5.0	*50*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*50.22*	5.0	*50*	0	*100*	*75-125*	0			

MSD Sample ID: **1001418-34AMSD** Units: **µg/L** Analysis Date: **1/22/2010 02:54 PM**

Client ID: Run ID: **VOA2_100122A** SeqNo: **1861249** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	45.4	5.0	50	0	90.8	78-120	46.2	1.74	20	
Benzene	48.11	5.0	50	0	96.2	73-121	49.2	2.24	20	
Chlorobenzene	44.28	5.0	50	0	88.6	80-120	45.06	1.75	20	
Dichloromethane	47	10	50	0	94	65-133	48.31	2.75	20	
Ethylbenzene	44.04	5.0	50	0	88.1	80-120	44.74	1.58	20	
Toluene	45.75	5.0	50	0.543	90.4	80-120	47.3	3.33	20	
Xylenes, Total	131.8	15	150	0	87.9	80-120	133.5	1.28	20	
Surr: 1,2-Dichloroethane-d4	*50.67*	5.0	*50*	0	*101*	*70-125*	51.56	*1.74*	*20*	
Surr: 4-Bromofluorobenzene	*47.83*	5.0	*50*	0	*95.7*	*72-125*	48.57	*1.52*	*20*	
Surr: Dibromofluoromethane	*51.76*	5.0	*50*	0	*104*	*71-125*	53.14	*2.62*	*20*	
Surr: Toluene-d8	*49*	5.0	*50*	0	*98*	*75-125*	50.22	*2.46*	*20*	

The following samples were analyzed in this batch: 1001482-15A 1001482-16A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86246** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012510-R86246** Units: **µg/L** Analysis Date: **1/25/2010 10:39 AM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862182** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*52.51*	5.0	*50*	0	*105*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.42*	5.0	*50*	0	*94.8*	*72-125*	0			
Surr: Dibromofluoromethane	*50.58*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*49.37*	5.0	*50*	0	*98.7*	*75-125*	0			

LCS Sample ID: **VLCSW-012510-R86246** Units: **µg/L** Analysis Date: **1/25/2010 09:50 AM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862181** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46	5.0	50	0	92	78-120	0			
Benzene	49.75	5.0	50	0	99.5	73-121	0			
Chlorobenzene	45.45	5.0	50	0	90.9	80-120	0			
Dichloromethane	47.31	10	50	0	94.6	65-133	0			
Ethylbenzene	47.08	5.0	50	0	94.2	80-120	0			
Toluene	46.8	5.0	50	0	93.6	80-120	0			
Xylenes, Total	138.4	15	150	0	92.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.06*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.26*	5.0	*50*	0	*94.5*	*72-125*	0			
Surr: Dibromofluoromethane	*50.83*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*49.78*	5.0	*50*	0	*99.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86246** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001481-01AMS** Units: **µg/L** Analysis Date: **1/25/2010 12:17 PM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862185** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	889.8	100	1000	0	89	78-120	0			
Benzene	940.2	100	1000	0	94	73-121	0			
Chlorobenzene	859	100	1000	0	85.9	80-120	0			
Dichloromethane	886.7	200	1000	30.7	85.6	65-133	0			
Ethylbenzene	864.3	100	1000	0	86.4	80-120	0			
Toluene	878.8	100	1000	0	87.9	80-120	0			
Xylenes, Total	2572	300	3000	0	85.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1016*	100	*1000*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*934.6*	100	*1000*	0	*93.5*	*72-125*	0			
Surr: Dibromofluoromethane	*1035*	100	*1000*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*978.8*	100	*1000*	0	*97.9*	*75-125*	0			

MSD Sample ID: **1001481-01AMSD** Units: **µg/L** Analysis Date: **1/25/2010 12:41 PM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862187** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	902.9	100	1000	0	90.3	78-120	889.8	1.47	20	
Benzene	912.2	100	1000	0	91.2	73-121	940.2	3.03	20	
Chlorobenzene	854	100	1000	0	85.4	80-120	859	0.583	20	
Dichloromethane	905.9	200	1000	30.7	87.5	65-133	886.7	2.15	20	
Ethylbenzene	820.8	100	1000	0	82.1	80-120	864.3	5.17	20	
Toluene	850.3	100	1000	0	85	80-120	878.8	3.3	20	
Xylenes, Total	2466	300	3000	0	82.2	80-120	2572	4.2	20	
Surr: 1,2-Dichloroethane-d4	*1052*	100	*1000*	0	*105*	*70-125*	1016	*3.45*	*20*	
Surr: 4-Bromofluorobenzene	*945.4*	100	*1000*	0	*94.5*	*72-125*	934.6	*1.16*	*20*	
Surr: Dibromofluoromethane	*1042*	100	*1000*	0	*104*	*71-125*	1035	*0.622*	*20*	
Surr: Toluene-d8	*995*	100	*1000*	0	*99.5*	*75-125*	978.8	*1.64*	*20*	

The following samples were analyzed in this batch:

1001482-01A	1001482-02A	1001482-03A
1001482-04A	1001482-05A	1001482-06A
1001482-07A	1001482-10A	1001482-11A
1001482-12A	1001482-13A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86300** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-012510-R86300** Units: **µg/L** Analysis Date: **1/25/2010 10:46 AM**

Client ID: Run ID: **VOA1_100125B** SeqNo: **1863364** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*44.93*	5.0	*50*	0	*89.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.18*	5.0	*50*	0	*94.4*	*72-125*	0			
Surr: Dibromofluoromethane	*43.11*	5.0	*50*	0	*86.2*	*71-125*	0			
Surr: Toluene-d8	*48.25*	5.0	*50*	0	*96.5*	*75-125*	0			

LCS Sample ID: **VLCSW-012510-R86300** Units: **µg/L** Analysis Date: **1/25/2010 09:30 AM**

Client ID: Run ID: **VOA1_100125B** SeqNo: **1863363** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.6	5.0	50	0	103	78-120	0			
Benzene	52.32	5.0	50	0	105	73-121	0			
Chlorobenzene	46.4	5.0	50	0	92.8	80-120	0			
Dichloromethane	46.26	10	50	0	92.5	65-133	0			
Ethylbenzene	49.93	5.0	50	0	99.9	80-120	0			
Toluene	50.57	5.0	50	0	101	80-120	0			
Xylenes, Total	155.8	15	150	0	104	80-120	0			
Surr: 1,2-Dichloroethane-d4	*42.76*	5.0	*50*	0	*85.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.99*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*44.82*	5.0	*50*	0	*89.6*	*71-125*	0			
Surr: Toluene-d8	*46.57*	5.0	*50*	0	*93.1*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86300** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1001522-01AMS** Units: **µg/L** Analysis Date: **1/25/2010 12:28 PM**

Client ID: Run ID: **VOA1_100125B** SeqNo: **1863370** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1200	120	1250	0	96	78-120	0			
Benzene	1161	120	1250	0	92.9	73-121	0			
Chlorobenzene	1294	120	1250	0	104	80-120	0			
Dichloromethane	1145	250	1250	0	91.6	65-133	0			
Ethylbenzene	1311	120	1250	0	105	80-120	0			
Toluene	1349	120	1250	0	108	80-120	0			
Xylenes, Total	4008	380	3750	0	107	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1103*	120	*1250*	0	*88.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1301*	120	*1250*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*1099*	120	*1250*	0	*87.9*	*71-125*	0			
Surr: Toluene-d8	*1254*	120	*1250*	0	*100*	*75-125*	0			

MSD Sample ID: **1001522-01AMSD** Units: **µg/L** Analysis Date: **1/25/2010 12:53 PM**

Client ID: Run ID: **VOA1_100125B** SeqNo: **1863371** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1259	120	1250	0	101	78-120	1200	4.78	20	
Benzene	1216	120	1250	0	97.2	73-121	1161	4.57	20	
Chlorobenzene	1195	120	1250	0	95.6	80-120	1294	7.97	20	
Dichloromethane	1119	250	1250	0	89.5	65-133	1145	2.36	20	
Ethylbenzene	1142	120	1250	0	91.3	80-120	1311	13.8	20	
Toluene	1229	120	1250	0	98.3	80-120	1349	9.32	20	
Xylenes, Total	3616	380	3750	0	96.4	80-120	4008	10.3	20	
Surr: 1,2-Dichloroethane-d4	*1138*	120	*1250*	0	*91*	*70-125*	1103	*3.1*	*20*	
Surr: 4-Bromofluorobenzene	*1271*	120	*1250*	0	*102*	*72-125*	1301	*2.35*	*20*	
Surr: Dibromofluoromethane	*1099*	120	*1250*	0	*87.9*	*71-125*	1099	*0.00588*	*20*	
Surr: Toluene-d8	*1231*	120	*1250*	0	*98.5*	*75-125*	1254	*1.85*	*20*	

The following samples were analyzed in this batch: 1001482-08A 1001482-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86428** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012710-R86428** Units: **µg/L** Analysis Date: **1/27/2010 05:34 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865769** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.27*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.71*	5.0	*50*	0	*99.4*	*72-125*	0			
Surr: Dibromofluoromethane	*49.3*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*48.88*	5.0	*50*	0	*97.8*	*75-125*	0			

LCS Sample ID: **VLCSW-012710-R86428** Units: **µg/L** Analysis Date: **1/27/2010 04:21 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865767** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.06	5.0	50	0	96.1	78-120	0			
Benzene	47.6	5.0	50	0	95.2	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	50.81	10	50	0	102	65-133	0			
Ethylbenzene	47.05	5.0	50	0	94.1	80-120	0			
Toluene	46.83	5.0	50	0	93.7	80-120	0			
Xylenes, Total	139.9	15	150	0	93.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.57*	5.0	*50*	0	*99.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.7*	5.0	*50*	0	*97.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.28*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.24*	5.0	*50*	0	*98.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001482
Project: UPRR HWPGW GW

QC BATCH REPORT

Batch ID: **R86428** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001594-03AMS** Units: **µg/L** Analysis Date: **1/27/2010 06:23 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865773** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1190	120	1250	0	95.2	78-120	0			
Benzene	1150	120	1250	0	92	73-121	0			
Chlorobenzene	1128	120	1250	0	90.2	80-120	0			
Dichloromethane	1249	250	1250	0	100	65-133	0			
Ethylbenzene	1128	120	1250	0	90.2	80-120	0			
Toluene	1137	120	1250	0	91	80-120	0			
Xylenes, Total	3395	380	3750	0	90.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1215*	120	*1250*	0	*97.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1221*	120	*1250*	0	*97.7*	*72-125*	0			
Surr: Dibromofluoromethane	*1286*	120	*1250*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*1213*	120	*1250*	0	*97*	*75-125*	0			

MSD Sample ID: **1001594-03AMSD** Units: **µg/L** Analysis Date: **1/27/2010 06:47 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865774** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1235	120	1250	0	98.8	78-120	1190	3.73	20	
Benzene	1182	120	1250	0	94.6	73-121	1150	2.73	20	
Chlorobenzene	1172	120	1250	0	93.7	80-120	1128	3.82	20	
Dichloromethane	1417	250	1250	0	113	65-133	1249	12.6	20	
Ethylbenzene	1146	120	1250	0	91.7	80-120	1128	1.6	20	
Toluene	1160	120	1250	0	92.8	80-120	1137	1.95	20	
Xylenes, Total	3445	380	3750	0	91.9	80-120	3395	1.46	20	
Surr: 1,2-Dichloroethane-d4	*1273*	120	*1250*	0	*102*	*70-125*	1215	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*1257*	120	*1250*	0	*101*	*72-125*	1221	*2.96*	*20*	
Surr: Dibromofluoromethane	*1280*	120	*1250*	0	*102*	*71-125*	1286	*0.454*	*20*	
Surr: Toluene-d8	*1253*	120	*1250*	0	*100*	*75-125*	1213	*3.31*	*20*	

The following samples were analyzed in this batch: 1001482-14A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPGW GW
WorkOrder: **1001482**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 0146Z

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW66D-012010	1-20-10	1010	W		5	X	X									
2	WG-1620-MW49B-012010	1-20-10	1100	W		5	X	X									
3	WG-1620-MW59D-012010	1-20-10	1205	W		5	X	X									
4	WG-1620-FD03-012010	1-20-10	1205	W		5	X	X									
5	WG-1620-MW50A-012010	1-20-10	1345	W		5	X	X									
6	WG-1620-MW59A-012010	1-20-10	1255	W		5	X	X									
7	WG-1620-MW51A-012010	1-20-10	1445	W		5	X	X									
8	WG-1620-MW47C-012010	1-20-10	1545	W		5	X	X									
9	WG-1620-MW61A-012010	1-20-10	1630	W		5	X	X									
10	WG-1620-MW60A-012010	1-20-10	1710	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 1/21/10 Time: 15:11 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 1/21/10 15:11

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☑ TRRP CheckList
- ☐ Level III Std QC/Raw Data
- ☐ TRRP Level IV
- ☐ Level IV SW846/CLP
- ☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1010L

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW49A-012110	1-21-10	0640	W		5	X	X									
2	WG-1620-MW48C-012110	1-21-10	0735	W		5	X	X									
3	WG-1620-MW54C-012110	1-21-10	0830	W		5	X	X									
4	WG-1620-MW65D-012110	1-21-10	0940	W		5	X	X									
5	WG-1620-FB05-012010	1-20-10	1645	W		5	X	X									
6	WG-1620-TB05-012010	1-20-10		W		2	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BEAUDOIN John Beaudoin

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Beaudoin	Date: 1/21/10	Time: 18:11	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	1/21/10 18:11
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **21-Jan-10 18:11**

Work Order: **1001482** Received by: **RNG**

Checklist completed by Richard Sanchez (eSignature) 22-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 25-Jan-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.2c, 1.8c, 2.4c	002	
Cooler(s)/Kit(s):	1891,3305,2475		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

A L S L a b o r a t o r y G r o u p
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

01-Feb-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: UPRR HWPW GW Work Order: **1001525**

Dear Eric,

ALS Laboratory Group received 7 samples on 22-Jan-2010 04:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 31.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations

Certificate No: TX: T104704231-09-1

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: 1001525

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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.

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observec the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Re Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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

Lora Terrill

Lora Terrill
VP Lab Operations

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: UPRR HWPGW GW	Laboratory Job Number: 1001525
Reviewer Name: Lora Terrill	Prep Batch Number(s) : 40699, R86246, R86248

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: UPRR HWPGW GW	Laboratory Job Number: 1001525
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40699, R86246, R86248

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/01/2010
Project Name: UPRR HWPGW GW	Laboratory Job Number: 1001525
Reviewer Name: Lora Terrill	Prep Batch Number(s): : 40699, R86246, R86248

ER #[1]	DESCRIPTION
	No Exceptions.

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

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Work Order: **1001525**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1001525-01	WG-1620-MW64A-012110	Water		1/21/2010 10:35	1/22/2010 16:00	☐
1001525-01	WG-1620-MW64A-012110	Water		1/21/2010 10:35	1/22/2010 16:00	☐
1001525-02	WG-1620-MW21C-012110	Water		1/21/2010 11:45	1/22/2010 16:00	☐
1001525-03	WG-1620-FD04-012110	Water		1/21/2010 11:45	1/22/2010 16:00	☐
1001525-04	WG-1620-FB06-012110	Water		1/21/2010 12:00	1/22/2010 16:00	☐
1001525-05	WG-1620-P11-012110	Water		1/21/2010 13:00	1/22/2010 16:00	☐
1001525-06	WG-1620-MW62B-012110	Water		1/21/2010 14:05	1/22/2010 16:00	☐
1001525-07	WG-1620-TB06-012110	Water		1/21/2010	1/22/2010 16:00	☐

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW64A-012110
Collection Date: 1/21/2010 10:35 AM

Work Order: 1001525
Lab ID: 1001525-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 18:28
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:28
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 18:28
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:28
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:28
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 18:28
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 18:28
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 18:28
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 18:28
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 18:28
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 18:28
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 18:28
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:28
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 18:28
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 18:28
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 18:28
Surr: 2,4,6-Tribromophenol	*86.5*			*34-129*	*%REC*	1	1/29/2010 18:28
Surr: 2-Fluorobiphenyl	*71.6*			*40-125*	*%REC*	1	1/29/2010 18:28
Surr: 2-Fluorophenol	*62.0*			*20-120*	*%REC*	1	1/29/2010 18:28
Surr: 4-Terphenyl-d14	*66.2*			*40-135*	*%REC*	1	1/29/2010 18:28
Surr: Nitrobenzene-d5	*63.2*			*41-120*	*%REC*	1	1/29/2010 18:28
Surr: Phenol-d6	*62.5*			*20-120*	*%REC*	1	1/29/2010 18:28
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 17:10
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 17:10
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:10
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 17:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW64A-012110
Collection Date: 1/21/2010 10:35 AM

Work Order: 1001525
Lab ID: 1001525-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:10
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 17:10
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 17:10
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	1/25/2010 17:10
Surr: 4-Bromofluorobenzene	*92.0*			*72-125*	*%REC*	1	1/25/2010 17:10
Surr: Dibromofluoromethane	*99.3*			*71-125*	*%REC*	1	1/25/2010 17:10
Surr: Toluene-d8	*95.9*			*75-125*	*%REC*	1	1/25/2010 17:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW21C-012110
Collection Date: 1/21/2010 11:45 AM

Work Order: 1001525
Lab ID: 1001525-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 18:49
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:49
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 18:49
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:49
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 18:49
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 18:49
Acenaphthene	**0.41**		**0.090**	**0.20**	**µg/L**	1	1/29/2010 18:49
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 18:49
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 18:49
Bis(2-ethylhexyl)phthalate	**0.72**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 18:49
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 18:49
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 18:49
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 18:49
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 18:49
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 18:49
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 18:49
Surr: 2,4,6-Tribromophenol	*89.9*			*34-129*	*%REC*	1	1/29/2010 18:49
Surr: 2-Fluorobiphenyl	*71.0*			*40-125*	*%REC*	1	1/29/2010 18:49
Surr: 2-Fluorophenol	*65.4*			*20-120*	*%REC*	1	1/29/2010 18:49
Surr: 4-Terphenyl-d14	*63.9*			*40-135*	*%REC*	1	1/29/2010 18:49
Surr: Nitrobenzene-d5	*60.5*			*41-120*	*%REC*	1	1/29/2010 18:49
Surr: Phenol-d6	*64.8*			*20-120*	*%REC*	1	1/29/2010 18:49
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 17:35
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 17:35
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:35
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 17:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW21C-012110
Collection Date: 1/21/2010 11:45 AM

Work Order: 1001525
Lab ID: 1001525-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:35
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 17:35
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 17:35
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	1/25/2010 17:35
Surr: 4-Bromofluorobenzene	*93.9*			*72-125*	*%REC*	1	1/25/2010 17:35
Surr: Dibromofluoromethane	*102*			*71-125*	*%REC*	1	1/25/2010 17:35
Surr: Toluene-d8	*98.8*			*75-125*	*%REC*	1	1/25/2010 17:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FD04-012110
Collection Date: 1/21/2010 11:45 AM

Work Order: 1001525
Lab ID: 1001525-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 19:11
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 19:11
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 19:11
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 19:11
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 19:11
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 19:11
Acenaphthene	**0.35**		**0.090**	**0.20**	**µg/L**	1	1/29/2010 19:11
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 19:11
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 19:11
Bis(2-ethylhexyl)phthalate	**0.54**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 19:11
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 19:11
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 19:11
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 19:11
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 19:11
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 19:11
Phenanthrene	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	1/29/2010 19:11
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 19:11
Surr: 2,4,6-Tribromophenol	*93.8*			*34-129*	*%REC*	1	1/29/2010 19:11
Surr: 2-Fluorobiphenyl	*69.6*			*40-125*	*%REC*	1	1/29/2010 19:11
Surr: 2-Fluorophenol	*66.1*			*20-120*	*%REC*	1	1/29/2010 19:11
Surr: 4-Terphenyl-d14	*66.1*			*40-135*	*%REC*	1	1/29/2010 19:11
Surr: Nitrobenzene-d5	*63.7*			*41-120*	*%REC*	1	1/29/2010 19:11
Surr: Phenol-d6	*67.0*			*20-120*	*%REC*	1	1/29/2010 19:11
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 17:59
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 17:59
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:59
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FD04-012110
Collection Date: 1/21/2010 11:45 AM

Work Order: 1001525
Lab ID: 1001525-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 17:59
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 17:59
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 17:59
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	1/25/2010 17:59
Surr: 4-Bromofluorobenzene	*95.6*			*72-125*	*%REC*	1	1/25/2010 17:59
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/25/2010 17:59
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/25/2010 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB06-012110
Collection Date: 1/21/2010 12:00 PM

Work Order: 1001525
Lab ID: 1001525-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 10:24
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 10:24
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 10:24
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 10:24
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 10:24
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 10:24
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 10:24
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 10:24
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 10:24
Bis(2-ethylhexyl)phthalate	**0.34**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 10:24
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 10:24
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 10:24
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 10:24
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 10:24
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 10:24
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 10:24
Surr: 2,4,6-Tribromophenol	*61.0*			*34-129*	*%REC*	1	1/29/2010 10:24
Surr: 2-Fluorobiphenyl	*57.9*			*40-125*	*%REC*	1	1/29/2010 10:24
Surr: 2-Fluorophenol	*52.4*			*20-120*	*%REC*	1	1/29/2010 10:24
Surr: 4-Terphenyl-d14	*54.9*			*40-135*	*%REC*	1	1/29/2010 10:24
Surr: Nitrobenzene-d5	*54.1*			*41-120*	*%REC*	1	1/29/2010 10:24
Surr: Phenol-d6	*55.2*			*20-120*	*%REC*	1	1/29/2010 10:24
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 16:46
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 16:46
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 16:46
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 16:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-FB06-012110
Collection Date: 1/21/2010 12:00 PM

Work Order: 1001525
Lab ID: 1001525-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 16:46
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 16:46
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 16:46
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	1/25/2010 16:46
Surr: 4-Bromofluorobenzene	*96.5*			*72-125*	*%REC*	1	1/25/2010 16:46
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/25/2010 16:46
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	1/25/2010 16:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-P11-012110
Collection Date: 1/21/2010 01:00 PM

Work Order: 1001525
Lab ID: 1001525-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 19:39
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 19:39
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 19:39
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 19:39
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 19:39
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 19:39
Acenaphthene	U		0.090	0.20	µg/L	1	1/29/2010 19:39
Acenaphthylene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Anthracene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 19:39
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 19:39
Bis(2-ethylhexyl)phthalate	**0.51**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 19:39
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Dibenzofuran	U		0.080	0.20	µg/L	1	1/29/2010 19:39
Fluoranthene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Fluorene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 19:39
Naphthalene	U		0.10	0.20	µg/L	1	1/29/2010 19:39
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 19:39
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 19:39
Phenanthrene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Pyrene	U		0.070	0.20	µg/L	1	1/29/2010 19:39
Surr: 2,4,6-Tribromophenol	*75.7*			*34-129*	*%REC*	1	1/29/2010 19:39
Surr: 2-Fluorobiphenyl	*64.3*			*40-125*	*%REC*	1	1/29/2010 19:39
Surr: 2-Fluorophenol	*64.5*			*20-120*	*%REC*	1	1/29/2010 19:39
Surr: 4-Terphenyl-d14	*69.7*			*40-135*	*%REC*	1	1/29/2010 19:39
Surr: Nitrobenzene-d5	*67.8*			*41-120*	*%REC*	1	1/29/2010 19:39
Surr: Phenol-d6	*65.8*			*20-120*	*%REC*	1	1/29/2010 19:39
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 18:23
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 18:23
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 18:23
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 18:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-P11-012110
Collection Date: 1/21/2010 01:00 PM

Work Order: 1001525
Lab ID: 1001525-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 18:23
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 18:23
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 18:23
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	1/25/2010 18:23
Surr: 4-Bromofluorobenzene	*99.6*			*72-125*	*%REC*	1	1/25/2010 18:23
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	1/25/2010 18:23
Surr: Toluene-d8	*104*			*75-125*	*%REC*	1	1/25/2010 18:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW62B-012110
Collection Date: 1/21/2010 02:05 PM

Work Order: 1001525
Lab ID: 1001525-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 1/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	1/29/2010 10:45
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	1/29/2010 10:45
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	1/29/2010 10:45
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	1/29/2010 10:45
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	1/29/2010 10:45
2-Methylnaphthalene	**1.6**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	1/29/2010 10:45
4-Nitrophenol	U		0.070	1.0	µg/L	1	1/29/2010 10:45
Acenaphthene	**39**		**0.36**	**0.80**	**µg/L**	4	1/30/2010 13:09
Acenaphthylene	**0.66**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
Anthracene	**1.1**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
Benz(a)anthracene	U		0.070	0.20	µg/L	1	1/29/2010 10:45
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	1/29/2010 10:45
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	1/29/2010 10:45
Bis(2-ethylhexyl)phthalate	**0.98**		**0.20**	**0.20**	**µg/L**	1	1/29/2010 10:45
Chrysene	U		0.070	0.20	µg/L	1	1/29/2010 10:45
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	1/29/2010 10:45
Dibenzofuran	**13**		**0.32**	**0.80**	**µg/L**	4	1/30/2010 13:09
Fluoranthene	**1.1**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
Fluorene	**15**		**0.28**	**0.80**	**µg/L**	4	1/30/2010 13:09
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	1/29/2010 10:45
Naphthalene	**0.28**		**0.10**	**0.20**	**µg/L**	1	1/29/2010 10:45
Nitrobenzene	U		0.090	0.20	µg/L	1	1/29/2010 10:45
Pentachlorophenol	U		0.080	0.20	µg/L	1	1/29/2010 10:45
Phenanthrene	**2.5**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
Phenol	U		0.070	0.20	µg/L	1	1/29/2010 10:45
Pyrene	**0.47**		**0.070**	**0.20**	**µg/L**	1	1/29/2010 10:45
Surr: 2,4,6-Tribromophenol	*63.7*			*34-129*	*%REC*	1	1/29/2010 10:45
Surr: 2,4,6-Tribromophenol	*73.8*			*34-129*	*%REC*	4	1/30/2010 13:09
Surr: 2-Fluorobiphenyl	*54.9*			*40-125*	*%REC*	1	1/29/2010 10:45
Surr: 2-Fluorobiphenyl	*81.2*			*40-125*	*%REC*	4	1/30/2010 13:09
Surr: 2-Fluorophenol	*60.0*			*20-120*	*%REC*	1	1/29/2010 10:45
Surr: 2-Fluorophenol	*50.3*			*20-120*	*%REC*	4	1/30/2010 13:09
Surr: 4-Terphenyl-d14	*57.2*			*40-135*	*%REC*	1	1/29/2010 10:45
Surr: 4-Terphenyl-d14	*75.4*			*40-135*	*%REC*	4	1/30/2010 13:09
Surr: Nitrobenzene-d5	*59.3*			*41-120*	*%REC*	1	1/29/2010 10:45
Surr: Nitrobenzene-d5	*70.7*			*41-120*	*%REC*	4	1/30/2010 13:09
Surr: Phenol-d6	*59.9*			*20-120*	*%REC*	1	1/29/2010 10:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-MW62B-012110
Collection Date: 1/21/2010 02:05 PM

Work Order: 1001525
Lab ID: 1001525-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*70.1*			*20-120*	*%REC*	4	1/30/2010 13:09
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/28/2010 00:04
Benzene	U		0.50	5.0	µg/L	1	1/28/2010 00:04
Chlorobenzene	U		0.50	5.0	µg/L	1	1/28/2010 00:04
Dichloromethane	U		0.50	10	µg/L	1	1/28/2010 00:04
Ethylbenzene	U		0.50	5.0	µg/L	1	1/28/2010 00:04
Toluene	U		0.50	5.0	µg/L	1	1/28/2010 00:04
Xylenes, Total	U		1.0	15	µg/L	1	1/28/2010 00:04
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	1/28/2010 00:04
Surr: 4-Bromofluorobenzene	*106*			*72-125*	*%REC*	1	1/28/2010 00:04
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	1/28/2010 00:04
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	1/28/2010 00:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *01-Feb-10*

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
Sample ID: WG-1620-TB06-012110
Collection Date: 1/21/2010

Work Order: 1001525
Lab ID: 1001525-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	1/25/2010 16:21
Benzene	U		0.50	5.0	µg/L	1	1/25/2010 16:21
Chlorobenzene	U		0.50	5.0	µg/L	1	1/25/2010 16:21
Dichloromethane	U		0.50	10	µg/L	1	1/25/2010 16:21
Ethylbenzene	U		0.50	5.0	µg/L	1	1/25/2010 16:21
Toluene	U		0.50	5.0	µg/L	1	1/25/2010 16:21
Xylenes, Total	U		1.0	15	µg/L	1	1/25/2010 16:21
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	1/25/2010 16:21
Surr: 4-Bromofluorobenzene	*95.3*			*72-125*	*%REC*	1	1/25/2010 16:21
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	1/25/2010 16:21
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	1/25/2010 16:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001525
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 01-Feb-10

WorkOrder: 1001525
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **40699** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100126-40699** Units: **µg/L** Analysis Date: **1/29/2010 08:13 AM**

Client ID: Run ID: **SV-2_100129A** SeqNo: **1867564** Prep Date: **1/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.537*	0.20	*5*	0	*70.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.37*	0.20	*5*	0	*67.4*	*40-125*	0			
Surr: 2-Fluorophenol	*3.399*	0.20	*5*	0	*68*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.223*	0.20	*5*	0	*64.5*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.409*	0.20	*5*	0	*68.2*	*41-120*	0			
Surr: Phenol-d6	*3.415*	0.20	*5*	0	*68.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40699** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW2-100126-40699** Units: **µg/L** Analysis Date: **1/29/2010 08:34 AM**

Client ID: Run ID: **SV-2_100129A** SeqNo: **1867565** Prep Date: **1/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.801	0.20	5	0	76	39-127	0			
2,4-Dimethylphenol	3.665	0.20	5	0	73.3	35-120	0			
2,4-Dinitrotoluene	4.161	0.20	5	0	83.2	50-122	0			
2,6-Dinitrotoluene	3.879	0.20	5	0	77.6	50-120	0			
2-Chloronaphthalene	4.263	0.20	5	0	85.3	50-120	0			
2-Methylnaphthalene	3.713	0.20	5	0	74.3	50-120	0			
4,6-Dinitro-2-methylphenol	4.462	0.20	5	0	89.2	25-121	0			
4-Nitrophenol	4.027	1.0	5	0	80.5	30-130	0			
Acenaphthene	3.714	0.20	5	0	74.3	45-120	0			
Acenaphthylene	3.817	0.20	5	0	76.3	47-120	0			
Anthracene	3.847	0.20	5	0	76.9	45-120	0			
Benz(a)anthracene	3.958	0.20	5	0	79.2	40-120	0			
Benzo(a)pyrene	3.984	0.20	5	0	79.7	45-120	0			
Bis(2-chloroethoxy)methane	3.536	0.20	5	0	70.7	45-120	0			
Bis(2-ethylhexyl)phthalate	3.934	0.20	5	0	78.7	40-139	0			
Chrysene	3.881	0.20	5	0	77.6	43-120	0			
Di-n-butyl phthalate	3.896	0.20	5	0	77.9	45-123	0			
Dibenzofuran	3.626	0.20	5	0	72.5	50-120	0			
Fluoranthene	3.837	0.20	5	0	76.7	45-125	0			
Fluorene	3.787	0.20	5	0	75.7	49-120	0			
N-Nitrosodiphenylamine	3.976	0.20	5	0	79.5	40-125	0			
Naphthalene	3.797	0.20	5	0	75.9	45-120	0			
Nitrobenzene	3.668	0.20	5	0	73.4	44-120	0			
Pentachlorophenol	4.224	0.20	5	0	84.5	19-121	0			
Phenanthrene	3.758	0.20	5	0	75.2	45-121	0			
Phenol	3.845	0.20	5	0	76.9	20-124	0			
Pyrene	3.799	0.20	5	0	76	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.021*	0.20	*5*	0	*80.4*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.7*	0.20	*5*	0	*74*	*40-125*	0			
Surr: 2-Fluorophenol	*3.577*	0.20	*5*	0	*71.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.547*	0.20	*5*	0	*70.9*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.493*	0.20	*5*	0	*69.9*	*41-120*	0			
Surr: Phenol-d6	*3.514*	0.20	*5*	0	*70.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **40699** Instrument ID **SV-2** Method: **SW8270**

LCSD Sample ID: **SLCSDW2-100126-40699** Units: **µg/L** Analysis Date: **1/29/2010 08:56 AM**

Client ID: Run ID: **SV-2_100129A** SeqNo: **1867566** Prep Date: **1/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.864	0.20	5	0	77.3	39-127	3.801	1.66	20	
2,4-Dimethylphenol	3.576	0.20	5	0	71.5	35-120	3.665	2.44	20	
2,4-Dinitrotoluene	4.045	0.20	5	0	80.9	50-122	4.161	2.81	20	
2,6-Dinitrotoluene	3.857	0.20	5	0	77.1	50-120	3.879	0.589	20	
2-Chloronaphthalene	4.304	0.20	5	0	86.1	50-120	4.263	0.956	20	
2-Methylnaphthalene	3.907	0.20	5	0	78.1	50-120	3.713	5.09	20	
4,6-Dinitro-2-methylphenol	4.572	0.20	5	0	91.4	25-121	4.462	2.43	20	
4-Nitrophenol	4.127	1.0	5	0	82.5	30-130	4.027	2.46	20	
Acenaphthene	3.793	0.20	5	0	75.9	45-120	3.714	2.08	20	
Acenaphthylene	3.846	0.20	5	0	76.9	47-120	3.817	0.749	20	
Anthracene	3.914	0.20	5	0	78.3	45-120	3.847	1.72	20	
Benz(a)anthracene	3.914	0.20	5	0	78.3	40-120	3.958	1.12	20	
Benzo(a)pyrene	3.887	0.20	5	0	77.7	45-120	3.984	2.48	20	
Bis(2-chloroethoxy)methane	3.68	0.20	5	0	73.6	45-120	3.536	3.99	20	
Bis(2-ethylhexyl)phthalate	3.898	0.20	5	0	78	40-139	3.934	0.909	20	
Chrysene	3.808	0.20	5	0	76.2	43-120	3.881	1.89	20	
Di-n-butyl phthalate	3.784	0.20	5	0	75.7	45-123	3.896	2.92	20	
Dibenzofuran	3.779	0.20	5	0	75.6	50-120	3.626	4.13	20	
Fluoranthene	3.789	0.20	5	0	75.8	45-125	3.837	1.27	20	
Fluorene	3.886	0.20	5	0	77.7	49-120	3.787	2.59	20	
N-Nitrosodiphenylamine	3.964	0.20	5	0	79.3	40-125	3.976	0.307	20	
Naphthalene	3.891	0.20	5	0	77.8	45-120	3.797	2.44	20	
Nitrobenzene	3.876	0.20	5	0	77.5	44-120	3.668	5.51	20	
Pentachlorophenol	4.678	0.20	5	0	93.6	19-121	4.224	10.2	20	
Phenanthrene	3.898	0.20	5	0	78	45-121	3.758	3.66	20	
Phenol	3.851	0.20	5	0	77	20-124	3.845	0.155	20	
Pyrene	3.719	0.20	5	0	74.4	40-130	3.799	2.14	20	
Surr: 2,4,6-Tribromophenol	*3.914*	0.20	*5*	0	*78.3*	*34-129*	4.021	*2.68*	*20*	
Surr: 2-Fluorobiphenyl	*3.887*	0.20	*5*	0	*77.7*	*40-125*	3.7	*4.94*	*20*	
Surr: 2-Fluorophenol	*3.847*	0.20	*5*	0	*76.9*	*20-120*	3.577	*7.26*	*20*	
Surr: 4-Terphenyl-d14	*3.478*	0.20	*5*	0	*69.6*	*40-135*	3.547	*1.97*	*20*	
Surr: Nitrobenzene-d5	*3.834*	0.20	*5*	0	*76.7*	*41-120*	3.493	*9.3*	*20*	
Surr: Phenol-d6	*3.73*	0.20	*5*	0	*74.6*	*20-120*	3.514	*5.97*	*20*	

The following samples were analyzed in this batch:

1001525-01B	1001525-02B	1001525-03B
1001525-04B	1001525-05B	1001525-06B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86246** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012510-R86246** Units: **µg/L** Analysis Date: **1/25/2010 10:39 AM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862182** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*52.51*	5.0	*50*	0	*105*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.42*	5.0	*50*	0	*94.8*	*72-125*	0			
Surr: Dibromofluoromethane	*50.58*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*49.37*	5.0	*50*	0	*98.7*	*75-125*	0			

LCS Sample ID: **VLCSW-012510-R86246** Units: **µg/L** Analysis Date: **1/25/2010 09:50 AM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862181** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46	5.0	50	0	92	78-120	0			
Benzene	49.75	5.0	50	0	99.5	73-121	0			
Chlorobenzene	45.45	5.0	50	0	90.9	80-120	0			
Dichloromethane	47.31	10	50	0	94.6	65-133	0			
Ethylbenzene	47.08	5.0	50	0	94.2	80-120	0			
Toluene	46.8	5.0	50	0	93.6	80-120	0			
Xylenes, Total	138.4	15	150	0	92.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.06*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.26*	5.0	*50*	0	*94.5*	*72-125*	0			
Surr: Dibromofluoromethane	*50.83*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*49.78*	5.0	*50*	0	*99.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86246** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001481-01AMS** Units: **µg/L** Analysis Date: **1/25/2010 12:17 PM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862185** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	889.8	100	1000	0	89	78-120	0			
Benzene	940.2	100	1000	0	94	73-121	0			
Chlorobenzene	859	100	1000	0	85.9	80-120	0			
Dichloromethane	886.7	200	1000	30.7	85.6	65-133	0			
Ethylbenzene	864.3	100	1000	0	86.4	80-120	0			
Toluene	878.8	100	1000	0	87.9	80-120	0			
Xylenes, Total	2572	300	3000	0	85.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1016*	100	*1000*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*934.6*	100	*1000*	0	*93.5*	*72-125*	0			
Surr: Dibromofluoromethane	*1035*	100	*1000*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*978.8*	100	*1000*	0	*97.9*	*75-125*	0			

MSD Sample ID: **1001481-01AMSD** Units: **µg/L** Analysis Date: **1/25/2010 12:41 PM**

Client ID: Run ID: **VOA2_100125B** SeqNo: **1862187** Prep Date: DF: **20**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	902.9	100	1000	0	90.3	78-120	889.8	1.47	20	
Benzene	912.2	100	1000	0	91.2	73-121	940.2	3.03	20	
Chlorobenzene	854	100	1000	0	85.4	80-120	859	0.583	20	
Dichloromethane	905.9	200	1000	30.7	87.5	65-133	886.7	2.15	20	
Ethylbenzene	820.8	100	1000	0	82.1	80-120	864.3	5.17	20	
Toluene	850.3	100	1000	0	85	80-120	878.8	3.3	20	
Xylenes, Total	2466	300	3000	0	82.2	80-120	2572	4.2	20	
Surr: 1,2-Dichloroethane-d4	*1052*	100	*1000*	0	*105*	*70-125*	1016	*3.45*	*20*	
Surr: 4-Bromofluorobenzene	*945.4*	100	*1000*	0	*94.5*	*72-125*	934.6	*1.16*	*20*	
Surr: Dibromofluoromethane	*1042*	100	*1000*	0	*104*	*71-125*	1035	*0.622*	*20*	
Surr: Toluene-d8	*995*	100	*1000*	0	*99.5*	*75-125*	978.8	*1.64*	*20*	

The following samples were analyzed in this batch:

1001525-01A	1001525-02A	1001525-03A
1001525-04A	1001525-05A	1001525-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86428** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-012710-R86428** Units: **µg/L** Analysis Date: **1/27/2010 05:34 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865769** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.27*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.71*	5.0	*50*	0	*99.4*	*72-125*	0			
Surr: Dibromofluoromethane	*49.3*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*48.88*	5.0	*50*	0	*97.8*	*75-125*	0			

LCS Sample ID: **VLCSW-012710-R86428** Units: **µg/L** Analysis Date: **1/27/2010 04:21 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865767** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.06	5.0	50	0	96.1	78-120	0			
Benzene	47.6	5.0	50	0	95.2	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	50.81	10	50	0	102	65-133	0			
Ethylbenzene	47.05	5.0	50	0	94.1	80-120	0			
Toluene	46.83	5.0	50	0	93.7	80-120	0			
Xylenes, Total	139.9	15	150	0	93.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.57*	5.0	*50*	0	*99.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.7*	5.0	*50*	0	*97.4*	*72-125*	0			
Surr: Dibromofluoromethane	*52.28*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.24*	5.0	*50*	0	*98.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1001525
Project: UPRR HWPW GW

QC BATCH REPORT

Batch ID: **R86428** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1001594-03AMS** Units: **µg/L** Analysis Date: **1/27/2010 06:23 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865773** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1190	120	1250	0	95.2	78-120	0			
Benzene	1150	120	1250	0	92	73-121	0			
Chlorobenzene	1128	120	1250	0	90.2	80-120	0			
Dichloromethane	1249	250	1250	0	100	65-133	0			
Ethylbenzene	1128	120	1250	0	90.2	80-120	0			
Toluene	1137	120	1250	0	91	80-120	0			
Xylenes, Total	3395	380	3750	0	90.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1215*	120	*1250*	0	*97.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1221*	120	*1250*	0	*97.7*	*72-125*	0			
Surr: Dibromofluoromethane	*1286*	120	*1250*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*1213*	120	*1250*	0	*97*	*75-125*	0			

MSD Sample ID: **1001594-03AMSD** Units: **µg/L** Analysis Date: **1/27/2010 06:47 PM**

Client ID: Run ID: **VOA2_100127A** SeqNo: **1865774** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1235	120	1250	0	98.8	78-120	1190	3.73	20	
Benzene	1182	120	1250	0	94.6	73-121	1150	2.73	20	
Chlorobenzene	1172	120	1250	0	93.7	80-120	1128	3.82	20	
Dichloromethane	1417	250	1250	0	113	65-133	1249	12.6	20	
Ethylbenzene	1146	120	1250	0	91.7	80-120	1128	1.6	20	
Toluene	1160	120	1250	0	92.8	80-120	1137	1.95	20	
Xylenes, Total	3445	380	3750	0	91.9	80-120	3395	1.46	20	
Surr: 1,2-Dichloroethane-d4	*1273*	120	*1250*	0	*102*	*70-125*	1215	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*1257*	120	*1250*	0	*101*	*72-125*	1221	*2.96*	*20*	
Surr: Dibromofluoromethane	*1280*	120	*1250*	0	*102*	*71-125*	1286	*0.454*	*20*	
Surr: Toluene-d8	*1253*	120	*1250*	0	*100*	*75-125*	1213	*3.31*	*20*	

The following samples were analyzed in this batch: 1001525-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Feb-10

Client: Pastor, Behling & Wheeler, LLC
Project: UPRR HWPW GW
WorkOrder: **1001525**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1

☐ **ALS Laboratory Group**
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | **ALS Work Order #:** 1003278

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW GW	A	VOC (8260) BTEX + MeCl2+1,2-DCA
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW64A-012110	1-21-10	1035	W		5	X	X									
2	WG-1620-MW21C-012110	1-21-10	1145	W		5	X	X									
3	WG-1620-FD04-012110	1-21-10	1145	W		5	X	X									
4	WG-1620-FB06-012110	1-21-10	1200	W		5	X	X									
5	WG-1620-PII-012110	1-21-10	1300	W		5	X	X									
6	WG-1620-MW62B-012110	1-21-10	1405	W		5	X	X									
7	WG-1620-TB06-012110	1-21-10		W		2	X										
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date: 1-22-10	Time: 1600	Received by:		
Relinquished by:	Date: 1-23-10	Time: 1025	Received by (Laboratory):	Date: 1/23/10	Time: 10:25
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

Notes: 10 Work Days TAT

Cooler ID	Cooler Temp.
3500	
1859	

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **22-Jan-10 16:00**

Work Order: **1001525** Received by: **PS**

Checklist completed by Richard Sanchez (eSignature) 25-Jan-10 (Date) Reviewed by: Lora Terrill (eSignature) 26-Jan-10 (Date)

Matrices: water
Carrier name: ALS.HS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6c, 2.2c	002	
Cooler(s)/Kit(s):	3300,1859		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CONESTOGA-ROVERS & ASSOCIATES

E-Mail Date: September 27, 2010
E-Mail To: Eric Matzner/ Pastor, Behling & Wheeler, LLC
c.c.: Patricia Lynch
E-Mail and Hard Copy if Requested

DATA USABILITY SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SOIL SAMPLING
HOUSTON, TEXAS
JUNE 2010

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
6320 Rothway, Suite 100
Houston, Texas 77040
Telephone: 713-734-3090 Fax: 713-734-3391
Contact: Patricia L. Lynch [jih]
Date: September 27, 2010
www.CRAworld.com

Data Usability Summary

Reviewer:	Patricia L. Lynch – Conestoga-Rovers & Associates, Inc.
Contract Laboratory:	ALS Laboratory Group—Houston, Texas
Project/Area of Interest:	UPRR Houston Wood Preserving Works – Houston, Texas
Description of Data Packages Reviewed:	Soil sample results in data package 1006824
Sample Collection Date(s):	June 22 – 24, 2010
Intended Use of Data:	To monitor the COCs in soils at the site and to evaluate whether migration of COCs could result in risk to human or ecological health.

1.0 Scope of Data Usability Summary

Data were reviewed and validated in accordance with Title 30 of the Texas Administrative Code Section 350.54 (30 TAC 350.54) as described in *Review and Reporting of COC Concentration Data,* (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The review included examination of the reported data, the laboratory review checklist (LRC), and field/laboratory quality assurance/quality control (QA/QC) samples collected at the Site. Tables summarizing data qualifications discussed in this DUS can be found in Appendix A.

Soil samples plus a field duplicate and a trip blank were analyzed for the following:

i. Volatile organic compounds (VOCs) by SW-846 Method 8260B[1]
ii. Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C[1]

A sampling and analysis summary is presented in Table 1. This summary includes a cross-reference of field sample identification numbers and laboratory sample numbers. Each sample was assigned a unique field identification number. The lists of VOC and SVOC target compounds are presented in Table 2.

[1] "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with subsequent revisions).

2.0 Laboratory Qualifications

Analytical services were provided by ALS Laboratory Group (ALS) located in Houston, Texas. The laboratory's quality assurance program is consistent with the quality standards outlined in the National Environmental Laboratory Accreditation Program (NELAP). The laboratory was accredited under Texas Certification Number T104704231-10-3 at the time the analyses were performed.

3.0 Project Objectives

3.1 Levels of Required Performance (LORP)

Prior to sampling, the LORP for each COC was established for the investigation. Standard available analytical methods were selected and minimal detection limits that are at or below the Texas Risk Reduction Tier 1 Residential Protective Concentration Levels (PCLs) for soil were sought.

3.2 Sampling/Analytical QA/QC Objectives

Pastor, Behling & Wheeler, LLC designed the QA/QC program to identify contamination resulting from sample collection, sample transport and the analytical process.

- The trip blank is a zero headspace sample container filled by the laboratory with analyte-free water. A trip blank was submitted and analyzed with the samples requiring volatile organic analysis. The trip blank sample was kept in the same environment in which the other field samples were collected.
- Method blanks of a similar matrix to that of the associated samples are prepared by the laboratory and analyzed to determine if laboratory contaminants are affecting the analytical results. Method blanks are prepared and analyzed with each batch.

Similarly, the QA/QC program was designed to evaluate the quality of the resulting data with respect to bias and precision. First, a laboratory control sample (LCS) and a laboratory control sample duplicate (LCSD) were prepared and analyzed with each batch. The recovery ranges established by the laboratory are adopted as the acceptance criteria for the project. Second, a matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed with each batch. The recovery ranges and RPDs established by the laboratory are adopted as the acceptance criteria for the project. Third, a field duplicate was collected and submitted for analysis. The RPD acceptance criterion for the soil field duplicates is 50 percent. This RPD criterion is only used when sample concentrations are above the estimated regions of detection.

4.0 Data Review/Validation Results

4.1 Analytical Results

Summaries of the qualified analytical results are reported in Tables 3, 4 and 5. Analytes with concentrations above the Sample Detection Limits (SDLs) but below the Method Quantitation Limits (MQL) have been qualified as estimated on the analytical tables per the TRRP-13 document.

4.2 LORP

All MDLs and unadjusted MQLs met the LORP for this investigation except as noted below:

- 2,4-dinitrotoluene and 2,6-dinitrotoluene: The MDLs and MQLs excceded the PCLs.

- Bis(2-chloroethoxy)methane: The MQL excceded the PCL, but the MDL met the criterion.

Data for some analyses were reported from dilutions due to the concentrations of target or non-target compounds in the samples. The SDLs and MQLs were adjusted for the dilution factors in these cases.

4.3 Preservation and Holding Times

Samples were properly cooled to 4°C (±2°C) and shipped on ice to the laboratory. Samples were shipped with chains of custody, and the paperwork was filled out properly. All samples were prepared and analyzed within the applicable holding times.

4.4 Sample Containers

Sample containers were certified pre-cleaned glass provided by the laboratory. These containers meet or exceed analyte specifications established in the USEPA *Specifications and Guidance for Contaminant-free Sample Containers*.

4.5 Tuning & Calibrations

According to the LRCs, instrument tuning and initial calibration and continuing calibration data met the criteria for the selected methods.

4.6 Blanks

Method Blanks: As these were not discrete samples handled in the field, the method blanks are not listed on the sample identification cross-reference list found in Table 1. Results are reported in the data packages on a laboratory batch basis. All of the laboratory blank results were reported as ND (not detected) except for methylene chloride in two method blanks. All sample results greater than the MDL but less than 10 times the amount detected in the associated blank were qualified as non-detect (see Table 3). All remaining investigative samples associated with these method blanks yielded either non-detect concentrations or concentrations greater than 10 times the associated method blank concentrations for the analytes of interest.

Trip Blanks: The trip blank, which was a discrete sample handled in the field, is listed on the sample summary table. Results are reported in the data package with the other project sample results. All of the trip blank results were reported as ND (not detected) except for methylene chloride. All sample results greater than the MDL but less than 10 times the amount detected in the associated trip blank were qualified as non-detect (see Table 4). All remaining investigative samples associated with contaminated trip blanks yielded either non-detect concentrations or concentrations greater than 10 times the associated trip blank concentration for the analytes of interest.

4.7 Internal Standard and Surrogate Recoveries

Recoveries of internal standards and surrogates for VOCs and SVOCs are addressed in the LRCs of the laboratory data package. All VOC surrogate recoveries were within the acceptance limits. Many SVOC surrogate recoveries could not be assessed due to necessary sample

dilutions. However, data for these samples were also reported from lesser dilutions, and the recoveries in these dilutions were acceptable.

For SVOCs, results for pentachlorophenol were reported from the following samples without dilution to ensure that the LORP criterion could be met:

- SO-1620-SB145 (1.5-2.5)-20100622
- SO-1620-SB143 (1.5-2.5)-20100622
- SO-1620-SB141 (0-2)-20100623
- SO-1620-SB139 (0-2)-20100624

Surrogate data were not reported from these dilutions due to matrix interference, but were reported from subsequent dilutions. The internal standard recoveries for the undiluted sample were acceptable thus the results for pentachlorophenol were reported.

All VOC and SVOC internal standard areas and retention times were acceptable per the LRCs.

4.8 Laboratory Control Samples (LCS)/ Laboratory Control Sample Duplicates (LCSD)

LCS or LCS/LCSD data for all COCs were reported for each batch. LCS spike recoveries and RPDs for all COCs were within the project objectives.

4.9 Matrix Spikes

Several project samples were selected for matrix spike/matrix spike duplicate analyses for VOCs and SVOCs, and the results are reported in the data package. Most recoveries and RPDs were within the laboratory established control limits. Detected compounds associated with high MS/MSD recoveries did not require qualification. Several MSD recoveries for VOCs in sample SO-1620-SB143 (18-18.7)-20100622 were slightly below the control limits, but since the MS recoveries and the RPDs were within the acceptance limits, the data was not qualified. All recoveries were well within the default limits of 60 to 140 percent for TRRP projects. Those results impacted by MS/MSD recoveries are summarized in Table 5.

The laboratory also performed MS/MSD analyses on unrelated samples from other projects, but the data for these unrelated samples cannot be used to assess precision for the associated project samples.

4.10 Field Duplicate

Sample SO-1620-SB139 (13-14.4)-20100624 was collected and analyzed in duplicate. Many results were non-detect, and the RPDs could not be calculated. Only 2,4-dimethylphenol was detected in the duplicate samples above the estimated regions of detection, and the RPD was within the 50 percent criterion for soil samples.

4.11 Field Procedures

Pastor, Behling & Wheeler, LLC collected soil samples in accordance with their Standard Operating Procedures (SOP) for sample collection.

4.12 Summary

The analytical data in this report are usable to assess the impact of COCs in soil at the site. Qualifications of the data as discussed in this report are summarized in Appendix A.

APPENDIX A

TABLES

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE 2010

				Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCS*	*SVOCS*	*MOISTURE*	*Comments*
WB-1620-TB-20100622	____	6/22/2010	____	X			Trip Blank
SO-1620-SB145 (1.5-2.5)-201006	SB-145	6/22/2010	09:40	X	X	X	
SO-1620-SB145(16-17.4)-2010062	SB-145	6/22/2010	09:45	X	X	X	
SO-1620-SB144(12-13)-20100622	SB-144	6/22/2010	11:00	X	X	X	
SO-1620-SB144(16-16.9)-2010062	SB-144	6/22/2010	11:10	X	X	X	
SO-1620-SB146(0-2)-20100622	SB-146	6/22/2010	11:45	X	X	X	
SO-1620-SB146(14-14.8)-2010062	SB-146	6/22/2010	11:50	X	X	X	
SO-1620-SB143(1.5-2.5)-2010062	SB-143	6/22/2010	13:40	X	X	X	
SO-1620-SB143(18-18.7)-2010062	SB-143	6/22/2010	13:50	X	X	X	
SO-1620-SB142(0-2)-20100622	SB-142	6/22/2010	15:30	X	X	X	
SO-1620-SB142(16-16.9)-2010062	SB-142	6/22/2010	15:40	X	X	X	
SO-1620-SB147(2-2.9)-20100622	SB-147	6/22/2010	17:25	X	X	X	
SO-1620-SB147(13-14.3)-2010062	SB-147	6/22/2010	17:35	X	X	X	
SO-1620-SB141(0-2)-20100623	SB-141	6/23/2010	12:45	X	X	X	
SO-1620-SB141(16-17.1)-2010062	SB-141	6/23/2010	12:55	X	X	X	
SO-1620-SB140(0-2)-20100623	SB-140	6/23/2010	14:10	X	X	X	
SO-1620-SB140(13-14.3)-2010062	SB-140	6/23/2010	14:15	X	X	X	
SO-1620-SB139(0-2)-20100624	SB-139	6/24/2010	11:40	X	X	X	
SO-1620-SB139(13-14.4)-20100624	SB-139	6/24/2010	11:50	X	X	X	
SO-1620-SB138(6-8)-20100624	SB-138	6/24/2010	13:20	X	X	X	
SO-1620-SB138(16-16.9)-2010062	SB-138	6/24/2010	13:30	X	X	X	
SO-1620-Dup1-20100624	SB-139	6/24/2010	____	X	X	X	Field Duplicate of SO-1620-SB139(13-14.4)-20100624

Notes:

VOCs Volatile Organic Compounds
SVOCs Semi-Volatile Organic Compounds

TABLE 2
TARGET COMPOUND SUMMARY
SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE 2010

VOCs	SVOCs
Ethylbenzene	4-Nitrophenol
1,2-Dichloroethane	2,4-Dimethylphenol
Toluene	Phenol
Chlorobenzene	bis(2-Chloroethoxy)methane
Xylene (total)	bis(2-Ethylhexyl)phthalate (DEHP)
Benzene	Anthracene
Methylene chloride	2,4-Dinitrotoluene
	1,2-Diphenylhydrazine
	Pyrene
	Dibenzofuran
	Fluoranthene
	Acenaphthylene
	Chrysene
	Benzo(a)pyrene
	4,6-Dinitro-2-methylphenol
	Benzo(a)anthracene
	2,6-Dinitrotoluene
	Acenaphthene
	Di-n-butylphthalate (DBP)
	Phenanthrene
	N-Nitrosodiphenylamine
	Fluorene
	Pentachlorophenol
	Naphthalene
	2-Methylnaphthalene
	2-Chloronaphthalene
	Nitrobenzene

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE 2010

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
VOCs	06/25/10	Methylene chloride	1.052	SO-1620-SB145(16-17.4)-2010062	2.5	U	ug/Kg
	06/26/10	Methylene chloride	2.058	SO-1620-SB147(13-14.3)-2010062	2.9	U	ug/Kg

Notes:

VOCs Volatile Organic Compounds
U Not detected at reported concentration

TABLE 4

QUALIFIED SAMPLE DATA DUE TO ANALYTE CONCENTRATIONS IN THE TRIP BLANK
SOIL SAMPLING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE 2010

Parameter	*Blank Date*	*Analyte*	*Blank Result*	*Associated Sample ID*	*Qualified Sample Result*		*Units*
VOCs	06/22/10	Methylene chloride	1.1	SO-1620-SB138(16-16.9)-2010062	1.7	U	ug/Kg
				SO-1620-SB145(16-17.4)-2010062	2.5	U	ug/Kg
				SO-1620-SB147(13-14.3)-2010062	2.9	U	ug/Kg

Notes:

VOCs Volatile Organic Compounds
U Not detected at reported concentration

21-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Phase 4 Soils Work Order: **1006824**

Dear Eric,

ALS Laboratory Group received 22 samples on 24-Jun-2010 05:33 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 87.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: R. Kevin Given

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Work Order: 1006824

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 21-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Work Order: **1006824**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1006824-01	WB-1620-TB-20100622	Water		6/22/2010 08:45	6/24/2010 17:33	☐
1006824-02	SO-1620-SB145 (1.5-2.5)-20100622	Soil		6/22/2010 09:40	6/24/2010 17:33	☐
1006824-03	SO-1620-SB145(16-17.4)-20100622	Soil		6/22/2010 09:45	6/24/2010 17:33	☐
1006824-04	SO-1620-SB144(12-13)-20100622	Soil		6/22/2010 11:00	6/24/2010 17:33	☐
1006824-05	SO-1620-SB144(16-16.9)-20100622	Soil		6/22/2010 11:10	6/24/2010 17:33	☐
1006824-06	SO-1620-SB146(0-2)-20100622	Soil		6/22/2010 11:45	6/24/2010 17:33	☐
1006824-07	SO-1620-SB146(14-14.8)-20100622	Soil		6/22/2010 11:50	6/24/2010 17:33	☐
1006824-08	SO-1620-SB143(1.5-2.5)-20100622	Soil		6/22/2010 13:40	6/24/2010 17:33	☐
1006824-09	SO-1620-SB143(18-18.7)-20100622	Soil		6/22/2010 13:50	6/24/2010 17:33	☐
1006824-10	SO-1620-SB142(0-2)-20100622	Soil		6/22/2010 15:30	6/24/2010 17:33	☐
1006824-11	SO-1620-SB142(16-16.9)-20100622	Soil		6/22/2010 15:40	6/24/2010 17:33	☐
1006824-12	SO-1620-SB147(2-2.9)-20100622	Soil		6/22/2010 17:25	6/24/2010 17:33	☐
1006824-13	SO-1620-SB147(13-14.3)-20100622	Soil		6/22/2010 17:35	6/24/2010 17:33	☐
1006824-14	SO-1620-SB141(0-2)-20100623	Soil		6/23/2010 12:45	6/24/2010 17:33	☐
1006824-15	SO-1620-SB141(16-17.1)-20100623	Soil		6/23/2010 12:55	6/24/2010 17:33	☐
1006824-16	SO-1620-SB140(0-2)-20100623	Soil		6/23/2010 14:10	6/24/2010 17:33	☐
1006824-17	SO-1620-SB140(13-14.3)-20100623	Soil		6/23/2010 14:15	6/24/2010 17:33	☐
1006824-18	SO-1620-SB139(0-2)-20100624	Soil		6/24/2010 11:40	6/24/2010 17:33	☐
1006824-19	SO-1620-SB139(13-14.4)-20100624	Soil		6/24/2010 11:50	6/24/2010 17:33	☐
1006824-20	SO-1620-SB138(6-8)-20100624	Soil		6/24/2010 13:20	6/24/2010 17:33	☐
1006824-21	SO-1620-SB138(16-16.9)-20100624	Soil		6/24/2010 13:30	6/24/2010 17:33	☐
1006824-22	SO-1620-Dup1-20100624	Soil		6/24/2010	6/24/2010 17:33	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/15/2010
Project Name: HWPW-PHASE 4 SOILS	Laboratory Job Number: 1006824
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44037, 44038, R93158, R93188, R93192, R93213, R93224, R93352, R93431, R93432

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?	X				
		7) Was % moisture (or solids) reported for all soil and sediment samples?	X				
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				4
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				5

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/15/2010
Project Name: HWPW-PHASE 4 SOILS	Laboratory Job Number: 1006824
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44037, 44038, R93158, R93188, R93192, R93213, R93224, R93352, R93431, R93432

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report		
Laboratory Name: ALS Laboratory Group		LRC Date: 07/15/2010
Project Name: HWPW-PHASE 4 SOILS		Laboratory Job Number: 1006824
Reviewer Name: R. Kevin Given		Prep Batch Number(s): : 44037, 44038, R93158, R93188, R93192, R93213, R93224, R93352, R93431, R93432
ER #[1]	**DESCRIPTION**	
1	Low-Level Semivolatiles surrogate recovery was outside the control limits for Sample SO-1620-SB145 (1.5-2.5)-20100622. Results confirmed as matrix interference by reanalysis at dilution. Low-Level Semivolatiles, Sample SO-1620-SB144(12-13)-20100622 : Surrogate recovery was diluted out in the 40X dilution. Low-Level Semivolatiles, Sample SO-1620-SB144(16-16.9)-20100622 : Surrogate recovery was diluted out in the 100X dilution. Low-Level Semivolatiles, Sample SO-1620-SB144(16-16.9)-20100622 : Surrogate recovery was diluted out in the 500X dilution.	
2	Batch 44037, Semivolatile Organics, Sample SO-1620-SB138(16-16.9)-20100624 : MS/MSD recoveries were below the control limits for 2,4-Dimethylphenol. Batch R93158, Volatile Organics, Sample 1006810-02 : MS is for an unrelated sample. Batch R93192, Volatile Organics, Sample SO-1620-SB147(13-14.3)-20100622 : MSD recoveries were above the control limits for 1,2-Dichloroethane, Benzene, Ethylbenzene, Toluene, and Xylenes, Total. The associated RPD's were within the control limits. Batch R93213, Volatile Organics, Sample SO-1620-SB143(18-18.7)-20100622 : MSD recoveries were below the control limits for Benzene, Chlorobenzene, Dichloromethane, and Toluene. The associated RPD's were within the control limits.	
3	Batch 44037, Semivolatile Organics, Sample SO-1620-SB138(16-16.9)-20100624 : MSD RPD recovery was above the control limits for 2,4-Dimethylphenol.	
4	Batch 44037, Semivolatile Organics: Pentachlorophenol was reported from the 1x dilution for samples SO-1620-SB145 (1.5-2.5)-20100622, SO-1620-SB143(1.5-2.5)-20100622, SO-1620-SB142(0-2)-20100622, SO-1620-SB141(0-2)-20100623, and SO-1620-SB139(0-2)-20100624in order to meet project objectives. No surrogate recoveries could be reported from that run due to extensive matrix interference, however the internal standard used to calculate Pentachlorophenol (Phenanthrene-d10) was within control limits for area.	

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/15/2010
Project Name: HWPW-PHASE 4 SOILS	Laboratory Job Number: 1006824
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44037, 44038, R93158, R93188, R93192, R93213, R93224, R93352, R93431, R93432

ER #[1]	DESCRIPTION
5	Low-Level Semivolatiles, Sample SO-1620-SB145 (1.5-2.5)-20100622 could not be analyzed at a lower dilution due to high concentrations of target compounds. Low-Level Semivolatiles, Sample SO-1620-SB146(0-2)-20100622 could not be analyzed at a lower dilution due to matrix interference. Low-Level Semivolatiles, Sample SO-1620-SB143(1.5-2.5)-20100622 could not be analyzed at a lower dilution due to high concentrations of target compounds. Low-Level Semivolatiles, Sample SO-1620-SB142(0-2)-20100622 could not be analyzed at a lower dilution due to matrix interference. Low-Level Semivolatiles, Sample SO-1620-SB141(0-2)-20100623 could not be analyzed at a lower dilution due to matrix interference. Low-Level Semivolatiles, Sample SO-1620-SB139(0-2)-20100624 could not be analyzed at a lower dilution due to matrix interference.

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

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: WB-1620-TB-20100622
Collection Date: 6/22/2010 08:45 AM

Work Order: 1006824
Lab ID: 1006824-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 20:55
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 20:55
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:55
Dichloromethane	**1.1**	J	**0.50**	**10**	**µg/L**	1	6/28/2010 20:55
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:55
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 20:55
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 20:55
Surr: 1,2-Dichloroethane-d4	*90.1*			*70-125*	*%REC*	1	6/28/2010 20:55
Surr: 4-Bromofluorobenzene	*99.0*			*72-125*	*%REC*	1	6/28/2010 20:55
Surr: Dibromofluoromethane	*97.4*			*71-125*	*%REC*	1	6/28/2010 20:55
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	6/28/2010 20:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB145 (1.5-2.5)-20100622
Collection Date: 6/22/2010 09:40 AM

Work Order: 1006824
Lab ID: 1006824-02
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		28	84	µg/Kg-dry	10	7/11/2010 20:31
2,4-Dimethylphenol	**110**		**42**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
2,4-Dinitrotoluene	U		42	84	µg/Kg-dry	10	7/11/2010 20:31
2,6-Dinitrotoluene	U		41	84	µg/Kg-dry	10	7/11/2010 20:31
2-Chloronaphthalene	U		52	84	µg/Kg-dry	10	7/11/2010 20:31
2-Methylnaphthalene	**120**		**34**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
4,6-Dinitro-2-methylphenol	U		42	84	µg/Kg-dry	10	7/11/2010 20:31
4-Nitrophenol	U		48	420	µg/Kg-dry	10	7/11/2010 20:31
Acenaphthene	**110**		**28**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Acenaphthylene	**1,800**		**28**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Anthracene	**3,700**		**140**	**420**	**µg/Kg-dry**	50	7/12/2010 15:42
Benz(a)anthracene	**3,000**		**36**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Benzo(a)pyrene	**4,300**		**150**	**420**	**µg/Kg-dry**	50	7/12/2010 15:42
Bis(2-chloroethoxy)methane	U		31	84	µg/Kg-dry	10	7/11/2010 20:31
Bis(2-ethylhexyl)phthalate	U		84	84	µg/Kg-dry	10	7/11/2010 20:31
Chrysene	**4,500**		**180**	**420**	**µg/Kg-dry**	50	7/12/2010 15:42
Di-n-butyl phthalate	U		32	84	µg/Kg-dry	10	7/11/2010 20:31
Dibenzofuran	**160**		**28**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Fluoranthene	**7,500**		**140**	**420**	**µg/Kg-dry**	50	7/12/2010 15:42
Fluorene	**270**		**28**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
N-Nitrosodiphenylamine	U		28	84	µg/Kg-dry	10	7/11/2010 20:31
Naphthalene	**330**		**42**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Nitrobenzene	U		42	84	µg/Kg-dry	10	7/11/2010 20:31
Pentachlorophenol	U		3.6	8.4	µg/Kg-dry	1	7/18/2010 01:53
Phenanthrene	**950**		**38**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Phenol	**74**	J	**42**	**84**	**µg/Kg-dry**	10	7/11/2010 20:31
Pyrene	**9,000**		**140**	**420**	**µg/Kg-dry**	50	7/12/2010 15:42
Surr: 2,4,6-Tribromophenol	*92.4*			*36-126*	*%REC*	10	7/11/2010 20:31
Surr: 2,4,6-Tribromophenol	*73.4*	J		*36-126*	*%REC*	50	7/12/2010 15:42
Surr: 2-Fluorobiphenyl	*75.2*			*43-125*	*%REC*	10	7/11/2010 20:31
Surr: 2-Fluorobiphenyl	*90.7*	J		*43-125*	*%REC*	50	7/12/2010 15:42
Surr: 2-Fluorophenol	*74.5*			*37-125*	*%REC*	10	7/11/2010 20:31
Surr: 2-Fluorophenol	*88.8*	J		*37-125*	*%REC*	50	7/12/2010 15:42
Surr: 4-Terphenyl-d14	*88.8*			*32-125*	*%REC*	10	7/11/2010 20:31
Surr: 4-Terphenyl-d14	*128*	JS		*32-125*	*%REC*	50	7/12/2010 15:42
Surr: Nitrobenzene-d5	*82.5*			*37-125*	*%REC*	10	7/11/2010 20:31
Surr: Nitrobenzene-d5	*98.5*	J		*37-125*	*%REC*	50	7/12/2010 15:42
Surr: Phenol-d6	*73.0*			*40-125*	*%REC*	10	7/11/2010 20:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB145 (1.5-2.5)-20100622
Collection Date: 6/22/2010 09:40 AM

Work Order: 1006824
Lab ID: 1006824-02
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*71.8*	J		*40-125*	*%REC*	50	7/12/2010 15:42
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.64	6.4	µg/Kg-dry	1	6/25/2010 21:55
Benzene	U		0.64	6.4	µg/Kg-dry	1	6/25/2010 21:55
Chlorobenzene	U		0.64	6.4	µg/Kg-dry	1	6/25/2010 21:55
Dichloromethane	U		1.8	13	µg/Kg-dry	1	6/25/2010 21:55
Ethylbenzene	U		0.64	6.4	µg/Kg-dry	1	6/25/2010 21:55
Toluene	U		0.64	6.4	µg/Kg-dry	1	6/25/2010 21:55
Xylenes, Total	U		1.3	19	µg/Kg-dry	1	6/25/2010 21:55
Surr: 1,2-Dichloroethane-d4	*104*			*70-128*	*%REC*	1	6/25/2010 21:55
Surr: 4-Bromofluorobenzene	*102*			*73-126*	*%REC*	1	6/25/2010 21:55
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/25/2010 21:55
Surr: Toluene-d8	*113*			*73-127*	*%REC*	1	6/25/2010 21:55
MOISTURE		Method: **E160.3**					Analyst: **JLC**
Percent Moisture	**21.7**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB145(16-17.4)-20100622
Collection Date: 6/22/2010 09:45 AM

Work Order: 1006824
Lab ID: 1006824-03
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.7	µg/Kg-dry	1	7/11/2010 19:51
2,4-Dimethylphenol	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 19:51
2,4-Dinitrotoluene	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 19:51
2,6-Dinitrotoluene	U		3.7	7.7	µg/Kg-dry	1	7/11/2010 19:51
2-Chloronaphthalene	U		4.8	7.7	µg/Kg-dry	1	7/11/2010 19:51
2-Methylnaphthalene	**12**		**3.2**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
4,6-Dinitro-2-methylphenol	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 19:51
4-Nitrophenol	U		4.4	39	µg/Kg-dry	1	7/11/2010 19:51
Acenaphthene	**52**		**2.6**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Acenaphthylene	**98**		**2.6**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Anthracene	**290**		**2.6**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Benz(a)anthracene	**380**		**3.3**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Benzo(a)pyrene	**590**		**27**	**77**	**µg/Kg-dry**	10	7/12/2010 15:01
Bis(2-chloroethoxy)methane	U		2.8	7.7	µg/Kg-dry	1	7/11/2010 19:51
Bis(2-ethylhexyl)phthalate	**74**		**7.7**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Chrysene	**770**		**34**	**77**	**µg/Kg-dry**	10	7/12/2010 15:01
Di-n-butyl phthalate	U		2.9	7.7	µg/Kg-dry	1	7/11/2010 19:51
Dibenzofuran	**22**		**2.6**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Fluoranthene	**1,300**		**26**	**77**	**µg/Kg-dry**	10	7/12/2010 15:01
Fluorene	**39**		**2.6**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
N-Nitrosodiphenylamine	U		2.6	7.7	µg/Kg-dry	1	7/11/2010 19:51
Naphthalene	**27**		**3.9**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Nitrobenzene	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 19:51
Pentachlorophenol	**40**		**3.3**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Phenanthrene	**300**		**3.5**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Phenol	**18**		**3.9**	**7.7**	**µg/Kg-dry**	1	7/11/2010 19:51
Pyrene	**1,400**		**26**	**77**	**µg/Kg-dry**	10	7/12/2010 15:01
Surr: 2,4,6-Tribromophenol	*91.9*			*36-126*	*%REC*	1	7/11/2010 19:51
Surr: 2,4,6-Tribromophenol	*74.4*			*36-126*	*%REC*	10	7/12/2010 15:01
Surr: 2-Fluorobiphenyl	*71.5*			*43-125*	*%REC*	1	7/11/2010 19:51
Surr: 2-Fluorobiphenyl	*84.2*			*43-125*	*%REC*	10	7/12/2010 15:01
Surr: 2-Fluorophenol	*74.0*			*37-125*	*%REC*	1	7/11/2010 19:51
Surr: 2-Fluorophenol	*80.2*			*37-125*	*%REC*	10	7/12/2010 15:01
Surr: 4-Terphenyl-d14	*75.9*			*32-125*	*%REC*	1	7/11/2010 19:51
Surr: 4-Terphenyl-d14	*80.8*			*32-125*	*%REC*	10	7/12/2010 15:01
Surr: Nitrobenzene-d5	*84.6*			*37-125*	*%REC*	1	7/11/2010 19:51
Surr: Nitrobenzene-d5	*80.1*			*37-125*	*%REC*	10	7/12/2010 15:01
Surr: Phenol-d6	*68.1*			*40-125*	*%REC*	1	7/11/2010 19:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB145(16-17.4)-20100622
Collection Date: 6/22/2010 09:45 AM

Work Order: 1006824
Lab ID: 1006824-03
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*91.9*			*40-125*	*%REC*	10	7/12/2010 15:01
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.58	5.8	µg/Kg-dry	1	6/25/2010 22:22
Benzene	U		0.58	5.8	µg/Kg-dry	1	6/25/2010 22:22
Chlorobenzene	U		0.58	5.8	µg/Kg-dry	1	6/25/2010 22:22
Dichloromethane	**2.5**	J	**1.6**	**12**	**µg/Kg-dry**	1	6/25/2010 22:22
Ethylbenzene	U		0.58	5.8	µg/Kg-dry	1	6/25/2010 22:22
Toluene	U		0.58	5.8	µg/Kg-dry	1	6/25/2010 22:22
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/25/2010 22:22
Surr: 1,2-Dichloroethane-d4	*103*			*70-128*	*%REC*	1	6/25/2010 22:22
Surr: 4-Bromofluorobenzene	*100*			*73-126*	*%REC*	1	6/25/2010 22:22
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/25/2010 22:22
Surr: Toluene-d8	*104*			*73-127*	*%REC*	1	6/25/2010 22:22
MOISTURE		Method: **E160.3**					Analyst: **JLC**
Percent Moisture	**14.5**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB144(12-13)-20100622
Collection Date: 6/22/2010 11:00 AM

Work Order: 1006824
Lab ID: 1006824-04
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.7	µg/Kg-dry	1	7/11/2010 18:53
2,4-Dimethylphenol	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
2,4-Dinitrotoluene	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
2,6-Dinitrotoluene	U		3.8	7.7	µg/Kg-dry	1	7/11/2010 18:53
2-Chloronaphthalene	U		4.8	7.7	µg/Kg-dry	1	7/11/2010 18:53
2-Methylnaphthalene	**1,300**		**32**	**77**	**µg/Kg-dry**	10	7/10/2010 23:45
4,6-Dinitro-2-methylphenol	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
4-Nitrophenol	U		4.5	39	µg/Kg-dry	1	7/11/2010 18:53
Acenaphthene	**3,900**		**100**	**310**	**µg/Kg-dry**	40	7/11/2010 23:30
Acenaphthylene	U		2.6	7.7	µg/Kg-dry	1	7/11/2010 18:53
Anthracene	**1,700**		**26**	**77**	**µg/Kg-dry**	10	7/10/2010 23:45
Benz(a)anthracene	**350**		**3.3**	**7.7**	**µg/Kg-dry**	1	7/11/2010 18:53
Benzo(a)pyrene	**110**		**2.7**	**7.7**	**µg/Kg-dry**	1	7/11/2010 18:53
Bis(2-chloroethoxy)methane	U		2.8	7.7	µg/Kg-dry	1	7/11/2010 18:53
Bis(2-ethylhexyl)phthalate	U		7.7	7.7	µg/Kg-dry	1	7/11/2010 18:53
Chrysene	**390**		**3.4**	**7.7**	**µg/Kg-dry**	1	7/11/2010 18:53
Di-n-butyl phthalate	U		2.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
Dibenzofuran	**4,200**		**100**	**310**	**µg/Kg-dry**	40	7/11/2010 23:30
Fluoranthene	**3,600**		**26**	**77**	**µg/Kg-dry**	10	7/10/2010 23:45
Fluorene	**3,900**		**100**	**310**	**µg/Kg-dry**	40	7/11/2010 23:30
N-Nitrosodiphenylamine	U		2.6	7.7	µg/Kg-dry	1	7/11/2010 18:53
Naphthalene	**5,300**		**150**	**310**	**µg/Kg-dry**	40	7/11/2010 23:30
Nitrobenzene	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
Pentachlorophenol	U		3.3	7.7	µg/Kg-dry	1	7/11/2010 18:53
Phenanthrene	**10,000**		**140**	**310**	**µg/Kg-dry**	40	7/11/2010 23:30
Phenol	U		3.9	7.7	µg/Kg-dry	1	7/11/2010 18:53
Pyrene	**2,000**		**26**	**77**	**µg/Kg-dry**	10	7/10/2010 23:45
Surr: 2,4,6-Tribromophenol	*75.1*			*36-126*	*%REC*	10	7/10/2010 23:45
Surr: 2,4,6-Tribromophenol	*80.3*			*36-126*	*%REC*	1	7/11/2010 18:53
Surr: 2,4,6-Tribromophenol	*0*	S		*36-126*	*%REC*	40	7/11/2010 23:30
Surr: 2-Fluorobiphenyl	*69.3*			*43-125*	*%REC*	10	7/10/2010 23:45
Surr: 2-Fluorobiphenyl	*61.0*			*43-125*	*%REC*	1	7/11/2010 18:53
Surr: 2-Fluorobiphenyl	*83.5*	J		*43-125*	*%REC*	40	7/11/2010 23:30
Surr: 2-Fluorophenol	*74.4*			*37-125*	*%REC*	10	7/10/2010 23:45
Surr: 2-Fluorophenol	*66.4*			*37-125*	*%REC*	1	7/11/2010 18:53
Surr: 2-Fluorophenol	*71.4*	J		*37-125*	*%REC*	40	7/11/2010 23:30
Surr: 4-Terphenyl-d14	*76.2*			*32-125*	*%REC*	10	7/10/2010 23:45
Surr: 4-Terphenyl-d14	*78.9*			*32-125*	*%REC*	1	7/11/2010 18:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB144(12-13)-20100622
Collection Date: 6/22/2010 11:00 AM

Work Order: 1006824
Lab ID: 1006824-04
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*64.7*	J		*32-125*	*%REC*	40	7/11/2010 23:30
Surr: Nitrobenzene-d5	*69.0*			*37-125*	*%REC*	10	7/10/2010 23:45
Surr: Nitrobenzene-d5	*79.5*			*37-125*	*%REC*	1	7/11/2010 18:53
Surr: Nitrobenzene-d5	*78.8*	J		*37-125*	*%REC*	40	7/11/2010 23:30
Surr: Phenol-d6	*71.0*			*40-125*	*%REC*	10	7/10/2010 23:45
Surr: Phenol-d6	*67.9*			*40-125*	*%REC*	1	7/11/2010 18:53
Surr: Phenol-d6	*63.0*	J		*40-125*	*%REC*	40	7/11/2010 23:30
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.59	5.9	µg/Kg-dry	1	6/25/2010 23:44
Benzene	U		0.59	5.9	µg/Kg-dry	1	6/25/2010 23:44
Chlorobenzene	U		0.59	5.9	µg/Kg-dry	1	6/25/2010 23:44
Dichloromethane	U		1.6	12	µg/Kg-dry	1	6/25/2010 23:44
Ethylbenzene	**5.7**	J	**0.59**	**5.9**	**µg/Kg-dry**	1	6/25/2010 23:44
Toluene	U		0.59	5.9	µg/Kg-dry	1	6/25/2010 23:44
Xylenes, Total	**7.9**	J	**1.2**	**18**	**µg/Kg-dry**	1	6/25/2010 23:44
Surr: 1,2-Dichloroethane-d4	*111*			*70-128*	*%REC*	1	6/25/2010 23:44
Surr: 4-Bromofluorobenzene	*103*			*73-126*	*%REC*	1	6/25/2010 23:44
Surr: Dibromofluoromethane	*110*			*71-128*	*%REC*	1	6/25/2010 23:44
Surr: Toluene-d8	*101*			*73-127*	*%REC*	1	6/25/2010 23:44
MOISTURE		Method: **E160.3**					Analyst: **JLC**
Percent Moisture	**14.8**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB144(16-16.9)-20100622
Collection Date: 6/22/2010 11:10 AM

Work Order: 1006824
Lab ID: 1006824-05
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.7	8.2	µg/Kg-dry	1	7/11/2010 20:11
2,4-Dimethylphenol	U		4.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
2,4-Dinitrotoluene	U		4.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
2,6-Dinitrotoluene	U		4.0	8.2	µg/Kg-dry	1	7/11/2010 20:11
2-Chloronaphthalene	U		5.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
2-Methylnaphthalene	**39,000**		**330**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
4,6-Dinitro-2-methylphenol	U		4.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
4-Nitrophenol	U		4.7	41	µg/Kg-dry	1	7/11/2010 20:11
Acenaphthene	**39,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Acenaphthylene	**470**		**27**	**82**	**µg/Kg-dry**	10	7/12/2010 15:21
Anthracene	**26,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Benz(a)anthracene	**3,900**		**35**	**82**	**µg/Kg-dry**	10	7/12/2010 15:21
Benzo(a)pyrene	**1,200**		**28**	**82**	**µg/Kg-dry**	10	7/12/2010 15:21
Bis(2-chloroethoxy)methane	U		3.0	8.2	µg/Kg-dry	1	7/11/2010 20:11
Bis(2-ethylhexyl)phthalate	**59**		**8.2**	**8.2**	**µg/Kg-dry**	1	7/11/2010 20:11
Chrysene	**4,000**		**360**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Di-n-butyl phthalate	U		3.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
Dibenzofuran	**34,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Fluoranthene	**34,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Fluorene	**39,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
N-Nitrosodiphenylamine	U		2.7	8.2	µg/Kg-dry	1	7/11/2010 20:11
Naphthalene	**130,000**		**2,000**	**4,100**	**µg/Kg-dry**	500	7/12/2010 17:57
Nitrobenzene	U		4.1	8.2	µg/Kg-dry	1	7/11/2010 20:11
Pentachlorophenol	U		3.5	8.2	µg/Kg-dry	1	7/11/2010 20:11
Phenanthrene	**94,000**		**1,900**	**4,100**	**µg/Kg-dry**	500	7/12/2010 17:57
Phenol	**18**		**4.1**	**8.2**	**µg/Kg-dry**	1	7/11/2010 20:11
Pyrene	**19,000**		**270**	**820**	**µg/Kg-dry**	100	7/12/2010 17:16
Surr: 2,4,6-Tribromophenol	*113*			*36-126*	*%REC*	1	7/11/2010 20:11
Surr: 2,4,6-Tribromophenol	*45.9*			*36-126*	*%REC*	10	7/12/2010 15:21
Surr: 2,4,6-Tribromophenol	*0*	S		*36-126*	*%REC*	100	7/12/2010 17:16
Surr: 2,4,6-Tribromophenol	*0*	S		*36-126*	*%REC*	500	7/12/2010 17:57
Surr: 2-Fluorobiphenyl	*101*			*43-125*	*%REC*	1	7/11/2010 20:11
Surr: 2-Fluorobiphenyl	*64.3*			*43-125*	*%REC*	10	7/12/2010 15:21
Surr: 2-Fluorobiphenyl	*0*	S		*43-125*	*%REC*	100	7/12/2010 17:16
Surr: 2-Fluorobiphenyl	*0*	S		*43-125*	*%REC*	500	7/12/2010 17:57
Surr: 2-Fluorophenol	*67.4*			*37-125*	*%REC*	1	7/11/2010 20:11
Surr: 2-Fluorophenol	*69.9*			*37-125*	*%REC*	10	7/12/2010 15:21
Surr: 2-Fluorophenol	*0*	S		*37-125*	*%REC*	100	7/12/2010 17:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB144(16-16.9)-20100622
Collection Date: 6/22/2010 11:10 AM

Work Order: 1006824
Lab ID: 1006824-05
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*37-125*	*%REC*	500	7/12/2010 17:57
Surr: 4-Terphenyl-d14	*72.3*			*32-125*	*%REC*	1	7/11/2010 20:11
Surr: 4-Terphenyl-d14	*105*			*32-125*	*%REC*	10	7/12/2010 15:21
Surr: 4-Terphenyl-d14	*0*	S		*32-125*	*%REC*	100	7/12/2010 17:16
Surr: 4-Terphenyl-d14	*0*	S		*32-125*	*%REC*	500	7/12/2010 17:57
Surr: Nitrobenzene-d5	*54.6*			*37-125*	*%REC*	1	7/11/2010 20:11
Surr: Nitrobenzene-d5	*58.7*			*37-125*	*%REC*	10	7/12/2010 15:21
Surr: Nitrobenzene-d5	*0*	S		*37-125*	*%REC*	100	7/12/2010 17:16
Surr: Nitrobenzene-d5	*0*	S		*37-125*	*%REC*	500	7/12/2010 17:57
Surr: Phenol-d6	*67.6*			*40-125*	*%REC*	1	7/11/2010 20:11
Surr: Phenol-d6	*58.7*			*40-125*	*%REC*	10	7/12/2010 15:21
Surr: Phenol-d6	*0*	S		*40-125*	*%REC*	100	7/12/2010 17:16
Surr: Phenol-d6	*0*	S		*40-125*	*%REC*	500	7/12/2010 17:57
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.62	6.2	µg/Kg-dry	1	6/26/2010 00:11
Benzene	**0.81**	J	**0.62**	**6.2**	**µg/Kg-dry**	1	6/26/2010 00:11
Chlorobenzene	U		0.62	6.2	µg/Kg-dry	1	6/26/2010 00:11
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/26/2010 00:11
Ethylbenzene	**64**		**0.62**	**6.2**	**µg/Kg-dry**	1	6/26/2010 00:11
Toluene	**2.3**	J	**0.62**	**6.2**	**µg/Kg-dry**	1	6/26/2010 00:11
Xylenes, Total	**120**		**1.2**	**19**	**µg/Kg-dry**	1	6/26/2010 00:11
Surr: 1,2-Dichloroethane-d4	*112*			*70-128*	*%REC*	1	6/26/2010 00:11
Surr: 4-Bromofluorobenzene	*103*			*73-126*	*%REC*	1	6/26/2010 00:11
Surr: Dibromofluoromethane	*109*			*71-128*	*%REC*	1	6/26/2010 00:11
Surr: Toluene-d8	*100*			*73-127*	*%REC*	1	6/26/2010 00:11
MOISTURE		Method: **E160.3**					Analyst: **JLC**
Percent Moisture	**19.3**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB146(0-2)-20100622
Collection Date: 6/22/2010 11:45 AM

Work Order: 1006824
Lab ID: 1006824-06
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		12	36	µg/Kg-dry	5	7/11/2010 20:50
2,4-Dimethylphenol	U		18	36	µg/Kg-dry	5	7/11/2010 20:50
2,4-Dinitrotoluene	U		18	36	µg/Kg-dry	5	7/11/2010 20:50
2,6-Dinitrotoluene	U		18	36	µg/Kg-dry	5	7/11/2010 20:50
2-Chloronaphthalene	U		23	36	µg/Kg-dry	5	7/11/2010 20:50
2-Methylnaphthalene	U		15	36	µg/Kg-dry	5	7/11/2010 20:50
4,6-Dinitro-2-methylphenol	U		18	36	µg/Kg-dry	5	7/11/2010 20:50
4-Nitrophenol	U		21	180	µg/Kg-dry	5	7/11/2010 20:50
Acenaphthene	**26**	J	**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Acenaphthylene	**190**		**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Anthracene	**460**		**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Benz(a)anthracene	**170**		**15**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Benzo(a)pyrene	**330**		**13**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Bis(2-chloroethoxy)methane	U		13	36	µg/Kg-dry	5	7/11/2010 20:50
Bis(2-ethylhexyl)phthalate	U		36	36	µg/Kg-dry	5	7/11/2010 20:50
Chrysene	**260**		**16**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Di-n-butyl phthalate	U		14	36	µg/Kg-dry	5	7/11/2010 20:50
Dibenzofuran	**20**	J	**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Fluoranthene	**430**		**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Fluorene	**69**		**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
N-Nitrosodiphenylamine	U		12	36	µg/Kg-dry	5	7/11/2010 20:50
Naphthalene	**51**		**18**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Nitrobenzene	U		18	36	µg/Kg-dry	5	7/11/2010 20:50
Pentachlorophenol	**140**		**15**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Phenanthrene	**250**		**17**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Phenol	**20**	J	**18**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Pyrene	**350**		**12**	**36**	**µg/Kg-dry**	5	7/11/2010 20:50
Surr: 2,4,6-Tribromophenol	*94.7*			*36-126*	*%REC*	5	7/11/2010 20:50
Surr: 2-Fluorobiphenyl	*77.3*			*43-125*	*%REC*	5	7/11/2010 20:50
Surr: 2-Fluorophenol	*74.0*			*37-125*	*%REC*	5	7/11/2010 20:50
Surr: 4-Terphenyl-d14	*70.2*			*32-125*	*%REC*	5	7/11/2010 20:50
Surr: Nitrobenzene-d5	*73.2*			*37-125*	*%REC*	5	7/11/2010 20:50
Surr: Phenol-d6	*69.7*			*40-125*	*%REC*	5	7/11/2010 20:50
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.55	5.5	µg/Kg-dry	1	6/25/2010 22:49
Benzene	U		0.55	5.5	µg/Kg-dry	1	6/25/2010 22:49
Chlorobenzene	U		0.55	5.5	µg/Kg-dry	1	6/25/2010 22:49
Dichloromethane	U		1.5	11	µg/Kg-dry	1	6/25/2010 22:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB146(0-2)-20100622
Collection Date: 6/22/2010 11:45 AM

Work Order: 1006824
Lab ID: 1006824-06
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.55	5.5	µg/Kg-dry	1	6/25/2010 22:49
Toluene	U		0.55	5.5	µg/Kg-dry	1	6/25/2010 22:49
Xylenes, Total	U		1.1	17	µg/Kg-dry	1	6/25/2010 22:49
Surr: 1,2-Dichloroethane-d4	*108*			*70-128*	*%REC*	1	6/25/2010 22:49
Surr: 4-Bromofluorobenzene	*99.5*			*73-126*	*%REC*	1	6/25/2010 22:49
Surr: Dibromofluoromethane	*105*			*71-128*	*%REC*	1	6/25/2010 22:49
Surr: Toluene-d8	*101*			*73-127*	*%REC*	1	6/25/2010 22:49
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**9.31**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB146(14-14.8)-20100622
Collection Date: 6/22/2010 11:50 AM

Work Order: 1006824
Lab ID: 1006824-07
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
2,4-Dimethylphenol	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
2,4-Dinitrotoluene	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
2,6-Dinitrotoluene	U		3.8	7.9	µg/Kg-dry	1	7/10/2010 21:25
2-Chloronaphthalene	U		4.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
2-Methylnaphthalene	U		3.2	7.9	µg/Kg-dry	1	7/10/2010 21:25
4,6-Dinitro-2-methylphenol	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
4-Nitrophenol	U		4.5	39	µg/Kg-dry	1	7/10/2010 21:25
Acenaphthene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Acenaphthylene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Anthracene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Benz(a)anthracene	U		3.3	7.9	µg/Kg-dry	1	7/10/2010 21:25
Benzo(a)pyrene	U		2.7	7.9	µg/Kg-dry	1	7/10/2010 21:25
Bis(2-chloroethoxy)methane	U		2.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
Bis(2-ethylhexyl)phthalate	U		7.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
Chrysene	U		3.5	7.9	µg/Kg-dry	1	7/10/2010 21:25
Di-n-butyl phthalate	U		3.0	7.9	µg/Kg-dry	1	7/10/2010 21:25
Dibenzofuran	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Fluoranthene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Fluorene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
N-Nitrosodiphenylamine	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Naphthalene	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
Nitrobenzene	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
Pentachlorophenol	**15**		**3.3**	**7.9**	**µg/Kg-dry**	1	7/10/2010 21:25
Phenanthrene	**4.5**	J	**3.6**	**7.9**	**µg/Kg-dry**	1	7/10/2010 21:25
Phenol	U		3.9	7.9	µg/Kg-dry	1	7/10/2010 21:25
Pyrene	U		2.6	7.9	µg/Kg-dry	1	7/10/2010 21:25
Surr: 2,4,6-Tribromophenol	*36.3*			*36-126*	*%REC*	1	7/10/2010 21:25
Surr: 2-Fluorobiphenyl	*66.6*			*43-125*	*%REC*	1	7/10/2010 21:25
Surr: 2-Fluorophenol	*37.3*			*37-125*	*%REC*	1	7/10/2010 21:25
Surr: 4-Terphenyl-d14	*61.0*			*32-125*	*%REC*	1	7/10/2010 21:25
Surr: Nitrobenzene-d5	*63.7*			*37-125*	*%REC*	1	7/10/2010 21:25
Surr: Phenol-d6	*50.0*			*40-125*	*%REC*	1	7/10/2010 21:25
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.60	6.0	µg/Kg-dry	1	6/25/2010 23:17
Benzene	U		0.60	6.0	µg/Kg-dry	1	6/25/2010 23:17
Chlorobenzene	U		0.60	6.0	µg/Kg-dry	1	6/25/2010 23:17
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/25/2010 23:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB146(14-14.8)-20100622
Collection Date: 6/22/2010 11:50 AM

Work Order: 1006824
Lab ID: 1006824-07
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.60	6.0	µg/Kg-dry	1	6/25/2010 23:17
Toluene	U		0.60	6.0	µg/Kg-dry	1	6/25/2010 23:17
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/25/2010 23:17
Surr: 1,2-Dichloroethane-d4	*106*			*70-128*	*%REC*	1	6/25/2010 23:17
Surr: 4-Bromofluorobenzene	*101*			*73-126*	*%REC*	1	6/25/2010 23:17
Surr: Dibromofluoromethane	*106*			*71-128*	*%REC*	1	6/25/2010 23:17
Surr: Toluene-d8	*101*			*73-127*	*%REC*	1	6/25/2010 23:17
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**16.3**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB143(1.5-2.5)-20100622
Collection Date: 6/22/2010 01:40 PM

Work Order: 1006824
Lab ID: 1006824-08
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		26	78	µg/Kg-dry	10	7/11/2010 21:10
2,4-Dimethylphenol	**180**		**39**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
2,4-Dinitrotoluene	U		39	78	µg/Kg-dry	10	7/11/2010 21:10
2,6-Dinitrotoluene	U		38	78	µg/Kg-dry	10	7/11/2010 21:10
2-Chloronaphthalene	U		48	78	µg/Kg-dry	10	7/11/2010 21:10
2-Methylnaphthalene	**1,200**		**32**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
4,6-Dinitro-2-methylphenol	U		39	78	µg/Kg-dry	10	7/11/2010 21:10
4-Nitrophenol	U		45	390	µg/Kg-dry	10	7/11/2010 21:10
Acenaphthene	**3,200**		**26**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Acenaphthylene	**1,500**		**26**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Anthracene	**3,700**		**100**	**310**	**µg/Kg-dry**	40	7/12/2010 16:03
Benz(a)anthracene	**1,100**		**33**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Benzo(a)pyrene	**3,100**		**110**	**310**	**µg/Kg-dry**	40	7/12/2010 16:03
Bis(2-chloroethoxy)methane	U		28	78	µg/Kg-dry	10	7/11/2010 21:10
Bis(2-ethylhexyl)phthalate	U		78	78	µg/Kg-dry	10	7/11/2010 21:10
Chrysene	**2,500**		**34**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Di-n-butyl phthalate	U		29	78	µg/Kg-dry	10	7/11/2010 21:10
Dibenzofuran	**3,200**		**26**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Fluoranthene	**5,800**		**100**	**310**	**µg/Kg-dry**	40	7/12/2010 16:03
Fluorene	**2,800**		**26**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
N-Nitrosodiphenylamine	U		26	78	µg/Kg-dry	10	7/11/2010 21:10
Naphthalene	**5,000**		**160**	**310**	**µg/Kg-dry**	40	7/12/2010 16:03
Nitrobenzene	U		39	78	µg/Kg-dry	10	7/11/2010 21:10
Pentachlorophenol	U		3.3	7.8	µg/Kg-dry	1	7/19/2010 17:59
Phenanthrene	**2,300**		**35**	**78**	**µg/Kg-dry**	10	7/11/2010 21:10
Phenol	U		39	78	µg/Kg-dry	10	7/11/2010 21:10
Pyrene	**5,400**		**100**	**310**	**µg/Kg-dry**	40	7/12/2010 16:03
Surr: 2,4,6-Tribromophenol	*86.6*			*36-126*	*%REC*	10	7/11/2010 21:10
Surr: 2,4,6-Tribromophenol	*56.9*	J		*36-126*	*%REC*	40	7/12/2010 16:03
Surr: 2-Fluorobiphenyl	*76.1*			*43-125*	*%REC*	10	7/11/2010 21:10
Surr: 2-Fluorobiphenyl	*75.7*	J		*43-125*	*%REC*	40	7/12/2010 16:03
Surr: 2-Fluorophenol	*63.6*			*37-125*	*%REC*	10	7/11/2010 21:10
Surr: 2-Fluorophenol	*94.9*	J		*37-125*	*%REC*	40	7/12/2010 16:03
Surr: 4-Terphenyl-d14	*82.9*			*32-125*	*%REC*	10	7/11/2010 21:10
Surr: 4-Terphenyl-d14	*82.5*	J		*32-125*	*%REC*	40	7/12/2010 16:03
Surr: Nitrobenzene-d5	*85.7*			*37-125*	*%REC*	10	7/11/2010 21:10
Surr: Nitrobenzene-d5	*60.3*	J		*37-125*	*%REC*	40	7/12/2010 16:03
Surr: Phenol-d6	*73.5*			*40-125*	*%REC*	10	7/11/2010 21:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB143(1.5-2.5)-20100622
Collection Date: 6/22/2010 01:40 PM

Work Order: 1006824
Lab ID: 1006824-08
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*107*	J		*40-125*	*%REC*	40	7/12/2010 16:03
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:04
Benzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:04
Chlorobenzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:04
Dichloromethane	U		1.6	12	µg/Kg-dry	1	6/28/2010 10:04
Ethylbenzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:04
Toluene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:04
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/28/2010 10:04
Surr: 1,2-Dichloroethane-d4	*102*			*70-128*	*%REC*	1	6/28/2010 10:04
Surr: 4-Bromofluorobenzene	*98.0*			*73-126*	*%REC*	1	6/28/2010 10:04
Surr: Dibromofluoromethane	*102*			*71-128*	*%REC*	1	6/28/2010 10:04
Surr: Toluene-d8	*98.7*			*73-127*	*%REC*	1	6/28/2010 10:04
MOISTURE		Method: **E160.3**					Analyst: **JLC**
Percent Moisture	**15.1**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB143(18-18.7)-20100622
Collection Date: 6/22/2010 01:50 PM

Work Order: 1006824
Lab ID: 1006824-09
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
2,4-Dimethylphenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
2,4-Dinitrotoluene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
2,6-Dinitrotoluene	U		3.8	7.8	µg/Kg-dry	1	7/10/2010 21:45
2-Chloronaphthalene	U		4.8	7.8	µg/Kg-dry	1	7/10/2010 21:45
2-Methylnaphthalene	U		3.2	7.8	µg/Kg-dry	1	7/10/2010 21:45
4,6-Dinitro-2-methylphenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
4-Nitrophenol	U		4.5	39	µg/Kg-dry	1	7/10/2010 21:45
Acenaphthene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
Acenaphthylene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
Anthracene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
Benz(a)anthracene	U		3.3	7.8	µg/Kg-dry	1	7/10/2010 21:45
Benzo(a)pyrene	U		2.7	7.8	µg/Kg-dry	1	7/10/2010 21:45
Bis(2-chloroethoxy)methane	U		2.8	7.8	µg/Kg-dry	1	7/10/2010 21:45
Bis(2-ethylhexyl)phthalate	U		7.8	7.8	µg/Kg-dry	1	7/10/2010 21:45
Chrysene	U		3.4	7.8	µg/Kg-dry	1	7/10/2010 21:45
Di-n-butyl phthalate	U		2.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
Dibenzofuran	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
Fluoranthene	**5.7**	J	**2.6**	**7.8**	**µg/Kg-dry**	1	7/10/2010 21:45
Fluorene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
N-Nitrosodiphenylamine	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 21:45
Naphthalene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
Nitrobenzene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
Pentachlorophenol	**13**		**3.3**	**7.8**	**µg/Kg-dry**	1	7/10/2010 21:45
Phenanthrene	**4.0**	J	**3.5**	**7.8**	**µg/Kg-dry**	1	7/10/2010 21:45
Phenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 21:45
Pyrene	**4.1**	J	**2.6**	**7.8**	**µg/Kg-dry**	1	7/10/2010 21:45
Surr: 2,4,6-Tribromophenol	*41.0*			*36-126*	*%REC*	1	7/10/2010 21:45
Surr: 2-Fluorobiphenyl	*65.3*			*43-125*	*%REC*	1	7/10/2010 21:45
Surr: 2-Fluorophenol	*48.2*			*37-125*	*%REC*	1	7/10/2010 21:45
Surr: 4-Terphenyl-d14	*60.2*			*32-125*	*%REC*	1	7/10/2010 21:45
Surr: Nitrobenzene-d5	*63.4*			*37-125*	*%REC*	1	7/10/2010 21:45
Surr: Phenol-d6	*54.9*			*40-125*	*%REC*	1	7/10/2010 21:45
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:32
Benzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:32
Chlorobenzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:32
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/28/2010 10:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB143(18-18.7)-20100622
Collection Date: 6/22/2010 01:50 PM

Work Order: 1006824
Lab ID: 1006824-09
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:32
Toluene	U		0.59	5.9	µg/Kg-dry	1	6/28/2010 10:32
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/28/2010 10:32
Surr: 1,2-Dichloroethane-d4	*104*			*70-128*	*%REC*	1	6/28/2010 10:32
Surr: 4-Bromofluorobenzene	*101*			*73-126*	*%REC*	1	6/28/2010 10:32
Surr: Dibromofluoromethane	*99.2*			*71-128*	*%REC*	1	6/28/2010 10:32
Surr: Toluene-d8	*98.8*			*73-127*	*%REC*	1	6/28/2010 10:32
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**15.3**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB142(0-2)-20100622
Collection Date: 6/22/2010 03:30 PM

Work Order: 1006824
Lab ID: 1006824-10
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		12	35	µg/Kg-dry	5	7/11/2010 21:29
2,4-Dimethylphenol	U		18	35	µg/Kg-dry	5	7/11/2010 21:29
2,4-Dinitrotoluene	U		18	35	µg/Kg-dry	5	7/11/2010 21:29
2,6-Dinitrotoluene	U		17	35	µg/Kg-dry	5	7/11/2010 21:29
2-Chloronaphthalene	U		22	35	µg/Kg-dry	5	7/11/2010 21:29
2-Methylnaphthalene	**22**	J	**14**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
4,6-Dinitro-2-methylphenol	U		18	35	µg/Kg-dry	5	7/11/2010 21:29
4-Nitrophenol	U		20	180	µg/Kg-dry	5	7/11/2010 21:29
Acenaphthene	U		12	35	µg/Kg-dry	5	7/11/2010 21:29
Acenaphthylene	**95**		**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Anthracene	**360**		**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Benz(a)anthracene	**110**		**15**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Benzo(a)pyrene	**310**		**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Bis(2-chloroethoxy)methane	U		13	35	µg/Kg-dry	5	7/11/2010 21:29
Bis(2-ethylhexyl)phthalate	**1,500**		**35**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Chrysene	**160**		**15**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Di-n-butyl phthalate	U		13	35	µg/Kg-dry	5	7/11/2010 21:29
Dibenzofuran	**24**	J	**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Fluoranthene	**240**		**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Fluorene	**27**	J	**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
N-Nitrosodiphenylamine	U		12	35	µg/Kg-dry	5	7/11/2010 21:29
Naphthalene	**76**		**18**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Nitrobenzene	U		18	35	µg/Kg-dry	5	7/11/2010 21:29
Pentachlorophenol	**12**		**3.0**	**7.0**	**µg/Kg-dry**	1	7/18/2010 00:31
Phenanthrene	**82**		**16**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Phenol	U		18	35	µg/Kg-dry	5	7/11/2010 21:29
Pyrene	**230**		**12**	**35**	**µg/Kg-dry**	5	7/11/2010 21:29
Surr: 2,4,6-Tribromophenol	*74.1*			*36-126*	*%REC*	5	7/11/2010 21:29
Surr: 2-Fluorobiphenyl	*55.4*			*43-125*	*%REC*	5	7/11/2010 21:29
Surr: 2-Fluorophenol	*65.9*			*37-125*	*%REC*	5	7/11/2010 21:29
Surr: 4-Terphenyl-d14	*74.6*			*32-125*	*%REC*	5	7/11/2010 21:29
Surr: Nitrobenzene-d5	*61.6*			*37-125*	*%REC*	5	7/11/2010 21:29
Surr: Phenol-d6	*61.1*			*40-125*	*%REC*	5	7/11/2010 21:29
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.53	5.3	µg/Kg-dry	1	6/28/2010 18:24
Benzene	U		0.53	5.3	µg/Kg-dry	1	6/28/2010 18:24
Chlorobenzene	U		0.53	5.3	µg/Kg-dry	1	6/28/2010 18:24
Dichloromethane	U		1.5	11	µg/Kg-dry	1	6/28/2010 18:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB142(0-2)-20100622
Collection Date: 6/22/2010 03:30 PM

Work Order: 1006824
Lab ID: 1006824-10
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.53	5.3	µg/Kg-dry	1	6/28/2010 18:24
Toluene	U		0.53	5.3	µg/Kg-dry	1	6/28/2010 18:24
Xylenes, Total	U		1.1	16	µg/Kg-dry	1	6/28/2010 18:24
Surr: 1,2-Dichloroethane-d4	*102*			*70-128*	*%REC*	1	6/28/2010 18:24
Surr: 4-Bromofluorobenzene	*100*			*73-126*	*%REC*	1	6/28/2010 18:24
Surr: Dibromofluoromethane	*94.2*			*71-128*	*%REC*	1	6/28/2010 18:24
Surr: Toluene-d8	*101*			*73-127*	*%REC*	1	6/28/2010 18:24
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**6.48**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB142(16-16.9)-20100622
Collection Date: 6/22/2010 03:40 PM

Work Order: 1006824
Lab ID: 1006824-11
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
2,4-Dimethylphenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 18:14
2,4-Dinitrotoluene	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 18:14
2,6-Dinitrotoluene	U		3.8	7.9	µg/Kg-dry	1	7/11/2010 18:14
2-Chloronaphthalene	U		4.9	7.9	µg/Kg-dry	1	7/11/2010 18:14
2-Methylnaphthalene	U		3.2	7.9	µg/Kg-dry	1	7/11/2010 18:14
4,6-Dinitro-2-methylphenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 18:14
4-Nitrophenol	U		4.6	40	µg/Kg-dry	1	7/11/2010 18:14
Acenaphthene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
Acenaphthylene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
Anthracene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
Benz(a)anthracene	U		3.4	7.9	µg/Kg-dry	1	7/11/2010 18:14
Benzo(a)pyrene	U		2.8	7.9	µg/Kg-dry	1	7/11/2010 18:14
Bis(2-chloroethoxy)methane	U		2.9	7.9	µg/Kg-dry	1	7/11/2010 18:14
Bis(2-ethylhexyl)phthalate	U		7.9	7.9	µg/Kg-dry	1	7/11/2010 18:14
Chrysene	**4.4**	J	**3.5**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Di-n-butyl phthalate	**3.6**	J	**3.0**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Dibenzofuran	**5.2**	J	**2.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Fluoranthene	**5.0**	J	**2.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Fluorene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
N-Nitrosodiphenylamine	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
Naphthalene	**11**		**4.0**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Nitrobenzene	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 18:14
Pentachlorophenol	U		3.4	7.9	µg/Kg-dry	1	7/11/2010 18:14
Phenanthrene	**5.2**	J	**3.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 18:14
Phenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 18:14
Pyrene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 18:14
Surr: 2,4,6-Tribromophenol	*88.1*			*36-126*	*%REC*	1	7/11/2010 18:14
Surr: 2-Fluorobiphenyl	*69.2*			*43-125*	*%REC*	1	7/11/2010 18:14
Surr: 2-Fluorophenol	*70.3*			*37-125*	*%REC*	1	7/11/2010 18:14
Surr: 4-Terphenyl-d14	*75.8*			*32-125*	*%REC*	1	7/11/2010 18:14
Surr: Nitrobenzene-d5	*81.5*			*37-125*	*%REC*	1	7/11/2010 18:14
Surr: Phenol-d6	*71.2*			*40-125*	*%REC*	1	7/11/2010 18:14
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 11:54
Benzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 11:54
Chlorobenzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 11:54
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/29/2010 11:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB142(16-16.9)-20100622
Collection Date: 6/22/2010 03:40 PM

Work Order: 1006824
Lab ID: 1006824-11
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 11:54
Toluene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 11:54
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/29/2010 11:54
Surr: 1,2-Dichloroethane-d4	*107*			*70-128*	*%REC*	1	6/29/2010 11:54
Surr: 4-Bromofluorobenzene	*98.2*			*73-126*	*%REC*	1	6/29/2010 11:54
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/29/2010 11:54
Surr: Toluene-d8	*95.4*			*73-127*	*%REC*	1	6/29/2010 11:54
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**16.8**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB147(2-2.9)-20100622
Collection Date: 6/22/2010 05:25 PM

Work Order: 1006824
Lab ID: 1006824-12
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
2,4-Dimethylphenol	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
2,4-Dinitrotoluene	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
2,6-Dinitrotoluene	U		4.0	8.3	µg/Kg-dry	1	7/10/2010 22:05
2-Chloronaphthalene	U		5.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
2-Methylnaphthalene	U		3.4	8.3	µg/Kg-dry	1	7/10/2010 22:05
4,6-Dinitro-2-methylphenol	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
4-Nitrophenol	U		4.8	41	µg/Kg-dry	1	7/10/2010 22:05
Acenaphthene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Acenaphthylene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Anthracene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Benz(a)anthracene	U		3.5	8.3	µg/Kg-dry	1	7/10/2010 22:05
Benzo(a)pyrene	U		2.9	8.3	µg/Kg-dry	1	7/10/2010 22:05
Bis(2-chloroethoxy)methane	U		3.0	8.3	µg/Kg-dry	1	7/10/2010 22:05
Bis(2-ethylhexyl)phthalate	U		8.3	8.3	µg/Kg-dry	1	7/10/2010 22:05
Chrysene	U		3.6	8.3	µg/Kg-dry	1	7/10/2010 22:05
Di-n-butyl phthalate	U		3.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
Dibenzofuran	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Fluoranthene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Fluorene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
N-Nitrosodiphenylamine	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Naphthalene	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
Nitrobenzene	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
Pentachlorophenol	U		3.5	8.3	µg/Kg-dry	1	7/10/2010 22:05
Phenanthrene	U		3.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Phenol	U		4.1	8.3	µg/Kg-dry	1	7/10/2010 22:05
Pyrene	U		2.8	8.3	µg/Kg-dry	1	7/10/2010 22:05
Surr: 2,4,6-Tribromophenol	*60.2*			*36-126*	*%REC*	1	7/10/2010 22:05
Surr: 2-Fluorobiphenyl	*58.3*			*43-125*	*%REC*	1	7/10/2010 22:05
Surr: 2-Fluorophenol	*47.9*			*37-125*	*%REC*	1	7/10/2010 22:05
Surr: 4-Terphenyl-d14	*66.4*			*32-125*	*%REC*	1	7/10/2010 22:05
Surr: Nitrobenzene-d5	*57.9*			*37-125*	*%REC*	1	7/10/2010 22:05
Surr: Phenol-d6	*54.2*			*40-125*	*%REC*	1	7/10/2010 22:05
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.63	6.3	µg/Kg-dry	1	6/29/2010 12:22
Benzene	U		0.63	6.3	µg/Kg-dry	1	6/29/2010 12:22
Chlorobenzene	U		0.63	6.3	µg/Kg-dry	1	6/29/2010 12:22
Dichloromethane	U		1.8	13	µg/Kg-dry	1	6/29/2010 12:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB147(2-2.9)-20100622
Collection Date: 6/22/2010 05:25 PM

Work Order: 1006824
Lab ID: 1006824-12
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.63	6.3	µg/Kg-dry	1	6/29/2010 12:22
Toluene	U		0.63	6.3	µg/Kg-dry	1	6/29/2010 12:22
Xylenes, Total	U		1.3	19	µg/Kg-dry	1	6/29/2010 12:22
Surr: 1,2-Dichloroethane-d4	*105*			*70-128*	*%REC*	1	6/29/2010 12:22
Surr: 4-Bromofluorobenzene	*98.3*			*73-126*	*%REC*	1	6/29/2010 12:22
Surr: Dibromofluoromethane	*102*			*71-128*	*%REC*	1	6/29/2010 12:22
Surr: Toluene-d8	*96.0*			*73-127*	*%REC*	1	6/29/2010 12:22
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**20.3**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB147(13-14.3)-20100622
Collection Date: 6/22/2010 05:35 PM

Work Order: 1006824
Lab ID: 1006824-13
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
2,4-Dimethylphenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
2,4-Dinitrotoluene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
2,6-Dinitrotoluene	U		3.8	7.8	µg/Kg-dry	1	7/10/2010 22:25
2-Chloronaphthalene	U		4.8	7.8	µg/Kg-dry	1	7/10/2010 22:25
2-Methylnaphthalene	U		3.2	7.8	µg/Kg-dry	1	7/10/2010 22:25
4,6-Dinitro-2-methylphenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
4-Nitrophenol	U		4.5	39	µg/Kg-dry	1	7/10/2010 22:25
Acenaphthene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Acenaphthylene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Anthracene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Benz(a)anthracene	U		3.3	7.8	µg/Kg-dry	1	7/10/2010 22:25
Benzo(a)pyrene	U		2.7	7.8	µg/Kg-dry	1	7/10/2010 22:25
Bis(2-chloroethoxy)methane	U		2.8	7.8	µg/Kg-dry	1	7/10/2010 22:25
Bis(2-ethylhexyl)phthalate	U		7.8	7.8	µg/Kg-dry	1	7/10/2010 22:25
Chrysene	U		3.4	7.8	µg/Kg-dry	1	7/10/2010 22:25
Di-n-butyl phthalate	U		2.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
Dibenzofuran	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Fluoranthene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Fluorene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
N-Nitrosodiphenylamine	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Naphthalene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
Nitrobenzene	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
Pentachlorophenol	U		3.3	7.8	µg/Kg-dry	1	7/10/2010 22:25
Phenanthrene	U		3.5	7.8	µg/Kg-dry	1	7/10/2010 22:25
Phenol	U		3.9	7.8	µg/Kg-dry	1	7/10/2010 22:25
Pyrene	U		2.6	7.8	µg/Kg-dry	1	7/10/2010 22:25
Surr: 2,4,6-Tribromophenol	*59.4*			*36-126*	*%REC*	1	7/10/2010 22:25
Surr: 2-Fluorobiphenyl	*60.4*			*43-125*	*%REC*	1	7/10/2010 22:25
Surr: 2-Fluorophenol	*58.2*			*37-125*	*%REC*	1	7/10/2010 22:25
Surr: 4-Terphenyl-d14	*68.2*			*32-125*	*%REC*	1	7/10/2010 22:25
Surr: Nitrobenzene-d5	*65.1*			*37-125*	*%REC*	1	7/10/2010 22:25
Surr: Phenol-d6	*60.8*			*40-125*	*%REC*	1	7/10/2010 22:25
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.59	5.9	µg/Kg-dry	1	6/26/2010 17:02
Benzene	U		0.59	5.9	µg/Kg-dry	1	6/26/2010 17:02
Chlorobenzene	U		0.59	5.9	µg/Kg-dry	1	6/26/2010 17:02
Dichloromethane	**2.9**	J	**1.7**	**12**	**µg/Kg-dry**	1	6/26/2010 17:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB147(13-14.3)-20100622
Collection Date: 6/22/2010 05:35 PM

Work Order: 1006824
Lab ID: 1006824-13
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.59	5.9	µg/Kg-dry	1	6/26/2010 17:02
Toluene	U		0.59	5.9	µg/Kg-dry	1	6/26/2010 17:02
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/26/2010 17:02
Surr: 1,2-Dichloroethane-d4	*103*			*70-128*	*%REC*	1	6/26/2010 17:02
Surr: 4-Bromofluorobenzene	*98.3*			*73-126*	*%REC*	1	6/26/2010 17:02
Surr: Dibromofluoromethane	*97.2*			*71-128*	*%REC*	1	6/26/2010 17:02
Surr: Toluene-d8	*101*			*73-127*	*%REC*	1	6/26/2010 17:02
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**15.4**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB141(0-2)-20100623
Collection Date: 6/23/2010 12:45 PM

Work Order: 1006824
Lab ID: 1006824-14
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		23	70	µg/Kg-dry	10	7/11/2010 21:49
2,4-Dimethylphenol	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
2,4-Dinitrotoluene	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
2,6-Dinitrotoluene	U		34	70	µg/Kg-dry	10	7/11/2010 21:49
2-Chloronaphthalene	U		43	70	µg/Kg-dry	10	7/11/2010 21:49
2-Methylnaphthalene	U		28	70	µg/Kg-dry	10	7/11/2010 21:49
4,6-Dinitro-2-methylphenol	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
4-Nitrophenol	U		40	350	µg/Kg-dry	10	7/11/2010 21:49
Acenaphthene	**41**	J	**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Acenaphthylene	**91**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Anthracene	**300**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Benz(a)anthracene	**280**		**30**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Benzo(a)pyrene	**440**		**24**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Bis(2-chloroethoxy)methane	U		25	70	µg/Kg-dry	10	7/11/2010 21:49
Bis(2-ethylhexyl)phthalate	U		70	70	µg/Kg-dry	10	7/11/2010 21:49
Chrysene	**350**		**31**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Di-n-butyl phthalate	U		26	70	µg/Kg-dry	10	7/11/2010 21:49
Dibenzofuran	**24**	J	**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Fluoranthene	**800**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Fluorene	**53**	J	**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
N-Nitrosodiphenylamine	U		23	70	µg/Kg-dry	10	7/11/2010 21:49
Naphthalene	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
Nitrobenzene	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
Pentachlorophenol	**19**		**3.0**	**7.0**	**µg/Kg-dry**	1	7/17/2010 23:50
Phenanthrene	**410**		**32**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Phenol	U		35	70	µg/Kg-dry	10	7/11/2010 21:49
Pyrene	**620**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 21:49
Surr: 2,4,6-Tribromophenol	*79.7*			*36-126*	*%REC*	10	7/11/2010 21:49
Surr: 2-Fluorobiphenyl	*75.7*			*43-125*	*%REC*	10	7/11/2010 21:49
Surr: 2-Fluorophenol	*76.8*			*37-125*	*%REC*	10	7/11/2010 21:49
Surr: 4-Terphenyl-d14	*89.1*			*32-125*	*%REC*	10	7/11/2010 21:49
Surr: Nitrobenzene-d5	*70.1*			*37-125*	*%REC*	10	7/11/2010 21:49
Surr: Phenol-d6	*64.2*			*40-125*	*%REC*	10	7/11/2010 21:49
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 12:50
Benzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 12:50
Chlorobenzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 12:50
Dichloromethane	U		1.5	11	µg/Kg-dry	1	6/29/2010 12:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB141(0-2)-20100623
Collection Date: 6/23/2010 12:45 PM

Work Order: 1006824
Lab ID: 1006824-14
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 12:50
Toluene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 12:50
Xylenes, Total	U		1.1	16	µg/Kg-dry	1	6/29/2010 12:50
Surr: 1,2-Dichloroethane-d4	*104*			*70-128*	*%REC*	1	6/29/2010 12:50
Surr: 4-Bromofluorobenzene	*98.9*			*73-126*	*%REC*	1	6/29/2010 12:50
Surr: Dibromofluoromethane	*100*			*71-128*	*%REC*	1	6/29/2010 12:50
Surr: Toluene-d8	*96.1*			*73-127*	*%REC*	1	6/29/2010 12:50
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**5.28**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB141(16-17.1)-20100623
Collection Date: 6/23/2010 12:55 PM

Work Order: 1006824
Lab ID: 1006824-15
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
2,4-Dimethylphenol	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
2,4-Dinitrotoluene	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
2,6-Dinitrotoluene	U		3.9	8.1	µg/Kg-dry	1	7/11/2010 18:33
2-Chloronaphthalene	U		5.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
2-Methylnaphthalene	U		3.3	8.1	µg/Kg-dry	1	7/11/2010 18:33
4,6-Dinitro-2-methylphenol	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
4-Nitrophenol	U		4.6	40	µg/Kg-dry	1	7/11/2010 18:33
Acenaphthene	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
Acenaphthylene	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
Anthracene	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
Benz(a)anthracene	**4.8**	J	**3.4**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Benzo(a)pyrene	**6.0**	J	**2.8**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Bis(2-chloroethoxy)methane	U		2.9	8.1	µg/Kg-dry	1	7/11/2010 18:33
Bis(2-ethylhexyl)phthalate	U		8.1	8.1	µg/Kg-dry	1	7/11/2010 18:33
Chrysene	**9.2**		**3.5**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Di-n-butyl phthalate	**4.8**	J	**3.0**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Dibenzofuran	**3.0**	J	**2.7**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Fluoranthene	**18**		**2.7**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Fluorene	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
N-Nitrosodiphenylamine	U		2.7	8.1	µg/Kg-dry	1	7/11/2010 18:33
Naphthalene	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
Nitrobenzene	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
Pentachlorophenol	U		3.4	8.1	µg/Kg-dry	1	7/11/2010 18:33
Phenanthrene	**14**		**3.7**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Phenol	U		4.0	8.1	µg/Kg-dry	1	7/11/2010 18:33
Pyrene	**13**		**2.7**	**8.1**	**µg/Kg-dry**	1	7/11/2010 18:33
Surr: 2,4,6-Tribromophenol	*82.2*			*36-126*	*%REC*	1	7/11/2010 18:33
Surr: 2-Fluorobiphenyl	*72.4*			*43-125*	*%REC*	1	7/11/2010 18:33
Surr: 2-Fluorophenol	*66.9*			*37-125*	*%REC*	1	7/11/2010 18:33
Surr: 4-Terphenyl-d14	*80.8*			*32-125*	*%REC*	1	7/11/2010 18:33
Surr: Nitrobenzene-d5	*79.1*			*37-125*	*%REC*	1	7/11/2010 18:33
Surr: Phenol-d6	*70.8*			*40-125*	*%REC*	1	7/11/2010 18:33
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.61	6.1	µg/Kg-dry	1	6/29/2010 13:18
Benzene	U		0.61	6.1	µg/Kg-dry	1	6/29/2010 13:18
Chlorobenzene	U		0.61	6.1	µg/Kg-dry	1	6/29/2010 13:18
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/29/2010 13:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB141(16-17.1)-20100623
Collection Date: 6/23/2010 12:55 PM

Work Order: 1006824
Lab ID: 1006824-15
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.61	6.1	µg/Kg-dry	1	6/29/2010 13:18
Toluene	U		0.61	6.1	µg/Kg-dry	1	6/29/2010 13:18
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/29/2010 13:18
Surr: 1,2-Dichloroethane-d4	*102*			*70-128*	*%REC*	1	6/29/2010 13:18
Surr: 4-Bromofluorobenzene	*99.1*			*73-126*	*%REC*	1	6/29/2010 13:18
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/29/2010 13:18
Surr: Toluene-d8	*97.3*			*73-127*	*%REC*	1	6/29/2010 13:18
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**18.2**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB140(0-2)-20100623
Collection Date: 6/23/2010 02:10 PM

Work Order: 1006824
Lab ID: 1006824-16
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
2,4-Dimethylphenol	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
2,4-Dinitrotoluene	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
2,6-Dinitrotoluene	U		3.6	7.4	µg/Kg-dry	1	7/11/2010 19:12
2-Chloronaphthalene	U		4.6	7.4	µg/Kg-dry	1	7/11/2010 19:12
2-Methylnaphthalene	U		3.0	7.4	µg/Kg-dry	1	7/11/2010 19:12
4,6-Dinitro-2-methylphenol	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
4-Nitrophenol	U		4.3	37	µg/Kg-dry	1	7/11/2010 19:12
Acenaphthene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Acenaphthylene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Anthracene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Benz(a)anthracene	U		3.2	7.4	µg/Kg-dry	1	7/11/2010 19:12
Benzo(a)pyrene	U		2.6	7.4	µg/Kg-dry	1	7/11/2010 19:12
Bis(2-chloroethoxy)methane	U		2.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
Bis(2-ethylhexyl)phthalate	U		7.4	7.4	µg/Kg-dry	1	7/11/2010 19:12
Chrysene	U		3.3	7.4	µg/Kg-dry	1	7/11/2010 19:12
Di-n-butyl phthalate	U		2.8	7.4	µg/Kg-dry	1	7/11/2010 19:12
Dibenzofuran	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Fluoranthene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Fluorene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
N-Nitrosodiphenylamine	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Naphthalene	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
Nitrobenzene	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
Pentachlorophenol	U		3.2	7.4	µg/Kg-dry	1	7/11/2010 19:12
Phenanthrene	U		3.4	7.4	µg/Kg-dry	1	7/11/2010 19:12
Phenol	U		3.7	7.4	µg/Kg-dry	1	7/11/2010 19:12
Pyrene	U		2.5	7.4	µg/Kg-dry	1	7/11/2010 19:12
Surr: 2,4,6-Tribromophenol	*75.0*			*36-126*	*%REC*	1	7/11/2010 19:12
Surr: 2-Fluorobiphenyl	*59.9*			*43-125*	*%REC*	1	7/11/2010 19:12
Surr: 2-Fluorophenol	*53.4*			*37-125*	*%REC*	1	7/11/2010 19:12
Surr: 4-Terphenyl-d14	*77.7*			*32-125*	*%REC*	1	7/11/2010 19:12
Surr: Nitrobenzene-d5	*69.7*			*37-125*	*%REC*	1	7/11/2010 19:12
Surr: Phenol-d6	*60.8*			*40-125*	*%REC*	1	7/11/2010 19:12
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.56	5.6	µg/Kg-dry	1	6/29/2010 14:42
Benzene	U		0.56	5.6	µg/Kg-dry	1	6/29/2010 14:42
Chlorobenzene	U		0.56	5.6	µg/Kg-dry	1	6/29/2010 14:42
Dichloromethane	U		1.6	11	µg/Kg-dry	1	6/29/2010 14:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB140(0-2)-20100623
Collection Date: 6/23/2010 02:10 PM

Work Order: 1006824
Lab ID: 1006824-16
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.56	5.6	µg/Kg-dry	1	6/29/2010 14:42
Toluene	U		0.56	5.6	µg/Kg-dry	1	6/29/2010 14:42
Xylenes, Total	U		1.1	17	µg/Kg-dry	1	6/29/2010 14:42
Surr: 1,2-Dichloroethane-d4	*105*			*70-128*	*%REC*	1	6/29/2010 14:42
Surr: 4-Bromofluorobenzene	*96.9*			*73-126*	*%REC*	1	6/29/2010 14:42
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/29/2010 14:42
Surr: Toluene-d8	*94.8*			*73-127*	*%REC*	1	6/29/2010 14:42
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**11.4**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB140(13-14.3)-20100623
Collection Date: 6/23/2010 02:15 PM

Work Order: 1006824
Lab ID: 1006824-17
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
2,4-Dimethylphenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
2,4-Dinitrotoluene	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
2,6-Dinitrotoluene	U		3.8	7.9	µg/Kg-dry	1	7/11/2010 19:32
2-Chloronaphthalene	U		4.9	7.9	µg/Kg-dry	1	7/11/2010 19:32
2-Methylnaphthalene	U		3.2	7.9	µg/Kg-dry	1	7/11/2010 19:32
4,6-Dinitro-2-methylphenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
4-Nitrophenol	U		4.6	40	µg/Kg-dry	1	7/11/2010 19:32
Acenaphthene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
Acenaphthylene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
Anthracene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
Benz(a)anthracene	U		3.4	7.9	µg/Kg-dry	1	7/11/2010 19:32
Benzo(a)pyrene	U		2.8	7.9	µg/Kg-dry	1	7/11/2010 19:32
Bis(2-chloroethoxy)methane	U		2.9	7.9	µg/Kg-dry	1	7/11/2010 19:32
Bis(2-ethylhexyl)phthalate	U		7.9	7.9	µg/Kg-dry	1	7/11/2010 19:32
Chrysene	**5.0**	J	**3.5**	**7.9**	**µg/Kg-dry**	1	7/11/2010 19:32
Di-n-butyl phthalate	U		3.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
Dibenzofuran	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
Fluoranthene	**7.8**	J	**2.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 19:32
Fluorene	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
N-Nitrosodiphenylamine	U		2.6	7.9	µg/Kg-dry	1	7/11/2010 19:32
Naphthalene	**5.2**	J	**4.0**	**7.9**	**µg/Kg-dry**	1	7/11/2010 19:32
Nitrobenzene	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
Pentachlorophenol	U		3.4	7.9	µg/Kg-dry	1	7/11/2010 19:32
Phenanthrene	**4.9**	J	**3.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 19:32
Phenol	U		4.0	7.9	µg/Kg-dry	1	7/11/2010 19:32
Pyrene	**5.6**	J	**2.6**	**7.9**	**µg/Kg-dry**	1	7/11/2010 19:32
Surr: 2,4,6-Tribromophenol	*80.2*			*36-126*	*%REC*	1	7/11/2010 19:32
Surr: 2-Fluorobiphenyl	*60.3*			*43-125*	*%REC*	1	7/11/2010 19:32
Surr: 2-Fluorophenol	*66.1*			*37-125*	*%REC*	1	7/11/2010 19:32
Surr: 4-Terphenyl-d14	*75.5*			*32-125*	*%REC*	1	7/11/2010 19:32
Surr: Nitrobenzene-d5	*76.0*			*37-125*	*%REC*	1	7/11/2010 19:32
Surr: Phenol-d6	*61.4*			*40-125*	*%REC*	1	7/11/2010 19:32
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 15:10
Benzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 15:10
Chlorobenzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 15:10
Dichloromethane	U		1.7	12	µg/Kg-dry	1	6/29/2010 15:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB140(13-14.3)-20100623
Collection Date: 6/23/2010 02:15 PM

Work Order: 1006824
Lab ID: 1006824-17
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 15:10
Toluene	U		0.60	6.0	µg/Kg-dry	1	6/29/2010 15:10
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/29/2010 15:10
Surr: 1,2-Dichloroethane-d4	*106*			*70-128*	*%REC*	1	6/29/2010 15:10
Surr: 4-Bromofluorobenzene	*98.0*			*73-126*	*%REC*	1	6/29/2010 15:10
Surr: Dibromofluoromethane	*102*			*71-128*	*%REC*	1	6/29/2010 15:10
Surr: Toluene-d8	*95.4*			*73-127*	*%REC*	1	6/29/2010 15:10
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**17.0**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB139(0-2)-20100624
Collection Date: 6/24/2010 11:40 AM

Work Order: 1006824
Lab ID: 1006824-18
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
2,4-Dimethylphenol	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
2,4-Dinitrotoluene	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
2,6-Dinitrotoluene	U		34	70	µg/Kg-dry	10	7/11/2010 22:08
2-Chloronaphthalene	U		44	70	µg/Kg-dry	10	7/11/2010 22:08
2-Methylnaphthalene	U		29	70	µg/Kg-dry	10	7/11/2010 22:08
4,6-Dinitro-2-methylphenol	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
4-Nitrophenol	U		40	350	µg/Kg-dry	10	7/11/2010 22:08
Acenaphthene	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
Acenaphthylene	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
Anthracene	**130**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Benz(a)anthracene	**140**		**30**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Benzo(a)pyrene	**290**		**24**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Bis(2-chloroethoxy)methane	U		26	70	µg/Kg-dry	10	7/11/2010 22:08
Bis(2-ethylhexyl)phthalate	**130**		**70**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Chrysene	**220**		**31**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Di-n-butyl phthalate	**77**		**27**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Dibenzofuran	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
Fluoranthene	**410**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Fluorene	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
N-Nitrosodiphenylamine	U		23	70	µg/Kg-dry	10	7/11/2010 22:08
Naphthalene	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
Nitrobenzene	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
Pentachlorophenol	**14**		**3.0**	**7.0**	**µg/Kg-dry**	1	7/17/2010 23:10
Phenanthrene	**170**		**32**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Phenol	U		35	70	µg/Kg-dry	10	7/11/2010 22:08
Pyrene	**340**		**23**	**70**	**µg/Kg-dry**	10	7/11/2010 22:08
Surr: 2,4,6-Tribromophenol	*86.8*			*36-126*	*%REC*	10	7/11/2010 22:08
Surr: 2-Fluorobiphenyl	*54.3*			*43-125*	*%REC*	10	7/11/2010 22:08
Surr: 2-Fluorophenol	*58.4*			*37-125*	*%REC*	10	7/11/2010 22:08
Surr: 4-Terphenyl-d14	*66.8*			*32-125*	*%REC*	10	7/11/2010 22:08
Surr: Nitrobenzene-d5	*50.9*			*37-125*	*%REC*	10	7/11/2010 22:08
Surr: Phenol-d6	*51.5*			*40-125*	*%REC*	10	7/11/2010 22:08
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 15:38
Benzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 15:38
Chlorobenzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 15:38
Dichloromethane	U		1.5	11	µg/Kg-dry	1	6/29/2010 15:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB139(0-2)-20100624
Collection Date: 6/24/2010 11:40 AM

Work Order: 1006824
Lab ID: 1006824-18
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 15:38
Toluene	U		0.53	5.3	µg/Kg-dry	1	6/29/2010 15:38
Xylenes, Total	U		1.1	16	µg/Kg-dry	1	6/29/2010 15:38
Surr: 1,2-Dichloroethane-d4	*111*			*70-128*	*%REC*	1	6/29/2010 15:38
Surr: 4-Bromofluorobenzene	*98.9*			*73-126*	*%REC*	1	6/29/2010 15:38
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/29/2010 15:38
Surr: Toluene-d8	*97.2*			*73-127*	*%REC*	1	6/29/2010 15:38
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**6.14**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB139(13-14.4)-20100624
Collection Date: 6/24/2010 11:50 AM

Work Order: 1006824
Lab ID: 1006824-19
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
2,4-Dimethylphenol	**25**		**3.8**	**7.6**	**µg/Kg-dry**	1	7/10/2010 22:45
2,4-Dinitrotoluene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
2,6-Dinitrotoluene	U		3.7	7.6	µg/Kg-dry	1	7/10/2010 22:45
2-Chloronaphthalene	U		4.7	7.6	µg/Kg-dry	1	7/10/2010 22:45
2-Methylnaphthalene	U		3.1	7.6	µg/Kg-dry	1	7/10/2010 22:45
4,6-Dinitro-2-methylphenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
4-Nitrophenol	U		4.4	38	µg/Kg-dry	1	7/10/2010 22:45
Acenaphthene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Acenaphthylene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Anthracene	**7.3**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 22:45
Benz(a)anthracene	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 22:45
Benzo(a)pyrene	U		2.7	7.6	µg/Kg-dry	1	7/10/2010 22:45
Bis(2-chloroethoxy)methane	U		2.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
Bis(2-ethylhexyl)phthalate	U		7.6	7.6	µg/Kg-dry	1	7/10/2010 22:45
Chrysene	U		3.3	7.6	µg/Kg-dry	1	7/10/2010 22:45
Di-n-butyl phthalate	U		2.9	7.6	µg/Kg-dry	1	7/10/2010 22:45
Dibenzofuran	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Fluoranthene	**5.9**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 22:45
Fluorene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
N-Nitrosodiphenylamine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Naphthalene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
Nitrobenzene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
Pentachlorophenol	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 22:45
Phenanthrene	U		3.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Phenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 22:45
Pyrene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 22:45
Surr: 2,4,6-Tribromophenol	*63.5*			*36-126*	*%REC*	1	7/10/2010 22:45
Surr: 2-Fluorobiphenyl	*59.0*			*43-125*	*%REC*	1	7/10/2010 22:45
Surr: 2-Fluorophenol	*58.1*			*37-125*	*%REC*	1	7/10/2010 22:45
Surr: 4-Terphenyl-d14	*59.4*			*32-125*	*%REC*	1	7/10/2010 22:45
Surr: Nitrobenzene-d5	*61.8*			*37-125*	*%REC*	1	7/10/2010 22:45
Surr: Phenol-d6	*59.9*			*40-125*	*%REC*	1	7/10/2010 22:45
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 16:07
Benzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 16:07
Chlorobenzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 16:07
Dichloromethane	U		1.6	12	µg/Kg-dry	1	6/29/2010 16:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB139(13-14.4)-20100624
Collection Date: 6/24/2010 11:50 AM

Work Order: 1006824
Lab ID: 1006824-19
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 16:07
Toluene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 16:07
Xylenes, Total	U		1.2	17	µg/Kg-dry	1	6/29/2010 16:07
Surr: 1,2-Dichloroethane-d4	*105*			*70-128*	*%REC*	1	6/29/2010 16:07
Surr: 4-Bromofluorobenzene	*97.5*			*73-126*	*%REC*	1	6/29/2010 16:07
Surr: Dibromofluoromethane	*98.7*			*71-128*	*%REC*	1	6/29/2010 16:07
Surr: Toluene-d8	*95.5*			*73-127*	*%REC*	1	6/29/2010 16:07
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**13.6**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB138(6-8)-20100624
Collection Date: 6/24/2010 01:20 PM

Work Order: 1006824
Lab ID: 1006824-20
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
2,4-Dimethylphenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
2,4-Dinitrotoluene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
2,6-Dinitrotoluene	U		3.7	7.6	µg/Kg-dry	1	7/10/2010 23:05
2-Chloronaphthalene	U		4.7	7.6	µg/Kg-dry	1	7/10/2010 23:05
2-Methylnaphthalene	U		3.1	7.6	µg/Kg-dry	1	7/10/2010 23:05
4,6-Dinitro-2-methylphenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
4-Nitrophenol	U		4.4	38	µg/Kg-dry	1	7/10/2010 23:05
Acenaphthene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Acenaphthylene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Anthracene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Benz(a)anthracene	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 23:05
Benzo(a)pyrene	U		2.6	7.6	µg/Kg-dry	1	7/10/2010 23:05
Bis(2-chloroethoxy)methane	U		2.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
Bis(2-ethylhexyl)phthalate	U		7.6	7.6	µg/Kg-dry	1	7/10/2010 23:05
Chrysene	U		3.3	7.6	µg/Kg-dry	1	7/10/2010 23:05
Di-n-butyl phthalate	U		2.9	7.6	µg/Kg-dry	1	7/10/2010 23:05
Dibenzofuran	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Fluoranthene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Fluorene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
N-Nitrosodiphenylamine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Naphthalene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
Nitrobenzene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
Pentachlorophenol	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 23:05
Phenanthrene	U		3.4	7.6	µg/Kg-dry	1	7/10/2010 23:05
Phenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:05
Pyrene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:05
Surr: 2,4,6-Tribromophenol	*36.5*			*36-126*	*%REC*	1	7/10/2010 23:05
Surr: 2-Fluorobiphenyl	*63.9*			*43-125*	*%REC*	1	7/10/2010 23:05
Surr: 2-Fluorophenol	*41.0*			*37-125*	*%REC*	1	7/10/2010 23:05
Surr: 4-Terphenyl-d14	*66.6*			*32-125*	*%REC*	1	7/10/2010 23:05
Surr: Nitrobenzene-d5	*63.3*			*37-125*	*%REC*	1	7/10/2010 23:05
Surr: Phenol-d6	*51.1*			*40-125*	*%REC*	1	7/10/2010 23:05
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.57	5.7	µg/Kg-dry	1	6/29/2010 16:35
Benzene	U		0.57	5.7	µg/Kg-dry	1	6/29/2010 16:35
Chlorobenzene	U		0.57	5.7	µg/Kg-dry	1	6/29/2010 16:35
Dichloromethane	U		1.6	11	µg/Kg-dry	1	6/29/2010 16:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB138(6-8)-20100624
Collection Date: 6/24/2010 01:20 PM

Work Order: 1006824
Lab ID: 1006824-20
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.57	5.7	µg/Kg-dry	1	6/29/2010 16:35
Toluene	U		0.57	5.7	µg/Kg-dry	1	6/29/2010 16:35
Xylenes, Total	U		1.1	17	µg/Kg-dry	1	6/29/2010 16:35
Surr: 1,2-Dichloroethane-d4	*105*			*70-128*	*%REC*	1	6/29/2010 16:35
Surr: 4-Bromofluorobenzene	*96.3*			*73-126*	*%REC*	1	6/29/2010 16:35
Surr: Dibromofluoromethane	*100*			*71-128*	*%REC*	1	6/29/2010 16:35
Surr: Toluene-d8	*94.9*			*73-127*	*%REC*	1	6/29/2010 16:35
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**13.0**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB138(16-16.9)-20100624
Collection Date: 6/24/2010 01:30 PM

Work Order: 1006824
Lab ID: 1006824-21
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
2,4-Dimethylphenol	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
2,4-Dinitrotoluene	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
2,6-Dinitrotoluene	U		3.8	7.8	µg/Kg-dry	1	7/11/2010 16:16
2-Chloronaphthalene	U		4.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
2-Methylnaphthalene	U		3.2	7.8	µg/Kg-dry	1	7/11/2010 16:16
4,6-Dinitro-2-methylphenol	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
4-Nitrophenol	U		4.5	39	µg/Kg-dry	1	7/11/2010 16:16
Acenaphthene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Acenaphthylene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Anthracene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Benz(a)anthracene	U		3.3	7.8	µg/Kg-dry	1	7/11/2010 16:16
Benzo(a)pyrene	U		2.7	7.8	µg/Kg-dry	1	7/11/2010 16:16
Bis(2-chloroethoxy)methane	U		2.8	7.8	µg/Kg-dry	1	7/11/2010 16:16
Bis(2-ethylhexyl)phthalate	U		7.8	7.8	µg/Kg-dry	1	7/11/2010 16:16
Chrysene	U		3.4	7.8	µg/Kg-dry	1	7/11/2010 16:16
Di-n-butyl phthalate	U		3.0	7.8	µg/Kg-dry	1	7/11/2010 16:16
Dibenzofuran	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Fluoranthene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Fluorene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
N-Nitrosodiphenylamine	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Naphthalene	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
Nitrobenzene	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
Pentachlorophenol	U		3.3	7.8	µg/Kg-dry	1	7/11/2010 16:16
Phenanthrene	U		3.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Phenol	U		3.9	7.8	µg/Kg-dry	1	7/11/2010 16:16
Pyrene	U		2.6	7.8	µg/Kg-dry	1	7/11/2010 16:16
Surr: 2,4,6-Tribromophenol	*44.4*			*36-126*	*%REC*	1	7/11/2010 16:16
Surr: 2-Fluorobiphenyl	*67.0*			*43-125*	*%REC*	1	7/11/2010 16:16
Surr: 2-Fluorophenol	*57.1*			*37-125*	*%REC*	1	7/11/2010 16:16
Surr: 4-Terphenyl-d14	*78.2*			*32-125*	*%REC*	1	7/11/2010 16:16
Surr: Nitrobenzene-d5	*71.0*			*37-125*	*%REC*	1	7/11/2010 16:16
Surr: Phenol-d6	*64.9*			*40-125*	*%REC*	1	7/11/2010 16:16
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.59	5.9	µg/Kg-dry	1	6/29/2010 17:03
Benzene	U		0.59	5.9	µg/Kg-dry	1	6/29/2010 17:03
Chlorobenzene	U		0.59	5.9	µg/Kg-dry	1	6/29/2010 17:03
Dichloromethane	**1.7**	J	**1.7**	**12**	**µg/Kg-dry**	1	6/29/2010 17:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-SB138(16-16.9)-20100624
Collection Date: 6/24/2010 01:30 PM

Work Order: 1006824
Lab ID: 1006824-21
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.59	5.9	µg/Kg-dry	1	6/29/2010 17:03
Toluene	U		0.59	5.9	µg/Kg-dry	1	6/29/2010 17:03
Xylenes, Total	U		1.2	18	µg/Kg-dry	1	6/29/2010 17:03
Surr: 1,2-Dichloroethane-d4	*102*			*70-128*	*%REC*	1	6/29/2010 17:03
Surr: 4-Bromofluorobenzene	*97.2*			*73-126*	*%REC*	1	6/29/2010 17:03
Surr: Dibromofluoromethane	*103*			*71-128*	*%REC*	1	6/29/2010 17:03
Surr: Toluene-d8	*94.6*			*73-127*	*%REC*	1	6/29/2010 17:03
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**15.9**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *21-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-Dup1-20100624
Collection Date: 6/24/2010

Work Order: 1006824
Lab ID: 1006824-22
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3541 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
2,4-Dimethylphenol	**19**		**3.8**	**7.6**	**µg/Kg-dry**	1	7/10/2010 23:26
2,4-Dinitrotoluene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
2,6-Dinitrotoluene	U		3.7	7.6	µg/Kg-dry	1	7/10/2010 23:26
2-Chloronaphthalene	U		4.7	7.6	µg/Kg-dry	1	7/10/2010 23:26
2-Methylnaphthalene	U		3.1	7.6	µg/Kg-dry	1	7/10/2010 23:26
4,6-Dinitro-2-methylphenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
4-Nitrophenol	U		4.4	38	µg/Kg-dry	1	7/10/2010 23:26
Acenaphthene	**3.9**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 23:26
Acenaphthylene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
Anthracene	**7.2**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 23:26
Benz(a)anthracene	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 23:26
Benzo(a)pyrene	U		2.7	7.6	µg/Kg-dry	1	7/10/2010 23:26
Bis(2-chloroethoxy)methane	U		2.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
Bis(2-ethylhexyl)phthalate	U		7.6	7.6	µg/Kg-dry	1	7/10/2010 23:26
Chrysene	U		3.4	7.6	µg/Kg-dry	1	7/10/2010 23:26
Di-n-butyl phthalate	U		2.9	7.6	µg/Kg-dry	1	7/10/2010 23:26
Dibenzofuran	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
Fluoranthene	**4.1**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 23:26
Fluorene	**4.0**	J	**2.5**	**7.6**	**µg/Kg-dry**	1	7/10/2010 23:26
N-Nitrosodiphenylamine	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
Naphthalene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
Nitrobenzene	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
Pentachlorophenol	U		3.2	7.6	µg/Kg-dry	1	7/10/2010 23:26
Phenanthrene	U		3.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
Phenol	U		3.8	7.6	µg/Kg-dry	1	7/10/2010 23:26
Pyrene	U		2.5	7.6	µg/Kg-dry	1	7/10/2010 23:26
Surr: 2,4,6-Tribromophenol	*57.1*			*36-126*	*%REC*	1	7/10/2010 23:26
Surr: 2-Fluorobiphenyl	*56.9*			*43-125*	*%REC*	1	7/10/2010 23:26
Surr: 2-Fluorophenol	*52.5*			*37-125*	*%REC*	1	7/10/2010 23:26
Surr: 4-Terphenyl-d14	*62.9*			*32-125*	*%REC*	1	7/10/2010 23:26
Surr: Nitrobenzene-d5	*56.9*			*37-125*	*%REC*	1	7/10/2010 23:26
Surr: Phenol-d6	*53.8*			*40-125*	*%REC*	1	7/10/2010 23:26
TCL VOLATILES		Method: **SW8260**					Analyst: **WLR**
1,2-Dichloroethane	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 17:32
Benzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 17:32
Chlorobenzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 17:32
Dichloromethane	U		1.6	12	µg/Kg-dry	1	6/29/2010 17:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
Sample ID: SO-1620-Dup1-20100624
Collection Date: 6/24/2010

Work Order: 1006824
Lab ID: 1006824-22
Matrix: SOIL

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 17:32
Toluene	U		0.58	5.8	µg/Kg-dry	1	6/29/2010 17:32
Xylenes, Total	U		1.2	17	µg/Kg-dry	1	6/29/2010 17:32
Surr: 1,2-Dichloroethane-d4	*104*			*70-128*	*%REC*	1	6/29/2010 17:32
Surr: 4-Bromofluorobenzene	*98.3*			*73-126*	*%REC*	1	6/29/2010 17:32
Surr: Dibromofluoromethane	*101*			*71-128*	*%REC*	1	6/29/2010 17:32
Surr: Toluene-d8	*95.9*			*73-127*	*%REC*	1	6/29/2010 17:32
MOISTURE		Method:	**E160.3**				Analyst: **JLC**
Percent Moisture	**13.7**	n	**0.010**	**0.0100**	**wt%**	1	6/30/2010 10:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 21-Jul-10

WorkOrder: 1006824
Test Code: 8260_TCL_S
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid **Units:** µg/Kg

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	1.4	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0
S	Surr: Dibromofluoromethane	1868-53-7	0	0
S	Surr: Toluene-d8	2037-26-5	0	0

WorkOrder: 1006824
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles **Matrix:** Aqueous **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

WorkOrder: 1006824
Test Code: 8270_LOW_S
Test Number: SW8270
Test Name: Low-Level Semivolatiles **Matrix:** Solid **Units:** µg/Kg

METHOD DETECTION / REPORTING LIMITS

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	2.2	6.6
A	2,4-Dimethylphenol	105-67-9	3.3	6.6
A	2,4-Dinitrotoluene	121-14-2	3.3	6.6
A	2,6-Dinitrotoluene	606-20-2	3.2	6.6
A	2-Chloronaphthalene	91-58-7	4.1	6.6
A	2-Methylnaphthalene	91-57-6	2.7	6.6
A	4,6-Dinitro-2-methylphenol	534-52-1	3.3	6.6
A	4-Nitrophenol	100-02-7	3.8	33
A	Acenaphthene	83-32-9	2.2	6.6
A	Acenaphthylene	208-96-8	2.2	6.6
A	Anthracene	120-12-7	2.2	6.6
A	Benz(a)anthracene	56-55-3	2.8	6.6
A	Benzo(a)pyrene	50-32-8	2.3	6.6
A	Bis(2-chloroethoxy)methane	111-91-1	2.4	6.6
A	Bis(2-ethylhexyl)phthalate	117-81-7	6.6	6.6
A	Chrysene	218-01-9	2.9	6.6
A	Di-n-butyl phthalate	84-74-2	2.5	6.6
A	Dibenzofuran	132-64-9	2.2	6.6
A	Fluoranthene	206-44-0	2.2	6.6
A	Fluorene	86-73-7	2.2	6.6
A	N-Nitrosodiphenylamine	86-30-6	2.2	6.6
A	Naphthalene	91-20-3	3.3	6.6
A	Nitrobenzene	98-95-3	3.3	6.6
A	Pentachlorophenol	87-86-5	2.8	6.6
A	Phenanthrene	85-01-8	3	6.6
A	Phenol	108-95-2	3.3	6.6
A	Pyrene	129-00-0	2.2	6.6
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	6.6
S	Surr: 2-Fluorobiphenyl	321-60-8	0	6.6
S	Surr: 2-Fluorophenol	367-12-4	0	6.6
S	Surr: 4-Terphenyl-d14	1718-51-0	0	6.6
S	Surr: Nitrobenzene-d5	4165-60-0	0	6.6
S	Surr: Phenol-d6	13127-88-3	0	6.6

WorkOrder: 1006824
Test Code: MOISTURE
Test Number: E160.3
Test Name: Moisture

METHOD DETECTION / REPORTING LIMITS

Matrix: Solid **Units:** wt%

Type	Analyte	CAS	MDL	Unadjusted MQL
A	Percent Moisture	MOIST	0.01	0.01

Batch ID: **44037** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKS3-100625-44037** Units: **µg/Kg** Analysis Date: **7/11/2010 03:36 PM**

Client ID: Run ID: **SV-4_100710B** SeqNo: **2027883** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Methylnaphthalene	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Nitrophenol	U	33								
Acenaphthene	U	6.6								
Acenaphthylene	U	6.6								
Anthracene	U	6.6								
Benz(a)anthracene	U	6.6								
Benzo(a)pyrene	U	6.6								
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Chrysene	U	6.6								
Di-n-butyl phthalate	U	6.6								
Dibenzofuran	U	6.6								
Fluoranthene	U	6.6								
Fluorene	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Naphthalene	U	6.6								
Nitrobenzene	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	6.6								
Phenol	U	6.6								
Pyrene	U	6.6								
Surr: 2,4,6-Tribromophenol	*122.5*	6.6	*166.7*	0	*73.5*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*134.4*	6.6	*166.7*	0	*80.7*	*43-125*	0			
Surr: 2-Fluorophenol	*119.4*	6.6	*166.7*	0	*71.6*	*37-125*	0			
Surr: 4-Terphenyl-d14	*131.9*	6.6	*166.7*	0	*79.1*	*32-125*	0			
Surr: Nitrobenzene-d5	*144.1*	6.6	*166.7*	0	*86.5*	*37-125*	0			
Surr: Phenol-d6	*131.7*	6.6	*166.7*	0	*79*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44037** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSS3-100625-44037** Units: **µg/Kg** Analysis Date: **7/11/2010 03:57 PM**

Client ID: Run ID: **SV-4_100710B** SeqNo: **2027884** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	130.3	6.6	166.7	0	78.2	50-135	0			
2,4-Dimethylphenol	81.44	6.6	166.7	0	48.9	45-120	0			
2,4-Dinitrotoluene	153.7	6.6	166.7	0	92.2	50-130	0			
2,6-Dinitrotoluene	148.4	6.6	166.7	0	89	50-125	0			
2-Chloronaphthalene	150.9	6.6	166.7	0	90.6	50-145	0			
2-Methylnaphthalene	140	6.6	166.7	0	84	50-120	0			
4,6-Dinitro-2-methylphenol	138.4	6.6	166.7	0	83.1	15-135	0			
4-Nitrophenol	187.2	33	166.7	0	112	40-147	0			
Acenaphthene	132.8	6.6	166.7	0	79.7	50-120	0			
Acenaphthylene	144.8	6.6	166.7	0	86.9	50-120	0			
Anthracene	124.5	6.6	166.7	0	74.7	50-123	0			
Benz(a)anthracene	132.6	6.6	166.7	0	79.5	50-131	0			
Benzo(a)pyrene	138.4	6.6	166.7	0	83.1	50-130	0			
Bis(2-chloroethoxy)methane	145.2	6.6	166.7	0	87.1	50-120	0			
Bis(2-ethylhexyl)phthalate	164.1	6.6	166.7	0	98.4	21-148	0			
Chrysene	136.1	6.6	166.7	0	81.6	50-130	0			
Di-n-butyl phthalate	152.1	6.6	166.7	0	91.2	50-140	0			
Dibenzofuran	142	6.6	166.7	0	85.2	50-125	0			
Fluoranthene	144.3	6.6	166.7	0	86.6	50-131	0			
Fluorene	141.6	6.6	166.7	0	85	50-125	0			
N-Nitrosodiphenylamine	128.2	6.6	166.7	0	76.9	50-130	0			
Naphthalene	147.7	6.6	166.7	0	88.6	50-125	0			
Nitrobenzene	148.3	6.6	166.7	0	89	50-125	0			
Pentachlorophenol	92.98	6.6	166.7	0	55.8	23-136	0			
Phenanthrene	137.9	6.6	166.7	0	82.8	50-125	0			
Phenol	147.3	6.6	166.7	0	88.4	45-130	0			
Pyrene	137.7	6.6	166.7	0	82.6	45-130	0			
Surr: 2,4,6-Tribromophenol	*145.6*	6.6	*166.7*	0	*87.3*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*133.8*	6.6	*166.7*	0	*80.3*	*43-125*	0			
Surr: 2-Fluorophenol	*135.9*	6.6	*166.7*	0	*81.6*	*37-125*	0			
Surr: 4-Terphenyl-d14	*127.4*	6.6	*166.7*	0	*76.5*	*32-125*	0			
Surr: Nitrobenzene-d5	*137.8*	6.6	*166.7*	0	*82.7*	*37-125*	0			
Surr: Phenol-d6	*138.6*	6.6	*166.7*	0	*83.2*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44037** Instrument ID **SV-4** Method: **SW8270**

MS Sample ID: **1006824-21BMS** Units: **µg/Kg** Analysis Date: **7/11/2010 04:36 PM**

Client ID: **SO-1620-SB138(16-16.9)-20100624** Run ID: **SV-4_100710B** SeqNo: **2027886** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	100.3	6.6	166.6	0	60.2	50-135	0			
2,4-Dimethylphenol	13.02	6.6	166.6	0	7.82	45-120	0			S
2,4-Dinitrotoluene	129.9	6.6	166.6	0	78	50-130	0			
2,6-Dinitrotoluene	123.5	6.6	166.6	0	74.1	50-125	0			
2-Chloronaphthalene	116.3	6.6	166.6	0	69.8	50-145	0			
2-Methylnaphthalene	102.6	6.6	166.6	0	61.6	50-120	0			
4,6-Dinitro-2-methylphenol	118.5	6.6	166.6	0	71.1	15-135	0			
4-Nitrophenol	168.6	33	166.6	0	101	40-147	0			
Acenaphthene	101.8	6.6	166.6	0	61.1	50-120	0			
Acenaphthylene	108.1	6.6	166.6	0	64.9	50-120	0			
Anthracene	103.1	6.6	166.6	0	61.9	50-123	0			
Benz(a)anthracene	129.8	6.6	166.6	0	77.9	50-131	0			
Benzo(a)pyrene	126.1	6.6	166.6	0	75.7	50-130	0			
Bis(2-chloroethoxy)methane	103.4	6.6	166.6	0	62.1	50-120	0			
Bis(2-ethylhexyl)phthalate	166.3	6.6	166.6	0	99.8	21-148	0			
Chrysene	133.5	6.6	166.6	0	80.2	50-130	0			
Di-n-butyl phthalate	139.4	6.6	166.6	0	83.7	50-140	0			
Dibenzofuran	109.9	6.6	166.6	0	65.9	50-125	0			
Fluoranthene	131.8	6.6	166.6	0	79.1	50-131	0			
Fluorene	109.6	6.6	166.6	0	65.8	50-125	0			
N-Nitrosodiphenylamine	98.82	6.6	166.6	0	59.3	50-130	0			
Naphthalene	106.9	6.6	166.6	0	64.2	50-125	0			
Nitrobenzene	108.2	6.6	166.6	0	64.9	50-125	0			
Pentachlorophenol	60.77	6.6	166.6	0	36.5	23-136	0			
Phenanthrene	113.6	6.6	166.6	0	68.2	50-125	0			
Phenol	107.5	6.6	166.6	0	64.5	45-130	0			
Pyrene	131.6	6.6	166.6	0	79	45-130	0			
Surr: 2,4,6-Tribromophenol	*121*	6.6	*166.6*	0	*72.6*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*94.78*	6.6	*166.6*	0	*56.9*	*43-125*	0			
Surr: 2-Fluorophenol	*88.85*	6.6	*166.6*	0	*53.3*	*37-125*	0			
Surr: 4-Terphenyl-d14	*121.6*	6.6	*166.6*	0	*73*	*32-125*	0			
Surr: Nitrobenzene-d5	*101.2*	6.6	*166.6*	0	*60.7*	*37-125*	0			
Surr: Phenol-d6	*97.97*	6.6	*166.6*	0	*58.8*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44037** Instrument ID **SV-4** Method: **SW8270**

MSD Sample ID: **1006824-21BMSD** Units: **µg/Kg** Analysis Date: **7/11/2010 04:55 PM**

Client ID: **SO-1620-SB138(16-16.9)-20100624** Run ID: **SV-4_100710B** SeqNo: **2027887** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	113.4	6.6	166.3	0	68.2	50-135	100.3	12.3	30	
2,4-Dimethylphenol	21.68	6.6	166.3	0	13	45-120	13.02	49.9	30	SR
2,4-Dinitrotoluene	139.5	6.6	166.3	0	83.9	50-130	129.9	7.08	30	
2,6-Dinitrotoluene	131.8	6.6	166.3	0	79.2	50-125	123.5	6.44	30	
2-Chloronaphthalene	138.7	6.6	166.3	0	83.4	50-145	116.3	17.6	30	
2-Methylnaphthalene	121.9	6.6	166.3	0	73.3	50-120	102.6	17.2	30	
4,6-Dinitro-2-methylphenol	131.7	6.6	166.3	0	79.2	15-135	118.5	10.6	30	
4-Nitrophenol	179.4	33	166.3	0	108	40-147	168.6	6.21	30	
Acenaphthene	115.7	6.6	166.3	0	69.6	50-120	101.8	12.8	30	
Acenaphthylene	120.7	6.6	166.3	0	72.6	50-120	108.1	11	30	
Anthracene	112.4	6.6	166.3	0	67.6	50-123	103.1	8.64	30	
Benz(a)anthracene	136.5	6.6	166.3	0	82.1	50-131	129.8	5.02	30	
Benzo(a)pyrene	128.9	6.6	166.3	0	77.5	50-130	126.1	2.21	30	
Bis(2-chloroethoxy)methane	121.7	6.6	166.3	0	73.2	50-120	103.4	16.2	30	
Bis(2-ethylhexyl)phthalate	170.2	6.6	166.3	0	102	21-148	166.3	2.29	30	
Chrysene	136.3	6.6	166.3	0	81.9	50-130	133.5	2.03	30	
Di-n-butyl phthalate	145.2	6.6	166.3	0	87.3	50-140	139.4	4.06	30	
Dibenzofuran	125	6.6	166.3	0	75.1	50-125	109.9	12.9	30	
Fluoranthene	136	6.6	166.3	0	81.8	50-131	131.8	3.16	30	
Fluorene	123.5	6.6	166.3	0	74.2	50-125	109.6	11.9	30	
N-Nitrosodiphenylamine	109	6.6	166.3	0	65.5	50-130	98.82	9.77	30	
Naphthalene	127.9	6.6	166.3	0	76.9	50-125	106.9	17.9	30	
Nitrobenzene	126.3	6.6	166.3	0	75.9	50-125	108.2	15.4	30	
Pentachlorophenol	73.38	6.6	166.3	0	44.1	23-136	60.77	18.8	30	
Phenanthrene	128.5	6.6	166.3	0	77.3	50-125	113.6	12.3	30	
Phenol	119.6	6.6	166.3	0	71.9	45-130	107.5	10.7	30	
Pyrene	135.3	6.6	166.3	0	81.4	45-130	131.6	2.79	30	
Surr: 2,4,6-Tribromophenol	*131.7*	6.6	*166.3*	0	*79.2*	*36-126*	121	*8.48*	*30*	
Surr: 2-Fluorobiphenyl	*109.5*	6.6	*166.3*	0	*65.9*	*43-125*	94.78	*14.5*	*30*	
Surr: 2-Fluorophenol	*110.3*	6.6	*166.3*	0	*66.3*	*37-125*	88.85	*21.5*	*30*	
Surr: 4-Terphenyl-d14	*124.5*	6.6	*166.3*	0	*74.9*	*32-125*	121.6	*2.37*	*30*	
Surr: Nitrobenzene-d5	*115.1*	6.6	*166.3*	0	*69.2*	*37-125*	101.2	*12.9*	*30*	
Surr: Phenol-d6	*108.3*	6.6	*166.3*	0	*65.1*	*40-125*	97.97	*9.99*	*30*	

The following samples were analyzed in this batch:

1006824-02B	1006824-03B	1006824-04B
1006824-05B	1006824-06B	1006824-07B
1006824-08B	1006824-09B	1006824-10B
1006824-11B	1006824-12B	1006824-13B
1006824-14B	1006824-15B	1006824-16B
1006824-17B	1006824-18B	1006824-19B
1006824-20B	1006824-21B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44038** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKS4-100625-44038** Units: **µg/Kg** Analysis Date: **6/28/2010 01:37 PM**

Client ID: Run ID: **SV-2_100626A** SeqNo: **2009968** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Methylnaphthalene	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Nitrophenol	U	33								
Acenaphthene	U	6.6								
Acenaphthylene	U	6.6								
Anthracene	U	6.6								
Benz(a)anthracene	U	6.6								
Benzo(a)pyrene	U	6.6								
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Chrysene	U	6.6								
Di-n-butyl phthalate	U	6.6								
Dibenzofuran	U	6.6								
Fluoranthene	U	6.6								
Fluorene	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Naphthalene	U	6.6								
Nitrobenzene	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	6.6								
Phenol	U	6.6								
Pyrene	U	6.6								
Surr: 2,4,6-Tribromophenol	*117*	6.6	*166.7*	0	*70.2*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*162*	6.6	*166.7*	0	*97.2*	*43-125*	0			
Surr: 2-Fluorophenol	*131.7*	6.6	*166.7*	0	*79*	*37-125*	0			
Surr: 4-Terphenyl-d14	*162.4*	6.6	*166.7*	0	*97.5*	*32-125*	0			
Surr: Nitrobenzene-d5	*162.5*	6.6	*166.7*	0	*97.5*	*37-125*	0			
Surr: Phenol-d6	*160.2*	6.6	*166.7*	0	*96.1*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44038** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSS4-100625-44038** Units: **µg/Kg** Analysis Date: **6/28/2010 01:58 PM**

Client ID: Run ID: **SV-2_100626A** SeqNo: **2009969** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	198.4	6.6	166.7	0	119	50-135	0			
2,4-Dimethylphenol	115	6.6	166.7	0	69	45-120	0			
2,4-Dinitrotoluene	169.6	6.6	166.7	0	102	50-130	0			
2,6-Dinitrotoluene	174.7	6.6	166.7	0	105	50-125	0			
2-Chloronaphthalene	160.6	6.6	166.7	0	96.4	50-145	0			
2-Methylnaphthalene	156.9	6.6	166.7	0	94.2	50-120	0			
4,6-Dinitro-2-methylphenol	177	6.6	166.7	0	106	15-135	0			
4-Nitrophenol	200.7	33	166.7	0	120	40-147	0			
Acenaphthene	173.2	6.6	166.7	0	104	50-120	0			
Acenaphthylene	159.8	6.6	166.7	0	95.9	50-120	0			
Anthracene	164.9	6.6	166.7	0	98.9	50-123	0			
Benz(a)anthracene	167.9	6.6	166.7	0	101	50-131	0			
Benzo(a)pyrene	177.2	6.6	166.7	0	106	50-130	0			
Bis(2-chloroethoxy)methane	157.3	6.6	166.7	0	94.4	50-120	0			
Bis(2-ethylhexyl)phthalate	187.3	6.6	166.7	0	112	21-148	0			
Chrysene	165.5	6.6	166.7	0	99.3	50-130	0			
Di-n-butyl phthalate	176.3	6.6	166.7	0	106	50-140	0			
Dibenzofuran	160.1	6.6	166.7	0	96.1	50-125	0			
Fluoranthene	162.7	6.6	166.7	0	97.6	50-131	0			
Fluorene	169.5	6.6	166.7	0	102	50-125	0			
N-Nitrosodiphenylamine	173	6.6	166.7	0	104	50-130	0			
Naphthalene	157.3	6.6	166.7	0	94.4	50-125	0			
Nitrobenzene	172.1	6.6	166.7	0	103	50-125	0			
Pentachlorophenol	151.5	6.6	166.7	0	90.9	23-136	0			
Phenanthrene	163.9	6.6	166.7	0	98.4	50-125	0			
Phenol	180.4	6.6	166.7	0	108	45-130	0			
Pyrene	163.3	6.6	166.7	0	98	45-130	0			
Surr: 2,4,6-Tribromophenol	*174.5*	6.6	*166.7*	0	*105*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*158.4*	6.6	*166.7*	0	*95.1*	*43-125*	0			
Surr: 2-Fluorophenol	*157.6*	6.6	*166.7*	0	*94.6*	*37-125*	0			
Surr: 4-Terphenyl-d14	*151.6*	6.6	*166.7*	0	*91*	*32-125*	0			
Surr: Nitrobenzene-d5	*167.7*	6.6	*166.7*	0	*101*	*37-125*	0			
Surr: Phenol-d6	*174.5*	6.6	*166.7*	0	*105*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44038** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1006745-04BMS** Units: **µg/Kg** Analysis Date: **6/26/2010 03:05 PM**

Client ID: Run ID: **SV-2_100626A** SeqNo: **2009976** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	358.3	6.6	166.4	182.3	106	50-120	0			E
Acenaphthene	156.4	6.6	166.4	12.97	86.2	50-120	0			
Acenaphthylene	149.8	6.6	166.4	0	90.1	50-120	0			
Anthracene	186.4	6.6	166.4	5.416	109	50-123	0			
Benz(a)anthracene	174.7	6.6	166.4	0	105	50-131	0			
Benzo(a)pyrene	198.1	6.6	166.4	7.379	115	50-130	0			
Chrysene	179.2	6.6	166.4	0	108	50-130	0			
Dibenzofuran	145.8	6.6	166.4	0	87.6	50-125	0			
Fluoranthene	187.2	6.6	166.4	5.311	109	50-131	0			
Fluorene	174.6	6.6	166.4	28	88.1	50-125	0			
Naphthalene	171.8	6.6	166.4	56.08	69.5	50-125	0			
Phenanthrene	200.4	6.6	166.4	25.49	105	50-125	0			
Pyrene	192.3	6.6	166.4	18.23	105	45-130	0			
Surr: 2,4,6-Tribromophenol	*165.5*	6.6	*166.4*	0	*99.5*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*140.9*	6.6	*166.4*	0	*84.7*	*43-125*	0			
Surr: 2-Fluorophenol	*125.2*	6.6	*166.4*	0	*75.2*	*37-125*	0			
Surr: 4-Terphenyl-d14	*156.3*	6.6	*166.4*	0	*93.9*	*32-125*	0			
Surr: Nitrobenzene-d5	*151.4*	6.6	*166.4*	0	*91*	*37-125*	0			
Surr: Phenol-d6	*141.4*	6.6	*166.4*	0	*85*	*40-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **44038** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1006745-04BMSD** Units: **µg/Kg** Analysis Date: **6/26/2010 03:24 PM**

Client ID: Run ID: **SV-2_100626A** SeqNo: **2009978** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	351	6.6	166.2	182.3	102	50-120	358.3	2.06	30	E
Acenaphthene	156.2	6.6	166.2	12.97	86.2	50-120	156.4	0.105	30	
Acenaphthylene	156.7	6.6	166.2	0	94.3	50-120	149.8	4.5	30	
Anthracene	189.3	6.6	166.2	5.416	111	50-123	186.4	1.55	30	
Benz(a)anthracene	178.1	6.6	166.2	0	107	50-131	174.7	1.91	30	
Benzo(a)pyrene	197.6	6.6	166.2	7.379	114	50-130	198.1	0.283	30	
Chrysene	192.2	6.6	166.2	0	116	50-130	179.2	7.05	30	
Dibenzofuran	154.3	6.6	166.2	0	92.9	50-125	145.8	5.69	30	
Fluoranthene	185.2	6.6	166.2	5.311	108	50-131	187.2	1.08	30	
Fluorene	192.3	6.6	166.2	28	98.9	50-125	174.6	9.63	30	
Naphthalene	179.5	6.6	166.2	56.08	74.3	50-125	171.8	4.4	30	
Phenanthrene	199.7	6.6	166.2	25.49	105	50-125	200.4	0.342	30	
Pyrene	196.3	6.6	166.2	18.23	107	45-130	192.3	2.05	30	
Surr: 2,4,6-Tribromophenol	*173.6*	6.6	*166.2*	0	*104*	*36-126*	165.5	*4.8*	*30*	
Surr: 2-Fluorobiphenyl	*145.2*	6.6	*166.2*	0	*87.4*	*43-125*	140.9	*2.98*	*30*	
Surr: 2-Fluorophenol	*130.8*	6.6	*166.2*	0	*78.7*	*37-125*	125.2	*4.4*	*30*	
Surr: 4-Terphenyl-d14	*164.5*	6.6	*166.2*	0	*99*	*32-125*	156.3	*5.11*	*30*	
Surr: Nitrobenzene-d5	*147.3*	6.6	*166.2*	0	*88.6*	*37-125*	151.4	*2.78*	*30*	
Surr: Phenol-d6	*137.8*	6.6	*166.2*	0	*82.9*	*40-125*	141.4	*2.57*	*30*	

The following samples were analyzed in this batch: 1006824-22B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93158** Instrument ID **VOA3** Method: **SW8260**

MBLK Sample ID: **VBLKS1-100625-R93158** Units: **µg/Kg** Analysis Date: **6/25/2010 05:45 PM**

Client ID: Run ID: **VOA3_100625A** SeqNo: **2008091** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	1.052	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*47.11*	0	*50*	0	*94.2*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.91*	0	*50*	0	*97.8*	*73-126*	0			
Surr: Dibromofluoromethane	*47.49*	0	*50*	0	*95*	*71-128*	0			
Surr: Toluene-d8	*50.47*	0	*50*	0	*101*	*73-127*	0			

LCS Sample ID: **VLCSS1-100625-R93158** Units: **µg/Kg** Analysis Date: **6/25/2010 04:49 PM**

Client ID: Run ID: **VOA3_100625A** SeqNo: **2008086** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.56	5.0	50	0	95.1	73-121	0			
Benzene	48.86	5.0	50	0	97.7	79-120	0			
Chlorobenzene	48.3	5.0	50	0	96.6	79-120	0			
Dichloromethane	45.1	10	50	0	90.2	70-123	0			
Ethylbenzene	48.76	5.0	50	0	97.5	80-122	0			
Toluene	48.76	5.0	50	0	97.5	79-120	0			
Xylenes, Total	148.4	15	150	0	98.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.72*	0	*50*	0	*99.4*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*49.88*	0	*50*	0	*99.8*	*73-126*	0			
Surr: Dibromofluoromethane	*49.28*	0	*50*	0	*98.6*	*71-128*	0			
Surr: Toluene-d8	*49.68*	0	*50*	0	*99.4*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93158** Instrument ID **VOA3** Method: **SW8260**

LCSD Sample ID: **VLCSDS1-100625-R93158** Units: **µg/Kg** Analysis Date: **6/25/2010 05:17 PM**

Client ID: Run ID: **VOA3_100625A** SeqNo: **2008089** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.35	5.0	50	0	101	73-121	47.56	5.69	30	
Benzene	52.36	5.0	50	0	105	79-120	48.86	6.91	30	
Chlorobenzene	50.84	5.0	50	0	102	79-120	48.3	5.13	30	
Dichloromethane	45.04	10	50	0	90.1	70-123	45.1	0.125	30	
Ethylbenzene	52.92	5.0	50	0	106	80-122	48.76	8.18	30	
Toluene	51.53	5.0	50	0	103	79-120	48.76	5.53	30	
Xylenes, Total	156.2	15	150	0	104	80-120	148.4	5.09	30	
Surr: 1,2-Dichloroethane-d4	*50.09*	0	*50*	0	*100*	*70-128*	49.72	*0.735*	*30*	
Surr: 4-Bromofluorobenzene	*49.91*	0	*50*	0	*99.8*	*73-126*	49.88	*0.0698*	*30*	
Surr: Dibromofluoromethane	*49.63*	0	*50*	0	*99.3*	*71-128*	49.28	*0.71*	*30*	
Surr: Toluene-d8	*50.03*	0	*50*	0	*100*	*73-127*	49.68	*0.704*	*30*	

MS Sample ID: **1006810-02AMS** Units: **µg/Kg** Analysis Date: **6/25/2010 06:41 PM**

Client ID: Run ID: **VOA3_100625A** SeqNo: **2008096** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	42.6	5.0	50	0	85.2	73-121	0			
Benzene	43.37	5.0	50	0	86.7	79-120	0			
Chlorobenzene	37.76	5.0	50	0	75.5	79-120	0			S
Dichloromethane	39.94	10	50	1.232	77.4	70-123	0			
Ethylbenzene	39.87	5.0	50	0	79.7	80-122	0			S
Toluene	41.33	5.0	50	0	82.7	79-120	0			
Xylenes, Total	118.9	15	150	0	79.3	80-120	0			S
Surr: 1,2-Dichloroethane-d4	*54.4*	0	*50*	0	*109*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*51*	0	*50*	0	*102*	*73-126*	0			
Surr: Dibromofluoromethane	*53*	0	*50*	0	*106*	*71-128*	0			
Surr: Toluene-d8	*50.1*	0	*50*	0	*100*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93158** Instrument ID **VOA3** Method: **SW8260**

MSD Sample ID: **1006810-02AMSD** Units: **µg/Kg** Analysis Date: **6/25/2010 07:08 PM**

Client ID: Run ID: **VOA3_100625A** SeqNo: **2008098** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.96	5.0	50	0	102	73-121	42.6	17.9	30	
Benzene	53.99	5.0	50	0	108	79-120	43.37	21.8	30	
Chlorobenzene	46.28	5.0	50	0	92.6	79-120	37.76	20.3	30	
Dichloromethane	49.05	10	50	1.232	95.6	70-123	39.94	20.5	30	
Ethylbenzene	52.17	5.0	50	0	104	80-122	39.87	26.7	30	
Toluene	51.66	5.0	50	0	103	79-120	41.33	22.2	30	
Xylenes, Total	147.9	15	150	0	98.6	80-120	118.9	21.7	30	
Surr: 1,2-Dichloroethane-d4	*53.37*	0	*50*	0	*107*	*70-128*	54.4	*1.92*	*30*	
Surr: 4-Bromofluorobenzene	*49.23*	0	*50*	0	*98.5*	*73-126*	51	*3.53*	*30*	
Surr: Dibromofluoromethane	*51.54*	0	*50*	0	*103*	*71-128*	53	*2.79*	*30*	
Surr: Toluene-d8	*49.01*	0	*50*	0	*98*	*73-127*	50.1	*2.2*	*30*	

The following samples were analyzed in this batch:

1006824-02A	1006824-03A	1006824-04A
1006824-05A	1006824-06A	1006824-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93188** Instrument ID **VOA5** Method: **SW8260**

MBLK Sample ID: **VBLKS1-100628-R93188** Units: **µg/Kg** Analysis Date: **6/28/2010 09:51 AM**

Client ID: Run ID: **VOA5_100628A** SeqNo: **2010609** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*48.24*	0	*50*	0	*96.5*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.81*	0	*50*	0	*97.6*	*73-126*	0			
Surr: Dibromofluoromethane	*47.67*	0	*50*	0	*95.3*	*71-128*	0			
Surr: Toluene-d8	*49.83*	0	*50*	0	*99.7*	*73-127*	0			

LCS Sample ID: **VLCSS1-100628-R93188** Units: **µg/Kg** Analysis Date: **6/28/2010 08:45 AM**

Client ID: Run ID: **VOA5_100628A** SeqNo: **2010607** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	57.7	5.0	50	0	115	73-121	0			
Benzene	57.76	5.0	50	0	116	79-120	0			
Chlorobenzene	56.38	5.0	50	0	113	79-120	0			
Dichloromethane	54	10	50	0	108	70-123	0			
Ethylbenzene	59.34	5.0	50	0	119	80-122	0			
Toluene	57.78	5.0	50	0	116	79-120	0			
Xylenes, Total	174.1	15	150	0	116	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.15*	0	*50*	0	*102*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*50.82*	0	*50*	0	*102*	*73-126*	0			
Surr: Dibromofluoromethane	*51.16*	0	*50*	0	*102*	*71-128*	0			
Surr: Toluene-d8	*49.5*	0	*50*	0	*99*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93188** Instrument ID **VOA5** Method: **SW8260**

LCSD Sample ID: **VLCSD1-100628-R93188** Units: **µg/Kg** Analysis Date: **6/28/2010 09:07 AM**

Client ID: Run ID: **VOA5_100628A** SeqNo: **2010608** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.92	5.0	50	0	112	73-121	57.7	3.14	30	
Benzene	55.61	5.0	50	0	111	79-120	57.76	3.79	30	
Chlorobenzene	55.04	5.0	50	0	110	79-120	56.38	2.41	30	
Dichloromethane	50.06	10	50	0	100	70-123	54	7.57	30	
Ethylbenzene	55.99	5.0	50	0	112	80-122	59.34	5.81	30	
Toluene	54.99	5.0	50	0	110	79-120	57.78	4.95	30	
Xylenes, Total	165.7	15	150	0	110	80-120	174.1	4.97	30	
Surr: 1,2-Dichloroethane-d4	*49.11*	0	*50*	0	*98.2*	*70-128*	51.15	*4.08*	*30*	
Surr: 4-Bromofluorobenzene	*49.76*	0	*50*	0	*99.5*	*73-126*	50.82	*2.12*	*30*	
Surr: Dibromofluoromethane	*49.92*	0	*50*	0	*99.8*	*71-128*	51.16	*2.45*	*30*	
Surr: Toluene-d8	*50.07*	0	*50*	0	*100*	*73-127*	49.5	*1.15*	*30*	

MS Sample ID: **1006866-01AMS** Units: **µg/Kg** Analysis Date: **6/28/2010 12:49 PM**

Client ID: Run ID: **VOA5_100628A** SeqNo: **2010621** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	43.11	5.0	50	0	86.2	73-121	0			
Benzene	44.21	5.0	50	0	88.4	79-120	0			
Chlorobenzene	40.5	5.0	50	0	81	79-120	0			
Dichloromethane	43.93	10	50	2.246	83.4	70-123	0			
Ethylbenzene	44.06	5.0	50	0	88.1	80-122	0			
Toluene	43.38	5.0	50	0	86.8	79-120	0			
Xylenes, Total	126.7	15	150	0	84.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.73*	0	*50*	0	*101*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*50.25*	0	*50*	0	*101*	*73-126*	0			
Surr: Dibromofluoromethane	*50.54*	0	*50*	0	*101*	*71-128*	0			
Surr: Toluene-d8	*50.06*	0	*50*	0	*100*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93188** Instrument ID **VOA5** Method: **SW8260**

MSD Sample ID: **1006866-01AMSD** Units: **µg/Kg** Analysis Date: **6/28/2010 01:11 PM**

Client ID: Run ID: **VOA5_100628A** SeqNo: **2010622** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.45	5.0	50	0	98.9	73-121	43.11	13.7	30	
Benzene	51.27	5.0	50	0	103	79-120	44.21	14.8	30	
Chlorobenzene	46.47	5.0	50	0	92.9	79-120	40.5	13.7	30	
Dichloromethane	51.1	10	50	2.246	97.7	70-123	43.93	15.1	30	
Ethylbenzene	50.79	5.0	50	0	102	80-122	44.06	14.2	30	
Toluene	50.45	5.0	50	0	101	79-120	43.38	15.1	30	
Xylenes, Total	146.6	15	150	0	97.8	80-120	126.7	14.6	30	
Surr: 1,2-Dichloroethane-d4	*51.38*	0	*50*	0	*103*	*70-128*	50.73	*1.27*	*30*	
Surr: 4-Bromofluorobenzene	*50.51*	0	*50*	0	*101*	*73-126*	50.25	*0.507*	*30*	
Surr: Dibromofluoromethane	*51.93*	0	*50*	0	*104*	*71-128*	50.54	*2.73*	*30*	
Surr: Toluene-d8	*50.06*	0	*50*	0	*100*	*73-127*	50.06	*0.00264*	*30*	

The following samples were analyzed in this batch: 1006824-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93192** Instrument ID **VOA5** Method: **SW8260**

MBLK Sample ID: **VBLKS-100626-R93192** Units: **µg/Kg** Analysis Date: **6/26/2010 03:55 PM**

Client ID: Run ID: **VOA5_100626B** SeqNo: **2008886** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	2.068	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.18*	0	*50*	0	*100*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.73*	0	*50*	0	*97.5*	*73-126*	0			
Surr: Dibromofluoromethane	*47.77*	0	*50*	0	*95.5*	*71-128*	0			
Surr: Toluene-d8	*49.4*	0	*50*	0	*98.8*	*73-127*	0			

LCS Sample ID: **VLCSS-100626-R93192** Units: **µg/Kg** Analysis Date: **6/26/2010 02:49 PM**

Client ID: Run ID: **VOA5_100626B** SeqNo: **2008879** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	53.81	5.0	50	0	108	73-121	0			
Benzene	53.64	5.0	50	0	107	79-120	0			
Chlorobenzene	53.14	5.0	50	0	106	79-120	0			
Dichloromethane	50.07	10	50	0	100	70-123	0			
Ethylbenzene	54.62	5.0	50	0	109	80-122	0			
Toluene	53.48	5.0	50	0	107	79-120	0			
Xylenes, Total	159.7	15	150	0	106	80-120	0			
Surr: 1,2-Dichloroethane-d4	*48.03*	0	*50*	0	*96.1*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*49.57*	0	*50*	0	*99.1*	*73-126*	0			
Surr: Dibromofluoromethane	*48.39*	0	*50*	0	*96.8*	*71-128*	0			
Surr: Toluene-d8	*50.13*	0	*50*	0	*100*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93192** Instrument ID **VOA5** Method: **SW8260**

LCSD Sample ID: **VLCSDS-100626-R93192** Units: **µg/Kg** Analysis Date: **6/26/2010 03:11 PM**

Client ID: Run ID: **VOA5_100626B** SeqNo: **2008885** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.84	5.0	50	0	99.7	73-121	53.81	7.67	30	
Benzene	49.23	5.0	50	0	98.5	79-120	53.64	8.57	30	
Chlorobenzene	48.81	5.0	50	0	97.6	79-120	53.14	8.48	30	
Dichloromethane	47.03	10	50	0	94.1	70-123	50.07	6.26	30	
Ethylbenzene	50.16	5.0	50	0	100	80-122	54.62	8.51	30	
Toluene	48.96	5.0	50	0	97.9	79-120	53.48	8.84	30	
Xylenes, Total	145.9	15	150	0	97.3	80-120	159.7	9.03	30	
Surr: 1,2-Dichloroethane-d4	*49.09*	0	*50*	0	*98.2*	*70-128*	48.03	*2.19*	*30*	
Surr: 4-Bromofluorobenzene	*49.53*	0	*50*	0	*99.1*	*73-126*	49.57	*0.0811*	*30*	
Surr: Dibromofluoromethane	*50.15*	0	*50*	0	*100*	*71-128*	48.39	*3.57*	*30*	
Surr: Toluene-d8	*50.24*	0	*50*	0	*100*	*73-127*	50.13	*0.232*	*30*	

MS Sample ID: **1006824-13AMS** Units: **µg/Kg** Analysis Date: **6/26/2010 05:24 PM**

Client ID: **SO-1620-SB147(13-14.3)-20100622** Run ID: **VOA5_100626B** SeqNo: **2008888** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.09	5.0	50	0	100	73-121	0			
Benzene	51.04	5.0	50	0	102	79-120	0			
Chlorobenzene	49.13	5.0	50	0	98.3	79-120	0			
Dichloromethane	48.53	10	50	2.471	92.1	70-123	0			
Ethylbenzene	51.32	5.0	50	0	103	80-122	0			
Toluene	51.34	5.0	50	0	103	79-120	0			
Xylenes, Total	151.8	15	150	0	101	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.07*	0	*50*	0	*98.1*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*51.4*	0	*50*	0	*103*	*73-126*	0			
Surr: Dibromofluoromethane	*49.47*	0	*50*	0	*98.9*	*71-128*	0			
Surr: Toluene-d8	*50.89*	0	*50*	0	*102*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93192** Instrument ID **VOA5** Method: **SW8260**

MSD Sample ID: **1006824-13AMSD** Units: **µg/Kg** Analysis Date: **6/26/2010 05:46 PM**

Client ID: **SO-1620-SB147(13-14.3)-20100622** Run ID: **VOA5_100626B** SeqNo: **2008889** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	60.84	5.0	50	0	122	73-121	50.09	19.4	30	S
Benzene	63.25	5.0	50	0	126	79-120	51.04	21.4	30	S
Chlorobenzene	59.07	5.0	50	0	118	79-120	49.13	18.4	30	
Dichloromethane	61.09	10	50	2.471	117	70-123	48.53	22.9	30	
Ethylbenzene	62.78	5.0	50	0	126	80-122	51.32	20.1	30	S
Toluene	61.41	5.0	50	0	123	79-120	51.34	17.9	30	S
Xylenes, Total	181.1	15	150	0	121	80-120	151.8	17.6	30	S
Surr: 1,2-Dichloroethane-d4	*50.52*	0	*50*	0	*101*	*70-128*	49.07	*2.91*	*30*	
Surr: 4-Bromofluorobenzene	*51.3*	0	*50*	0	*103*	*73-126*	51.4	*0.188*	*30*	
Surr: Dibromofluoromethane	*51.25*	0	*50*	0	*102*	*71-128*	49.47	*3.52*	*30*	
Surr: Toluene-d8	*49.15*	0	*50*	0	*98.3*	*73-127*	50.89	*3.48*	*30*	

The following samples were analyzed in this batch: 1006824-13A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93213** Instrument ID **VOA3** Method: **SW8260**

MBLK Sample ID: **VBLKS-100628-R93213** Units: **µg/Kg** Analysis Date: **6/28/2010 09:36 AM**

Client ID: Run ID: **VOA3_100628A** SeqNo: **2009535** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*48.44*	0	*50*	0	*96.9*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.92*	0	*50*	0	*97.8*	*73-126*	0			
Surr: Dibromofluoromethane	*48.23*	0	*50*	0	*96.5*	*71-128*	0			
Surr: Toluene-d8	*50.34*	0	*50*	0	*101*	*73-127*	0			

LCS Sample ID: **VLCSS-100628-R93213** Units: **µg/Kg** Analysis Date: **6/28/2010 08:41 AM**

Client ID: Run ID: **VOA3_100628A** SeqNo: **2009530** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.31	5.0	50	0	94.6	73-121	0			
Benzene	49.37	5.0	50	0	98.7	79-120	0			
Chlorobenzene	49.39	5.0	50	0	98.8	79-120	0			
Dichloromethane	45.7	10	50	0	91.4	70-123	0			
Ethylbenzene	51.28	5.0	50	0	103	80-122	0			
Toluene	50.01	5.0	50	0	100	79-120	0			
Xylenes, Total	151.3	15	150	0	101	80-120	0			
Surr: 1,2-Dichloroethane-d4	*49.31*	0	*50*	0	*98.6*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*50.49*	0	*50*	0	*101*	*73-126*	0			
Surr: Dibromofluoromethane	*53.1*	0	*50*	0	*106*	*71-128*	0			
Surr: Toluene-d8	*51.21*	0	*50*	0	*102*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93213** Instrument ID **VOA3** Method: **SW8260**

LCSD Sample ID: **VLCSDS-100628-R93213** Units: **µg/Kg** Analysis Date: **6/28/2010 09:09 AM**

Client ID: Run ID: **VOA3_100628A** SeqNo: **2009532** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.18	5.0	50	0	96.4	73-121	47.31	1.81	30	
Benzene	50.19	5.0	50	0	100	79-120	49.37	1.64	30	
Chlorobenzene	50.57	5.0	50	0	101	79-120	49.39	2.37	30	
Dichloromethane	45.7	10	50	0	91.4	70-123	45.7	0.018	30	
Ethylbenzene	51.79	5.0	50	0	104	80-122	51.28	1.01	30	
Toluene	51.05	5.0	50	0	102	79-120	50.01	2.07	30	
Xylenes, Total	155.1	15	150	0	103	80-120	151.3	2.45	30	
Surr: 1,2-Dichloroethane-d4	*48.18*	0	*50*	0	*96.4*	*70-128*	49.31	*2.3*	*30*	
Surr: 4-Bromofluorobenzene	*49.85*	0	*50*	0	*99.7*	*73-126*	50.49	*1.28*	*30*	
Surr: Dibromofluoromethane	*52.7*	0	*50*	0	*105*	*71-128*	53.1	*0.769*	*30*	
Surr: Toluene-d8	*50.73*	0	*50*	0	*101*	*73-127*	51.21	*0.932*	*30*	

MS Sample ID: **1006824-09AMS** Units: **µg/Kg** Analysis Date: **6/28/2010 11:28 AM**

Client ID: **SO-1620-SB143(18-18.7)-20100622** Run ID: **VOA3_100628A** SeqNo: **2009543** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.76	5.0	50	0	95.5	73-121	0			
Benzene	49.33	5.0	50	0	98.7	79-120	0			
Chlorobenzene	48.33	5.0	50	0	96.7	79-120	0			
Dichloromethane	41.29	10	50	0	82.6	70-123	0			
Ethylbenzene	49.3	5.0	50	0	98.6	80-122	0			
Toluene	49.03	5.0	50	0	98.1	79-120	0			
Xylenes, Total	150.5	15	150	0	100	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.88*	0	*50*	0	*102*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*50.26*	0	*50*	0	*101*	*73-126*	0			
Surr: Dibromofluoromethane	*51.39*	0	*50*	0	*103*	*71-128*	0			
Surr: Toluene-d8	*49.17*	0	*50*	0	*98.3*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93213** Instrument ID **VOA3** Method: **SW8260**

MSD Sample ID: **1006824-09AMSD** Units: **µg/Kg** Analysis Date: **6/28/2010 11:56 AM**

Client ID: **SO-1620-SB143(18-18.7)-20100622** Run ID: **VOA3_100628A** SeqNo: **2009546** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	37.81	5.0	50	0	75.6	73-121	47.76	23.3	30	
Benzene	39.15	5.0	50	0	78.3	79-120	49.33	23	30	S
Chlorobenzene	39.15	5.0	50	0	78.3	79-120	48.33	21	30	S
Dichloromethane	34.45	10	50	0	68.9	70-123	41.29	18	30	S
Ethylbenzene	40.5	5.0	50	0	81	80-122	49.3	19.6	30	
Toluene	39.18	5.0	50	0	78.4	79-120	49.03	22.3	30	S
Xylenes, Total	120.6	15	150	0	80.4	80-120	150.5	22	30	
Surr: 1,2-Dichloroethane-d4	*50.11*	0	*50*	0	*100*	*70-128*	50.88	*1.53*	*30*	
Surr: 4-Bromofluorobenzene	*50.18*	0	*50*	0	*100*	*73-126*	50.26	*0.144*	*30*	
Surr: Dibromofluoromethane	*51.59*	0	*50*	0	*103*	*71-128*	51.39	*0.391*	*30*	
Surr: Toluene-d8	*49.47*	0	*50*	0	*98.9*	*73-127*	49.17	*0.613*	*30*	

The following samples were analyzed in this batch: 1006824-08A 1006824-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 01:06 PM**
Client ID: Run ID: **VOA1_100628A** SeqNo: **2009707** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.5976	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.01*	5.0	*50*	0	*94*	*72-125*	0			
Surr: Dibromofluoromethane	*52.08*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 11:48 AM**
Client ID: Run ID: **VOA1_100628A** SeqNo: **2009705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.72	5.0	50	0	101	78-120	0			
Benzene	48.81	5.0	50	0	97.6	73-121	0			
Chlorobenzene	46.21	5.0	50	0	92.4	80-120	0			
Dichloromethane	45.01	10	50	0	90	65-133	0			
Ethylbenzene	47.14	5.0	50	0	94.3	80-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Xylenes, Total	149.7	15	150	0	99.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.7*	5.0	*50*	0	*89.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.87*	5.0	*50*	0	*95.7*	*71-125*	0			
Surr: Toluene-d8	*48.39*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 12:15 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.52	5.0	50	0	95	78-120	50.72	6.51	20	
Benzene	48.61	5.0	50	0	97.2	73-121	48.81	0.399	20	
Chlorobenzene	43.86	5.0	50	0	87.7	80-120	46.21	5.23	20	
Dichloromethane	46.52	10	50	0	93	65-133	45.01	3.3	20	
Ethylbenzene	46.89	5.0	50	0	93.8	80-120	47.14	0.515	20	
Toluene	43.02	5.0	50	0	86	80-120	48.68	12.3	20	
Xylenes, Total	142.2	15	150	0	94.8	80-120	149.7	5.1	20	
Surr: 1,2-Dichloroethane-d4	*46.81*	5.0	*50*	0	*93.6*	*70-125*	44.7	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.12*	5.0	*50*	0	*98.2*	*72-125*	50.69	*3.15*	*20*	
Surr: Dibromofluoromethane	*50.53*	5.0	*50*	0	*101*	*71-125*	47.87	*5.41*	*20*	
Surr: Toluene-d8	*47.32*	5.0	*50*	0	*94.6*	*75-125*	48.39	*2.22*	*20*	

MS Sample ID: **1006737-07AMS** Units: **µg/L** Analysis Date: **6/28/2010 03:16 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010801** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.39	5.0	50	0	94.8	78-120	0			
Benzene	47.72	5.0	50	0	95.4	73-121	0			
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Dichloromethane	43.99	10	50	0	88	65-133	0			
Ethylbenzene	41.09	5.0	50	0	82.2	80-120	0			
Toluene	43.14	5.0	50	0	86.3	80-120	0			
Xylenes, Total	138	15	150	0	92	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.05*	5.0	*50*	0	*88.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.8*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*49.31*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006737-07AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:42 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010802** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.82	5.0	50	0	93.6	78-120	47.39	1.21	20	
Benzene	44.08	5.0	50	0	88.2	73-121	47.72	7.93	20	
Chlorobenzene	45.04	5.0	50	0	90.1	80-120	43.5	3.48	20	
Dichloromethane	39.46	10	50	0	78.9	65-133	43.99	10.9	20	
Ethylbenzene	45	5.0	50	0	90	80-120	41.09	9.07	20	
Toluene	46.63	5.0	50	0	93.3	80-120	43.14	7.78	20	
Xylenes, Total	141.1	15	150	0	94.1	80-120	138	2.23	20	
Surr: 1,2-Dichloroethane-d4	*41.14*	5.0	*50*	0	*82.3*	*70-125*	44.05	*6.83*	*20*	
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	50.8	*1.67*	*20*	
Surr: Dibromofluoromethane	*46.87*	5.0	*50*	0	*93.7*	*71-125*	49.31	*5.08*	*20*	
Surr: Toluene-d8	*48.85*	5.0	*50*	0	*97.7*	*75-125*	47.82	*2.13*	*20*	

The following samples were analyzed in this batch: 1006824-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93352** Instrument ID **VOA3** Method: **SW8260**

MBLK Sample ID: **VBLKS-100629-R93352** Units: **µg/Kg** Analysis Date: **6/29/2010 11:26 AM**

Client ID: Run ID: **VOA3_100629A** SeqNo: **2012454** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.01*	0	*50*	0	*100*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.78*	0	*50*	0	*97.6*	*73-126*	0			
Surr: Dibromofluoromethane	*48.39*	0	*50*	0	*96.8*	*71-128*	0			
Surr: Toluene-d8	*48.29*	0	*50*	0	*96.6*	*73-127*	0			

LCS Sample ID: **VLCSS1-100629-R93352** Units: **µg/Kg** Analysis Date: **6/29/2010 10:29 AM**

Client ID: Run ID: **VOA3_100629A** SeqNo: **2012452** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	57.44	5.0	50	0	115	73-121	0			
Benzene	60	5.0	50	0	120	79-120.005	0			
Chlorobenzene	58.38	5.0	50	0	117	79-120	0			
Dichloromethane	52.92	10	50	0	106	70-123	0			
Ethylbenzene	59.9	5.0	50	0	120	80-122	0			
Toluene	58.37	5.0	50	0	117	79-120	0			
Xylenes, Total	178.2	15	150	0	119	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.6*	0	*50*	0	*101*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*49.96*	0	*50*	0	*99.9*	*73-126*	0			
Surr: Dibromofluoromethane	*52.17*	0	*50*	0	*104*	*71-128*	0			
Surr: Toluene-d8	*48.9*	0	*50*	0	*97.8*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93352** Instrument ID **VOA3** Method: **SW8260**

LCSD Sample ID: **VLCSDS1-100629-R93352** Units: **µg/Kg** Analysis Date: **6/29/2010 10:58 AM**

Client ID: Run ID: **VOA3_100629A** SeqNo: **2012453** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	43.43	5.0	50	0	86.9	73-121	57.44	27.8	30	
Benzene	47.09	5.0	50	0	94.2	79-120	60	24.1	30	
Chlorobenzene	44.49	5.0	50	0	89	79-120	58.38	27	30	
Dichloromethane	42.89	10	50	0	85.8	70-123	52.92	21	30	
Ethylbenzene	46.66	5.0	50	0	93.3	80-122	59.9	24.8	30	
Toluene	45.17	5.0	50	0	90.3	79-120	58.37	25.5	30	
Xylenes, Total	139.7	15	150	0	93.1	80-120	178.2	24.2	30	
Surr: 1,2-Dichloroethane-d4	*49.98*	0	*50*	0	*100*	*70-128*	50.6	*1.23*	*30*	
Surr: 4-Bromofluorobenzene	*49.28*	0	*50*	0	*98.6*	*73-126*	49.96	*1.38*	*30*	
Surr: Dibromofluoromethane	*51.96*	0	*50*	0	*104*	*71-128*	52.17	*0.406*	*30*	
Surr: Toluene-d8	*48.32*	0	*50*	0	*96.6*	*73-127*	48.9	*1.19*	*30*	

MS Sample ID: **1006824-15AMS** Units: **µg/Kg** Analysis Date: **6/29/2010 01:46 PM**

Client ID: **SO-1620-SB141(16-17.1)-20100623** Run ID: **VOA3_100629A** SeqNo: **2012456** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.95	5.0	50	0	93.9	73-121	0			
Benzene	50.22	5.0	50	0	100	79-120	0			
Chlorobenzene	49.19	5.0	50	0	98.4	79-120	0			
Dichloromethane	43.34	10	50	0	86.7	70-123	0			
Ethylbenzene	51.48	5.0	50	0	103	80-122	0			
Toluene	49.77	5.0	50	0	99.5	79-120	0			
Xylenes, Total	155.3	15	150	0	104	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.71*	0	*50*	0	*101*	*70-128*	0			
Surr: 4-Bromofluorobenzene	*48.96*	0	*50*	0	*97.9*	*73-126*	0			
Surr: Dibromofluoromethane	*51.99*	0	*50*	0	*104*	*71-128*	0			
Surr: Toluene-d8	*47.69*	0	*50*	0	*95.4*	*73-127*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93352** Instrument ID **VOA3** Method: **SW8260**

MSD Sample ID: **1006824-15AMSD** Units: **µg/Kg** Analysis Date: **6/29/2010 02:14 PM**

Client ID: **SO-1620-SB141(16-17.1)-20100623** Run ID: **VOA3_100629A** SeqNo: **2012457** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.74	5.0	50	0	105	73-121	46.95	11.6	30	
Benzene	56.97	5.0	50	0	114	79-120	50.22	12.6	30	
Chlorobenzene	56.56	5.0	50	0	113	79-120	49.19	13.9	30	
Dichloromethane	48.47	10	50	0	96.9	70-123	43.34	11.2	30	
Ethylbenzene	59.63	5.0	50	0	119	80-122	51.48	14.7	30	
Toluene	56.51	5.0	50	0	113	79-120	49.77	12.7	30	
Xylenes, Total	178	15	150	0	119	80-120	155.3	13.6	30	
Surr: 1,2-Dichloroethane-d4	*50.9*	0	*50*	0	*102*	*70-128*	50.71	*0.374*	*30*	
Surr: 4-Bromofluorobenzene	*48.89*	0	*50*	0	*97.8*	*73-126*	48.96	*0.141*	*30*	
Surr: Dibromofluoromethane	*52.47*	0	*50*	0	*105*	*71-128*	51.99	*0.913*	*30*	
Surr: Toluene-d8	*48.21*	0	*50*	0	*96.4*	*73-127*	47.69	*1.09*	*30*	

The following samples were analyzed in this batch:

1006824-11A	1006824-12A	1006824-14A
1006824-15A	1006824-16A	1006824-17A
1006824-18A	1006824-19A	1006824-20A
1006824-21A	1006824-22A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93431** Instrument ID **Balance1** Method: **E160.3**

DUP Sample ID: **1006824-21BDUP** Units: **wt%** Analysis Date: **6/30/2010**

Client ID: **SO-1620-SB138(16-16.9)-20100624** Run ID: **BALANCE1_100630D** SeqNo: **2014282** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	14.9	0.010	0	0	0	0-0	15.92	6.58	20	

The following samples were analyzed in this batch:

1006824-02B	1006824-03B	1006824-04B
1006824-05B	1006824-06B	1006824-07B
1006824-08B	1006824-09B	1006824-10B
1006824-11B	1006824-12B	1006824-13B
1006824-14B	1006824-15B	1006824-16B
1006824-17B	1006824-18B	1006824-19B
1006824-20B	1006824-21B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006824
Project: HWPW-Phase 4 Soils

QC BATCH REPORT

Batch ID: **R93432** Instrument ID **Balance1** Method: **E160.3**

DUP Sample ID: **1006892-09ADUP** Units: **wt%** Analysis Date: **6/30/2010 10:00 AM**

Client ID: Run ID: **BALANCE1_100630E** SeqNo: **2014337** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	18.79	0.010	0	0	0	0-0	17.85	5.11	20	

The following samples were analyzed in this batch: 1006824-22B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Phase 4 Soils
WorkOrder: **1006824**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/Kg-dry	Micrograms per Kilogram - Dry weight corrected
µg/L	Micrograms per Liter
wt%	

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Chain of Custody Form

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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1006124

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	1358.205	Project Name	HWPW-Phase 4 Soils	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	Moisture
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WB-1620-TB-20100622	6/22/10	0845	W	HCl	2	A	(Trip Blank)									
2	SO-1620-SB145(1.5-2.5)-20100622	6/22/10	0940	SO	Neat	2	X	X	X								
3	SO-1620-SB145(16-17.4)-20100622	6/22/10	0945	SO	Neat	2	X	X	X								
4	SO-1620-SB144(12-13)-20100622	6/22/10	1100	SO	Neat	2	X	X	X								
5	SO-1620-SB144(16-16.9)-20100622	6/22/10	1110	SO	Neat	2	X	X	X								
6	SO-1620-SB146(0-2)-20100622	6/22/10	1145	SO	Neat	2	X	X	X								
7	SO-1620-SB146(14-14.8)-20100622	6/22/10	1150	SO	Neat	2	X	X	X								
8	SO-1620-SB143(1.5-2.5)-20100622	6/22/10	1340	SO	Neat	2	X	X	X								
9	SO-1620-SB143(18-18.7)-20100622	6/22/10	1350	SO	Neat	2	X	X	X								
10																	

Sampler(s) Please Print & Sign: [signature]

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Other ☐ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ Overnight

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature]	10-24-10	1133	[signature]	10 Work Days TAT.
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 10/24/10 1133	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1006824

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	1358.205	Project Name	HWPW-Phase 4 Soils	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	Moisture
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	50-1620-SB142(0-2)-20100622	6/22/10	1530	SO	Neat	2	X	X	X								
2	50-1620-SB142(16-16.9)-20100622	6/22/10	1540	SO	Neat	2	X	X	X								
3	50-1620-SB147(2-2.9)-20100622	6/22/10	1725	SO	Neat	2	X	X	X								
4	50-1620-SB147(13-14.3)-20100622	6/22/10	1735	SO	Neat	2	X	X	X								
5	50-1620-SB141(0-2)-20100623	6/23/10	1245	SO	Neat	2	X	X	X								
6	50-1620-SB141(16-17.1)-20100623	6/23/10	1255	SO	Neat	2	X	X	X								
7	50-1620-SB140(0-2)-20100623	6/23/10	1410	SO	Neat	2	X	X	X								
8	50-1620-SB140(13-14.3)-20100623	6/23/10	1415	SO	Neat	2	X	X	X								
9	50-1620-SB139(0-2)-20100624	6/24/10	1140	SO	Neat	2	X	X	X								
10	50-1620-SB139(13-14.4)-20100624	6/24/10	1150	SO	Neat	2	X	X	X								

Sampler(s) Please Print & Sign | Shipment Method | Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 3 WK Days ☐ 24 Hour | Results Due Date:

Relinquished by:	Date: 6-24-10	Time: 1733	Received by:	Notes: 10 Work Days TAT.	
Relinquished by:	Date:	Time:	Received by (Laboratory): 6-24-10 1733	Cooler ID	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

☐ ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
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Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1008624

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	1358.205	Project Name	HWPW-Phase 4 Soils	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	Moisture
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SO-1620-SB138(6-8)-20100624	6/24/10	1320	SO	Neat	2	X	X	X								
2	SO-1620-SB138(16-16.9)-20100624	6/24/10	1330	SO	Neat	2	X	X	X								
3	SO-1620-DUP1-20100624	6/24/10	—	SO	Neat	2	X	X	X								
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: [signature]

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Other ☐ 1 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Std 10 WK Days

Results Due Date:

Relinquished by: [signature]	Date: 6-24-10	Time: 1733	Received by: [signature]	Notes: 10 Work Days TAT.
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 6/24/10 1733	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **24-Jun-10 17:33**

Work Order: **1006824** Received by: **RSZ**

Checklist completed by Richard Sanchez (eSignature) 24-Jun-10 (Date) Reviewed by: Shannon L. Tyrell (eSignature) 25-Jun-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.1c, 0.4c, 0.2c	002	
Cooler(s)/Kit(s):	3438,3284,3303		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CONESTOGA-ROVERS & ASSOCIATES

E-Mail Date: September 10, 2010
E-Mail To: Eric Matzner/ Pastor, Behling & Wheeler, LLC
c.c.: Patricia Lynch
E-Mail and Hard Copy if Requested

DATA USABILITY SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SEMI-ANNUAL GROUNDWATER MONITORING
HOUSTON, TEXAS
JUNE 2010

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
6320 Rothway, Suite 100
Houston, Texas 77040
Telephone: 713-734-3090 Fax: 713-734-3391
Contact: Patricia L. Lynch [jih]
Date: September 10, 2010
www.CRAworld.com

Data Usability Summary

Reviewer:	Patricia L. Lynch – Conestoga-Rovers & Associates, Inc.
Contract Laboratory:	ALS Laboratory Group—Houston, Texas
Project/Area of Interest:	UPRR Houston Wood Preserving Works – Houston, Texas
Description of Data Packages Reviewed:	Groundwater sample results in data packages 1006737, 1006821, 1006826, 1006872, 1007004, 1007048, 1007051 & 1007485
Sample Collection Date(s):	June 22 – 25, 29 – 30 & July 1,14 &15, 2010
Intended Use of Data:	To monitor the COCs in groundwater at the site and to evaluate whether migration of COCs could result in risk to human or ecological health.

1.0 Scope of Data Usability Summary

Data were reviewed and validated in accordance with Title 30 of the Texas Administrative Code Section 350.54 (30 TAC 350.54) as described in *Review and Reporting of COC Concentration Data,* (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The review included examination of the reported data, the laboratory review checklist (LRC), and field/laboratory quality assurance/quality control (QA/QC) samples collected at the Site. Tables summarizing data qualifications discussed in this DUS can be found in Appendix A.

Groundwater samples plus field duplicates and trip blanks were analyzed for the following:

i. Volatile organic compounds (VOCs) by SW-846 Method 8260B[1]

ii. Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C[1]

A sampling and analysis summary is presented in Table 1. This summary includes a cross-reference of field sample identification numbers and laboratory sample numbers. Each sample was assigned a unique field identification number. The lists of VOC and SVOC target compounds are presented in Table 2.

[1] "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with subsequent revisions).

2.0 Laboratory Qualifications

Analytical services were provided by ALS Laboratory Group (ALS) located in Houston, Texas. The laboratory's quality assurance program is consistent with the quality standards outlined in the National Environmental Laboratory Accreditation Program (NELAP). The laboratory was accredited under Texas Certification Number T104704231-10-3 at the time the analyses were performed.

3.0 Project Objectives

3.1 Levels of Required Performance (LORP)

Prior to sampling, the LORP for each COC was established for the investigation. Standard available analytical methods were selected and minimal detection limits that are at or below the Texas Risk Reduction Tier 1 Residential Protective Concentration Levels (PCLs), ^{GW} GW $_{ING}$ for groundwater were sought.

3.2 Sampling/Analytical QA/QC Objectives

Pastor, Behling & Wheeler, LLC designed the QA/QC program to identify contamination resulting from sample collection, sample transport and the analytical process.

- The trip blank is a zero headspace sample container filled by the laboratory with analyte-free water. Trip blanks were submitted and analyzed with the samples requiring volatile organic analysis. The trip blank samples were kept in the same environment in which the other field samples were collected.
- Method blanks of a similar matrix to that of the associated samples are prepared by the laboratory and analyzed to determine if laboratory contaminants are affecting the analytical results. Method blanks are prepared and analyzed with each batch.
- Field blanks were collected and analyzed to determine if the chemicals of concern would be detected based on the ambient field conditions. The field blanks were kept in the same environment in which the other field samples were collected.

Similarly, the QA/QC program was designed to evaluate the quality of the resulting data with respect to bias and precision. First, a laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was prepared and analyzed with each batch. The recovery ranges established by the laboratory are adopted as the acceptance criteria for the project. Second, a matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed with each batch. The recovery ranges and RPDs established by the laboratory are adopted as the acceptance criteria for the project. Third, field duplicates were collected and submitted for analysis. The RPD acceptance criterion for the water field duplicates is 30 percent. This RPD criterion is only used when sample concentrations are above the estimated regions of detection.

4.0 Data Review/Validation Results

4.1 Analytical Results

Summaries of the qualified analytical results are reported in Tables 3, 4, 5, 6, 7, 8 and 9. Analytes with concentrations above the Sample Detection Limits (SDLs) but below the Method Quantitation Limits (MQL) have been qualified as estimated on the analytical tables per the TRRP-13 document.

4.2 LORP

All SDLs and unadjusted MQLs met the LORP for this investigation. Data for some analyses were reported from dilutions due to the concentrations of target or non-target compounds in the samples. The SDLs and MQLs were adjusted for the dilution factors in these cases.

4.3 Preservation and Holding Times

Samples were properly preserved in the field and cooled to 4°C (±2°C). Samples were shipped with chains of custody, and the paperwork was filled out properly. All samples were shipped on ice. All samples were prepared and analyzed within the applicable holding times.

4.4 Sample Containers

Sample containers were certified pre-cleaned glass provided by the laboratory. These containers meet or exceed analyte specifications established in the USEPA *Specifications and Guidance for Contaminant-free Sample Containers*.

4.5 Calibrations

According to the LRCs, instrument tuning and initial calibration and continuing calibration data met the criteria for the selected methods.

4.6 Blanks

Method Blanks: As these were not discrete samples handled in the field, the method blanks are not listed on the sample identification cross-reference list found in Table 1. Results are reported in the data packages on a laboratory batch basis. All of the laboratory blank results were reported as ND (not detected) except for methylene chloride in several method blanks. All sample results greater than the MDL but less than 10 times the amount detected in the associated blank were qualified as non-detect (see Table 3). All remaining investigative samples associated with contaminated method blanks yielded either non-detect concentrations or concentrations greater than 10 times the associated method blank concentrations for the analytes of interest.

Trip Blanks: The trip blanks, which were discrete samples handled in the field, are listed on the sample summary table. Results are reported in the data packages with the other project sample results. All of the trip blank results were reported as ND (not detected) except for methylene chloride in several trip blanks. All sample results greater than the MDL but less than 10 times the amount detected in the associated trip blank were qualified as non-detect (see Table 4). All remaining investigative samples associated with contaminated trip blanks yielded either non-detect concentrations or concentrations greater than 10 times the associated trip blank concentrations for the analytes of interest.

Field Blanks: Field blanks were collected and analyzed for volatiles and semi-volatiles and are listed on the sample summary table. The SVOC compounds bis (2-ethylhexyl) phthalate, naphthalene and pentachlorophenol were detected in some of the field blanks, and results for

these compounds in samples with similar concentrations (less than 10 times the amount in the field blanks for bis (2-ethylhexyl) phthalate and less than 5 times the amount in the field blanks for the other compounds) are qualified as non detect (see Table 5).

4.7 Internal Standard and Surrogate Recoveries

Recoveries of internal standards and surrogates for VOCs and SVOCs are addressed in the LRCs of the laboratory data packages. All surrogate recoveries were within the acceptance limits except for the SVOC surrogate nitrobenzene-d5 in sample WG-1620-M54C-20100630. All other surrogate recoveries were within the control limits in this sample, and data qualification was not required. Many SVOC surrogate recoveries could not be assessed due to necessary sample dilutions. However, data for these samples were also reported from lesser dilutions, and the recoveries in these dilutions were acceptable.

Semi-volatile internal standard areas for several samples were low, and results associated with these internal standards were qualified as estimated/ biased high for those compounds that were detected (see Table 6). All other internal standard areas and retention limits were acceptable per the LRCs.

4.8 Laboratory Control Samples (LCS)/ Laboratory Control Sample Duplicates (LCSD)

LCS or LCS/LCSD data for all COCs were reported for each batch. LCS spike recoveries and RPDs for all COCs were within the project objectives.

4.9 Matrix Spikes

Several project samples were selected for matrix spike/matrix spike duplicate analyses for VOCs and SVOCs, and the results are reported in the data packages. Most recoveries and RPDs were within the laboratory established control limits. Detected compounds associated with high MS/MSD recoveries did not require qualification. Those results impacted by MS/MSD recoveries are summarized in Table 7.

The laboratory also performed MS/MSD analyses on unrelated samples from other projects, but the data for these unrelated samples cannot be used to assess precision for the associated project samples.

4.10 Field Duplicate

Field duplicates of samples listed below were collected and analyzed.

- WG-1620-MWX1-20100622 is a duplicate of WG-1620-MW21C-20100622.
- WG-1620-MWX2-20100629 is a duplicate of WG-1620-MW33A-20100629.
- WG-1620-MWX3-2010701 is a duplicate of WG-1620-MW59D-20100701.
- WG-1620-MWX4-20100715 is a duplicate of WG-1620-MW36B-20100715.

Most results showed good precision above the estimated regions of detection (see Table 8). Many results were non-detect, and the RPDs could not be calculated. Only detected results are

found on Table 8. Duplicate RPDs that exceed the criteria of 30 percent for groundwater are summarized on Table 9.

4.11 Field Procedures

Pastor, Behling & Wheeler, LLC collected groundwater samples in accordance with their Standard Operating Procedures (SOP) for sample collection.

4.12 Summary

The analytical data in this report are usable to assess the impact of COCs in groundwater at the site. Qualifications of the data as discussed in this report are summarized in Appendix A.

APPENDIX A

TABLES

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Analysis/Parameters

Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCS*	*SVOCS*	*Comments*
				X	X	
WG-1620-MW21C-20100622	MW-21C	6/22/2010	8:15	X	X	
WG-1620-MW14-20100622	MW-14	6/22/2010	9:15	X	X	
WG-1620-MW39B-20100622	MW-39B	6/22/2010	10:20	X	X	
WG-1620-MW12C-20100622	MW-12C	6/22/2010	11:10	X	X	
WG-1620-MW12A-20100622	MW-12A	6/22/2010	12:40	X	X	
WG-1620-MW40B-20100622	MW-40B	6/22/2010	13:45	X	X	
WG-1620-MWX1-20100622	MW-21C	6/22/2010	8:15	X	X	Field Duplicate of WG-1620-MW21C-20100622
WG-1620-P11-20100622	P-11	6/22/2010	14:50	X	X	
WG-1620-TB1-20100622	Trip Blank	6/22/2010	NA	X		
WG-1620-MW13-20100622	MW-13	6/22/2010	15:50	X	X	
WG-1620-FB1-20100622	Field Blank	6/22/2010	16:30	X	X	
WG-1620-MW15A-20100623	MW-15A	6/23/2010	8:45	X	X	
WG-1620-MW15C-20100623	MW-15C	6/23/2010	9:35	X	X	
WG-1620-MW16-20100623	MW-16	6/23/2010	10:20	X	X	
WG-1620-MW19C-20100623	MW-19C	6/23/2010	11:15	X	X	
WG-1620-MW17-20100623	MW-17	6/23/2010	12:00	X	X	
WG-1620-MW17C-20100623	MW-17C	6/23/2010	13:05	X	X	
WG-1620-MW23C-20100623	MW-23C	6/23/2010	14:00	X	X	
WG-1620-FB02-20100623	Field Blank	6/23/2010	14:30	X	X	
WG-1620-MW57A-20100623	MW-57A	6/23/2010	15:20	X	X	
WG-1620-MW58A-20100623	MW-58A	6/23/2010	16:15	X	X	
WG-1620-TB2-20100623	Trip Blank	6/23/2010	NA	X		
WG-1620-MW18A-20100624	MW-18A	6/24/2010	9:00	X	X	
WG-1620-MW18C-20100624	MW-18C	6/24/2010	10:00	X	X	
WG-1620-MW60A-20100624	MW-60A	6/24/2010	11:10	X	X	
WG-1620-MW48C-20100624	MW-48C	6/24/2010	12:05	X	X	
WG-1620-MW59A-20100624	MW-59A	6/24/2010	13:00	X	X	
WG-1620-MW49B-20100624	MW-49B	6/24/2010	13:50	X	X	
WG-1620-MW47C-20100624	MW-47C	6/24/2010	15:00	X	X	
WG-1620-MW51A-20100624	MW-51A	6/24/2010	16:00	X	X	
WG-1620-MWFB3-20100624	Field Blank	6/24/2010	16:15	X	X	
WG-1620-TB3-20100624	Trip Blank	6/24/2010	NA	X		
WG-1620-MW49A-20100625	MW-49A	6/25/2010	7:45	X	X	
WG-1620-MW50A-20100625	MW-50A	6/25/2010	8:45	X	X	
WG-1620-MW26A-20100625	MW-26A	6/25/2010	10:00	X	X	
WG-1620-FB4-20100625	Field Blank	6/25/2010	10:30	X	X	
WG-1620-TB4-20100625	Trip Blank	6/25/2010	NA	X		
WG-1620-MW25A-20100630	MW-25A	6/30/2010	7:50	X	X	
WG-1620-MW44A-20100630	MW-44A	6/30/2010	8:50	X	X	
WG-1620-MW53C-20100630	MW-53C	6/30/2010	10:10	X	X	
WG-1620-MW54C-20100630	MW-54C	6/30/2010	11:05	X	X	
WG-1620-MW63B-20100630	MW-63B	6/30/2010	12:00	X	X	
WG-1620-MW28A-20100630	MW-28A	6/30/2010	13:00	X	X	
WG-1620-MW28C-20100630	MW-28C	6/30/2010	13:45	X	X	
WG-1620-MW27C-20100630	MW-27C	6/30/2010	14:50	X	X	
WG-1620-MW35A-20100630	MW-35A	6/30/2010	16:05	X	X	
WG-1620-FB6-20100630	Field Blank	6/30/2010	16:45	X	X	
WG-1620-TB6-20100630	Trip Blank	6/30/2010	NA	X		
WG-1620-MW33A-20100629	MW-33A	6/29/2010	7:45	X	X	
WG-1620-MWX2-20100629	MW-33A	6/29/2010	7:45	X	X	Field Duplicate of WG-1620-MW33A-20100629
WG-1620-MW33B-20100629	MW-33B	6/29/2010	8:45	X	X	
WG-1620-MW38A-20100629	MW-38A	6/29/2010	9:40	X	X	
WG-1620-MW38B-20100629	MW-38B	6/29/2010	10:25	X	X	
WG-1620-MW22B-20100629	MW-22B	6/29/2010	11:15	X	X	
WG-1620-MW22A-20100629	MW-22A	6/29/2010	12:00	X	X	
WG-1620-MW24C-20100629	MW-24C	6/29/2010	13:00	X	X	
WG-1620-MW24B-20100629	MW-24B	6/29/2010	14:00	X	X	
WG-1620-MW24AR-20100629	MW-24AR	6/29/2010	15:00	X	X	
WG-1620-MW36A-20100629	MW-36A	6/29/2010	16:15	X	X	
WG-1620-FB5-20100629	Field Blank	6/29/2010	16:45	X	X	
WG-1620-TB5-20100629	Trip Blank	6/29/2010	NA	X		
WG-1620-MW32A-20100701	MW-32A	7/1/2010	8:15	X	X	
WG-1620-MW65D-20100701	MW-65D	7/1/2010	9:10	X	X	
WG-1620-MW35B-20100701	MW-35B	7/1/2010	7:30	X	X	
WG-1620-MW59D-20100701	MW-59D	7/1/2010	10:10	X	X	
WG-1620-MWX3-20100701	MW-59D	7/1/2010	10:10	X	X	Field Duplicate of WG-1620-MW59D-20100701
WG-1620-MW66D-20100701	MW-66D	7/1/2010	11:00	X	X	
WG-1620-MW61A-20100701	MW-61A	7/1/2010	11:45	X	X	
WG-1620-TB7-20100701	Trip Blank	7/1/2010	NA	X		
WG-1620-FB7-20100701	Field Blank	7/1/2010	12:00	X	X	
WG-1620-MW64A-20100714	MW-64A	7/14/2010	15:15	X	X	
WG-1620-MW62B-20100714	MW-62B	7/14/2010	16:30	X	X	
WG-1620-MW48C-20100715	MW-48C	7/15/2010	6:45	X	X	
WG-1620-MW59B-20100715	MW-59B	7/15/2010	7:45	X	X	
WG-1620-MW69A-20100715	MW-69A	7/15/2010	9:05	X	X	
WSANITS-1620-SSW3-20100715	SS-W3	7/15/2010	9:45	X	X	
WSANITS-1620-SSW2-20100715	SS-W2	7/15/2010	10:00	X	X	
WSANITS-1620-SSW1-20100715	SS-W1	7/15/2010	10:15	X	X	
WG-1620-MW36D-20100715	MW-36D	7/15/2010	11:30	X	X	
WG-1620-MW36B-20100715	MW-36B	7/15/2010	12:20	X	X	
WG-1620-MWX4-20100715	MW-36B	7/15/2010	12:20	X	X	Field Duplicate of WG-1620-MW36B-20100715
WG-1620-MW67B-20100715	MW-67B	7/15/2010	13:30	X	X	
WG-1620-MW68C-20100715	MW-68C	7/15/2010	14:20	X	X	
WG-1620-TRIP BLANK-20100715	Trip Blank	7/15/2010	NA	X		

Notes

VOCs Volatile Organic Compounds
SVOCs Semi-Volatile Organic Compounds
NA Not applicable

TABLE 2
TARGET COMPOUND SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

VOCs (Site Specific)	SVOCs (Site Specific)
1,2-Dichloroethane	1,2-Diphenylhydrazine
Benzene	2,4-Dimethylphenol
Chlorobenzene	2,4-Dinitrotoluene
Ethylbenzene	2,6-Dinitrotoluene
Methylene Chloride	2-Chloronaphthalene
Toluene	2-Methyl-4,6-dinitrophenol
Xylenes (total)	2-Methylnaphthalene
	4-Nitrophenol
	Acenaphthene
	Acenaphthylene
	Anthracene
	Benzo(a)anthracene
	Benzo(a)pyrene
	bis(2-chloroethoxy)methane
	bis(2-ethylhexyl)phthalate
	Chrysene
	Dibenzofuran
	Di-n-butyl Phthalate

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/JULY 2010

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
VOCs	06/28/10	Methylene chloride	5.98	WG-1620-MW16-20100623	6.2	U	ug/L
				WG-1620-MW17-20100623	5.6	U	ug/L
				WG-1620-MW58A-20100623	4.8	U	ug/L

Notes

VOCs Volatile Organic Compounds
U Not detected at reported concentration

TABLE 4

QUALIFIED SAMPLE DATA DUE TO ANALYTE CONCENTRATIONS IN THE TRIP BLANK
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/JULY 2010

Parameter	*Blank Date*	*Analyte*	*Blank Result*	*Associated Sample ID*	*Qualified Sample Result*		*Units*
VOCs	06/23/10	Methylene chloride	0.95	WG-1620-MW16-20100623	6.2	U	ug/L
				WG-1620-MW17-20100623	5.6	U	ug/L
				WG-1620-MW23C-20100623	9.2	U	ug/L
				WG-1620-MW58A-20100623	4.8	U	ug/L
VOCs	07/01/10	Methylene chloride	4.4	WG-1620-MW32A-20100701	3.2	U	ug/L

Notes

VOCs Volatile Organic Compounds
U Not detected at reported concentration

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*		*Units*
SVOCs	06/22/10	bis(2-Ethylhexyl)phthalate	0.63	WG-1620-MW12C-20100622	0.99	U	ug/L
				WG-1620-MW13-20100622	0.44	U	ug/L
				WG-1620-MW14-20100622	0.77	U	ug/L
				WG-1620-MW21C-20100622	0.23	U	ug/L
				WG-1620-MWX1-20100622	0.41	U	ug/L
				WG-1620-P11-20100622	0.21	U	ug/L
SVOCs	06/22/10	Naphthalene	0.14	WG-1620-MW12C-20100622	0.46	U	ug/L
				WG-1620-MW39B-20100622	0.15	U	ug/L
				WG-1620-MWX1-20100622	0.21	U	ug/L
SVOCs	06/23/10	bis(2-Ethylhexyl)phthalate	0.37	WG-1620-MW15A-20100623	0.84	U	ug/L
				WG-1620-MW15C-20100623	0.59	U	ug/L
				WG-1620-MW16-20100623	1.4	U	ug/L
				WG-1620-MW17C-20100623	1.8	U	ug/L
				WG-1620-MW19C-20100623	0.36	U	ug/L
				WG-1620-MW58A-20100623	0.46	U	ug/L
SVOCs	06/23/10	Naphthalene	0.38	WG-1620-MW15C-20100623	0.94	U	ug/L
				WG-1620-MW19C-20100623	1.5	U	ug/L
SVOCs	06/24/10	bis(2-Ethylhexyl)phthalate	0.21	WG-1620-MW47C-20100624	0.21	U	ug/L
				WG-1620-MW51A-20100624	0.35	U	ug/L
				WG-1620-MW59A-20100624	0.23	U	ug/L
SVOCs	06/25/10	bis(2-Ethylhexyl)phthalate	0.25	WG-1620-MW26A-20100625	0.45	U	ug/L
				WG-1620-MW50A-20100625	0.30	U	ug/L
SVOCs	06/25/10	Naphthalene	0.39	WG-1620-MW50A-20100625	0.40	U	ug/L
SVOCs	06/29/10	bis(2-Ethylhexyl)phthalate	3.3	WG-1620-MW22A-20100629	1.2	U	ug/L
				WG-1620-MW22B-20100629	0.61	U	ug/L
				WG-1620-MW24AR-20100629	2.4	U	ug/L
				WG-1620-MW24B-20100629	0.74	U	ug/L
				WG-1620-MW24C-20100629	1.0	U	ug/L
				WG-1620-MW33A-20100629	0.35	U	ug/L

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

					WG-1620-MW33B-20100629	0.54	U	ug/L
					WG-1620-MW36A-20100629	0.61	U	ug/L
					WG-1620-MW38A-20100629	0.44	U	ug/L
					WG-1620-MW38B-20100629	0.74	U	ug/L
					WG-1620-MWX2-20100629	1.6	U	ug/L
	SVOCs	06/30/10	bis(2-Ethylhexyl)phthalate	0.4	WG-1620-MW25A-20100630	0.56	U	ug/L
					WG-1620-MW27C-20100630	1.5	U	ug/L
					WG-1620-MW28A-20100630	1.9	U	ug/L
					WG-1620-MW28C-20100630	1.2	U	ug/L
					WG-1620-MW35A-20100630	0.48	U	ug/L
					WG-1620-MW44A-20100630	0.28	U	ug/L
					WG-1620-MW53C-20100630	0.32	U	ug/L
					WG-1620-MW54C-20100630	0.37	U	ug/L
					WG-1620-MW63B-20100630	0.36	U	ug/L
	SVOCs	07/01/10	bis(2-Ethylhexyl)phthalate	1.7	WG-1620-MW32A-20100701	4.1	U	ug/L
					WG-1620-MW35B-20100701	0.97	U	ug/L
					WG-1620-MW59D-20100701	0.31	U	ug/L
					WG-1620-MW61A-20100701	2.1	U	ug/L
					WG-1620-MW65D-20100701	1.0	U	ug/L
					WG-1620-MW66D-20100701	0.96	U	ug/L
					WG-1620-MWX3-20100701	0.49	U	ug/L
	SVOCs	07/01/10	Naphthalene	0.35	WG-1620-MW59D-20100701	0.22	U	ug/L
					WG-1620-MW61A-20100701	0.18	U	ug/L
					WG-1620-MW65D-20100701	0.59	U	ug/L
					WG-1620-MW66D-20100701	0.20	U	ug/L
	SVOCs	07/01/10	Pentachlorophenol	0.33	WG-1620-MW61A-20100701	0.32	U	ug/L

Notes

SVOCs Semi-Volatile Organic Compounds
U Not detected at reported concentration

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Parameter	*Sample ID*	*IS*	*IS Area Count (percent)*	*Control Limits (percent)*	*Analytes*	*Qualified Sample Results*		*Units*
Semi-Volatiles	WG-1620-MW57A-20100623	1,4-Dichlorobenzene	95532	151041-604164	2,4-Dimethylphenol	2700	JH	ug/L
		Naphthalene-d8	326352	489420-1957680	Anthracene	900	JH	ug/L
		Acenaphthene-d10	202713	295071-1180282	Pyrene	840	JH	ug/L
		Phenanthrene-d10	199539	303955-1215818	Dibenzofuran	1900	JH	ug/L
		Chrysene-d12	187728	287697-1150786	Fluoranthene	1400	JH	ug/L
		Perylene-d12	152649	243728-974912	Chrysene	140	JH	ug/L
					Benzo(a)anthracene	150	JH	ug/L
					Acenaphthene	2000	JH	ug/L
					Phenanthrene	4000	JH	ug/L
					Fluorene	1600	JH	ug/L
					2-Methylnaphthalene	3500	JH	ug/L
					Naphthalene	20000	JH	ug/L
					Phenol	42	JH	ug/L
					Acenaphthylene	20	JH	ug/L
					Benzo(a)pyrene	37	JH	ug/L
					4-Nitrophenol	0.35	UJ	ug/L
					bis(2-Chloroethoxy)methane	0.45	UJ	ug/L
					bis(2-Ethylhexyl)phthalate (DEHP)	1.0	UJ	ug/L
					2,4-Dinitrotoluene	0.45	UJ	ug/L
					1,2-Diphenylhydrazine	0.50	UJ	ug/L
					4,6-Dinitro-2-methylphenol	0.40	UJ	ug/L
					2,6-Dinitrotoluene	0.35	UJ	ug/L
					Di-n-butylphthalate (DBP)	0.35	UJ	ug/L
					N-Nitrosodiphenylamine	0.45	UJ	ug/L
					Pentachlorophenol	0.40	UJ	ug/L
					2-Chloronaphthalene	0.50	UJ	ug/L
					Nitrobenzene	0.45	UJ	ug/L
Semi-Volatiles	WG-1620-MW58A-20100623	1,4-Dichlorobenzene	97233	151041-604164	Anthracene	17	JH	ug/L
		Phenanthrene-d10	212856	303955-1215818	Phenanthrene	61	JH	ug/L
		Chrysene-d12	174100	287697-1150786	Phenol	6.5	JH	ug/L
		Perylene-d12	156980	243728-974912	bis(2-Ethylhexyl)phthalate (DEHP)	0.46	UJ	ug/L
					Pyrene	4.2	JH	ug/L
					Fluoranthene	9.0	JH	ug/L
					4-Nitrophenol	0.070	UJ	ug/L
					1,2-Diphenylhydrazine	0.10	UJ	ug/L
					Chrysene	0.070	UJ	ug/L
					Benzo(a)pyrene	0.080	UJ	ug/L
					4,6-Dinitro-2-methylphenol	0.080	UJ	ug/L

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Benzo(a)anthracene	0.070	UJ	ug/L
Di-n-butylphthalate (DBP)	0.070	UJ	ug/L
N-Nitrosodiphenylamine	0.090	UJ	ug/L
Pentachlorophenol	0.080	UJ	ug/L
			ug/L

Notes

JH Esimated result; high bias
UJ Not Detected; estimated Sample Detection Limit (SDL)

TABLE 7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Qualified Sample Result*		*Units*
						Recovery (percent)	*RPD (percent)*			
VOCs	WG-1620-MW18C-20100624	Toluene	75.9	59.5	4.6	75-125	20	720	JL	ug/L
SVOCs	WG-1620-MW18C-20100624	2,4-Dimethylphenol	122	53.8	27.8	35-120	20	7.8	JH	ug/L
		Anthracene	184	214	8.61	45-120	20	7.6	JH	ug/L
SVOCs	WG-1620-MW44A-20100630	2-Methylnaphthalene	20.3	16.7	3.7	50-120	20	4.0	JL	ug/L
		Acenaphthylene	46.6	37.7	14.5	47-120	20	0.96	JL	ug/L
		Anthracene	34.5	38.7	2.43	45-120	20	6.7	JL	ug/L
		Dibenzofuran	25.9	21	4.49	50-120	20	4.3	JL	ug/L
		Fluoranthene	15.2	34.8	13.4	45-125	20	6.0	JL	ug/L
		Phenanthrene	35.4	43.6	9.13	45-121	20	2.5	JL	ug/L
		Pyrene	31.5	48.4	16.8	40-130	20	3.0	JL	ug/L
		bis(2-Chloroethoxy)methane	49.8	43.3	13.9	45-120	20	0.090	UJ	ug/L
SVOCs	WG-1620-MW36D-20100715	2,4-Dimethylphenol	31.7	77.9	84.5	35-120	20	0.080	UJ	ug/L
		bis(2-Ethylhexyl)phthalate (DEHP)	50.3	14.1	27.6	40-139	20	5.0	JL	ug/L
		2,4-Dinitrotoluene	88.9	69.5	24.5	50-122	20	0.090	UJ	ug/L

Notes

VOCs	Volatile Organic Compounds
SVOCs	Semi-Volatile Organic Compounds
JL	Estimated concentration; low bias
JH	Estimated concentration; high bias
UJ	Not detected; estimated Sample Detection Limit (SDL)

TABLE 8
SUMMARY OF FIELD DUPLICATE RESULTS
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SEMI-ANNUAL MONITORING
JUNE/JULY 2010

Sample Location:	*MW21C*						*MW33A*						*MW36B*					
	Orig		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*	*Orig*		*Duplicate*		*RPD*	*Units*
Volatile Organics																		
Benzene	1.8	J	0.50	U	NC	ug/L	1.8	J	3.4	J	NC	ug/L	____		____		_____	
Semi-Volatile Organics																		
Dibenzofuran	4.4	J	6.7		52.2	ug/L	1.4	J	0.35	J	120	ug/L	____		____		____	
Fluoranthene	4.0	j	4.9	J	22.5	ug/L	1.2		0.95		20.8	ug/L	____		____		____	
Acenaphthene	68		75		10.3	ug/L	12	J	7.2	J	40	ug/L	____		____		____	
Fluorene	40		47		17.5	ug/L	1.2	J	0.41	J	98	ug/L	____		____		____	
Phenanthrene	1.1	J	2.5	J	127.0	ug/L	0.65		0.070	U	NC	ug/L	____		____		____	
2-Methylnaphthalene	ND		2.6		NC	ug/L	0.92		0.070	U	NC	ug/L	____		____		____	
Pyrene	2.1	J	2.6	J	23.80	ug/L	1.6		1.5		6.7	ug/L	____		____		____	
Anthracene	1.7	J	2.2	J	29.40	ug/L	0.21		0.070	U	NC	ug/L	____		____		____	
Chrysene	____		____		____	ug/L	0.090	J	0.070		NC	ug/L	____		____		____	
Benzo(a)anthracene	____		____		____	ug/L	0.14	J	0.14	J	NC	ug/L	____		____		____	
Naphthalene	____		____		____	ug/L	8.2	J	1.3	J	145	ug/L	____		____		____	
bis(2-Ethylhexyl)phthalate	____		____		____	ug/L	____		____		____	ug/L	10	J	2.4	J	122	ug/L

Notes:

J - Estimated concentration
NC - Unable to calculate

TABLE 9

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JUNE/ JULY 2010

Parameter	*Analyte*	*Original Sample ID*	*Qualified Sample Result*		*Duplicate Sample ID*	*Qualified Sample Result*		*RPD*	*Units*
SVOCs	Acenaphthene	WG-1620-MW33A-20100629	12	J	WG-1620-MWX2-20100629	7.2	J	40	ug/L
	Dibenzofuran		1.4	J		0.35	J	120	ug/L
	Fluorene		1.2	J		0.41	J	***98***	ug/L
	Naphthalene		8.2	J		1.3	J	***145***	ug/L
SVOCs	bis(2-Ethylhexyl)phthalate (DEHP)	WG-1620-MW36B-20100715	10	J	WG-1620-MWX4-20100715	2.4	J	122	ug/L

Notes

1 The qualifier applies to both the original and duplicate results.
SVOCs Semi-Volatile Organic Compounds
J Estimated concentration

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

12-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1006737**

Dear Eric,

ALS Laboratory Group received 11 samples on 23-Jun-2010 07:35 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 51.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Chris Bryson

R. Kevin Given
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1006737

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 12-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1006737**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1006737-01	WG-1620-MW21C-20100622	Water		6/22/2010 08:15	6/23/2010 07:35	☐
1006737-02	WG-1620-MW14-20100622	Water		6/22/2010 09:15	6/23/2010 07:35	☐
1006737-03	WG-1620-MW39B-20100622	Water		6/22/2010 10:20	6/23/2010 07:35	☐
1006737-04	WG-1620-MW12C-20100622	Water		6/22/2010 11:10	6/23/2010 07:35	☐
1006737-05	WG-1620-MW12A-20100622	Water		6/22/2010 12:40	6/23/2010 07:35	☐
1006737-06	WG-1620-MW40B-20100622	Water		6/22/2010 13:45	6/23/2010 07:35	☐
1006737-07	WG-1620-MWX1-20100622	Water		6/22/2010 08:15	6/23/2010 07:35	☐
1006737-08	WG-1620-P11-20100622	Water		6/22/2010 14:50	6/23/2010 07:35	☐
1006737-09	WG-1620-TB1-20100622	Water		6/22/2010	6/23/2010 07:35	☐
1006737-10	WG-1620-MW13-20100622	Water		6/22/2010 15:50	6/23/2010 07:35	☐
1006737-11	WG-1620-FB1-20100622	Water		6/22/2010 16:30	6/23/2010 07:35	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/12/2010
Project Name: HWPW-SITE WIDE MONITORING	Laboratory Job Number: 1006737
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44000, R92984, R93107, R93148, R93199, R93224, R93304

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/12/2010
Project Name: HWPW-SITE WIDE MONITORING	Laboratory Job Number: 1006737
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44000, R92984, R93107, R93148, R93199, R93224, R93304

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/12/2010
Project Name: HWPW-SITE WIDE MONITORING	Laboratory Job Number: 1006737
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44000, R92984, R93107, R93148, R93199, R93224, R93304

ER #[1]	DESCRIPTION
1	Low-Level Semivolatiles, Samples WG-1620-MW12A-20100622 and WG-1620-MW40B-20100622 : Surrogate recoveries were diluted out in the 100X dilution. Low-Level Semivolatiles, Sample WG-1620-MW40B-20100622 : Surrogate recoveries were diluted out in the 1000X dilution.

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

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW21C-20100622
Collection Date: 6/22/2010 08:15 AM

Work Order: 1006737
Lab ID: 1006737-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 22:15
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:15
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 22:15
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 22:15
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:15
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 22:15
Acenaphthene	U		0.090	0.20	µg/L	1	7/8/2010 22:15
Acenaphthylene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 22:15
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 22:15
Bis(2-ethylhexyl)phthalate	**0.23**		**0.20**	**0.20**	**µg/L**	1	7/8/2010 22:15
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Dibenzofuran	U		0.080	0.20	µg/L	1	7/8/2010 22:15
Fluoranthene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Fluorene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 22:15
Naphthalene	U		0.10	0.20	µg/L	1	7/8/2010 22:15
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 22:15
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 22:15
Phenanthrene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Pyrene	U		0.070	0.20	µg/L	1	7/8/2010 22:15
Surr: 2,4,6-Tribromophenol	*59.9*			*34-129*	*%REC*	1	7/8/2010 22:15
Surr: 2-Fluorobiphenyl	*54.5*			*40-125*	*%REC*	1	7/8/2010 22:15
Surr: 2-Fluorophenol	*50.9*			*20-120*	*%REC*	1	7/8/2010 22:15
Surr: 4-Terphenyl-d14	*66.3*			*40-135*	*%REC*	1	7/8/2010 22:15
Surr: Nitrobenzene-d5	*56.9*			*41-120*	*%REC*	1	7/8/2010 22:15
Surr: Phenol-d6	*49.7*			*20-120*	*%REC*	1	7/8/2010 22:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/23/2010 20:38
Benzene	U		0.50	5.0	µg/L	1	6/23/2010 20:38
Chlorobenzene	U		0.50	5.0	µg/L	1	6/23/2010 20:38
Dichloromethane	U		0.50	10	µg/L	1	6/23/2010 20:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW21C-20100622
Collection Date: 6/22/2010 08:15 AM

Work Order: 1006737
Lab ID: 1006737-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/23/2010 20:38
Toluene	U		0.50	5.0	µg/L	1	6/23/2010 20:38
Xylenes, Total	U		1.0	15	µg/L	1	6/23/2010 20:38
Surr: 1,2-Dichloroethane-d4	*93.6*			*70-125*	*%REC*	1	6/23/2010 20:38
Surr: 4-Bromofluorobenzene	*92.4*			*72-125*	*%REC*	1	6/23/2010 20:38
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	6/23/2010 20:38
Surr: Toluene-d8	*91.0*			*75-125*	*%REC*	1	6/23/2010 20:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW14-20100622
Collection Date: 6/22/2010 09:15 AM

Work Order: 1006737
Lab ID: 1006737-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 22:35
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:35
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 22:35
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 22:35
2-Methylnaphthalene	**0.49**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 22:35
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:35
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 22:35
Acenaphthene	**0.41**		**0.090**	**0.20**	**µg/L**	1	7/8/2010 22:35
Acenaphthylene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 22:35
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 22:35
Bis(2-ethylhexyl)phthalate	**0.77**		**0.20**	**0.20**	**µg/L**	1	7/8/2010 22:35
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Dibenzofuran	**0.37**		**0.080**	**0.20**	**µg/L**	1	7/8/2010 22:35
Fluoranthene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Fluorene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 22:35
Naphthalene	**2.2**		**0.10**	**0.20**	**µg/L**	1	7/8/2010 22:35
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 22:35
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 22:35
Phenanthrene	**0.44**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 22:35
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Pyrene	U		0.070	0.20	µg/L	1	7/8/2010 22:35
Surr: 2,4,6-Tribromophenol	*65.5*			*34-129*	*%REC*	1	7/8/2010 22:35
Surr: 2-Fluorobiphenyl	*53.4*			*40-125*	*%REC*	1	7/8/2010 22:35
Surr: 2-Fluorophenol	*56.3*			*20-120*	*%REC*	1	7/8/2010 22:35
Surr: 4-Terphenyl-d14	*67.6*			*40-135*	*%REC*	1	7/8/2010 22:35
Surr: Nitrobenzene-d5	*56.0*			*41-120*	*%REC*	1	7/8/2010 22:35
Surr: Phenol-d6	*50.9*			*20-120*	*%REC*	1	7/8/2010 22:35
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/23/2010 21:03
Benzene	U		0.50	5.0	µg/L	1	6/23/2010 21:03
Chlorobenzene	U		0.50	5.0	µg/L	1	6/23/2010 21:03
Dichloromethane	U		0.50	10	µg/L	1	6/23/2010 21:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW14-20100622
Collection Date: 6/22/2010 09:15 AM

Work Order: 1006737
Lab ID: 1006737-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/23/2010 21:03
Toluene	U		0.50	5.0	µg/L	1	6/23/2010 21:03
Xylenes, Total	U		1.0	15	µg/L	1	6/23/2010 21:03
Surr: 1,2-Dichloroethane-d4	*96.9*			*70-125*	*%REC*	1	6/23/2010 21:03
Surr: 4-Bromofluorobenzene	*105*			*72-125*	*%REC*	1	6/23/2010 21:03
Surr: Dibromofluoromethane	*100*			*71-125*	*%REC*	1	6/23/2010 21:03
Surr: Toluene-d8	*98.2*			*75-125*	*%REC*	1	6/23/2010 21:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW39B-20100622
Collection Date: 6/22/2010 10:20 AM

Work Order: 1006737
Lab ID: 1006737-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 22:55
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:55
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 22:55
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 22:55
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 22:55
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 22:55
Acenaphthene	**3.4**		**0.090**	**0.20**	**µg/L**	1	7/8/2010 22:55
Acenaphthylene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 22:55
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 22:55
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	7/8/2010 22:55
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Dibenzofuran	U		0.080	0.20	µg/L	1	7/8/2010 22:55
Fluoranthene	**1.9**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 22:55
Fluorene	**0.48**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 22:55
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 22:55
Naphthalene	**0.15**	J	**0.10**	**0.20**	**µg/L**	1	7/8/2010 22:55
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 22:55
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 22:55
Phenanthrene	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 22:55
Pyrene	**2.0**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 22:55
Surr: 2,4,6-Tribromophenol	*75.4*			*34-129*	*%REC*	1	7/8/2010 22:55
Surr: 2-Fluorobiphenyl	*69.1*			*40-125*	*%REC*	1	7/8/2010 22:55
Surr: 2-Fluorophenol	*64.3*			*20-120*	*%REC*	1	7/8/2010 22:55
Surr: 4-Terphenyl-d14	*68.5*			*40-135*	*%REC*	1	7/8/2010 22:55
Surr: Nitrobenzene-d5	*68.6*			*41-120*	*%REC*	1	7/8/2010 22:55
Surr: Phenol-d6	*49.1*			*20-120*	*%REC*	1	7/8/2010 22:55
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/25/2010 20:38
Benzene	U		0.50	5.0	µg/L	1	6/25/2010 20:38
Chlorobenzene	U		0.50	5.0	µg/L	1	6/25/2010 20:38
Dichloromethane	U		0.50	10	µg/L	1	6/25/2010 20:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW39B-20100622
Collection Date: 6/22/2010 10:20 AM

Work Order: 1006737
Lab ID: 1006737-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/25/2010 20:38
Toluene	U		0.50	5.0	µg/L	1	6/25/2010 20:38
Xylenes, Total	U		1.0	15	µg/L	1	6/25/2010 20:38
Surr: 1,2-Dichloroethane-d4	*98.4*			*70-125*	*%REC*	1	6/25/2010 20:38
Surr: 4-Bromofluorobenzene	*105*			*72-125*	*%REC*	1	6/25/2010 20:38
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	6/25/2010 20:38
Surr: Toluene-d8	*109*			*75-125*	*%REC*	1	6/25/2010 20:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW12C-20100622
Collection Date: 6/22/2010 11:10 AM

Work Order: 1006737
Lab ID: 1006737-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 23:16
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 23:16
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 23:16
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 23:16
2-Methylnaphthalene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:16
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 23:16
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 23:16
Acenaphthene	U		0.090	0.20	µg/L	1	7/8/2010 23:16
Acenaphthylene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Anthracene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 23:16
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 23:16
Bis(2-ethylhexyl)phthalate	**0.99**		**0.20**	**0.20**	**µg/L**	1	7/8/2010 23:16
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Dibenzofuran	U		0.080	0.20	µg/L	1	7/8/2010 23:16
Fluoranthene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Fluorene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 23:16
Naphthalene	**0.46**		**0.10**	**0.20**	**µg/L**	1	7/8/2010 23:16
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 23:16
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 23:16
Phenanthrene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Pyrene	U		0.070	0.20	µg/L	1	7/8/2010 23:16
Surr: 2,4,6-Tribromophenol	*55.2*			*34-129*	*%REC*	1	7/8/2010 23:16
Surr: 2-Fluorobiphenyl	*47.3*			*40-125*	*%REC*	1	7/8/2010 23:16
Surr: 2-Fluorophenol	*50.0*			*20-120*	*%REC*	1	7/8/2010 23:16
Surr: 4-Terphenyl-d14	*63.1*			*40-135*	*%REC*	1	7/8/2010 23:16
Surr: Nitrobenzene-d5	*52.7*			*41-120*	*%REC*	1	7/8/2010 23:16
Surr: Phenol-d6	*43.8*			*20-120*	*%REC*	1	7/8/2010 23:16
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/26/2010 13:04
Benzene	U		0.50	5.0	µg/L	1	6/26/2010 13:04
Chlorobenzene	U		0.50	5.0	µg/L	1	6/26/2010 13:04
Dichloromethane	U		0.50	10	µg/L	1	6/26/2010 13:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW12C-20100622
Collection Date: 6/22/2010 11:10 AM

Work Order: 1006737
Lab ID: 1006737-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/26/2010 13:04
Toluene	U		0.50	5.0	µg/L	1	6/26/2010 13:04
Xylenes, Total	U		1.0	15	µg/L	1	6/26/2010 13:04
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	6/26/2010 13:04
Surr: 4-Bromofluorobenzene	*88.6*			*72-125*	*%REC*	1	6/26/2010 13:04
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	6/26/2010 13:04
Surr: Toluene-d8	*98.2*			*75-125*	*%REC*	1	6/26/2010 13:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW12A-20100622
Collection Date: 6/22/2010 12:40 PM

Work Order: 1006737
Lab ID: 1006737-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 23:36
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 23:36
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 23:36
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 23:36
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 23:36
2-Methylnaphthalene	**150**		**3.5**	**10**	**µg/L**	50	7/9/2010 15:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 23:36
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 23:36
Acenaphthene	**210**		**4.5**	**10**	**µg/L**	50	7/9/2010 15:15
Acenaphthylene	**1.9**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:36
Anthracene	**11**		**0.70**	**2.0**	**µg/L**	10	7/9/2010 14:13
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 23:36
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 23:36
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 23:36
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	7/8/2010 23:36
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 23:36
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 23:36
Dibenzofuran	**180**		**4.0**	**10**	**µg/L**	50	7/9/2010 15:15
Fluoranthene	**6.4**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:36
Fluorene	**160**		**3.5**	**10**	**µg/L**	50	7/9/2010 15:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 23:36
Naphthalene	**600**		**10**	**20**	**µg/L**	100	7/9/2010 16:42
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 23:36
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 23:36
Phenanthrene	**91**		**0.70**	**2.0**	**µg/L**	10	7/9/2010 14:13
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 23:36
Pyrene	**2.5**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:36
Surr: 2,4,6-Tribromophenol	*51.3*			*34-129*	*%REC*	1	7/8/2010 23:36
Surr: 2,4,6-Tribromophenol	*76.2*			*34-129*	*%REC*	10	7/9/2010 14:13
Surr: 2,4,6-Tribromophenol	*87.1*	J		*34-129*	*%REC*	50	7/9/2010 15:15
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	7/9/2010 16:42
Surr: 2-Fluorobiphenyl	*52.7*			*40-125*	*%REC*	1	7/8/2010 23:36
Surr: 2-Fluorobiphenyl	*75.1*			*40-125*	*%REC*	10	7/9/2010 14:13
Surr: 2-Fluorobiphenyl	*73.7*	J		*40-125*	*%REC*	50	7/9/2010 15:15
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	7/9/2010 16:42
Surr: 2-Fluorophenol	*61.1*			*20-120*	*%REC*	1	7/8/2010 23:36
Surr: 2-Fluorophenol	*72.5*			*20-120*	*%REC*	10	7/9/2010 14:13
Surr: 2-Fluorophenol	*70.2*	J		*20-120*	*%REC*	50	7/9/2010 15:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW12A-20100622
Collection Date: 6/22/2010 12:40 PM

Work Order: 1006737
Lab ID: 1006737-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	7/9/2010 16:42
Surr: 4-Terphenyl-d14	*68.6*			*40-135*	*%REC*	1	7/8/2010 23:36
Surr: 4-Terphenyl-d14	*83.0*			*40-135*	*%REC*	10	7/9/2010 14:13
Surr: 4-Terphenyl-d14	*94.1*	J		*40-135*	*%REC*	50	7/9/2010 15:15
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	7/9/2010 16:42
Surr: Nitrobenzene-d5	*50.0*			*41-120*	*%REC*	1	7/8/2010 23:36
Surr: Nitrobenzene-d5	*74.6*			*41-120*	*%REC*	10	7/9/2010 14:13
Surr: Nitrobenzene-d5	*69.7*	J		*41-120*	*%REC*	50	7/9/2010 15:15
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	7/9/2010 16:42
Surr: Phenol-d6	*60.0*			*20-120*	*%REC*	1	7/8/2010 23:36
Surr: Phenol-d6	*68.2*			*20-120*	*%REC*	10	7/9/2010 14:13
Surr: Phenol-d6	*67.6*	J		*20-120*	*%REC*	50	7/9/2010 15:15
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	7/9/2010 16:42
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 13:27
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 13:27
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 13:27
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 13:27
Ethylbenzene	**0.56**	J	**0.50**	**5.0**	**µg/L**	1	6/28/2010 13:27
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 13:27
Xylenes, Total	**2.6**	J	**1.0**	**15**	**µg/L**	1	6/28/2010 13:27
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	6/28/2010 13:27
Surr: 4-Bromofluorobenzene	*97.0*			*72-125*	*%REC*	1	6/28/2010 13:27
Surr: Dibromofluoromethane	*100*			*71-125*	*%REC*	1	6/28/2010 13:27
Surr: Toluene-d8	*94.9*			*75-125*	*%REC*	1	6/28/2010 13:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW40B-20100622
Collection Date: 6/22/2010 01:45 PM

Work Order: 1006737
Lab ID: 1006737-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 23:57
2,4-Dimethylphenol	**4.4**		**0.080**	**0.20**	**µg/L**	1	7/8/2010 23:57
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 23:57
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 23:57
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 23:57
2-Methylnaphthalene	**410**		**7.0**	**20**	**µg/L**	100	7/9/2010 14:55
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 23:57
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 23:57
Acenaphthene	**270**		**9.0**	**20**	**µg/L**	100	7/9/2010 14:55
Acenaphthylene	**3.1**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:57
Anthracene	**17**		**1.4**	**4.0**	**µg/L**	20	7/9/2010 13:53
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 23:57
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 23:57
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 23:57
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	7/8/2010 23:57
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 23:57
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 23:57
Dibenzofuran	**220**		**8.0**	**20**	**µg/L**	100	7/9/2010 14:55
Fluoranthene	**6.4**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:57
Fluorene	**170**		**1.4**	**4.0**	**µg/L**	20	7/9/2010 13:53
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 23:57
Naphthalene	**6,800**		**100**	**200**	**µg/L**	1000	7/9/2010 16:21
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 23:57
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 23:57
Phenanthrene	**150**		**1.4**	**4.0**	**µg/L**	20	7/9/2010 13:53
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 23:57
Pyrene	**3.5**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 23:57
Surr: 2,4,6-Tribromophenol	*55.0*			*34-129*	*%REC*	1	7/8/2010 23:57
Surr: 2,4,6-Tribromophenol	*59.2*	J		*34-129*	*%REC*	20	7/9/2010 13:53
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	7/9/2010 14:55
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	7/9/2010 16:21
Surr: 2-Fluorobiphenyl	*46.6*			*40-125*	*%REC*	1	7/8/2010 23:57
Surr: 2-Fluorobiphenyl	*61.5*	J		*40-125*	*%REC*	20	7/9/2010 13:53
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	7/9/2010 14:55
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	7/9/2010 16:21
Surr: 2-Fluorophenol	*91.9*			*20-120*	*%REC*	1	7/8/2010 23:57
Surr: 2-Fluorophenol	*91.5*			*20-120*	*%REC*	20	7/9/2010 13:53
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	7/9/2010 14:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW40B-20100622
Collection Date: 6/22/2010 01:45 PM

Work Order: 1006737
Lab ID: 1006737-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	7/9/2010 16:21
Surr: 4-Terphenyl-d14	*69.0*			*40-135*	*%REC*	1	7/8/2010 23:57
Surr: 4-Terphenyl-d14	*87.1*			*40-135*	*%REC*	20	7/9/2010 13:53
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	7/9/2010 14:55
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	7/9/2010 16:21
Surr: Nitrobenzene-d5	*58.5*			*41-120*	*%REC*	1	7/8/2010 23:57
Surr: Nitrobenzene-d5	*54.0*	J		*41-120*	*%REC*	20	7/9/2010 13:53
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	7/9/2010 14:55
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	7/9/2010 16:21
Surr: Phenol-d6	*64.6*			*20-120*	*%REC*	1	7/8/2010 23:57
Surr: Phenol-d6	*62.2*	J		*20-120*	*%REC*	20	7/9/2010 13:53
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	7/9/2010 14:55
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	7/9/2010 16:21
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 16:08
Benzene	**26**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 16:08
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 16:08
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 16:08
Ethylbenzene	**120**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 16:08
Toluene	**50**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 16:08
Xylenes, Total	**220**		**1.0**	**15**	**µg/L**	1	6/28/2010 16:08
Surr: 1,2-Dichloroethane-d4	*90.4*			*70-125*	*%REC*	1	6/28/2010 16:08
Surr: 4-Bromofluorobenzene	*99.4*			*72-125*	*%REC*	1	6/28/2010 16:08
Surr: Dibromofluoromethane	*95.2*			*71-125*	*%REC*	1	6/28/2010 16:08
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	6/28/2010 16:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX1-20100622
Collection Date: 6/22/2010 08:15 AM

Work Order: 1006737
Lab ID: 1006737-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 14:34
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 14:34
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 14:34
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 14:34
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 14:34
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 14:34
Acenaphthene	U		0.090	0.20	µg/L	1	7/9/2010 14:34
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 14:34
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 14:34
Bis(2-ethylhexyl)phthalate	**0.41**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 14:34
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Dibenzofuran	U		0.080	0.20	µg/L	1	7/9/2010 14:34
Fluoranthene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Fluorene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 14:34
Naphthalene	**0.21**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 14:34
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 14:34
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 14:34
Phenanthrene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Pyrene	U		0.070	0.20	µg/L	1	7/9/2010 14:34
Surr: 2,4,6-Tribromophenol	*46.2*			*34-129*	*%REC*	1	7/9/2010 14:34
Surr: 2-Fluorobiphenyl	*50.0*			*40-125*	*%REC*	1	7/9/2010 14:34
Surr: 2-Fluorophenol	*42.6*			*20-120*	*%REC*	1	7/9/2010 14:34
Surr: 4-Terphenyl-d14	*73.8*			*40-135*	*%REC*	1	7/9/2010 14:34
Surr: Nitrobenzene-d5	*47.6*			*41-120*	*%REC*	1	7/9/2010 14:34
Surr: Phenol-d6	*44.6*			*20-120*	*%REC*	1	7/9/2010 14:34
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 14:24
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 14:24
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 14:24
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 14:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX1-20100622
Collection Date: 6/22/2010 08:15 AM

Work Order: 1006737
Lab ID: 1006737-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 14:24
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 14:24
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 14:24
Surr: 1,2-Dichloroethane-d4	*93.9*			*70-125*	*%REC*	1	6/28/2010 14:24
Surr: 4-Bromofluorobenzene	*97.8*			*72-125*	*%REC*	1	6/28/2010 14:24
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	6/28/2010 14:24
Surr: Toluene-d8	*100*			*75-125*	*%REC*	1	6/28/2010 14:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-P11-20100622
Collection Date: 6/22/2010 02:50 PM

Work Order: 1006737
Lab ID: 1006737-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 00:37
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 00:37
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 00:37
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 00:37
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 00:37
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 00:37
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 00:37
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 00:37
Acenaphthene	**3.7**		**0.090**	**0.20**	**µg/L**	1	7/9/2010 00:37
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 00:37
Anthracene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:37
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 00:37
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 00:37
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 00:37
Bis(2-ethylhexyl)phthalate	**0.21**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 00:37
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 00:37
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 00:37
Dibenzofuran	**0.093**	J	**0.080**	**0.20**	**µg/L**	1	7/9/2010 00:37
Fluoranthene	**0.42**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:37
Fluorene	**1.6**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:37
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 00:37
Naphthalene	**2.7**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 00:37
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 00:37
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 00:37
Phenanthrene	**0.53**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:37
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 00:37
Pyrene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:37
Surr: 2,4,6-Tribromophenol	*39.0*			*34-129*	*%REC*	1	7/9/2010 00:37
Surr: 2-Fluorobiphenyl	*41.3*			*40-125*	*%REC*	1	7/9/2010 00:37
Surr: 2-Fluorophenol	*23.4*			*20-120*	*%REC*	1	7/9/2010 00:37
Surr: 4-Terphenyl-d14	*76.2*			*40-135*	*%REC*	1	7/9/2010 00:37
Surr: Nitrobenzene-d5	*43.8*			*41-120*	*%REC*	1	7/9/2010 00:37
Surr: Phenol-d6	*27.1*			*20-120*	*%REC*	1	7/9/2010 00:37
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 16:34
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 16:34
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 16:34
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 16:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-P11-20100622
Collection Date: 6/22/2010 02:50 PM

Work Order: 1006737
Lab ID: 1006737-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 16:34
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 16:34
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 16:34
Surr: 1,2-Dichloroethane-d4	*90.6*			*70-125*	*%REC*	1	6/28/2010 16:34
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	6/28/2010 16:34
Surr: Dibromofluoromethane	*96.1*			*71-125*	*%REC*	1	6/28/2010 16:34
Surr: Toluene-d8	*95.5*			*75-125*	*%REC*	1	6/28/2010 16:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB1-20100622
Collection Date: 6/22/2010

Work Order: 1006737
Lab ID: 1006737-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/25/2010 22:19
Benzene	U		0.50	5.0	µg/L	1	6/25/2010 22:19
Chlorobenzene	U		0.50	5.0	µg/L	1	6/25/2010 22:19
Dichloromethane	**2.3**	J	**0.50**	**10**	**µg/L**	1	6/25/2010 22:19
Ethylbenzene	U		0.50	5.0	µg/L	1	6/25/2010 22:19
Toluene	U		0.50	5.0	µg/L	1	6/25/2010 22:19
Xylenes, Total	U		1.0	15	µg/L	1	6/25/2010 22:19
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	6/25/2010 22:19
Surr: 4-Bromofluorobenzene	*95.9*			*72-125*	*%REC*	1	6/25/2010 22:19
Surr: Dibromofluoromethane	*98.7*			*71-125*	*%REC*	1	6/25/2010 22:19
Surr: Toluene-d8	*95.4*			*75-125*	*%REC*	1	6/25/2010 22:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW13-20100622
Collection Date: 6/22/2010 03:50 PM

Work Order: 1006737
Lab ID: 1006737-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 00:58
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 00:58
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 00:58
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 00:58
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 00:58
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 00:58
Acenaphthene	U		0.090	0.20	µg/L	1	7/9/2010 00:58
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 00:58
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 00:58
Bis(2-ethylhexyl)phthalate	**0.44**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 00:58
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Di-n-butyl phthalate	**0.10**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:58
Dibenzofuran	U		0.080	0.20	µg/L	1	7/9/2010 00:58
Fluoranthene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Fluorene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 00:58
Naphthalene	U		0.10	0.20	µg/L	1	7/9/2010 00:58
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 00:58
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 00:58
Phenanthrene	**0.20**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 00:58
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Pyrene	U		0.070	0.20	µg/L	1	7/9/2010 00:58
Surr: 2,4,6-Tribromophenol	*80.7*			*34-129*	*%REC*	1	7/9/2010 00:58
Surr: 2-Fluorobiphenyl	*45.6*			*40-125*	*%REC*	1	7/9/2010 00:58
Surr: 2-Fluorophenol	*57.1*			*20-120*	*%REC*	1	7/9/2010 00:58
Surr: 4-Terphenyl-d14	*68.1*			*40-135*	*%REC*	1	7/9/2010 00:58
Surr: Nitrobenzene-d5	*71.1*			*41-120*	*%REC*	1	7/9/2010 00:58
Surr: Phenol-d6	*53.1*			*20-120*	*%REC*	1	7/9/2010 00:58
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:00
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 17:00
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:00
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 17:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW13-20100622
Collection Date: 6/22/2010 03:50 PM

Work Order: 1006737
Lab ID: 1006737-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:00
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 17:00
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 17:00
Surr: 1,2-Dichloroethane-d4	*90.8*			*70-125*	*%REC*	1	6/28/2010 17:00
Surr: 4-Bromofluorobenzene	*99.3*			*72-125*	*%REC*	1	6/28/2010 17:00
Surr: Dibromofluoromethane	*96.8*			*71-125*	*%REC*	1	6/28/2010 17:00
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	6/28/2010 17:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB1-20100622
Collection Date: 6/22/2010 04:30 PM

Work Order: 1006737
Lab ID: 1006737-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/24/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 01:18
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 01:18
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 01:18
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 01:18
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 01:18
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 01:18
Acenaphthene	U		0.090	0.20	µg/L	1	7/9/2010 01:18
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 01:18
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 01:18
Bis(2-ethylhexyl)phthalate	**0.63**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 01:18
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Dibenzofuran	U		0.080	0.20	µg/L	1	7/9/2010 01:18
Fluoranthene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Fluorene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 01:18
Naphthalene	**0.14**	J	**0.10**	**0.20**	**µg/L**	1	7/9/2010 01:18
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 01:18
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 01:18
Phenanthrene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Pyrene	U		0.070	0.20	µg/L	1	7/9/2010 01:18
Surr: 2,4,6-Tribromophenol	*68.4*			*34-129*	*%REC*	1	7/9/2010 01:18
Surr: 2-Fluorobiphenyl	*62.4*			*40-125*	*%REC*	1	7/9/2010 01:18
Surr: 2-Fluorophenol	*52.6*			*20-120*	*%REC*	1	7/9/2010 01:18
Surr: 4-Terphenyl-d14	*69.4*			*40-135*	*%REC*	1	7/9/2010 01:18
Surr: Nitrobenzene-d5	*69.8*			*41-120*	*%REC*	1	7/9/2010 01:18
Surr: Phenol-d6	*44.6*			*20-120*	*%REC*	1	7/9/2010 01:18
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/25/2010 19:47
Benzene	U		0.50	5.0	µg/L	1	6/25/2010 19:47
Chlorobenzene	U		0.50	5.0	µg/L	1	6/25/2010 19:47
Dichloromethane	U		0.50	10	µg/L	1	6/25/2010 19:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *12-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB1-20100622
Collection Date: 6/22/2010 04:30 PM

Work Order: 1006737
Lab ID: 1006737-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/25/2010 19:47
Toluene	U		0.50	5.0	µg/L	1	6/25/2010 19:47
Xylenes, Total	U		1.0	15	µg/L	1	6/25/2010 19:47
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	6/25/2010 19:47
Surr: 4-Bromofluorobenzene	*95.7*			*72-125*	*%REC*	1	6/25/2010 19:47
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	6/25/2010 19:47
Surr: Toluene-d8	*95.7*			*75-125*	*%REC*	1	6/25/2010 19:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 12-Jul-10

WorkOrder: 1006737
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 12-Jul-10

WorkOrder: 1006737
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44000** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW4-100624-44000** Units: **µg/L** Analysis Date: **7/8/2010 07:11 PM**

Client ID: Run ID: **SV-2_100708A** SeqNo: **2022539** Prep Date: **6/24/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.148*	0.20	*5*	0	*63*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.519*	0.20	*5*	0	*70.4*	*40-125*	0			
Surr: 2-Fluorophenol	*3.221*	0.20	*5*	0	*64.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.488*	0.20	*5*	0	*69.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.572*	0.20	*5*	0	*71.4*	*41-120*	0			
Surr: Phenol-d6	*3.454*	0.20	*5*	0	*69.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44000** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW4-100624-44000** Units: **µg/L** Analysis Date: **7/8/2010 07:32 PM**

Client ID: Run ID: **SV-2_100708A** SeqNo: **2022541** Prep Date: **6/24/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.167	0.20	5	0	83.3	39-127	0			
2,4-Dimethylphenol	1.838	0.20	5	0	36.8	35-120	0			
2,4-Dinitrotoluene	3.95	0.20	5	0	79	50-122	0			
2,6-Dinitrotoluene	3.903	0.20	5	0	78.1	50-120	0			
2-Chloronaphthalene	4.242	0.20	5	0	84.8	50-120	0			
2-Methylnaphthalene	3.924	0.20	5	0	78.5	50-120	0			
4,6-Dinitro-2-methylphenol	4.288	0.20	5	0	85.8	25-121	0			
4-Nitrophenol	3.532	1.0	5	0	70.6	30-130	0			
Acenaphthene	3.738	0.20	5	0	74.8	45-120	0			
Acenaphthylene	3.882	0.20	5	0	77.6	47-120	0			
Anthracene	3.773	0.20	5	0	75.5	45-120	0			
Benz(a)anthracene	4.337	0.20	5	0	86.7	40-120	0			
Benzo(a)pyrene	4.626	0.20	5	0	92.5	45-120	0			
Bis(2-chloroethoxy)methane	3.868	0.20	5	0	77.4	45-120	0			
Bis(2-ethylhexyl)phthalate	4.468	0.20	5	0	89.4	40-139	0			
Chrysene	4.14	0.20	5	0	82.8	43-120	0			
Di-n-butyl phthalate	4.322	0.20	5	0	86.4	45-123	0			
Dibenzofuran	4.032	0.20	5	0	80.6	50-120	0			
Fluoranthene	4.277	0.20	5	0	85.5	45-125	0			
Fluorene	3.891	0.20	5	0	77.8	49-120	0			
N-Nitrosodiphenylamine	3.849	0.20	5	0	77	40-125	0			
Naphthalene	3.761	0.20	5	0	75.2	45-120	0			
Nitrobenzene	3.88	0.20	5	0	77.6	44-120	0			
Pentachlorophenol	3.878	0.20	5	0	77.6	19-121	0			
Phenanthrene	3.996	0.20	5	0	79.9	45-121	0			
Phenol	4.169	0.20	5	0	83.4	20-124	0			
Pyrene	4.141	0.20	5	0	82.8	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.05*	0.20	*5*	0	*81*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.651*	0.20	*5*	0	*73*	*40-125*	0			
Surr: 2-Fluorophenol	*3.733*	0.20	*5*	0	*74.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.8*	0.20	*5*	0	*76*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.704*	0.20	*5*	0	*74.1*	*41-120*	0			
Surr: Phenol-d6	*3.855*	0.20	*5*	0	*77.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44000** Instrument ID **SV-2** Method: **SW8270**

LCSD Sample ID: **SLCSDW4-100624-44000** Units: **µg/L** Analysis Date: **7/8/2010 07:52 PM**

Client ID: Run ID: **SV-2_100708A** SeqNo: **2022542** Prep Date: **6/24/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.81	0.20	5	0	76.2	39-127	4.167	8.94	20	
2,4-Dimethylphenol	1.971	0.20	5	0	39.4	35-120	1.838	6.97	20	
2,4-Dinitrotoluene	3.861	0.20	5	0	77.2	50-122	3.95	2.28	20	
2,6-Dinitrotoluene	3.828	0.20	5	0	76.6	50-120	3.903	1.95	20	
2-Chloronaphthalene	3.889	0.20	5	0	77.8	50-120	4.242	8.67	20	
2-Methylnaphthalene	3.963	0.20	5	0	79.3	50-120	3.924	0.989	20	
4,6-Dinitro-2-methylphenol	3.982	0.20	5	0	79.6	25-121	4.288	7.41	20	
4-Nitrophenol	3.231	1.0	5	0	64.6	30-130	3.532	8.91	20	
Acenaphthene	3.914	0.20	5	0	78.3	45-120	3.738	4.59	20	
Acenaphthylene	3.722	0.20	5	0	74.4	47-120	3.882	4.21	20	
Anthracene	3.516	0.20	5	0	70.3	45-120	3.773	7.04	20	
Benz(a)anthracene	4.338	0.20	5	0	86.8	40-120	4.337	0.0291	20	
Benzo(a)pyrene	4.451	0.20	5	0	89	45-120	4.626	3.86	20	
Bis(2-chloroethoxy)methane	3.719	0.20	5	0	74.4	45-120	3.868	3.94	20	
Bis(2-ethylhexyl)phthalate	4.492	0.20	5	0	89.8	40-139	4.468	0.53	20	
Chrysene	4.235	0.20	5	0	84.7	43-120	4.14	2.27	20	
Di-n-butyl phthalate	3.979	0.20	5	0	79.6	45-123	4.322	8.25	20	
Dibenzofuran	3.819	0.20	5	0	76.4	50-120	4.032	5.44	20	
Fluoranthene	4.042	0.20	5	0	80.8	45-125	4.277	5.67	20	
Fluorene	3.922	0.20	5	0	78.4	49-120	3.891	0.799	20	
N-Nitrosodiphenylamine	3.644	0.20	5	0	72.9	40-125	3.849	5.48	20	
Naphthalene	3.724	0.20	5	0	74.5	45-120	3.761	1	20	
Nitrobenzene	3.794	0.20	5	0	75.9	44-120	3.88	2.24	20	
Pentachlorophenol	3.604	0.20	5	0	72.1	19-121	3.878	7.32	20	
Phenanthrene	3.904	0.20	5	0	78.1	45-121	3.996	2.31	20	
Phenol	4.083	0.20	5	0	81.7	20-124	4.169	2.1	20	
Pyrene	4.317	0.20	5	0	86.3	40-130	4.141	4.17	20	
Surr: 2,4,6-Tribromophenol	*3.561*	0.20	*5*	0	*71.2*	*34-129*	4.05	*12.9*	*20*	
Surr: 2-Fluorobiphenyl	*3.454*	0.20	*5*	0	*69.1*	*40-125*	3.651	*5.55*	*20*	
Surr: 2-Fluorophenol	*3.211*	0.20	*5*	0	*64.2*	*20-120*	3.733	*15*	*20*	
Surr: 4-Terphenyl-d14	*3.744*	0.20	*5*	0	*74.9*	*40-135*	3.8	*1.5*	*20*	
Surr: Nitrobenzene-d5	*3.598*	0.20	*5*	0	*72*	*41-120*	3.704	*2.9*	*20*	
Surr: Phenol-d6	*3.673*	0.20	*5*	0	*73.5*	*20-120*	3.855	*4.83*	*20*	

The following samples were analyzed in this batch:

1006737-01B	1006737-02B	1006737-03B
1006737-04B	1006737-05B	1006737-06B
1006737-07B	1006737-08B	1006737-10B
1006737-11B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R92984** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062310-R92984** Units: **µg/L** Analysis Date: **6/23/2010 11:09 AM**

Client ID: Run ID: **VOA1_100623A** SeqNo: **2004402** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*45.66*	5.0	*50*	0	*91.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.67*	5.0	*50*	0	*99.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.96*	5.0	*50*	0	*99.9*	*71-125*	0			
Surr: Toluene-d8	*48.61*	5.0	*50*	0	*97.2*	*75-125*	0			

LCS Sample ID: **VLCSW-062310-R92984** Units: **µg/L** Analysis Date: **6/23/2010 10:18 AM**

Client ID: Run ID: **VOA1_100623A** SeqNo: **2004400** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.33	5.0	50	0	98.7	78-120	0			
Benzene	49.58	5.0	50	0	99.2	73-121	0			
Chlorobenzene	46.93	5.0	50	0	93.9	80-120	0			
Dichloromethane	44.33	10	50	0	88.7	65-133	0			
Ethylbenzene	48.09	5.0	50	0	96.2	80-120	0			
Toluene	48.1	5.0	50	0	96.2	80-120	0			
Xylenes, Total	157.9	15	150	0	105	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.77*	5.0	*50*	0	*95.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*55.14*	5.0	*50*	0	*110*	*72-125*	0			
Surr: Dibromofluoromethane	*52.74*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*55.9*	5.0	*50*	0	*112*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R92984** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1006385-12AMS** Units: **µg/L** Analysis Date: **6/23/2010 02:10 PM**

Client ID: Run ID: **VOA1_100623A** SeqNo: **2004408** Prep Date: DF: **200**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	10540	1,000	10000	0	105	78-120	0			
Benzene	20390	1,000	10000	10230	102	73-121	0			
Chlorobenzene	8615	1,000	10000	0	86.1	80-120	0			
Dichloromethane	9093	2,000	10000	0	90.9	65-133	0			
Ethylbenzene	10530	1,000	10000	1701	88.3	80-120	0			
Toluene	8581	1,000	10000	0	85.8	80-120	0			
Xylenes, Total	27980	3,000	30000	0	93.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*8858*	1,000	*10000*	0	*88.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*9921*	1,000	*10000*	0	*99.2*	*72-125*	0			
Surr: Dibromofluoromethane	*9793*	1,000	*10000*	0	*97.9*	*71-125*	0			
Surr: Toluene-d8	*8993*	1,000	*10000*	0	*89.9*	*75-125*	0			

MSD Sample ID: **1006385-12AMSD** Units: **µg/L** Analysis Date: **6/23/2010 02:36 PM**

Client ID: Run ID: **VOA1_100623A** SeqNo: **2004410** Prep Date: DF: **200**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	9576	1,000	10000	0	95.8	78-120	10540	9.57	20	
Benzene	18440	1,000	10000	10230	82.1	73-121	20390	10.1	20	
Chlorobenzene	8523	1,000	10000	0	85.2	80-120	8615	1.07	20	
Dichloromethane	8798	2,000	10000	0	88	65-133	9093	3.3	20	
Ethylbenzene	10730	1,000	10000	1701	90.3	80-120	10530	1.89	20	
Toluene	9150	1,000	10000	0	91.5	80-120	8581	6.42	20	
Xylenes, Total	27260	3,000	30000	0	90.9	80-120	27980	2.6	20	
Surr: 1,2-Dichloroethane-d4	*8907*	1,000	*10000*	0	*89.1*	*70-125*	8858	*0.551*	*20*	
Surr: 4-Bromofluorobenzene	*10140*	1,000	*10000*	0	*101*	*72-125*	9921	*2.15*	*20*	
Surr: Dibromofluoromethane	*9479*	1,000	*10000*	0	*94.8*	*71-125*	9793	*3.26*	*20*	
Surr: Toluene-d8	*10180*	1,000	*10000*	0	*102*	*75-125*	8993	*12.4*	*20*	

The following samples were analyzed in this batch: 1006737-01A 1006737-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93107** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062510-R93107** Units: **µg/L** Analysis Date: **6/25/2010 12:45 PM**

Client ID: Run ID: **VOA2_100625A** SeqNo: **2007064** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*53.22*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.35*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*50.5*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*48.51*	5.0	*50*	0	*97*	*75-125*	0			

LCS Sample ID: **VLCSW-062510-R93107** Units: **µg/L** Analysis Date: **6/25/2010 11:10 AM**

Client ID: Run ID: **VOA2_100625A** SeqNo: **2007062** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.84	5.0	50	0	106	78-120	0			
Benzene	49.33	5.0	50	0	98.7	73-121	0			
Chlorobenzene	49.47	5.0	50	0	98.9	80-120	0			
Dichloromethane	55.13	10	50	0	110	65-133	0			
Ethylbenzene	49.89	5.0	50	0	99.8	80-120	0			
Toluene	48.97	5.0	50	0	97.9	80-120	0			
Xylenes, Total	149.1	15	150	0	99.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.57*	5.0	*50*	0	*107*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.95*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*51.69*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*49.55*	5.0	*50*	0	*99.1*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93107** Instrument ID **VOA2** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062510-R93107** Units: **µg/L** Analysis Date: **6/25/2010 11:34 AM**

Client ID: Run ID: **VOA2_100625A** SeqNo: **2007063** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	53.25	5.0	50	0	106	78-120	52.84	0.768	20	
Benzene	49.86	5.0	50	0	99.7	73-121	49.33	1.06	20	
Chlorobenzene	49.11	5.0	50	0	98.2	80-120	49.47	0.739	20	
Dichloromethane	53.85	10	50	0	108	65-133	55.13	2.34	20	
Ethylbenzene	50.66	5.0	50	0	101	80-120	49.89	1.52	20	
Toluene	49.15	5.0	50	0	98.3	80-120	48.97	0.381	20	
Xylenes, Total	149.9	15	150	0	100	80-120	149.1	0.53	20	
Surr: 1,2-Dichloroethane-d4	*52.96*	5.0	*50*	0	*106*	*70-125*	53.57	*1.13*	*20*	
Surr: 4-Bromofluorobenzene	*50.81*	5.0	*50*	0	*102*	*72-125*	50.95	*0.27*	*20*	
Surr: Dibromofluoromethane	*51.74*	5.0	*50*	0	*103*	*71-125*	51.69	*0.106*	*20*	
Surr: Toluene-d8	*49.65*	5.0	*50*	0	*99.3*	*75-125*	49.55	*0.193*	*20*	

MS Sample ID: **1006600-03AMS** Units: **µg/L** Analysis Date: **6/25/2010 03:55 PM**

Client ID: Run ID: **VOA2_100625A** SeqNo: **2009793** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.96	5.0	50	0	104	78-120	0			
Benzene	45.98	5.0	50	0	92	73-121	0			
Chlorobenzene	47.18	5.0	50	0	94.4	80-120	0			
Dichloromethane	51.53	10	50	0	103	65-133	0			
Ethylbenzene	46.17	5.0	50	0	92.3	80-120	0			
Toluene	45.97	5.0	50	0	91.9	80-120	0			
Xylenes, Total	139.6	15	150	0	93.1	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.79*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.13*	5.0	*50*	0	*98.3*	*72-125*	0			
Surr: Dibromofluoromethane	*52.54*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*47.66*	5.0	*50*	0	*95.3*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93107** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1006600-03AMSD** Units: **µg/L** Analysis Date: **6/25/2010 04:19 PM**

Client ID: Run ID: **VOA2_100625A** SeqNo: **2009794** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	56.22	5.0	50	0	112	78-120	51.96	7.87	20	
Benzene	51.09	5.0	50	0	102	73-121	45.98	10.5	20	
Chlorobenzene	47.83	5.0	50	0	95.7	80-120	47.18	1.36	20	
Dichloromethane	48.8	10	50	0	97.6	65-133	51.53	5.44	20	
Ethylbenzene	47.39	5.0	50	0	94.8	80-120	46.17	2.61	20	
Toluene	46.83	5.0	50	0	93.7	80-120	45.97	1.84	20	
Xylenes, Total	141.9	15	150	0	94.6	80-120	139.6	1.65	20	
Surr: 1,2-Dichloroethane-d4	*51.42*	5.0	*50*	0	*103*	*70-125*	51.79	*0.725*	*20*	
Surr: 4-Bromofluorobenzene	*48.79*	5.0	*50*	0	*97.6*	*72-125*	49.13	*0.707*	*20*	
Surr: Dibromofluoromethane	*50.96*	5.0	*50*	0	*102*	*71-125*	52.54	*3.04*	*20*	
Surr: Toluene-d8	*47.59*	5.0	*50*	0	*95.2*	*75-125*	47.66	*0.141*	*20*	

The following samples were analyzed in this batch: 1006737-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93148** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062610-R93148** Units: **µg/L** Analysis Date: **6/26/2010 10:18 AM**

Client ID: Run ID: **VOA2_100626A** SeqNo: **2007957** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.79*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*46.65*	5.0	*50*	0	*93.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.66*	5.0	*50*	0	*99.3*	*71-125*	0			
Surr: Toluene-d8	*49.01*	5.0	*50*	0	*98*	*75-125*	0			

LCS Sample ID: **VLCSW-062610-R93148** Units: **µg/L** Analysis Date: **6/26/2010 09:07 AM**

Client ID: Run ID: **VOA2_100626A** SeqNo: **2007955** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.24	5.0	50	0	102	78-120	0			
Benzene	47.86	5.0	50	0	95.7	73-121	0			
Chlorobenzene	48.2	5.0	50	0	96.4	80-120	0			
Dichloromethane	54.9	10	50	0	110	65-133	0			
Ethylbenzene	49.42	5.0	50	0	98.8	80-120	0			
Toluene	47.59	5.0	50	0	95.2	80-120	0			
Xylenes, Total	146.3	15	150	0	97.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.91*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.65*	5.0	*50*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*53.13*	5.0	*50*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*47.87*	5.0	*50*	0	*95.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93148** Instrument ID **VOA2** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062610-R93148** Units: **µg/L** Analysis Date: **6/26/2010 09:30 AM**

Client ID: Run ID: **VOA2_100626A** SeqNo: **2007956** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.65	5.0	50	0	103	78-120	51.24	0.801	20	
Benzene	48.23	5.0	50	0	96.5	73-121	47.86	0.769	20	
Chlorobenzene	47.92	5.0	50	0	95.8	80-120	48.2	0.596	20	
Dichloromethane	55.37	10	50	0	111	65-133	54.9	0.851	20	
Ethylbenzene	48.62	5.0	50	0	97.2	80-120	49.42	1.63	20	
Toluene	47.68	5.0	50	0	95.4	80-120	47.59	0.186	20	
Xylenes, Total	146	15	150	0	97.3	80-120	146.3	0.226	20	
Surr: 1,2-Dichloroethane-d4	*51.92*	5.0	*50*	0	*104*	*70-125*	50.91	*1.96*	*20*	
Surr: 4-Bromofluorobenzene	*48.99*	5.0	*50*	0	*98*	*72-125*	48.65	*0.698*	*20*	
Surr: Dibromofluoromethane	*50.68*	5.0	*50*	0	*101*	*71-125*	53.13	*4.73*	*20*	
Surr: Toluene-d8	*47.87*	5.0	*50*	0	*95.7*	*75-125*	47.87	*0.00126*	*20*	

MS Sample ID: **1006638-04AMS** Units: **µg/L** Analysis Date: **6/26/2010 12:17 PM**

Client ID: Run ID: **VOA2_100626A** SeqNo: **2010026** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	53.22	5.0	50	0	106	78-120	0			
Benzene	48.48	5.0	50	1.465	94	73-121	0			
Chlorobenzene	46.76	5.0	50	0	93.5	80-120	0			
Dichloromethane	54.93	10	50	0	110	65-133	0			
Ethylbenzene	47.67	5.0	50	2.777	89.8	80-120	0			
Toluene	45.42	5.0	50	0	90.8	80-120	0			
Xylenes, Total	138	15	150	0.7735	91.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	*52.83*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.26*	5.0	*50*	0	*98.5*	*72-125*	0			
Surr: Dibromofluoromethane	*52.6*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*47.68*	5.0	*50*	0	*95.4*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93148** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1006638-04AMSD** Units: **µg/L** Analysis Date: **6/26/2010 12:41 PM**

Client ID: Run ID: **VOA2_100626A** SeqNo: **2010027** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.12	5.0	50	0	108	78-120	53.22	1.69	20	
Benzene	51.4	5.0	50	1.465	99.9	73-121	48.48	5.84	20	
Chlorobenzene	45.81	5.0	50	0	91.6	80-120	46.76	2.06	20	
Dichloromethane	46.56	10	50	0	93.1	65-133	54.93	16.5	20	
Ethylbenzene	47.62	5.0	50	2.777	89.7	80-120	47.67	0.103	20	
Toluene	44.3	5.0	50	0	88.6	80-120	45.42	2.49	20	
Xylenes, Total	137	15	150	0.7735	90.8	80-120	138	0.781	20	
Surr: 1,2-Dichloroethane-d4	*51.65*	5.0	*50*	0	*103*	*70-125*	52.83	*2.25*	*20*	
Surr: 4-Bromofluorobenzene	*49.48*	5.0	*50*	0	*99*	*72-125*	49.26	*0.462*	*20*	
Surr: Dibromofluoromethane	*51.49*	5.0	*50*	0	*103*	*71-125*	52.6	*2.14*	*20*	
Surr: Toluene-d8	*48.2*	5.0	*50*	0	*96.4*	*75-125*	47.68	*1.08*	*20*	

The following samples were analyzed in this batch: 1006737-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93199** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062510-R93199** Units: **µg/L** Analysis Date: **6/25/2010 11:11 AM**

Client ID: Run ID: **VOA1_100625A** SeqNo: **2009058** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*46.46*	5.0	*50*	0	*92.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.58*	5.0	*50*	0	*97.2*	*72-125*	0			
Surr: Dibromofluoromethane	*50.9*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*50.45*	5.0	*50*	0	*101*	*75-125*	0			

LCS Sample ID: **VLCSW-062510-R93199** Units: **µg/L** Analysis Date: **6/25/2010 10:19 AM**

Client ID: Run ID: **VOA1_100625A** SeqNo: **2009056** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.68	5.0	50	0	99.4	78-120	0			
Benzene	48.66	5.0	50	0	97.3	73-121	0			
Chlorobenzene	46.59	5.0	50	0	93.2	80-120	0			
Dichloromethane	45.68	10	50	0	91.4	65-133	0			
Ethylbenzene	49.91	5.0	50	0	99.8	80-120	0			
Toluene	47.43	5.0	50	0	94.9	80-120	0			
Xylenes, Total	154.9	15	150	0	103	80-120	0			
Surr: 1,2-Dichloroethane-d4	*45.18*	5.0	*50*	0	*90.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.42*	5.0	*50*	0	*105*	*72-125*	0			
Surr: Dibromofluoromethane	*50.13*	5.0	*50*	0	*100*	*71-125*	0			
Surr: Toluene-d8	*50.76*	5.0	*50*	0	*102*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93199** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1006722-21AMS** Units: **µg/L** Analysis Date: **6/25/2010 02:36 PM**

Client ID: Run ID: **VOA1_100625A** SeqNo: **2009069** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.03	5.0	50	0	108	78-120	0			
Benzene	48.75	5.0	50	0	97.5	73-121	0			
Chlorobenzene	44.34	5.0	50	0	88.7	80-120	0			
Dichloromethane	45.59	10	50	0	91.2	65-133	0			
Ethylbenzene	43.44	5.0	50	0	86.9	80-120	0			
Toluene	44.68	5.0	50	0	89.4	80-120	0			
Xylenes, Total	140.8	15	150	0	93.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*47.85*	5.0	*50*	0	*95.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.75*	5.0	*50*	0	*105*	*72-125*	0			
Surr: Dibromofluoromethane	*48.6*	5.0	*50*	0	*97.2*	*71-125*	0			
Surr: Toluene-d8	*50.44*	5.0	*50*	0	*101*	*75-125*	0			

MSD Sample ID: **1006722-21AMSD** Units: **µg/L** Analysis Date: **6/25/2010 03:02 PM**

Client ID: Run ID: **VOA1_100625A** SeqNo: **2009070** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.18	5.0	50	0	96.4	78-120	54.03	11.4	20	
Benzene	49	5.0	50	0	98	73-121	48.75	0.508	20	
Chlorobenzene	43.58	5.0	50	0	87.2	80-120	44.34	1.72	20	
Dichloromethane	47.21	10	50	0	94.4	65-133	45.59	3.5	20	
Ethylbenzene	44.48	5.0	50	0	89	80-120	43.44	2.35	20	
Toluene	45.64	5.0	50	0	91.3	80-120	44.68	2.14	20	
Xylenes, Total	141.8	15	150	0	94.6	80-120	140.8	0.767	20	
Surr: 1,2-Dichloroethane-d4	*47.53*	5.0	*50*	0	*95.1*	*70-125*	47.85	*0.665*	*20*	
Surr: 4-Bromofluorobenzene	*50.12*	5.0	*50*	0	*100*	*72-125*	52.75	*5.1*	*20*	
Surr: Dibromofluoromethane	*51.98*	5.0	*50*	0	*104*	*71-125*	48.6	*6.73*	*20*	
Surr: Toluene-d8	*52.73*	5.0	*50*	0	*105*	*75-125*	50.44	*4.44*	*20*	

The following samples were analyzed in this batch: 1006737-03A 1006737-11A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 01:06 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009707** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.5976	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.01*	5.0	*50*	0	*94*	*72-125*	0			
Surr: Dibromofluoromethane	*52.08*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 11:48 AM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.72	5.0	50	0	101	78-120	0			
Benzene	48.81	5.0	50	0	97.6	73-121	0			
Chlorobenzene	46.21	5.0	50	0	92.4	80-120	0			
Dichloromethane	45.01	10	50	0	90	65-133	0			
Ethylbenzene	47.14	5.0	50	0	94.3	80-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Xylenes, Total	149.7	15	150	0	99.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.7*	5.0	*50*	0	*89.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.87*	5.0	*50*	0	*95.7*	*71-125*	0			
Surr: Toluene-d8	*48.39*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 12:15 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.52	5.0	50	0	95	78-120	50.72	6.51	20	
Benzene	48.61	5.0	50	0	97.2	73-121	48.81	0.399	20	
Chlorobenzene	43.86	5.0	50	0	87.7	80-120	46.21	5.23	20	
Dichloromethane	46.52	10	50	0	93	65-133	45.01	3.3	20	
Ethylbenzene	46.89	5.0	50	0	93.8	80-120	47.14	0.515	20	
Toluene	43.02	5.0	50	0	86	80-120	48.68	12.3	20	
Xylenes, Total	142.2	15	150	0	94.8	80-120	149.7	5.1	20	
Surr: 1,2-Dichloroethane-d4	*46.81*	5.0	*50*	0	*93.6*	*70-125*	44.7	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.12*	5.0	*50*	0	*98.2*	*72-125*	50.69	*3.15*	*20*	
Surr: Dibromofluoromethane	*50.53*	5.0	*50*	0	*101*	*71-125*	47.87	*5.41*	*20*	
Surr: Toluene-d8	*47.32*	5.0	*50*	0	*94.6*	*75-125*	48.39	*2.22*	*20*	

MS Sample ID: **1006737-07AMS** Units: **µg/L** Analysis Date: **6/28/2010 03:16 PM**

Client ID: **WG-1620-MWX1-20100622** Run ID: **VOA1_100628A** SeqNo: **2010801** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.39	5.0	50	0	94.8	78-120	0			
Benzene	47.72	5.0	50	0	95.4	73-121	0			
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Dichloromethane	43.99	10	50	0	88	65-133	0			
Ethylbenzene	41.09	5.0	50	0	82.2	80-120	0			
Toluene	43.14	5.0	50	0	86.3	80-120	0			
Xylenes, Total	138	15	150	0	92	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.05*	5.0	*50*	0	*88.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.8*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*49.31*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006737-07AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:42 PM**

Client ID: **WG-1620-MWX1-20100622** Run ID: **VOA1_100628A** SeqNo: **2010802** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.82	5.0	50	0	93.6	78-120	47.39	1.21	20	
Benzene	44.08	5.0	50	0	88.2	73-121	47.72	7.93	20	
Chlorobenzene	45.04	5.0	50	0	90.1	80-120	43.5	3.48	20	
Dichloromethane	39.46	10	50	0	78.9	65-133	43.99	10.9	20	
Ethylbenzene	45	5.0	50	0	90	80-120	41.09	9.07	20	
Toluene	46.63	5.0	50	0	93.3	80-120	43.14	7.78	20	
Xylenes, Total	141.1	15	150	0	94.1	80-120	138	2.23	20	
Surr: 1,2-Dichloroethane-d4	*41.14*	5.0	*50*	0	*82.3*	*70-125*	44.05	*6.83*	*20*	
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	50.8	*1.67*	*20*	
Surr: Dibromofluoromethane	*46.87*	5.0	*50*	0	*93.7*	*71-125*	49.31	*5.08*	*20*	
Surr: Toluene-d8	*48.85*	5.0	*50*	0	*97.7*	*75-125*	47.82	*2.13*	*20*	

The following samples were analyzed in this batch: 1006737-06A 1006737-07A 1006737-08A 1006737-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 12:16 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011527** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.67*	5.0	*50*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.59*	5.0	*50*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*47.24*	5.0	*50*	0	*94.5*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 11:05 AM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011526** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.21	5.0	50	0	108	78-120	0			
Benzene	49.35	5.0	50	0	98.7	73-121	0			
Chlorobenzene	47.93	5.0	50	0	95.9	80-120	0			
Dichloromethane	58.21	10	50	0	116	65-133	0			
Ethylbenzene	46.2	5.0	50	0	92.4	80-120	0			
Toluene	47.36	5.0	50	0	94.7	80-120	0			
Xylenes, Total	138.5	15	150	0	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*52.75*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	0			
Surr: Dibromofluoromethane	*51.79*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.37*	5.0	*50*	0	*96.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006737
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1006737-05AMS** Units: **µg/L** Analysis Date: **6/28/2010 02:39 PM**

Client ID: **WG-1620-MW12A-20100622** Run ID: **VOA2_100628C** SeqNo: **2011529** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.83	5.0	50	0	112	78-120	0			
Benzene	51.74	5.0	50	0	103	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	48.93	10	50	0	97.9	65-133	0			
Ethylbenzene	46.92	5.0	50	0.5648	92.7	80-120	0			
Toluene	45.5	5.0	50	0	91	80-120	0			
Xylenes, Total	141.2	15	150	2.629	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.75*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.33*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*51.56*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*47.99*	5.0	*50*	0	*96*	*75-125*	0			

MSD Sample ID: **1006737-05AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:03 PM**

Client ID: **WG-1620-MW12A-20100622** Run ID: **VOA2_100628C** SeqNo: **2011530** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.37	5.0	50	0	101	78-120	55.83	10.3	20	
Benzene	47.3	5.0	50	0	94.6	73-121	51.74	8.95	20	
Chlorobenzene	46.48	5.0	50	0	93	80-120	46.49	0.00964	20	
Dichloromethane	49.75	10	50	0	99.5	65-133	48.93	1.66	20	
Ethylbenzene	47.51	5.0	50	0.5648	93.9	80-120	46.92	1.24	20	
Toluene	46.51	5.0	50	0	93	80-120	45.5	2.19	20	
Xylenes, Total	143.5	15	150	2.629	93.9	80-120	141.2	1.64	20	
Surr: 1,2-Dichloroethane-d4	*51.04*	5.0	*50*	0	*102*	*70-125*	50.75	*0.568*	*20*	
Surr: 4-Bromofluorobenzene	*49.68*	5.0	*50*	0	*99.4*	*72-125*	49.33	*0.709*	*20*	
Surr: Dibromofluoromethane	*51.04*	5.0	*50*	0	*102*	*71-125*	51.56	*1.01*	*20*	
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	47.99	*5.12*	*20*	

The following samples were analyzed in this batch: 1006737-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 12-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1006737**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 2

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | **ALS Work Order #:** 1000151

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW21C-20100622	6-22-10	0815	W		5	X	X									
2	WG-1620-MW14-20100622	6-22-10	0915	W		5	X	X									
3	WG-1620-MW39B-20100622	6-22-10	1020	W		5	X	X									
4	WG-1620-MW12C-20100622	6-22-10	1110	W		5	X	X									
5	WG-1620-MW12A-20100622	6-22-10	1240	W		5	X	X									
6	WG-1620-MW40B-20100622	6-22-10	1345	W		5	X	X									
7	WG-1620-MWX1-20100622	6-22-10	0815	W		5	X	X									
8	WG-1620-P11-20100622	6-22-10	1450	W		5	X	X									
9	WG-1620-TB1-20100622	6-22-10		W		2	X										
10	WG-1620-MW13-20100622	6-22-10	1550	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☐ ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton **Date:** 6-23-10 **Time:** 0830 **Received by:** [illegible] 1023-10 0830

Relinquished by: **Date:** **Time:** **Received by (Laboratory):**

Logged by (Laboratory): **Date:** **Time:** **Checked by (Laboratory):**

Notes: 10 Work Days TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Check List
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

1006731

ALS Project Manager: | ALS Work Order #: 1006731-530230

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-FB1-20100622	6-22-10	1630	W		5	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 1 | 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 6/23/10 Time: 0825

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 06/23/10 0825

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **23-Jun-10 07:35**

Work Order: **1006737** Received by: **RSZ**

Checklist completed by Richard Sanchez (eSignature) 23-Jun-10 (Date) Reviewed by: Shannon L. Tyrell (eSignature) 24-Jun-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2c, 2.6c	002	
Cooler(s)/Kit(s):	1925,3280		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

14-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1006821**

Dear Eric,

ALS Laboratory Group received 11 samples on 24-Jun-2010 07:46 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 43.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Chris Bryson

R. Kevin Given
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1006821

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1006821**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1006821-01	WG-1620-MW15A-20100623	Water		6/23/2010 08:45	6/24/2010 07:46	☐
1006821-02	WG-1620-MW15C-20100623	Water		6/23/2010 09:35	6/24/2010 07:46	☐
1006821-03	WG-1620-MW16-20100623	Water		6/23/2010 10:20	6/24/2010 07:46	☐
1006821-04	WG-1620-MW19C-20100623	Water		6/23/2010 11:15	6/24/2010 07:46	☐
1006821-05	WG-1620-MW17-20100623	Water		6/23/2010 12:00	6/24/2010 07:46	☐
1006821-06	WG-1620-MW17C-20100623	Water		6/23/2010 13:05	6/24/2010 07:46	☐
1006821-07	WG-1620-MW23C-20100623	Water		6/23/2010 14:00	6/24/2010 07:46	☐
1006821-08	WG-1620-FB02-20100623	Water		6/23/2010 14:30	6/24/2010 07:46	☐
1006821-09	WG-1620-MW57A-20100623	Water		6/23/2010 15:20	6/24/2010 07:46	☐
1006821-10	WG-1620-MW58A-20100623	Water		6/23/2010 16:15	6/24/2010 07:46	☐
1006821-11	WG-1620-TB2-20100623	Water		6/23/2010	6/24/2010 07:46	☐

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW15A-20100623
Collection Date: 6/23/2010 08:45 AM

Work Order: 1006821
Lab ID: 1006821-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 17:02
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 17:02
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 17:02
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 17:02
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 17:02
2-Methylnaphthalene	**42**		**1.8**	**5.0**	**µg/L**	25	7/10/2010 19:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 17:02
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 17:02
Acenaphthene	**160**		**2.2**	**5.0**	**µg/L**	25	7/10/2010 19:23
Acenaphthylene	**0.97**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:02
Anthracene	**4.9**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:02
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 17:02
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 17:02
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 17:02
Bis(2-ethylhexyl)phthalate	**0.84**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 17:02
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 17:02
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 17:02
Dibenzofuran	**48**		**2.0**	**5.0**	**µg/L**	25	7/10/2010 19:23
Fluoranthene	**2.0**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:02
Fluorene	**62**		**1.8**	**5.0**	**µg/L**	25	7/10/2010 19:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 17:02
Naphthalene	**36**		**2.5**	**5.0**	**µg/L**	25	7/10/2010 19:23
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 17:02
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 17:02
Phenanthrene	**12**		**1.8**	**5.0**	**µg/L**	25	7/10/2010 19:23
Phenol	**0.20**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:02
Pyrene	**0.76**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:02
Surr: 2,4,6-Tribromophenol	*57.4*			*34-129*	*%REC*	1	7/9/2010 17:02
Surr: 2,4,6-Tribromophenol	*72.1*	J		*34-129*	*%REC*	25	7/10/2010 19:23
Surr: 2-Fluorobiphenyl	*56.1*			*40-125*	*%REC*	1	7/9/2010 17:02
Surr: 2-Fluorobiphenyl	*67.3*	J		*40-125*	*%REC*	25	7/10/2010 19:23
Surr: 2-Fluorophenol	*61.9*			*20-120*	*%REC*	1	7/9/2010 17:02
Surr: 2-Fluorophenol	*58.3*	J		*20-120*	*%REC*	25	7/10/2010 19:23
Surr: 4-Terphenyl-d14	*73.2*			*40-135*	*%REC*	1	7/9/2010 17:02
Surr: 4-Terphenyl-d14	*69.0*	J		*40-135*	*%REC*	25	7/10/2010 19:23
Surr: Nitrobenzene-d5	*64.6*			*41-120*	*%REC*	1	7/9/2010 17:02
Surr: Nitrobenzene-d5	*82.1*	J		*41-120*	*%REC*	25	7/10/2010 19:23
Surr: Phenol-d6	*55.4*			*20-120*	*%REC*	1	7/9/2010 17:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW15A-20100623
Collection Date: 6/23/2010 08:45 AM

Work Order: 1006821
Lab ID: 1006821-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*65.8*	J		*20-120*	*%REC*	25	7/10/2010 19:23
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:26
Benzene	**1.7**	J	**0.50**	**5.0**	**µg/L**	1	6/28/2010 17:26
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:26
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 17:26
Ethylbenzene	**1.7**	J	**0.50**	**5.0**	**µg/L**	1	6/28/2010 17:26
Toluene	**0.55**	J	**0.50**	**5.0**	**µg/L**	1	6/28/2010 17:26
Xylenes, Total	**4.7**	J	**1.0**	**15**	**µg/L**	1	6/28/2010 17:26
Surr: 1,2-Dichloroethane-d4	*92.4*			*70-125*	*%REC*	1	6/28/2010 17:26
Surr: 4-Bromofluorobenzene	*95.2*			*72-125*	*%REC*	1	6/28/2010 17:26
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	6/28/2010 17:26
Surr: Toluene-d8	*96.1*			*75-125*	*%REC*	1	6/28/2010 17:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW15C-20100623
Collection Date: 6/23/2010 09:35 AM

Work Order: 1006821
Lab ID: 1006821-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 17:23
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 17:23
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 17:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 17:23
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 17:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 17:23
Acenaphthene	**13**		**0.36**	**0.80**	**µg/L**	4	7/10/2010 19:43
Acenaphthylene	**0.62**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:23
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 17:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 17:23
Bis(2-ethylhexyl)phthalate	**0.59**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 17:23
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Dibenzofuran	**5.0**		**0.080**	**0.20**	**µg/L**	1	7/9/2010 17:23
Fluoranthene	**0.20**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:23
Fluorene	**0.71**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 17:23
Naphthalene	**0.94**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 17:23
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 17:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 17:23
Phenanthrene	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 17:23
Pyrene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:23
Surr: 2,4,6-Tribromophenol	*53.7*			*34-129*	*%REC*	1	7/9/2010 17:23
Surr: 2,4,6-Tribromophenol	*64.5*			*34-129*	*%REC*	4	7/10/2010 19:43
Surr: 2-Fluorobiphenyl	*47.7*			*40-125*	*%REC*	1	7/9/2010 17:23
Surr: 2-Fluorobiphenyl	*53.2*			*40-125*	*%REC*	4	7/10/2010 19:43
Surr: 2-Fluorophenol	*49.0*			*20-120*	*%REC*	1	7/9/2010 17:23
Surr: 2-Fluorophenol	*53.6*			*20-120*	*%REC*	4	7/10/2010 19:43
Surr: 4-Terphenyl-d14	*64.7*			*40-135*	*%REC*	1	7/9/2010 17:23
Surr: 4-Terphenyl-d14	*67.3*			*40-135*	*%REC*	4	7/10/2010 19:43
Surr: Nitrobenzene-d5	*57.5*			*41-120*	*%REC*	1	7/9/2010 17:23
Surr: Nitrobenzene-d5	*57.5*			*41-120*	*%REC*	4	7/10/2010 19:43
Surr: Phenol-d6	*54.0*			*20-120*	*%REC*	1	7/9/2010 17:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW15C-20100623
Collection Date: 6/23/2010 09:35 AM

Work Order: 1006821
Lab ID: 1006821-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*55.9*			*20-120*	*%REC*	4	7/10/2010 19:43
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:01
Benzene	**1.0**	J	**0.50**	**5.0**	**µg/L**	1	6/28/2010 17:01
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:01
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 17:01
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:01
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 17:01
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 17:01
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	6/28/2010 17:01
Surr: 4-Bromofluorobenzene	*99.0*			*72-125*	*%REC*	1	6/28/2010 17:01
Surr: Dibromofluoromethane	*98.2*			*71-125*	*%REC*	1	6/28/2010 17:01
Surr: Toluene-d8	*96.6*			*75-125*	*%REC*	1	6/28/2010 17:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW16-20100623
Collection Date: 6/23/2010 10:20 AM

Work Order: 1006821
Lab ID: 1006821-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 17:44
2,4-Dimethylphenol	**5.4**		**0.080**	**0.20**	**µg/L**	1	7/9/2010 17:44
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 17:44
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 17:44
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 17:44
2-Methylnaphthalene	**40**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:04
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 17:44
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 17:44
Acenaphthene	**180**		**4.5**	**10**	**µg/L**	50	7/11/2010 16:21
Acenaphthylene	**3.1**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:44
Anthracene	**7.6**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:44
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 17:44
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 17:44
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 17:44
Bis(2-ethylhexyl)phthalate	**1.4**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 17:44
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 17:44
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 17:44
Dibenzofuran	**91**		**0.80**	**2.0**	**µg/L**	10	7/10/2010 20:04
Fluoranthene	**4.9**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:44
Fluorene	**86**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:04
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 17:44
Naphthalene	**1,400**		**20**	**40**	**µg/L**	200	7/11/2010 18:44
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 17:44
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 17:44
Phenanthrene	**42**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:04
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 17:44
Pyrene	**2.5**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 17:44
Surr: 2,4,6-Tribromophenol	*63.1*			*34-129*	*%REC*	1	7/9/2010 17:44
Surr: 2,4,6-Tribromophenol	*63.4*			*34-129*	*%REC*	10	7/10/2010 20:04
Surr: 2,4,6-Tribromophenol	*76.2*	J		*34-129*	*%REC*	50	7/11/2010 16:21
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	200	7/11/2010 18:44
Surr: 2-Fluorobiphenyl	*41.4*			*40-125*	*%REC*	1	7/9/2010 17:44
Surr: 2-Fluorobiphenyl	*51.9*			*40-125*	*%REC*	10	7/10/2010 20:04
Surr: 2-Fluorobiphenyl	*64.6*	J		*40-125*	*%REC*	50	7/11/2010 16:21
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	200	7/11/2010 18:44
Surr: 2-Fluorophenol	*59.5*			*20-120*	*%REC*	1	7/9/2010 17:44
Surr: 2-Fluorophenol	*50.4*			*20-120*	*%REC*	10	7/10/2010 20:04
Surr: 2-Fluorophenol	*53.4*	J		*20-120*	*%REC*	50	7/11/2010 16:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW16-20100623
Collection Date: 6/23/2010 10:20 AM

Work Order: 1006821
Lab ID: 1006821-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	200	7/11/2010 18:44
Surr: 4-Terphenyl-d14	*62.6*			*40-135*	*%REC*	1	7/9/2010 17:44
Surr: 4-Terphenyl-d14	*68.8*			*40-135*	*%REC*	10	7/10/2010 20:04
Surr: 4-Terphenyl-d14	*81.9*	J		*40-135*	*%REC*	50	7/11/2010 16:21
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	200	7/11/2010 18:44
Surr: Nitrobenzene-d5	*63.0*			*41-120*	*%REC*	1	7/9/2010 17:44
Surr: Nitrobenzene-d5	*59.7*			*41-120*	*%REC*	10	7/10/2010 20:04
Surr: Nitrobenzene-d5	*69.9*	J		*41-120*	*%REC*	50	7/11/2010 16:21
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	200	7/11/2010 18:44
Surr: Phenol-d6	*51.1*			*20-120*	*%REC*	1	7/9/2010 17:44
Surr: Phenol-d6	*43.4*			*20-120*	*%REC*	10	7/10/2010 20:04
Surr: Phenol-d6	*57.0*	J		*20-120*	*%REC*	50	7/11/2010 16:21
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	200	7/11/2010 18:44
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	6/28/2010 18:44
Benzene	**58**		**2.5**	**25**	**µg/L**	5	6/28/2010 18:44
Chlorobenzene	U		2.5	25	µg/L	5	6/28/2010 18:44
Dichloromethane	**6.2**	J	**2.5**	**50**	**µg/L**	5	6/28/2010 18:44
Ethylbenzene	**32**		**2.5**	**25**	**µg/L**	5	6/28/2010 18:44
Toluene	**10**	J	**2.5**	**25**	**µg/L**	5	6/28/2010 18:44
Xylenes, Total	**40**	J	**5.0**	**75**	**µg/L**	5	6/28/2010 18:44
Surr: 1,2-Dichloroethane-d4	*98.9*			*70-125*	*%REC*	5	6/28/2010 18:44
Surr: 4-Bromofluorobenzene	*95.1*			*72-125*	*%REC*	5	6/28/2010 18:44
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	5	6/28/2010 18:44
Surr: Toluene-d8	*93.4*			*75-125*	*%REC*	5	6/28/2010 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW19C-20100623
Collection Date: 6/23/2010 11:15 AM

Work Order: 1006821
Lab ID: 1006821-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	**0.24**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 18:04
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 18:04
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 18:04
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 18:04
2-Methylnaphthalene	**0.079**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:04
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 18:04
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 18:04
Acenaphthene	**0.12**	J	**0.090**	**0.20**	**µg/L**	1	7/9/2010 18:04
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 18:04
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 18:04
Bis(2-ethylhexyl)phthalate	**0.36**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 18:04
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Dibenzofuran	U		0.080	0.20	µg/L	1	7/9/2010 18:04
Fluoranthene	**2.1**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:04
Fluorene	**0.28**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:04
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 18:04
Naphthalene	**1.5**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 18:04
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 18:04
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 18:04
Phenanthrene	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 18:04
Pyrene	**1.2**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:04
Surr: 2,4,6-Tribromophenol	*49.7*			*34-129*	*%REC*	1	7/9/2010 18:04
Surr: 2-Fluorobiphenyl	*40.5*			*40-125*	*%REC*	1	7/9/2010 18:04
Surr: 2-Fluorophenol	*30.5*			*20-120*	*%REC*	1	7/9/2010 18:04
Surr: 4-Terphenyl-d14	*56.0*			*40-135*	*%REC*	1	7/9/2010 18:04
Surr: Nitrobenzene-d5	*41.7*			*41-120*	*%REC*	1	7/9/2010 18:04
Surr: Phenol-d6	*32.1*			*20-120*	*%REC*	1	7/9/2010 18:04
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:25
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 17:25
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:25
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 17:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW19C-20100623
Collection Date: 6/23/2010 11:15 AM

Work Order: 1006821
Lab ID: 1006821-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:25
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 17:25
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 17:25
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	6/28/2010 17:25
Surr: 4-Bromofluorobenzene	*95.9*			*72-125*	*%REC*	1	6/28/2010 17:25
Surr: Dibromofluoromethane	*96.5*			*71-125*	*%REC*	1	6/28/2010 17:25
Surr: Toluene-d8	*93.5*			*75-125*	*%REC*	1	6/28/2010 17:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW17-20100623
Collection Date: 6/23/2010 12:00 PM

Work Order: 1006821
Lab ID: 1006821-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		1.0	2.0	µg/L	10	7/10/2010 20:24
2,4-Dimethylphenol	**13,000**		**400**	**1,000**	**µg/L**	5000	7/11/2010 19:04
2,4-Dinitrotoluene	U		0.90	2.0	µg/L	10	7/10/2010 20:24
2,6-Dinitrotoluene	U		0.70	2.0	µg/L	10	7/10/2010 20:24
2-Chloronaphthalene	U		1.0	2.0	µg/L	10	7/10/2010 20:24
2-Methylnaphthalene	**390**		**7.0**	**20**	**µg/L**	100	7/10/2010 20:45
4,6-Dinitro-2-methylphenol	U		0.80	2.0	µg/L	10	7/10/2010 20:24
4-Nitrophenol	U		0.70	10	µg/L	10	7/10/2010 20:24
Acenaphthene	**71**		**0.90**	**2.0**	**µg/L**	10	7/10/2010 20:24
Acenaphthylene	**3.0**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
Anthracene	**7.5**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
Benz(a)anthracene	U		0.70	2.0	µg/L	10	7/10/2010 20:24
Benzo(a)pyrene	U		0.80	2.0	µg/L	10	7/10/2010 20:24
Bis(2-chloroethoxy)methane	U		0.90	2.0	µg/L	10	7/10/2010 20:24
Bis(2-ethylhexyl)phthalate	U		2.0	2.0	µg/L	10	7/10/2010 20:24
Chrysene	U		0.70	2.0	µg/L	10	7/10/2010 20:24
Di-n-butyl phthalate	U		0.70	2.0	µg/L	10	7/10/2010 20:24
Dibenzofuran	**65**		**0.80**	**2.0**	**µg/L**	10	7/10/2010 20:24
Fluoranthene	**2.2**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
Fluorene	**39**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
N-Nitrosodiphenylamine	U		0.90	2.0	µg/L	10	7/10/2010 20:24
Naphthalene	**15,000**		**500**	**1,000**	**µg/L**	5000	7/11/2010 19:04
Nitrobenzene	U		0.90	2.0	µg/L	10	7/10/2010 20:24
Pentachlorophenol	U		0.80	2.0	µg/L	10	7/10/2010 20:24
Phenanthrene	**33**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
Phenol	**19,000**		**350**	**1,000**	**µg/L**	5000	7/11/2010 19:04
Pyrene	**1.2**	J	**0.70**	**2.0**	**µg/L**	10	7/10/2010 20:24
Surr: 2,4,6-Tribromophenol	*43.4*			*34-129*	*%REC*	10	7/10/2010 20:24
Surr: 2,4,6-Tribromophenol	*106*	J		*34-129*	*%REC*	100	7/10/2010 20:45
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	5000	7/11/2010 19:04
Surr: 2-Fluorobiphenyl	*41.6*			*40-125*	*%REC*	10	7/10/2010 20:24
Surr: 2-Fluorobiphenyl	*72.0*	J		*40-125*	*%REC*	100	7/10/2010 20:45
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	5000	7/11/2010 19:04
Surr: 2-Fluorophenol	*86.0*			*20-120*	*%REC*	10	7/10/2010 20:24
Surr: 2-Fluorophenol	*103*	J		*20-120*	*%REC*	100	7/10/2010 20:45
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	5000	7/11/2010 19:04
Surr: 4-Terphenyl-d14	*43.9*			*40-135*	*%REC*	10	7/10/2010 20:24
Surr: 4-Terphenyl-d14	*87.9*	J		*40-135*	*%REC*	100	7/10/2010 20:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW17-20100623
Collection Date: 6/23/2010 12:00 PM

Work Order: 1006821
Lab ID: 1006821-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	5000	7/11/2010 19:04
Surr: Nitrobenzene-d5	*55.2*			*41-120*	*%REC*	10	7/10/2010 20:24
Surr: Nitrobenzene-d5	*113*	J		*41-120*	*%REC*	100	7/10/2010 20:45
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	5000	7/11/2010 19:04
Surr: Phenol-d6	*54.6*			*20-120*	*%REC*	10	7/10/2010 20:24
Surr: Phenol-d6	*111*	J		*20-120*	*%REC*	100	7/10/2010 20:45
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	5000	7/11/2010 19:04
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	6/28/2010 19:11
Benzene	**650**		**2.5**	**25**	**µg/L**	5	6/28/2010 19:11
Chlorobenzene	U		2.5	25	µg/L	5	6/28/2010 19:11
Dichloromethane	**5.6**	J	**2.5**	**50**	**µg/L**	5	6/28/2010 19:11
Ethylbenzene	**200**		**2.5**	**25**	**µg/L**	5	6/28/2010 19:11
Toluene	**880**		**2.5**	**25**	**µg/L**	5	6/28/2010 19:11
Xylenes, Total	**610**		**5.0**	**75**	**µg/L**	5	6/28/2010 19:11
Surr: 1,2-Dichloroethane-d4	*94.9*			*70-125*	*%REC*	5	6/28/2010 19:11
Surr: 4-Bromofluorobenzene	*108*			*72-125*	*%REC*	5	6/28/2010 19:11
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	5	6/28/2010 19:11
Surr: Toluene-d8	*106*			*75-125*	*%REC*	5	6/28/2010 19:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW17C-20100623
Collection Date: 6/23/2010 01:05 PM

Work Order: 1006821
Lab ID: 1006821-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 18:47
2,4-Dimethylphenol	**1.8**		**0.080**	**0.20**	**µg/L**	1	7/9/2010 18:47
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 18:47
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 18:47
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 18:47
2-Methylnaphthalene	**99**		**3.5**	**10**	**µg/L**	50	7/11/2010 17:09
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 18:47
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 18:47
Acenaphthene	**140**		**4.5**	**10**	**µg/L**	50	7/11/2010 17:09
Acenaphthylene	**1.6**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Anthracene	**7.1**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Benz(a)anthracene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 18:47
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 18:47
Bis(2-ethylhexyl)phthalate	**1.8**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 18:47
Chrysene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 18:47
Dibenzofuran	**130**		**4.0**	**10**	**µg/L**	50	7/11/2010 17:09
Fluoranthene	**5.0**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Fluorene	**69**		**3.5**	**10**	**µg/L**	50	7/11/2010 17:09
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 18:47
Naphthalene	**3,400**		**100**	**200**	**µg/L**	1000	7/11/2010 19:25
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 18:47
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 18:47
Phenanthrene	**80**		**3.5**	**10**	**µg/L**	50	7/11/2010 17:09
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 18:47
Pyrene	**2.6**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 18:47
Surr: 2,4,6-Tribromophenol	*52.2*			*34-129*	*%REC*	1	7/9/2010 18:47
Surr: 2,4,6-Tribromophenol	*70.9*	J		*34-129*	*%REC*	50	7/11/2010 17:09
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	7/11/2010 19:25
Surr: 2-Fluorobiphenyl	*48.8*			*40-125*	*%REC*	1	7/9/2010 18:47
Surr: 2-Fluorobiphenyl	*69.6*	J		*40-125*	*%REC*	50	7/11/2010 17:09
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	7/11/2010 19:25
Surr: 2-Fluorophenol	*94.0*			*20-120*	*%REC*	1	7/9/2010 18:47
Surr: 2-Fluorophenol	*106*	J		*20-120*	*%REC*	50	7/11/2010 17:09
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	7/11/2010 19:25
Surr: 4-Terphenyl-d14	*64.0*			*40-135*	*%REC*	1	7/9/2010 18:47
Surr: 4-Terphenyl-d14	*81.4*	J		*40-135*	*%REC*	50	7/11/2010 17:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW17C-20100623
Collection Date: 6/23/2010 01:05 PM

Work Order: 1006821
Lab ID: 1006821-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	7/11/2010 19:25
Surr: Nitrobenzene-d5	*51.9*			*41-120*	*%REC*	1	7/9/2010 18:47
Surr: Nitrobenzene-d5	*67.7*	J		*41-120*	*%REC*	50	7/11/2010 17:09
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	7/11/2010 19:25
Surr: Phenol-d6	*62.1*			*20-120*	*%REC*	1	7/9/2010 18:47
Surr: Phenol-d6	*83.0*	J		*20-120*	*%REC*	50	7/11/2010 17:09
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	7/11/2010 19:25
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 19:01
Benzene	**24**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 19:01
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 19:01
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 19:01
Ethylbenzene	**200**		**5.0**	**50**	**µg/L**	10	6/29/2010 16:37
Toluene	**7.1**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 19:01
Xylenes, Total	**330**		**1.0**	**15**	**µg/L**	1	6/28/2010 19:01
Surr: 1,2-Dichloroethane-d4	*100*			*70-125*	*%REC*	1	6/28/2010 19:01
Surr: 1,2-Dichloroethane-d4	*78.9*			*70-125*	*%REC*	10	6/29/2010 16:37
Surr: 4-Bromofluorobenzene	*97.5*			*72-125*	*%REC*	1	6/28/2010 19:01
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	10	6/29/2010 16:37
Surr: Dibromofluoromethane	*95.8*			*71-125*	*%REC*	1	6/28/2010 19:01
Surr: Dibromofluoromethane	*86.4*			*71-125*	*%REC*	10	6/29/2010 16:37
Surr: Toluene-d8	*95.3*			*75-125*	*%REC*	1	6/28/2010 19:01
Surr: Toluene-d8	*97.4*			*75-125*	*%REC*	10	6/29/2010 16:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW23C-20100623
Collection Date: 6/23/2010 02:00 PM

Work Order: 1006821
Lab ID: 1006821-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		5.0	10	µg/L	50	7/10/2010 21:26
2,4-Dimethylphenol	U		4.0	10	µg/L	50	7/10/2010 21:26
2,4-Dinitrotoluene	U		4.5	10	µg/L	50	7/10/2010 21:26
2,6-Dinitrotoluene	U		3.5	10	µg/L	50	7/10/2010 21:26
2-Chloronaphthalene	U		5.0	10	µg/L	50	7/10/2010 21:26
2-Methylnaphthalene	**2,700**		**35**	**100**	**µg/L**	500	7/11/2010 17:29
4,6-Dinitro-2-methylphenol	U		4.0	10	µg/L	50	7/10/2010 21:26
4-Nitrophenol	U		3.5	50	µg/L	50	7/10/2010 21:26
Acenaphthene	**3,400**		**45**	**100**	**µg/L**	500	7/11/2010 17:29
Acenaphthylene	**30**		**3.5**	**10**	**µg/L**	50	7/10/2010 21:26
Anthracene	**1,200**		**35**	**100**	**µg/L**	500	7/11/2010 17:29
Benz(a)anthracene	**300**		**3.5**	**10**	**µg/L**	50	7/10/2010 21:26
Benzo(a)pyrene	**93**		**4.0**	**10**	**µg/L**	50	7/10/2010 21:26
Bis(2-chloroethoxy)methane	U		4.5	10	µg/L	50	7/10/2010 21:26
Bis(2-ethylhexyl)phthalate	U		10	10	µg/L	50	7/10/2010 21:26
Chrysene	**270**		**3.5**	**10**	**µg/L**	50	7/10/2010 21:26
Di-n-butyl phthalate	U		3.5	10	µg/L	50	7/10/2010 21:26
Dibenzofuran	**3,600**		**40**	**100**	**µg/L**	500	7/11/2010 17:29
Fluoranthene	**3,000**		**35**	**100**	**µg/L**	500	7/11/2010 17:29
Fluorene	**2,600**		**35**	**100**	**µg/L**	500	7/11/2010 17:29
N-Nitrosodiphenylamine	U		4.5	10	µg/L	50	7/10/2010 21:26
Naphthalene	**8,900**		**200**	**400**	**µg/L**	2000	7/11/2010 19:45
Nitrobenzene	U		4.5	10	µg/L	50	7/10/2010 21:26
Pentachlorophenol	U		4.0	10	µg/L	50	7/10/2010 21:26
Phenanthrene	**8,200**		**140**	**400**	**µg/L**	2000	7/11/2010 19:45
Phenol	U		3.5	10	µg/L	50	7/10/2010 21:26
Pyrene	**1,900**		**35**	**100**	**µg/L**	500	7/11/2010 17:29
Surr: 2,4,6-Tribromophenol	*61.7*	J		*34-129*	*%REC*	50	7/10/2010 21:26
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/11/2010 17:29
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	7/11/2010 19:45
Surr: 2-Fluorobiphenyl	*73.6*	J		*40-125*	*%REC*	50	7/10/2010 21:26
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/11/2010 17:29
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	7/11/2010 19:45
Surr: 2-Fluorophenol	*88.5*	J		*20-120*	*%REC*	50	7/10/2010 21:26
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/11/2010 17:29
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	7/11/2010 19:45
Surr: 4-Terphenyl-d14	*60.6*	J		*40-135*	*%REC*	50	7/10/2010 21:26
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/11/2010 17:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW23C-20100623
Collection Date: 6/23/2010 02:00 PM

Work Order: 1006821
Lab ID: 1006821-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	7/11/2010 19:45
Surr: Nitrobenzene-d5	*86.3*	J		*41-120*	*%REC*	50	7/10/2010 21:26
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/11/2010 17:29
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	7/11/2010 19:45
Surr: Phenol-d6	*84.4*	J		*20-120*	*%REC*	50	7/10/2010 21:26
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/11/2010 17:29
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	7/11/2010 19:45
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	6/28/2010 19:37
Benzene	**9.5**	J	**5.0**	**50**	**µg/L**	10	6/28/2010 19:37
Chlorobenzene	U		5.0	50	µg/L	10	6/28/2010 19:37
Dichloromethane	**9.2**	J	**5.0**	**100**	**µg/L**	10	6/28/2010 19:37
Ethylbenzene	**120**		**5.0**	**50**	**µg/L**	10	6/28/2010 19:37
Toluene	U		5.0	50	µg/L	10	6/28/2010 19:37
Xylenes, Total	**69**	J	**10**	**150**	**µg/L**	10	6/28/2010 19:37
Surr: 1,2-Dichloroethane-d4	*89.7*			*70-125*	*%REC*	10	6/28/2010 19:37
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	10	6/28/2010 19:37
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	10	6/28/2010 19:37
Surr: Toluene-d8	*102*			*75-125*	*%REC*	10	6/28/2010 19:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB02-20100623
Collection Date: 6/23/2010 02:30 PM

Work Order: 1006821
Lab ID: 1006821-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/10/2010 18:25
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/10/2010 18:25
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/10/2010 18:25
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/10/2010 18:25
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/10/2010 18:25
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/10/2010 18:25
Acenaphthene	U		0.090	0.20	µg/L	1	7/10/2010 18:25
Acenaphthylene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Anthracene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/10/2010 18:25
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/10/2010 18:25
Bis(2-ethylhexyl)phthalate	**0.37**		**0.20**	**0.20**	**µg/L**	1	7/10/2010 18:25
Chrysene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Dibenzofuran	U		0.080	0.20	µg/L	1	7/10/2010 18:25
Fluoranthene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Fluorene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/10/2010 18:25
Naphthalene	**0.38**		**0.10**	**0.20**	**µg/L**	1	7/10/2010 18:25
Nitrobenzene	U		0.090	0.20	µg/L	1	7/10/2010 18:25
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/10/2010 18:25
Phenanthrene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Phenol	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Pyrene	U		0.070	0.20	µg/L	1	7/10/2010 18:25
Surr: 2,4,6-Tribromophenol	*34.9*			*34-129*	*%REC*	1	7/10/2010 18:25
Surr: 2-Fluorobiphenyl	*56.9*			*40-125*	*%REC*	1	7/10/2010 18:25
Surr: 2-Fluorophenol	*51.2*			*20-120*	*%REC*	1	7/10/2010 18:25
Surr: 4-Terphenyl-d14	*62.3*			*40-135*	*%REC*	1	7/10/2010 18:25
Surr: Nitrobenzene-d5	*60.3*			*41-120*	*%REC*	1	7/10/2010 18:25
Surr: Phenol-d6	*58.9*			*20-120*	*%REC*	1	7/10/2010 18:25
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 16:37
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 16:37
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 16:37
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 16:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB02-20100623
Collection Date: 6/23/2010 02:30 PM

Work Order: 1006821
Lab ID: 1006821-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 16:37
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 16:37
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 16:37
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	6/28/2010 16:37
Surr: 4-Bromofluorobenzene	*96.5*			*72-125*	*%REC*	1	6/28/2010 16:37
Surr: Dibromofluoromethane	*98.4*			*71-125*	*%REC*	1	6/28/2010 16:37
Surr: Toluene-d8	*95.5*			*75-125*	*%REC*	1	6/28/2010 16:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW57A-20100623
Collection Date: 6/23/2010 03:20 PM

Work Order: 1006821
Lab ID: 1006821-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/9/2010 19:48
2,4-Dimethylphenol	**2,700**		**40**	**100**	**µg/L**	500	7/11/2010 17:50
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/9/2010 19:48
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/9/2010 19:48
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/9/2010 19:48
2-Methylnaphthalene	**3,500**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/9/2010 19:48
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/9/2010 19:48
Acenaphthene	**2,000**		**45**	**100**	**µg/L**	500	7/11/2010 17:50
Acenaphthylene	**20**		**0.35**	**1.0**	**µg/L**	5	7/9/2010 19:48
Anthracene	**900**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Benz(a)anthracene	**150**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Benzo(a)pyrene	**37**		**0.40**	**1.0**	**µg/L**	5	7/9/2010 19:48
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/9/2010 19:48
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/9/2010 19:48
Chrysene	**140**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/9/2010 19:48
Dibenzofuran	**1,900**		**40**	**100**	**µg/L**	500	7/11/2010 17:50
Fluoranthene	**1,400**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Fluorene	**1,600**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/9/2010 19:48
Naphthalene	**20,000**		**250**	**500**	**µg/L**	2500	7/11/2010 20:06
Nitrobenzene	U		0.45	1.0	µg/L	5	7/9/2010 19:48
Pentachlorophenol	U		0.40	1.0	µg/L	5	7/9/2010 19:48
Phenanthrene	**4,000**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Phenol	**42**		**0.35**	**1.0**	**µg/L**	5	7/9/2010 19:48
Pyrene	**840**		**35**	**100**	**µg/L**	500	7/11/2010 17:50
Surr: 2,4,6-Tribromophenol	*41.3*			*34-129*	*%REC*	5	7/9/2010 19:48
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/11/2010 17:50
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2500	7/11/2010 20:06
Surr: 2-Fluorobiphenyl	*40.3*			*40-125*	*%REC*	5	7/9/2010 19:48
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/11/2010 17:50
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2500	7/11/2010 20:06
Surr: 2-Fluorophenol	*118*			*20-120*	*%REC*	5	7/9/2010 19:48
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/11/2010 17:50
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2500	7/11/2010 20:06
Surr: 4-Terphenyl-d14	*90.0*			*40-135*	*%REC*	5	7/9/2010 19:48
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/11/2010 17:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW57A-20100623
Collection Date: 6/23/2010 03:20 PM

Work Order: 1006821
Lab ID: 1006821-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2500	7/11/2010 20:06
Surr: Nitrobenzene-d5	*56.2*			*41-120*	*%REC*	5	7/9/2010 19:48
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/11/2010 17:50
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2500	7/11/2010 20:06
Surr: Phenol-d6	*84.6*			*20-120*	*%REC*	5	7/9/2010 19:48
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/11/2010 17:50
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2500	7/11/2010 20:06
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	6/28/2010 20:03
Benzene	**470**		**5.0**	**50**	**µg/L**	10	6/28/2010 20:03
Chlorobenzene	U		5.0	50	µg/L	10	6/28/2010 20:03
Dichloromethane	**14**	J	**5.0**	**100**	**µg/L**	10	6/28/2010 20:03
Ethylbenzene	**450**		**5.0**	**50**	**µg/L**	10	6/28/2010 20:03
Toluene	**860**		**5.0**	**50**	**µg/L**	10	6/28/2010 20:03
Xylenes, Total	**1,200**		**10**	**150**	**µg/L**	10	6/28/2010 20:03
Surr: 1,2-Dichloroethane-d4	*93.8*			*70-125*	*%REC*	10	6/28/2010 20:03
Surr: 4-Bromofluorobenzene	*96.0*			*72-125*	*%REC*	10	6/28/2010 20:03
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	10	6/28/2010 20:03
Surr: Toluene-d8	*92.5*			*75-125*	*%REC*	10	6/28/2010 20:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW58A-20100623
Collection Date: 6/23/2010 04:15 PM

Work Order: 1006821
Lab ID: 1006821-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 20:09
2,4-Dimethylphenol	**610**		**8.0**	**20**	**µg/L**	100	7/11/2010 18:10
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 20:09
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 20:09
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 20:09
2-Methylnaphthalene	**210**		**7.0**	**20**	**µg/L**	100	7/11/2010 18:10
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 20:09
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 20:09
Acenaphthene	**280**		**9.0**	**20**	**µg/L**	100	7/11/2010 18:10
Acenaphthylene	**1.5**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:09
Anthracene	**17**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 22:06
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 20:09
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 20:09
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 20:09
Bis(2-ethylhexyl)phthalate	**0.46**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 20:09
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 20:09
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 20:09
Dibenzofuran	**230**		**8.0**	**20**	**µg/L**	100	7/11/2010 18:10
Fluoranthene	**9.0**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:09
Fluorene	**160**		**7.0**	**20**	**µg/L**	100	7/11/2010 18:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 20:09
Naphthalene	**1,500**		**50**	**100**	**µg/L**	500	7/11/2010 20:26
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 20:09
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 20:09
Phenanthrene	**61**		**0.70**	**2.0**	**µg/L**	10	7/10/2010 22:06
Phenol	**6.5**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:09
Pyrene	**4.2**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:09
Surr: 2,4,6-Tribromophenol	*47.6*			*34-129*	*%REC*	1	7/9/2010 20:09
Surr: 2,4,6-Tribromophenol	*71.4*			*34-129*	*%REC*	10	7/10/2010 22:06
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	7/11/2010 18:10
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/11/2010 20:26
Surr: 2-Fluorobiphenyl	*46.2*			*40-125*	*%REC*	1	7/9/2010 20:09
Surr: 2-Fluorobiphenyl	*65.3*			*40-125*	*%REC*	10	7/10/2010 22:06
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	7/11/2010 18:10
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/11/2010 20:26
Surr: 2-Fluorophenol	*44.6*			*20-120*	*%REC*	1	7/9/2010 20:09
Surr: 2-Fluorophenol	*66.7*			*20-120*	*%REC*	10	7/10/2010 22:06
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	7/11/2010 18:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW58A-20100623
Collection Date: 6/23/2010 04:15 PM

Work Order: 1006821
Lab ID: 1006821-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/11/2010 20:26
Surr: 4-Terphenyl-d14	*60.3*			*40-135*	*%REC*	1	7/9/2010 20:09
Surr: 4-Terphenyl-d14	*74.9*			*40-135*	*%REC*	10	7/10/2010 22:06
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	7/11/2010 18:10
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/11/2010 20:26
Surr: Nitrobenzene-d5	*51.6*			*41-120*	*%REC*	1	7/9/2010 20:09
Surr: Nitrobenzene-d5	*58.1*			*41-120*	*%REC*	10	7/10/2010 22:06
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	7/11/2010 18:10
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/11/2010 20:26
Surr: Phenol-d6	*54.6*			*20-120*	*%REC*	1	7/9/2010 20:09
Surr: Phenol-d6	*54.0*			*20-120*	*%REC*	10	7/10/2010 22:06
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	7/11/2010 18:10
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/11/2010 20:26
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	6/28/2010 20:29
Benzene	**75**		**2.5**	**25**	**µg/L**	5	6/28/2010 20:29
Chlorobenzene	**10**	J	**2.5**	**25**	**µg/L**	5	6/28/2010 20:29
Dichloromethane	**4.8**	J	**2.5**	**50**	**µg/L**	5	6/28/2010 20:29
Ethylbenzene	**110**		**2.5**	**25**	**µg/L**	5	6/28/2010 20:29
Toluene	**45**		**2.5**	**25**	**µg/L**	5	6/28/2010 20:29
Xylenes, Total	**150**		**5.0**	**75**	**µg/L**	5	6/28/2010 20:29
Surr: 1,2-Dichloroethane-d4	*86.1*			*70-125*	*%REC*	5	6/28/2010 20:29
Surr: 4-Bromofluorobenzene	*98.3*			*72-125*	*%REC*	5	6/28/2010 20:29
Surr: Dibromofluoromethane	*95.2*			*71-125*	*%REC*	5	6/28/2010 20:29
Surr: Toluene-d8	*101*			*75-125*	*%REC*	5	6/28/2010 20:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB2-20100623
Collection Date: 6/23/2010

Work Order: 1006821
Lab ID: 1006821-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:48
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 17:48
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:48
Dichloromethane	**0.95**	J	**0.50**	**10**	**µg/L**	1	6/28/2010 17:48
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:48
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 17:48
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 17:48
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	6/28/2010 17:48
Surr: 4-Bromofluorobenzene	*96.2*			*72-125*	*%REC*	1	6/28/2010 17:48
Surr: Dibromofluoromethane	*97.6*			*71-125*	*%REC*	1	6/28/2010 17:48
Surr: Toluene-d8	*94.5*			*75-125*	*%REC*	1	6/28/2010 17:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006821
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006821
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100625-44015** Units: **µg/L** Analysis Date: **7/9/2010 10:22 AM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025727** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.584*	0.20	*5*	0	*71.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.498*	0.20	*5*	0	*70*	*40-125*	0			
Surr: 2-Fluorophenol	*3.485*	0.20	*5*	0	*69.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.083*	0.20	*5*	0	*81.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.552*	0.20	*5*	0	*71*	*41-120*	0			
Surr: Phenol-d6	*3.828*	0.20	*5*	0	*76.6*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW2-100625-44015** Units: **µg/L** Analysis Date: **7/9/2010 10:43 AM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025728** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.363	0.20	5	0	87.3	39-127	0			
2,4-Dimethylphenol	2.212	0.20	5	0	44.2	35-120	0			
2,4-Dinitrotoluene	4.566	0.20	5	0	91.3	50-122	0			
2,6-Dinitrotoluene	4.443	0.20	5	0	88.9	50-120	0			
2-Chloronaphthalene	4.694	0.20	5	0	93.9	50-120	0			
2-Methylnaphthalene	4.271	0.20	5	0	85.4	50-120	0			
4,6-Dinitro-2-methylphenol	4.086	0.20	5	0	81.7	25-121	0			
4-Nitrophenol	4.948	1.0	5	0	99	30-130	0			
Acenaphthene	4.181	0.20	5	0	83.6	45-120	0			
Acenaphthylene	4.367	0.20	5	0	87.3	47-120	0			
Anthracene	4.274	0.20	5	0	85.5	45-120	0			
Benz(a)anthracene	4.728	0.20	5	0	94.6	40-120	0			
Benzo(a)pyrene	4.855	0.20	5	0	97.1	45-120	0			
Bis(2-chloroethoxy)methane	4.14	0.20	5	0	82.8	45-120	0			
Bis(2-ethylhexyl)phthalate	4.821	0.20	5	0	96.4	40-139	0			
Chrysene	4.71	0.20	5	0	94.2	43-120	0			
Di-n-butyl phthalate	4.729	0.20	5	0	94.6	45-123	0			
Dibenzofuran	4.505	0.20	5	0	90.1	50-120	0			
Fluoranthene	4.709	0.20	5	0	94.2	45-125	0			
Fluorene	4.475	0.20	5	0	89.5	49-120	0			
N-Nitrosodiphenylamine	4.179	0.20	5	0	83.6	40-125	0			
Naphthalene	4.162	0.20	5	0	83.2	45-120	0			
Nitrobenzene	4.234	0.20	5	0	84.7	44-120	0			
Pentachlorophenol	3.506	0.20	5	0	70.1	19-121	0			
Phenanthrene	4.425	0.20	5	0	88.5	45-121	0			
Phenol	4.111	0.20	5	0	82.2	20-124	0			
Pyrene	4.683	0.20	5	0	93.7	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.237*	0.20	*5*	0	*84.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.114*	0.20	*5*	0	*82.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.37*	0.20	*5*	0	*67.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.148*	0.20	*5*	0	*83*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.87*	0.20	*5*	0	*77.4*	*41-120*	0			
Surr: Phenol-d6	*3.958*	0.20	*5*	0	*79.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1006826-02BMS** Units: **µg/L** Analysis Date: **7/11/2010 05:34 PM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025782** Prep Date: **6/25/2010** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.288	1.0	5	0	85.8	39-127	0			
2,4-Dimethylphenol	13.88	1.0	5	7.808	122	35-120	0			S
2,4-Dinitrotoluene	5.178	1.0	5	0	104	50-122	0			
2,6-Dinitrotoluene	5.855	1.0	5	0	117	50-120	0			
2-Chloronaphthalene	4.732	1.0	5	0	94.6	50-120	0			
2-Methylnaphthalene	161.4	1.0	5	123.6	755	50-120	0			SEO
4,6-Dinitro-2-methylphenol	3.911	1.0	5	0	78.2	25-121	0			
4-Nitrophenol	15.15	5.0	5	0	303	30-130	0			S
Acenaphthene	90.57	1.0	5	69.41	423	45-120	0			SEO
Acenaphthylene	5.534	1.0	5	1.478	81.1	47-120	0			
Anthracene	16.83	1.0	5	7.648	184	45-120	0			S
Benz(a)anthracene	3.31	1.0	5	0	66.2	40-120	0			
Benzo(a)pyrene	3.909	1.0	5	0	78.2	45-120	0			
Bis(2-chloroethoxy)methane	3.804	1.0	5	0	76.1	45-120	0			
Bis(2-ethylhexyl)phthalate	4.187	1.0	5	0	83.7	40-139	0			
Chrysene	4.005	1.0	5	0	80.1	43-120	0			
Di-n-butyl phthalate	3.785	1.0	5	0	75.7	45-123	0			
Dibenzofuran	71.31	1.0	5	56.32	300	50-120	0			SEO
Fluoranthene	7.128	1.0	5	2.341	95.7	45-125	0			
Fluorene	56.61	1.0	5	33.55	461	49-120	0			SEO
N-Nitrosodiphenylamine	3.55	1.0	5	0	71	40-125	0			
Naphthalene	413.8	1.0	5	297.7	2320	45-120	0			SEO
Nitrobenzene	4.469	1.0	5	0	89.4	44-120	0			
Pentachlorophenol	50.45	1.0	5	20.37	602	19-121	0			SEO
Phenanthrene	51.75	1.0	5	32.48	385	45-121	0			SEO
Phenol	54.85	1.0	5	25.89	579	20-124	0			SEO
Pyrene	4.777	1.0	5	1.212	71.3	40-130	0			
Surr: 2,4,6-Tribromophenol	*9.147*	1.0	*10*	0	*91.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.327*	1.0	*10*	0	*53.3*	*40-125*	0			
Surr: 2-Fluorophenol	*6.499*	1.0	*10*	0	*65*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.822*	1.0	*10*	0	*58.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.459*	1.0	*10*	0	*54.6*	*41-120*	0			
Surr: Phenol-d6	*5.317*	1.0	*10*	0	*53.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1006826-02BMSD** Units: **µg/L** Analysis Date: **7/11/2010 05:54 PM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025783** Prep Date: **6/25/2010** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.831	1.0	5	0	76.6	39-127	4.288	11.2	20	
2,4-Dimethylphenol	10.5	1.0	5	7.808	53.8	35-120	13.88	27.8	20	R
2,4-Dinitrotoluene	5.1	1.0	5	0	102	50-122	5.178	1.53	20	
2,6-Dinitrotoluene	5.422	1.0	5	0	108	50-120	5.855	7.68	20	
2-Chloronaphthalene	4.797	1.0	5	0	95.9	50-120	4.732	1.37	20	
2-Methylnaphthalene	140.9	1.0	5	123.6	346	50-120	161.4	13.5	20	SEO
4,6-Dinitro-2-methylphenol	3.512	1.0	5	0	70.2	25-121	3.911	10.8	20	
4-Nitrophenol	12.8	5.0	5	0	256	30-130	15.15	16.9	20	S
Acenaphthene	103.8	1.0	5	69.41	687	45-120	90.57	13.6	20	SEO
Acenaphthylene	5.696	1.0	5	1.478	84.4	47-120	5.534	2.88	20	
Anthracene	18.35	1.0	5	7.648	214	45-120	16.83	8.61	20	S
Benz(a)anthracene	2.625	1.0	5	0	52.5	40-120	3.31	23.1	20	R
Benzo(a)pyrene	3.994	1.0	5	0	79.9	45-120	3.909	2.15	20	
Bis(2-chloroethoxy)methane	3.476	1.0	5	0	69.5	45-120	3.804	9.02	20	
Bis(2-ethylhexyl)phthalate	3.834	1.0	5	0	76.7	40-139	4.187	8.8	20	
Chrysene	4.156	1.0	5	0	83.1	43-120	4.005	3.71	20	
Di-n-butyl phthalate	4.096	1.0	5	0	81.9	45-123	3.785	7.89	20	
Dibenzofuran	89.53	1.0	5	56.32	664	50-120	71.31	22.7	20	SREO
Fluoranthene	7.61	1.0	5	2.341	105	45-125	7.128	6.54	20	
Fluorene	64.44	1.0	5	33.55	618	49-120	56.61	12.9	20	SEO
N-Nitrosodiphenylamine	3.493	1.0	5	0	69.9	40-125	3.55	1.64	20	
Naphthalene	323.9	1.0	5	297.7	524	45-120	413.8	24.4	20	SREO
Nitrobenzene	3.38	1.0	5	0	67.6	44-120	4.469	27.8	20	R
Pentachlorophenol	53.61	1.0	5	20.37	665	19-121	50.45	6.09	20	SEO
Phenanthrene	53.46	1.0	5	32.48	420	45-121	51.75	3.25	20	SEO
Phenol	62.67	1.0	5	25.89	736	20-124	54.85	13.3	20	SEO
Pyrene	4.483	1.0	5	1.212	65.4	40-130	4.777	6.35	20	
Surr: 2,4,6-Tribromophenol	*8.706*	1.0	*10*	0	*87.1*	*34-129*	9.147	*4.95*	*20*	
Surr: 2-Fluorobiphenyl	*5.864*	1.0	*10*	0	*58.6*	*40-125*	5.327	*9.58*	*20*	
Surr: 2-Fluorophenol	*6.883*	1.0	*10*	0	*68.8*	*20-120*	6.499	*5.75*	*20*	
Surr: 4-Terphenyl-d14	*5.439*	1.0	*10*	0	*54.4*	*40-135*	5.822	*6.79*	*20*	
Surr: Nitrobenzene-d5	*7.516*	1.0	*10*	0	*75.2*	*41-120*	5.459	*31.7*	*20*	*R*
Surr: Phenol-d6	*6.108*	1.0	*10*	0	*61.1*	*20-120*	5.317	*13.9*	*20*	

The following samples were analyzed in this batch:

1006821-01B	1006821-02B	1006821-03B
1006821-04B	1006821-05B	1006821-06B
1006821-07B	1006821-08B	1006821-09B
1006821-10B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 01:06 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009707** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.5976	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.01*	5.0	*50*	0	*94*	*72-125*	0			
Surr: Dibromofluoromethane	*52.08*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 11:48 AM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.72	5.0	50	0	101	78-120	0			
Benzene	48.81	5.0	50	0	97.6	73-121	0			
Chlorobenzene	46.21	5.0	50	0	92.4	80-120	0			
Dichloromethane	45.01	10	50	0	90	65-133	0			
Ethylbenzene	47.14	5.0	50	0	94.3	80-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Xylenes, Total	149.7	15	150	0	99.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.7*	5.0	*50*	0	*89.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.87*	5.0	*50*	0	*95.7*	*71-125*	0			
Surr: Toluene-d8	*48.39*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 12:15 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.52	5.0	50	0	95	78-120	50.72	6.51	20	
Benzene	48.61	5.0	50	0	97.2	73-121	48.81	0.399	20	
Chlorobenzene	43.86	5.0	50	0	87.7	80-120	46.21	5.23	20	
Dichloromethane	46.52	10	50	0	93	65-133	45.01	3.3	20	
Ethylbenzene	46.89	5.0	50	0	93.8	80-120	47.14	0.515	20	
Toluene	43.02	5.0	50	0	86	80-120	48.68	12.3	20	
Xylenes, Total	142.2	15	150	0	94.8	80-120	149.7	5.1	20	
Surr: 1,2-Dichloroethane-d4	*46.81*	5.0	*50*	0	*93.6*	*70-125*	44.7	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.12*	5.0	*50*	0	*98.2*	*72-125*	50.69	*3.15*	*20*	
Surr: Dibromofluoromethane	*50.53*	5.0	*50*	0	*101*	*71-125*	47.87	*5.41*	*20*	
Surr: Toluene-d8	*47.32*	5.0	*50*	0	*94.6*	*75-125*	48.39	*2.22*	*20*	

MS Sample ID: **1006737-07AMS** Units: **µg/L** Analysis Date: **6/28/2010 03:16 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010801** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.39	5.0	50	0	94.8	78-120	0			
Benzene	47.72	5.0	50	0	95.4	73-121	0			
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Dichloromethane	43.99	10	50	0	88	65-133	0			
Ethylbenzene	41.09	5.0	50	0	82.2	80-120	0			
Toluene	43.14	5.0	50	0	86.3	80-120	0			
Xylenes, Total	138	15	150	0	92	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.05*	5.0	*50*	0	*88.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.8*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*49.31*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006737-07AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:42 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010802** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.82	5.0	50	0	93.6	78-120	47.39	1.21	20	
Benzene	44.08	5.0	50	0	88.2	73-121	47.72	7.93	20	
Chlorobenzene	45.04	5.0	50	0	90.1	80-120	43.5	3.48	20	
Dichloromethane	39.46	10	50	0	78.9	65-133	43.99	10.9	20	
Ethylbenzene	45	5.0	50	0	90	80-120	41.09	9.07	20	
Toluene	46.63	5.0	50	0	93.3	80-120	43.14	7.78	20	
Xylenes, Total	141.1	15	150	0	94.1	80-120	138	2.23	20	
Surr: 1,2-Dichloroethane-d4	*41.14*	5.0	*50*	0	*82.3*	*70-125*	44.05	*6.83*	*20*	
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	50.8	*1.67*	*20*	
Surr: Dibromofluoromethane	*46.87*	5.0	*50*	0	*93.7*	*71-125*	49.31	*5.08*	*20*	
Surr: Toluene-d8	*48.85*	5.0	*50*	0	*97.7*	*75-125*	47.82	*2.13*	*20*	

The following samples were analyzed in this batch:

1006821-01A	1006821-03A	1006821-05A
1006821-07A	1006821-09A	1006821-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 12:16 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011527** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.67*	5.0	*50*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.59*	5.0	*50*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*47.24*	5.0	*50*	0	*94.5*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 11:05 AM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011526** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.21	5.0	50	0	108	78-120	0			
Benzene	49.35	5.0	50	0	98.7	73-121	0			
Chlorobenzene	47.93	5.0	50	0	95.9	80-120	0			
Dichloromethane	58.21	10	50	0	116	65-133	0			
Ethylbenzene	46.2	5.0	50	0	92.4	80-120	0			
Toluene	47.36	5.0	50	0	94.7	80-120	0			
Xylenes, Total	138.5	15	150	0	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*52.75*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	0			
Surr: Dibromofluoromethane	*51.79*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.37*	5.0	*50*	0	*96.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1006737-05AMS** Units: **µg/L** Analysis Date: **6/28/2010 02:39 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011529** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.83	5.0	50	0	112	78-120	0			
Benzene	51.74	5.0	50	0	103	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	48.93	10	50	0	97.9	65-133	0			
Ethylbenzene	46.92	5.0	50	0.5648	92.7	80-120	0			
Toluene	45.5	5.0	50	0	91	80-120	0			
Xylenes, Total	141.2	15	150	2.629	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.75*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.33*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*51.56*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*47.99*	5.0	*50*	0	*96*	*75-125*	0			

MSD Sample ID: **1006737-05AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:03 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011530** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.37	5.0	50	0	101	78-120	55.83	10.3	20	
Benzene	47.3	5.0	50	0	94.6	73-121	51.74	8.95	20	
Chlorobenzene	46.48	5.0	50	0	93	80-120	46.49	0.00964	20	
Dichloromethane	49.75	10	50	0	99.5	65-133	48.93	1.66	20	
Ethylbenzene	47.51	5.0	50	0.5648	93.9	80-120	46.92	1.24	20	
Toluene	46.51	5.0	50	0	93	80-120	45.5	2.19	20	
Xylenes, Total	143.5	15	150	2.629	93.9	80-120	141.2	1.64	20	
Surr: 1,2-Dichloroethane-d4	*51.04*	5.0	*50*	0	*102*	*70-125*	50.75	*0.568*	*20*	
Surr: 4-Bromofluorobenzene	*49.68*	5.0	*50*	0	*99.4*	*72-125*	49.33	*0.709*	*20*	
Surr: Dibromofluoromethane	*51.04*	5.0	*50*	0	*102*	*71-125*	51.56	*1.01*	*20*	
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	47.99	*5.12*	*20*	

The following samples were analyzed in this batch:

1006821-02A	1006821-04A	1006821-06A
1006821-08A	1006821-11A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006821
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93410** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:56 AM**
Client ID: Run ID: **VOA1_100629B** SeqNo: **2013671** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	U	5.0								
Surr: 1,2-Dichloroethane-d4	*45*	5.0	*50*	0	*90*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.46*	5.0	*50*	0	*98.9*	*72-125*	0			
Surr: Dibromofluoromethane	*47.55*	5.0	*50*	0	*95.1*	*71-125*	0			
Surr: Toluene-d8	*49.4*	5.0	*50*	0	*98.8*	*75-125*	0			

LCS Sample ID: **VLCSW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:29 AM**
Client ID: Run ID: **VOA1_100629B** SeqNo: **2013670** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	48.68	5.0	50	0	97.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*42.21*	5.0	*50*	0	*84.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.13*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*45.96*	5.0	*50*	0	*91.9*	*71-125*	0			
Surr: Toluene-d8	*47.94*	5.0	*50*	0	*95.9*	*75-125*	0			

MS Sample ID: **1006826-02AMS** Units: **µg/L** Analysis Date: **6/29/2010 02:51 PM**
Client ID: Run ID: **VOA1_100629B** SeqNo: **2013674** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	341.9	25	250	134.5	83	80-120	0			
Surr: 1,2-Dichloroethane-d4	*192.6*	25	*250*	0	*77*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*258.6*	25	*250*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*214.9*	25	*250*	0	*86*	*71-125*	0			
Surr: Toluene-d8	*244.3*	25	*250*	0	*97.7*	*75-125*	0			

MSD Sample ID: **1006826-02AMSD** Units: **µg/L** Analysis Date: **6/29/2010 03:17 PM**
Client ID: Run ID: **VOA1_100629B** SeqNo: **2013675** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	332.2	25	250	134.5	79.1	80-120	341.9	2.89	20	S
Surr: 1,2-Dichloroethane-d4	*194.6*	25	*250*	0	*77.8*	*70-125*	192.6	*1.02*	*20*	
Surr: 4-Bromofluorobenzene	*258*	25	*250*	0	*103*	*72-125*	258.6	*0.215*	*20*	
Surr: Dibromofluoromethane	*206.6*	25	*250*	0	*82.6*	*71-125*	214.9	*3.96*	*20*	
Surr: Toluene-d8	*248.4*	25	*250*	0	*99.4*	*75-125*	244.3	*1.66*	*20*	

The following samples were analyzed in this batch: 1006821-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1006821**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
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Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1006921

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW5A-20100623	6-23-10	0845	W		5	X	X									
2	WG-1620-MW15C-20100623	6-23-10	0935	W		5	X	X									
3	WG-1620-MW16-20100623	6-23-10	1020	W		5	X	X									
4	WG-1620-MW19C-20100623	6-23-10	1115	W		5	X	X									
5	WG-1620-MW17-20100623	6-23-10	1200	W		5	X	X									
6	WG-1620-MW17C-20100623	6-23-10	1305	W		5	X	X									
7	WG-1620-MW23C-20100623	6-23-10	1400	W		5	X	X									
8	WG-1620-FB02-20100623	6-23-10	1430	W		5	X	X									
9	WG-1620-MW57A-20100623	6-23-10	1520	W		5	X	X									
10	WG-1620-MW58A-20100623	6-23-10	1615	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BEATTY

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 6240	Time: 0745	Received by:	Notes: 10 Work Days TAT.
Relinquished by:	Date:	Time:	Received by (Laboratory): 6240 0745	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☑ TRRP CheckList
- ☐ Level III Std QC/Raw Data
- ☐ TRRP Level IV
- ☐ Level IV SW846/CLP
- ☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
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Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1006021

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-TB2-20100623	6-23-10				2	X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAUTIGAM

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☑ Std: 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brautigam Date: 6/24/10 Time: 1015

Received by:

Notes: 10 Work Days TAT.

Relinquished by: Date: Time:

Received by (Laboratory): 06/24/10 1015

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Gronp are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **24-Jun-10 07:46**

Work Order: **1006821** Received by: **RSZ**

Checklist completed by Richard Sanchez (eSignature) 24-Jun-10 (Date) Reviewed by: Shannon L. Tyrell (eSignature) 25-Jun-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7c, 1.2c	002	
Cooler(s)/Kit(s):	7046,7063		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

14-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1006826**

Dear Eric,

ALS Laboratory Group received 10 samples on 24-Jun-2010 05:33 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 42.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Chris Bryson

R. Kevin Given
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1006826

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1006826**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1006826-01	WG-1620-MW18A-20100624	Water		6/24/2010 09:00	6/24/2010 17:33	☐
1006826-02	WG-1620-MW18C-20100624	Water		6/24/2010 10:00	6/24/2010 17:33	☐
1006826-03	WG-1620-MW60A-20100624	Water		6/24/2010 11:10	6/24/2010 17:33	☐
1006826-04	WG-1620-MW48C-20100624	Water		6/24/2010 12:05	6/24/2010 17:33	☐
1006826-05	WG-1620-MW59A-20100624	Water		6/24/2010 13:00	6/24/2010 17:33	☐
1006826-06	WG-1620-MW49B-20100624	Water		6/24/2010 13:50	6/24/2010 17:33	☐
1006826-07	WG-1620-MW47C-20100624	Water		6/24/2010 15:00	6/24/2010 17:33	☐
1006826-08	WG-1620-MW51A-20100624	Water		6/24/2010 16:00	6/24/2010 17:33	☐
1006826-09	WG-1620-MWFB3-20100624	Water		6/24/2010 16:15	6/24/2010 17:33	☐
1006826-10	WG-1620-TB3-20100624	Water		6/24/2010	6/24/2010 17:33	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/14/2010
Project Name: HWPW-SITE WIDE MONITORING	Laboratory Job Number: 1006826
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44015, R93224, R93304, R93410

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?		X			3
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				4

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 07/14/2010					
Project Name: HWPW-SITE WIDE MONITORING			Laboratory Job Number: 1006826					
Reviewer Name: R. Kevin Given			Prep Batch Number(s): : 44015, R93224, R93304, R93410					
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]	
S1	OI	**INITIAL CALIBRATION (ICAL)**						
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X					
		2) Were percent RSDs or correlation coefficient criteria met?	X					
		3) Was the number of standards recommended in the method used for all analytes?	X					
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X					
		5) Are ICAL data available for all instruments used?	X					
		6) 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**						
		1) Was the CCV analyzed at the method-required frequency?	X					
		2) Were percent differences for each analyte within the method-required QC limits?	X					
		3) Was the ICAL curve verified for each analyte?	X					
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X			
S3	O	**MASS SPECTRAL TUNING:**						
		1) Was the appropriate compound for the method used for tuning?	X					
		2) 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**						
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X					
		2) 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**						
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X			
S10	OI	**PROFICIENCY TEST REPORTS:**						
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X					
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**						
		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**						
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X					
		2) Is documentation of the analyst's competency up-to-date and on file?	X					
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**						
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/14/2010
Project Name: HWPW-SITE WIDE MONITORING	Laboratory Job Number: 1006826
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44015, R93224, R93304, R93410

ER #[1]	DESCRIPTION
1	Low-Level Semivolatiles, Sample WG-1620-MW18A-20100624 : Surrogate recoveries were diluted out in the 2000X dilution. Low-Level Semivolatiles, Sample WG-1620-MW18C-20100624 : Surrogate recoveries were diluted out in the 1000X dilution. Low-Level Semivolatiles, Samples WG-1620-MW48C-20100624 and WG-1620-MW49B-20100624 : Surrogate recoveries were diluted out in the 500X dilution.
2	Batch 44015, Semivolatile Organics, Sample WG-1620-MW18C-20100624 : MS/MSD recoveries were above the control limits for several analytes. Results are flagged with an E and an O qualifier as applicable. Batch R93410, Volatile Organics, Sample WG-1620-MW18C-20100624 : MS/MSD recoveries were below the control limits for Benzene, Toluene, and Xylenes, Total. The associated RPD's were within the control limits. Results are flagged with an E and an O qualifier as applicable.
3	Batch 44015, Semivolatile Organics, Sample WG-1620-MW18C-20100624 : MSD RPD recoveries were above the control limits for 2,4-Dimethylphenol, Benz(a)anthracene, Dibenzofuran, Naphthalene, and Nitrobenzene. Results are flagged with an E and an O qualifier as applicable.
4	Low-Level Semivolatiles, Samples WG-1620-MW18A-20100624, WG-1620-MW18C-20100624, WG-1620-MW48C-20100624, and WG-1620-MW49B-20100624 could not be analyzed at a lower dilution due to the nature of the sample.

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

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW18A-20100624
Collection Date: 6/24/2010 09:00 AM

Work Order: 1006826
Lab ID: 1006826-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/10/2010 20:05
2,4-Dimethylphenol	**7,900**		**160**	**400**	**µg/L**	2000	7/12/2010 14:36
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/10/2010 20:05
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/10/2010 20:05
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/10/2010 20:05
2-Methylnaphthalene	**400**		**3.5**	**10**	**µg/L**	50	7/11/2010 20:47
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/10/2010 20:05
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/10/2010 20:05
Acenaphthene	**250**		**4.5**	**10**	**µg/L**	50	7/11/2010 20:47
Acenaphthylene	**9.5**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:05
Anthracene	**7.5**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:05
Benz(a)anthracene	U		0.35	1.0	µg/L	5	7/10/2010 20:05
Benzo(a)pyrene	U		0.40	1.0	µg/L	5	7/10/2010 20:05
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/10/2010 20:05
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/10/2010 20:05
Chrysene	U		0.35	1.0	µg/L	5	7/10/2010 20:05
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/10/2010 20:05
Dibenzofuran	**160**		**4.0**	**10**	**µg/L**	50	7/11/2010 20:47
Fluoranthene	**1.3**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:05
Fluorene	**110**		**3.5**	**10**	**µg/L**	50	7/11/2010 20:47
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/10/2010 20:05
Naphthalene	**6,100**		**200**	**400**	**µg/L**	2000	7/12/2010 14:36
Nitrobenzene	U		0.45	1.0	µg/L	5	7/10/2010 20:05
Pentachlorophenol	U		0.40	1.0	µg/L	5	7/10/2010 20:05
Phenanthrene	**82**		**3.5**	**10**	**µg/L**	50	7/11/2010 20:47
Phenol	**5.4**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:05
Pyrene	**0.63**	J	**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:05
Surr: 2,4,6-Tribromophenol	*88.6*			*34-129*	*%REC*	5	7/10/2010 20:05
Surr: 2,4,6-Tribromophenol	*54.2*	J		*34-129*	*%REC*	50	7/11/2010 20:47
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	7/12/2010 14:36
Surr: 2-Fluorobiphenyl	*56.4*			*40-125*	*%REC*	5	7/10/2010 20:05
Surr: 2-Fluorobiphenyl	*69.7*	J		*40-125*	*%REC*	50	7/11/2010 20:47
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	7/12/2010 14:36
Surr: 2-Fluorophenol	*54.5*			*20-120*	*%REC*	5	7/10/2010 20:05
Surr: 2-Fluorophenol	*77.8*	J		*20-120*	*%REC*	50	7/11/2010 20:47
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	7/12/2010 14:36
Surr: 4-Terphenyl-d14	*64.6*			*40-135*	*%REC*	5	7/10/2010 20:05
Surr: 4-Terphenyl-d14	*81.2*	J		*40-135*	*%REC*	50	7/11/2010 20:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW18A-20100624
Collection Date: 6/24/2010 09:00 AM

Work Order: 1006826
Lab ID: 1006826-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	7/12/2010 14:36
Surr: Nitrobenzene-d5	*42.7*			*41-120*	*%REC*	5	7/10/2010 20:05
Surr: Nitrobenzene-d5	*82.7*	J		*41-120*	*%REC*	50	7/11/2010 20:47
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	7/12/2010 14:36
Surr: Phenol-d6	*58.3*			*20-120*	*%REC*	5	7/10/2010 20:05
Surr: Phenol-d6	*81.7*	J		*20-120*	*%REC*	50	7/11/2010 20:47
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	7/12/2010 14:36
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	6/29/2010 13:59
Benzene	**470**		**2.5**	**25**	**µg/L**	5	6/29/2010 13:59
Chlorobenzene	U		2.5	25	µg/L	5	6/29/2010 13:59
Dichloromethane	U		2.5	50	µg/L	5	6/29/2010 13:59
Ethylbenzene	**540**		**2.5**	**25**	**µg/L**	5	6/29/2010 13:59
Toluene	**450**		**2.5**	**25**	**µg/L**	5	6/29/2010 13:59
Xylenes, Total	**1,200**		**5.0**	**75**	**µg/L**	5	6/29/2010 13:59
Surr: 1,2-Dichloroethane-d4	*85.5*			*70-125*	*%REC*	5	6/29/2010 13:59
Surr: 4-Bromofluorobenzene	*102*			*72-125*	*%REC*	5	6/29/2010 13:59
Surr: Dibromofluoromethane	*88.4*			*71-125*	*%REC*	5	6/29/2010 13:59
Surr: Toluene-d8	*97.3*			*75-125*	*%REC*	5	6/29/2010 13:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW18C-20100624
Collection Date: 6/24/2010 10:00 AM

Work Order: 1006826
Lab ID: 1006826-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/10/2010 20:25
2,4-Dimethylphenol	**7.8**		**0.40**	**1.0**	**µg/L**	5	7/10/2010 20:25
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/10/2010 20:25
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/10/2010 20:25
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/10/2010 20:25
2-Methylnaphthalene	**200**		**3.5**	**10**	**µg/L**	50	7/11/2010 21:28
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/10/2010 20:25
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/10/2010 20:25
Acenaphthene	**82**		**4.5**	**10**	**µg/L**	50	7/11/2010 21:28
Acenaphthylene	**1.5**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Anthracene	**7.6**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Benz(a)anthracene	U		0.35	1.0	µg/L	5	7/10/2010 20:25
Benzo(a)pyrene	U		0.40	1.0	µg/L	5	7/10/2010 20:25
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/10/2010 20:25
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/10/2010 20:25
Chrysene	U		0.35	1.0	µg/L	5	7/10/2010 20:25
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/10/2010 20:25
Dibenzofuran	**77**		**4.0**	**10**	**µg/L**	50	7/11/2010 21:28
Fluoranthene	**2.3**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Fluorene	**34**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/10/2010 20:25
Naphthalene	**6,200**		**100**	**200**	**µg/L**	1000	7/12/2010 14:13
Nitrobenzene	U		0.45	1.0	µg/L	5	7/10/2010 20:25
Pentachlorophenol	**20**		**0.40**	**1.0**	**µg/L**	5	7/10/2010 20:25
Phenanthrene	**32**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Phenol	**26**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Pyrene	**1.2**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:25
Surr: 2,4,6-Tribromophenol	*83.3*			*34-129*	*%REC*	5	7/10/2010 20:25
Surr: 2,4,6-Tribromophenol	*41.3*	J		*34-129*	*%REC*	50	7/11/2010 21:28
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	1000	7/12/2010 14:13
Surr: 2-Fluorobiphenyl	*56.7*			*40-125*	*%REC*	5	7/10/2010 20:25
Surr: 2-Fluorobiphenyl	*68.2*	J		*40-125*	*%REC*	50	7/11/2010 21:28
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	1000	7/12/2010 14:13
Surr: 2-Fluorophenol	*56.3*			*20-120*	*%REC*	5	7/10/2010 20:25
Surr: 2-Fluorophenol	*64.6*	J		*20-120*	*%REC*	50	7/11/2010 21:28
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	1000	7/12/2010 14:13
Surr: 4-Terphenyl-d14	*62.0*			*40-135*	*%REC*	5	7/10/2010 20:25
Surr: 4-Terphenyl-d14	*62.3*	J		*40-135*	*%REC*	50	7/11/2010 21:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW18C-20100624
Collection Date: 6/24/2010 10:00 AM

Work Order: 1006826
Lab ID: 1006826-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	1000	7/12/2010 14:13
Surr: Nitrobenzene-d5	*65.3*			*41-120*	*%REC*	5	7/10/2010 20:25
Surr: Nitrobenzene-d5	*49.1*	J		*41-120*	*%REC*	50	7/11/2010 21:28
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	1000	7/12/2010 14:13
Surr: Phenol-d6	*53.3*			*20-120*	*%REC*	5	7/10/2010 20:25
Surr: Phenol-d6	*70.3*	J		*20-120*	*%REC*	50	7/11/2010 21:28
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	1000	7/12/2010 14:13
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	6/29/2010 14:25
Benzene	**1,000**		**12**	**120**	**µg/L**	25	6/29/2010 15:44
Chlorobenzene	U		2.5	25	µg/L	5	6/29/2010 14:25
Dichloromethane	U		2.5	50	µg/L	5	6/29/2010 14:25
Ethylbenzene	**130**		**2.5**	**25**	**µg/L**	5	6/29/2010 14:25
Toluene	**720**		**2.5**	**25**	**µg/L**	5	6/29/2010 14:25
Xylenes, Total	**1,000**		**5.0**	**75**	**µg/L**	5	6/29/2010 14:25
Surr: 1,2-Dichloroethane-d4	*82.2*			*70-125*	*%REC*	5	6/29/2010 14:25
Surr: 1,2-Dichloroethane-d4	*81.5*			*70-125*	*%REC*	25	6/29/2010 15:44
Surr: 4-Bromofluorobenzene	*111*			*72-125*	*%REC*	5	6/29/2010 14:25
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	25	6/29/2010 15:44
Surr: Dibromofluoromethane	*87.1*			*71-125*	*%REC*	5	6/29/2010 14:25
Surr: Dibromofluoromethane	*87.8*			*71-125*	*%REC*	25	6/29/2010 15:44
Surr: Toluene-d8	*101*			*75-125*	*%REC*	5	6/29/2010 14:25
Surr: Toluene-d8	*98.2*			*75-125*	*%REC*	25	6/29/2010 15:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW60A-20100624
Collection Date: 6/24/2010 11:10 AM

Work Order: 1006826
Lab ID: 1006826-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/10/2010 19:25
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/10/2010 19:25
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/10/2010 19:25
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/10/2010 19:25
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/10/2010 19:25
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/10/2010 19:25
Acenaphthene	U		0.090	0.20	µg/L	1	7/10/2010 19:25
Acenaphthylene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Anthracene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/10/2010 19:25
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/10/2010 19:25
Bis(2-ethylhexyl)phthalate	U		0.20	0.20	µg/L	1	7/10/2010 19:25
Chrysene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Dibenzofuran	U		0.080	0.20	µg/L	1	7/10/2010 19:25
Fluoranthene	**0.30**		**0.070**	**0.20**	**µg/L**	1	7/10/2010 19:25
Fluorene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/10/2010 19:25
Naphthalene	**1.5**		**0.10**	**0.20**	**µg/L**	1	7/10/2010 19:25
Nitrobenzene	U		0.090	0.20	µg/L	1	7/10/2010 19:25
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/10/2010 19:25
Phenanthrene	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Phenol	U		0.070	0.20	µg/L	1	7/10/2010 19:25
Pyrene	**0.20**	J	**0.070**	**0.20**	**µg/L**	1	7/10/2010 19:25
Surr: 2,4,6-Tribromophenol	*67.3*			*34-129*	*%REC*	1	7/10/2010 19:25
Surr: 2-Fluorobiphenyl	*63.9*			*40-125*	*%REC*	1	7/10/2010 19:25
Surr: 2-Fluorophenol	*50.3*			*20-120*	*%REC*	1	7/10/2010 19:25
Surr: 4-Terphenyl-d14	*65.3*			*40-135*	*%REC*	1	7/10/2010 19:25
Surr: Nitrobenzene-d5	*61.9*			*41-120*	*%REC*	1	7/10/2010 19:25
Surr: Phenol-d6	*54.0*			*20-120*	*%REC*	1	7/10/2010 19:25
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 19:25
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 19:25
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 19:25
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 19:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW60A-20100624
Collection Date: 6/24/2010 11:10 AM

Work Order: 1006826
Lab ID: 1006826-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 19:25
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 19:25
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 19:25
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	6/28/2010 19:25
Surr: 4-Bromofluorobenzene	*98.3*			*72-125*	*%REC*	1	6/28/2010 19:25
Surr: Dibromofluoromethane	*96.0*			*71-125*	*%REC*	1	6/28/2010 19:25
Surr: Toluene-d8	*96.9*			*75-125*	*%REC*	1	6/28/2010 19:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW48C-20100624
Collection Date: 6/24/2010 12:05 PM

Work Order: 1006826
Lab ID: 1006826-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/10/2010 20:45
2,4-Dimethylphenol	**7.3**		**0.40**	**1.0**	**µg/L**	5	7/10/2010 20:45
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/10/2010 20:45
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/10/2010 20:45
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/10/2010 20:45
2-Methylnaphthalene	**180**		**3.5**	**10**	**µg/L**	50	7/11/2010 22:09
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/10/2010 20:45
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/10/2010 20:45
Acenaphthene	**73**		**4.5**	**10**	**µg/L**	50	7/11/2010 22:09
Acenaphthylene	**1.4**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Anthracene	**7.0**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Benz(a)anthracene	U		0.35	1.0	µg/L	5	7/10/2010 20:45
Benzo(a)pyrene	U		0.40	1.0	µg/L	5	7/10/2010 20:45
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/10/2010 20:45
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/10/2010 20:45
Chrysene	U		0.35	1.0	µg/L	5	7/10/2010 20:45
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/10/2010 20:45
Dibenzofuran	**65**		**4.0**	**10**	**µg/L**	50	7/11/2010 22:09
Fluoranthene	**2.1**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Fluorene	**32**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/10/2010 20:45
Naphthalene	**5,000**		**50**	**100**	**µg/L**	500	7/11/2010 22:29
Nitrobenzene	U		0.45	1.0	µg/L	5	7/10/2010 20:45
Pentachlorophenol	**19**		**0.40**	**1.0**	**µg/L**	5	7/10/2010 20:45
Phenanthrene	**30**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Phenol	**24**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Pyrene	**1.0**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 20:45
Surr: 2,4,6-Tribromophenol	*73.9*			*34-129*	*%REC*	5	7/10/2010 20:45
Surr: 2,4,6-Tribromophenol	*76.3*	J		*34-129*	*%REC*	50	7/11/2010 22:09
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/11/2010 22:29
Surr: 2-Fluorobiphenyl	*52.4*			*40-125*	*%REC*	5	7/10/2010 20:45
Surr: 2-Fluorobiphenyl	*54.7*	J		*40-125*	*%REC*	50	7/11/2010 22:09
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/11/2010 22:29
Surr: 2-Fluorophenol	*55.3*			*20-120*	*%REC*	5	7/10/2010 20:45
Surr: 2-Fluorophenol	*57.2*	J		*20-120*	*%REC*	50	7/11/2010 22:09
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/11/2010 22:29
Surr: 4-Terphenyl-d14	*56.8*			*40-135*	*%REC*	5	7/10/2010 20:45
Surr: 4-Terphenyl-d14	*71.0*	J		*40-135*	*%REC*	50	7/11/2010 22:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW48C-20100624
Collection Date: 6/24/2010 12:05 PM

Work Order: 1006826
Lab ID: 1006826-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/11/2010 22:29
Surr: Nitrobenzene-d5	*60.2*			*41-120*	*%REC*	5	7/10/2010 20:45
Surr: Nitrobenzene-d5	*44.0*	J		*41-120*	*%REC*	50	7/11/2010 22:09
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/11/2010 22:29
Surr: Phenol-d6	*52.4*			*20-120*	*%REC*	5	7/10/2010 20:45
Surr: Phenol-d6	*56.7*	J		*20-120*	*%REC*	50	7/11/2010 22:09
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/11/2010 22:29
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 17:52
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 17:52
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:52
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 17:52
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 17:52
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 17:52
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 17:52
Surr: 1,2-Dichloroethane-d4	*88.5*			*70-125*	*%REC*	1	6/28/2010 17:52
Surr: 4-Bromofluorobenzene	*98.6*			*72-125*	*%REC*	1	6/28/2010 17:52
Surr: Dibromofluoromethane	*101*			*71-125*	*%REC*	1	6/28/2010 17:52
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	6/28/2010 17:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59A-20100624
Collection Date: 6/24/2010 01:00 PM

Work Order: 1006826
Lab ID: 1006826-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/11/2010 17:15
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/11/2010 17:15
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/11/2010 17:15
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/11/2010 17:15
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/11/2010 17:15
2-Methylnaphthalene	**0.20**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/11/2010 17:15
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/11/2010 17:15
Acenaphthene	**0.30**		**0.090**	**0.20**	**µg/L**	1	7/11/2010 17:15
Acenaphthylene	U		0.070	0.20	µg/L	1	7/11/2010 17:15
Anthracene	**0.26**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/11/2010 17:15
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/11/2010 17:15
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/11/2010 17:15
Bis(2-ethylhexyl)phthalate	**0.23**		**0.20**	**0.20**	**µg/L**	1	7/11/2010 17:15
Chrysene	U		0.070	0.20	µg/L	1	7/11/2010 17:15
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/11/2010 17:15
Dibenzofuran	**0.70**		**0.080**	**0.20**	**µg/L**	1	7/11/2010 17:15
Fluoranthene	**0.50**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
Fluorene	**0.45**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/11/2010 17:15
Naphthalene	**0.47**		**0.10**	**0.20**	**µg/L**	1	7/11/2010 17:15
Nitrobenzene	U		0.090	0.20	µg/L	1	7/11/2010 17:15
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/11/2010 17:15
Phenanthrene	**1.7**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
Phenol	U		0.070	0.20	µg/L	1	7/11/2010 17:15
Pyrene	**0.29**		**0.070**	**0.20**	**µg/L**	1	7/11/2010 17:15
Surr: 2,4,6-Tribromophenol	*75.5*			*34-129*	*%REC*	1	7/11/2010 17:15
Surr: 2-Fluorobiphenyl	*56.3*			*40-125*	*%REC*	1	7/11/2010 17:15
Surr: 2-Fluorophenol	*52.8*			*20-120*	*%REC*	1	7/11/2010 17:15
Surr: 4-Terphenyl-d14	*68.6*			*40-135*	*%REC*	1	7/11/2010 17:15
Surr: Nitrobenzene-d5	*56.7*			*41-120*	*%REC*	1	7/11/2010 17:15
Surr: Phenol-d6	*56.3*			*20-120*	*%REC*	1	7/11/2010 17:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 19:48
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 19:48
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 19:48
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59A-20100624
Collection Date: 6/24/2010 01:00 PM

Work Order: 1006826
Lab ID: 1006826-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 19:48
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 19:48
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 19:48
Surr: 1,2-Dichloroethane-d4	*100*			*70-125*	*%REC*	1	6/28/2010 19:48
Surr: 4-Bromofluorobenzene	*96.7*			*72-125*	*%REC*	1	6/28/2010 19:48
Surr: Dibromofluoromethane	*94.2*			*71-125*	*%REC*	1	6/28/2010 19:48
Surr: Toluene-d8	*96.0*			*75-125*	*%REC*	1	6/28/2010 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW49B-20100624
Collection Date: 6/24/2010 01:50 PM

Work Order: 1006826
Lab ID: 1006826-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/10/2010 21:05
2,4-Dimethylphenol	**1,200**		**40**	**100**	**µg/L**	500	7/11/2010 23:10
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/10/2010 21:05
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/10/2010 21:05
2-Methylnaphthalene	**1.6**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 21:05
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/10/2010 21:05
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/10/2010 21:05
Acenaphthene	**14**		**0.45**	**1.0**	**µg/L**	5	7/10/2010 21:05
Acenaphthylene	**0.63**	J	**0.35**	**1.0**	**µg/L**	5	7/10/2010 21:05
Anthracene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Benz(a)anthracene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Benzo(a)pyrene	U		0.40	1.0	µg/L	5	7/10/2010 21:05
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/10/2010 21:05
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/10/2010 21:05
Chrysene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Dibenzofuran	**2.6**		**0.40**	**1.0**	**µg/L**	5	7/10/2010 21:05
Fluoranthene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Fluorene	**1.6**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 21:05
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/10/2010 21:05
Naphthalene	**230**		**5.0**	**10**	**µg/L**	50	7/11/2010 22:49
Nitrobenzene	U		0.45	1.0	µg/L	5	7/10/2010 21:05
Pentachlorophenol	U		0.40	1.0	µg/L	5	7/10/2010 21:05
Phenanthrene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Phenol	**5.3**		**0.35**	**1.0**	**µg/L**	5	7/10/2010 21:05
Pyrene	U		0.35	1.0	µg/L	5	7/10/2010 21:05
Surr: 2,4,6-Tribromophenol	*78.4*			*34-129*	*%REC*	5	7/10/2010 21:05
Surr: 2,4,6-Tribromophenol	*54.7*	J		*34-129*	*%REC*	50	7/11/2010 22:49
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/11/2010 23:10
Surr: 2-Fluorobiphenyl	*54.7*			*40-125*	*%REC*	5	7/10/2010 21:05
Surr: 2-Fluorobiphenyl	*62.1*	J		*40-125*	*%REC*	50	7/11/2010 22:49
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/11/2010 23:10
Surr: 2-Fluorophenol	*45.9*			*20-120*	*%REC*	5	7/10/2010 21:05
Surr: 2-Fluorophenol	*64.5*	J		*20-120*	*%REC*	50	7/11/2010 22:49
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/11/2010 23:10
Surr: 4-Terphenyl-d14	*63.6*			*40-135*	*%REC*	5	7/10/2010 21:05
Surr: 4-Terphenyl-d14	*78.2*	J		*40-135*	*%REC*	50	7/11/2010 22:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW49B-20100624
Collection Date: 6/24/2010 01:50 PM

Work Order: 1006826
Lab ID: 1006826-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/11/2010 23:10
Surr: Nitrobenzene-d5	*45.5*			*41-120*	*%REC*	5	7/10/2010 21:05
Surr: Nitrobenzene-d5	*54.1*	J		*41-120*	*%REC*	50	7/11/2010 22:49
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/11/2010 23:10
Surr: Phenol-d6	*56.1*			*20-120*	*%REC*	5	7/10/2010 21:05
Surr: Phenol-d6	*71.9*	J		*20-120*	*%REC*	50	7/11/2010 22:49
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/11/2010 23:10
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 18:18
Benzene	**100**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 18:18
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 18:18
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 18:18
Ethylbenzene	**19**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 18:18
Toluene	**71**		**0.50**	**5.0**	**µg/L**	1	6/28/2010 18:18
Xylenes, Total	**47**		**1.0**	**15**	**µg/L**	1	6/28/2010 18:18
Surr: 1,2-Dichloroethane-d4	*96.8*			*70-125*	*%REC*	1	6/28/2010 18:18
Surr: 4-Bromofluorobenzene	*103*			*72-125*	*%REC*	1	6/28/2010 18:18
Surr: Dibromofluoromethane	*100*			*71-125*	*%REC*	1	6/28/2010 18:18
Surr: Toluene-d8	*96.0*			*75-125*	*%REC*	1	6/28/2010 18:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW47C-20100624
Collection Date: 6/24/2010 03:00 PM

Work Order: 1006826
Lab ID: 1006826-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/10/2010 18:45
2,4-Dimethylphenol	**0.11**	J	**0.080**	**0.20**	**µg/L**	1	7/10/2010 18:45
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/10/2010 18:45
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/10/2010 18:45
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/10/2010 18:45
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/10/2010 18:45
Acenaphthene	U		0.090	0.20	µg/L	1	7/10/2010 18:45
Acenaphthylene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Anthracene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/10/2010 18:45
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/10/2010 18:45
Bis(2-ethylhexyl)phthalate	**0.21**		**0.20**	**0.20**	**µg/L**	1	7/10/2010 18:45
Chrysene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Dibenzofuran	U		0.080	0.20	µg/L	1	7/10/2010 18:45
Fluoranthene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Fluorene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/10/2010 18:45
Naphthalene	**0.46**		**0.10**	**0.20**	**µg/L**	1	7/10/2010 18:45
Nitrobenzene	U		0.090	0.20	µg/L	1	7/10/2010 18:45
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/10/2010 18:45
Phenanthrene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Phenol	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Pyrene	U		0.070	0.20	µg/L	1	7/10/2010 18:45
Surr: 2,4,6-Tribromophenol	*53.5*			*34-129*	*%REC*	1	7/10/2010 18:45
Surr: 2-Fluorobiphenyl	*50.0*			*40-125*	*%REC*	1	7/10/2010 18:45
Surr: 2-Fluorophenol	*40.4*			*20-120*	*%REC*	1	7/10/2010 18:45
Surr: 4-Terphenyl-d14	*67.7*			*40-135*	*%REC*	1	7/10/2010 18:45
Surr: Nitrobenzene-d5	*49.7*			*41-120*	*%REC*	1	7/10/2010 18:45
Surr: Phenol-d6	*49.4*			*20-120*	*%REC*	1	7/10/2010 18:45
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 20:12
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 20:12
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:12
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 20:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW47C-20100624
Collection Date: 6/24/2010 03:00 PM

Work Order: 1006826
Lab ID: 1006826-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:12
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 20:12
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 20:12
Surr: 1,2-Dichloroethane-d4	*99.9*			*70-125*	*%REC*	1	6/28/2010 20:12
Surr: 4-Bromofluorobenzene	*99.7*			*72-125*	*%REC*	1	6/28/2010 20:12
Surr: Dibromofluoromethane	*97.3*			*71-125*	*%REC*	1	6/28/2010 20:12
Surr: Toluene-d8	*98.0*			*75-125*	*%REC*	1	6/28/2010 20:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW51A-20100624
Collection Date: 6/24/2010 04:00 PM

Work Order: 1006826
Lab ID: 1006826-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 20:50
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 20:50
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 20:50
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 20:50
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 20:50
2-Methylnaphthalene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 20:50
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 20:50
Acenaphthene	**0.13**	J	**0.090**	**0.20**	**µg/L**	1	7/9/2010 20:50
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 20:50
Anthracene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Benz(a)anthracene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 20:50
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 20:50
Bis(2-ethylhexyl)phthalate	**0.35**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 20:50
Chrysene	**0.13**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 20:50
Dibenzofuran	**0.12**	J	**0.080**	**0.20**	**µg/L**	1	7/9/2010 20:50
Fluoranthene	**0.72**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Fluorene	**0.11**	J	**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 20:50
Naphthalene	**0.87**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 20:50
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 20:50
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 20:50
Phenanthrene	**0.68**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 20:50
Pyrene	**0.37**		**0.070**	**0.20**	**µg/L**	1	7/9/2010 20:50
Surr: 2,4,6-Tribromophenol	*60.5*			*34-129*	*%REC*	1	7/9/2010 20:50
Surr: 2-Fluorobiphenyl	*49.3*			*40-125*	*%REC*	1	7/9/2010 20:50
Surr: 2-Fluorophenol	*54.5*			*20-120*	*%REC*	1	7/9/2010 20:50
Surr: 4-Terphenyl-d14	*57.8*			*40-135*	*%REC*	1	7/9/2010 20:50
Surr: Nitrobenzene-d5	*53.5*			*41-120*	*%REC*	1	7/9/2010 20:50
Surr: Phenol-d6	*52.2*			*20-120*	*%REC*	1	7/9/2010 20:50
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 20:36
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 20:36
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:36
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 20:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW51A-20100624
Collection Date: 6/24/2010 04:00 PM

Work Order: 1006826
Lab ID: 1006826-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 20:36
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 20:36
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 20:36
Surr: 1,2-Dichloroethane-d4	*99.8*			*70-125*	*%REC*	1	6/28/2010 20:36
Surr: 4-Bromofluorobenzene	*98.0*			*72-125*	*%REC*	1	6/28/2010 20:36
Surr: Dibromofluoromethane	*97.5*			*71-125*	*%REC*	1	6/28/2010 20:36
Surr: Toluene-d8	*97.4*			*75-125*	*%REC*	1	6/28/2010 20:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWFB3-20100624
Collection Date: 6/24/2010 04:15 PM

Work Order: 1006826
Lab ID: 1006826-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/25/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/9/2010 21:10
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/9/2010 21:10
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/9/2010 21:10
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/9/2010 21:10
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/9/2010 21:10
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/9/2010 21:10
Acenaphthene	U		0.090	0.20	µg/L	1	7/9/2010 21:10
Acenaphthylene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Anthracene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/9/2010 21:10
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/9/2010 21:10
Bis(2-ethylhexyl)phthalate	**0.21**		**0.20**	**0.20**	**µg/L**	1	7/9/2010 21:10
Chrysene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Dibenzofuran	U		0.080	0.20	µg/L	1	7/9/2010 21:10
Fluoranthene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Fluorene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/9/2010 21:10
Naphthalene	**0.29**		**0.10**	**0.20**	**µg/L**	1	7/9/2010 21:10
Nitrobenzene	U		0.090	0.20	µg/L	1	7/9/2010 21:10
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/9/2010 21:10
Phenanthrene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Phenol	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Pyrene	U		0.070	0.20	µg/L	1	7/9/2010 21:10
Surr: 2,4,6-Tribromophenol	*40.7*			*34-129*	*%REC*	1	7/9/2010 21:10
Surr: 2-Fluorobiphenyl	*42.1*			*40-125*	*%REC*	1	7/9/2010 21:10
Surr: 2-Fluorophenol	*42.9*			*20-120*	*%REC*	1	7/9/2010 21:10
Surr: 4-Terphenyl-d14	*57.3*			*40-135*	*%REC*	1	7/9/2010 21:10
Surr: Nitrobenzene-d5	*53.7*			*41-120*	*%REC*	1	7/9/2010 21:10
Surr: Phenol-d6	*37.1*			*20-120*	*%REC*	1	7/9/2010 21:10
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 18:37
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 18:37
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 18:37
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 18:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWFB3-20100624
Collection Date: 6/24/2010 04:15 PM

Work Order: 1006826
Lab ID: 1006826-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 18:37
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 18:37
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 18:37
Surr: 1,2-Dichloroethane-d4	*99.7*			*70-125*	*%REC*	1	6/28/2010 18:37
Surr: 4-Bromofluorobenzene	*96.5*			*72-125*	*%REC*	1	6/28/2010 18:37
Surr: Dibromofluoromethane	*95.3*			*71-125*	*%REC*	1	6/28/2010 18:37
Surr: Toluene-d8	*95.4*			*75-125*	*%REC*	1	6/28/2010 18:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB3-20100624
Collection Date: 6/24/2010

Work Order: 1006826
Lab ID: 1006826-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 18:14
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 18:14
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 18:14
Dichloromethane	**1.3**	J	**0.50**	**10**	**µg/L**	1	6/28/2010 18:14
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 18:14
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 18:14
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 18:14
Surr: 1,2-Dichloroethane-d4	*99.5*			*70-125*	*%REC*	1	6/28/2010 18:14
Surr: 4-Bromofluorobenzene	*96.9*			*72-125*	*%REC*	1	6/28/2010 18:14
Surr: Dibromofluoromethane	*96.2*			*71-125*	*%REC*	1	6/28/2010 18:14
Surr: Toluene-d8	*96.3*			*75-125*	*%REC*	1	6/28/2010 18:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006826
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006826
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100625-44015** Units: **µg/L** Analysis Date: **7/9/2010 10:22 AM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025727** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Di-n-butyl phthalate	U	0.20								
Dibenzofuran	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.584*	0.20	*5*	0	*71.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.498*	0.20	*5*	0	*70*	*40-125*	0			
Surr: 2-Fluorophenol	*3.485*	0.20	*5*	0	*69.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.083*	0.20	*5*	0	*81.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.552*	0.20	*5*	0	*71*	*41-120*	0			
Surr: Phenol-d6	*3.828*	0.20	*5*	0	*76.6*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW2-100625-44015** Units: **µg/L** Analysis Date: **7/9/2010 10:43 AM**

Client ID: Run ID: **SV-2_100709B** SeqNo: **2025728** Prep Date: **6/25/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.363	0.20	5	0	87.3	39-127	0			
2,4-Dimethylphenol	2.212	0.20	5	0	44.2	35-120	0			
2,4-Dinitrotoluene	4.566	0.20	5	0	91.3	50-122	0			
2,6-Dinitrotoluene	4.443	0.20	5	0	88.9	50-120	0			
2-Chloronaphthalene	4.694	0.20	5	0	93.9	50-120	0			
2-Methylnaphthalene	4.271	0.20	5	0	85.4	50-120	0			
4,6-Dinitro-2-methylphenol	4.086	0.20	5	0	81.7	25-121	0			
4-Nitrophenol	4.948	1.0	5	0	99	30-130	0			
Acenaphthene	4.181	0.20	5	0	83.6	45-120	0			
Acenaphthylene	4.367	0.20	5	0	87.3	47-120	0			
Anthracene	4.274	0.20	5	0	85.5	45-120	0			
Benz(a)anthracene	4.728	0.20	5	0	94.6	40-120	0			
Benzo(a)pyrene	4.855	0.20	5	0	97.1	45-120	0			
Bis(2-chloroethoxy)methane	4.14	0.20	5	0	82.8	45-120	0			
Bis(2-ethylhexyl)phthalate	4.821	0.20	5	0	96.4	40-139	0			
Chrysene	4.71	0.20	5	0	94.2	43-120	0			
Di-n-butyl phthalate	4.729	0.20	5	0	94.6	45-123	0			
Dibenzofuran	4.505	0.20	5	0	90.1	50-120	0			
Fluoranthene	4.709	0.20	5	0	94.2	45-125	0			
Fluorene	4.475	0.20	5	0	89.5	49-120	0			
N-Nitrosodiphenylamine	4.179	0.20	5	0	83.6	40-125	0			
Naphthalene	4.162	0.20	5	0	83.2	45-120	0			
Nitrobenzene	4.234	0.20	5	0	84.7	44-120	0			
Pentachlorophenol	3.506	0.20	5	0	70.1	19-121	0			
Phenanthrene	4.425	0.20	5	0	88.5	45-121	0			
Phenol	4.111	0.20	5	0	82.2	20-124	0			
Pyrene	4.683	0.20	5	0	93.7	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.237*	0.20	*5*	0	*84.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*4.114*	0.20	*5*	0	*82.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.37*	0.20	*5*	0	*67.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.148*	0.20	*5*	0	*83*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.87*	0.20	*5*	0	*77.4*	*41-120*	0			
Surr: Phenol-d6	*3.958*	0.20	*5*	0	*79.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1006826-02BMS** Units: **µg/L** Analysis Date: **7/11/2010 05:34 PM**

Client ID: **WG-1620-MW18C-20100624** Run ID: **SV-2_100709B** SeqNo: **2025782** Prep Date: **6/25/2010** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.288	1.0	5	0	85.8	39-127	0			
2,4-Dimethylphenol	13.88	1.0	5	7.808	122	35-120	0			S
2,4-Dinitrotoluene	5.178	1.0	5	0	104	50-122	0			
2,6-Dinitrotoluene	5.855	1.0	5	0	117	50-120	0			
2-Chloronaphthalene	4.732	1.0	5	0	94.6	50-120	0			
2-Methylnaphthalene	161.4	1.0	5	123.6	755	50-120	0			SEO
4,6-Dinitro-2-methylphenol	3.911	1.0	5	0	78.2	25-121	0			
4-Nitrophenol	15.15	5.0	5	0	303	30-130	0			S
Acenaphthene	90.57	1.0	5	69.41	423	45-120	0			SEO
Acenaphthylene	5.534	1.0	5	1.478	81.1	47-120	0			
Anthracene	16.83	1.0	5	7.648	184	45-120	0			S
Benz(a)anthracene	3.31	1.0	5	0	66.2	40-120	0			
Benzo(a)pyrene	3.909	1.0	5	0	78.2	45-120	0			
Bis(2-chloroethoxy)methane	3.804	1.0	5	0	76.1	45-120	0			
Bis(2-ethylhexyl)phthalate	4.187	1.0	5	0	83.7	40-139	0			
Chrysene	4.005	1.0	5	0	80.1	43-120	0			
Di-n-butyl phthalate	3.785	1.0	5	0	75.7	45-123	0			
Dibenzofuran	71.31	1.0	5	56.32	300	50-120	0			SEO
Fluoranthene	7.128	1.0	5	2.341	95.7	45-125	0			
Fluorene	56.61	1.0	5	33.55	461	49-120	0			SEO
N-Nitrosodiphenylamine	3.55	1.0	5	0	71	40-125	0			
Naphthalene	413.8	1.0	5	297.7	2320	45-120	0			SEO
Nitrobenzene	4.469	1.0	5	0	89.4	44-120	0			
Pentachlorophenol	50.45	1.0	5	20.37	602	19-121	0			SEO
Phenanthrene	51.75	1.0	5	32.48	385	45-121	0			SEO
Phenol	54.85	1.0	5	25.89	579	20-124	0			SEO
Pyrene	4.777	1.0	5	1.212	71.3	40-130	0			
Surr: 2,4,6-Tribromophenol	*9.147*	1.0	*10*	0	*91.5*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*5.327*	1.0	*10*	0	*53.3*	*40-125*	0			
Surr: 2-Fluorophenol	*6.499*	1.0	*10*	0	*65*	*20-120*	0			
Surr: 4-Terphenyl-d14	*5.822*	1.0	*10*	0	*58.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*5.459*	1.0	*10*	0	*54.6*	*41-120*	0			
Surr: Phenol-d6	*5.317*	1.0	*10*	0	*53.2*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44015** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1006826-02BMSD** Units: **µg/L** Analysis Date: **7/11/2010 05:54 PM**

Client ID: **WG-1620-MW18C-20100624** Run ID: **SV-2_100709B** SeqNo: **2025783** Prep Date: **6/25/2010** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.831	1.0	5	0	76.6	39-127	4.288	11.2	20	
2,4-Dimethylphenol	10.5	1.0	5	7.808	53.8	35-120	13.88	27.8	20	R
2,4-Dinitrotoluene	5.1	1.0	5	0	102	50-122	5.178	1.53	20	
2,6-Dinitrotoluene	5.422	1.0	5	0	108	50-120	5.855	7.68	20	
2-Chloronaphthalene	4.797	1.0	5	0	95.9	50-120	4.732	1.37	20	
2-Methylnaphthalene	140.9	1.0	5	123.6	346	50-120	161.4	13.5	20	SEO
4,6-Dinitro-2-methylphenol	3.512	1.0	5	0	70.2	25-121	3.911	10.8	20	
4-Nitrophenol	12.8	5.0	5	0	256	30-130	15.15	16.9	20	S
Acenaphthene	103.8	1.0	5	69.41	687	45-120	90.57	13.6	20	SEO
Acenaphthylene	5.696	1.0	5	1.478	84.4	47-120	5.534	2.88	20	
Anthracene	18.35	1.0	5	7.648	214	45-120	16.83	8.61	20	S
Benz(a)anthracene	2.625	1.0	5	0	52.5	40-120	3.31	23.1	20	R
Benzo(a)pyrene	3.994	1.0	5	0	79.9	45-120	3.909	2.15	20	
Bis(2-chloroethoxy)methane	3.476	1.0	5	0	69.5	45-120	3.804	9.02	20	
Bis(2-ethylhexyl)phthalate	3.834	1.0	5	0	76.7	40-139	4.187	8.8	20	
Chrysene	4.156	1.0	5	0	83.1	43-120	4.005	3.71	20	
Di-n-butyl phthalate	4.096	1.0	5	0	81.9	45-123	3.785	7.89	20	
Dibenzofuran	89.53	1.0	5	56.32	664	50-120	71.31	22.7	20	SREO
Fluoranthene	7.61	1.0	5	2.341	105	45-125	7.128	6.54	20	
Fluorene	64.44	1.0	5	33.55	618	49-120	56.61	12.9	20	SEO
N-Nitrosodiphenylamine	3.493	1.0	5	0	69.9	40-125	3.55	1.64	20	
Naphthalene	323.9	1.0	5	297.7	524	45-120	413.8	24.4	20	SREO
Nitrobenzene	3.38	1.0	5	0	67.6	44-120	4.469	27.8	20	R
Pentachlorophenol	53.61	1.0	5	20.37	665	19-121	50.45	6.09	20	SEO
Phenanthrene	53.46	1.0	5	32.48	420	45-121	51.75	3.25	20	SEO
Phenol	62.67	1.0	5	25.89	736	20-124	54.85	13.3	20	SEO
Pyrene	4.483	1.0	5	1.212	65.4	40-130	4.777	6.35	20	
Surr: 2,4,6-Tribromophenol	*8.706*	1.0	*10*	0	*87.1*	*34-129*	9.147	*4.95*	*20*	
Surr: 2-Fluorobiphenyl	*5.864*	1.0	*10*	0	*58.6*	*40-125*	5.327	*9.58*	*20*	
Surr: 2-Fluorophenol	*6.883*	1.0	*10*	0	*68.8*	*20-120*	6.499	*5.75*	*20*	
Surr: 4-Terphenyl-d14	*5.439*	1.0	*10*	0	*54.4*	*40-135*	5.822	*6.79*	*20*	
Surr: Nitrobenzene-d5	*7.516*	1.0	*10*	0	*75.2*	*41-120*	5.459	*31.7*	*20*	*R*
Surr: Phenol-d6	*6.108*	1.0	*10*	0	*61.1*	*20-120*	5.317	*13.9*	*20*	

The following samples were analyzed in this batch:

1006826-01B	1006826-02B	1006826-03B
1006826-04B	1006826-05B	1006826-06B
1006826-07B	1006826-08B	1006826-09B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 01:06 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009707** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.5976	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.01*	5.0	*50*	0	*94*	*72-125*	0			
Surr: Dibromofluoromethane	*52.08*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 11:48 AM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.72	5.0	50	0	101	78-120	0			
Benzene	48.81	5.0	50	0	97.6	73-121	0			
Chlorobenzene	46.21	5.0	50	0	92.4	80-120	0			
Dichloromethane	45.01	10	50	0	90	65-133	0			
Ethylbenzene	47.14	5.0	50	0	94.3	80-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Xylenes, Total	149.7	15	150	0	99.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.7*	5.0	*50*	0	*89.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.87*	5.0	*50*	0	*95.7*	*71-125*	0			
Surr: Toluene-d8	*48.39*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 12:15 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.52	5.0	50	0	95	78-120	50.72	6.51	20	
Benzene	48.61	5.0	50	0	97.2	73-121	48.81	0.399	20	
Chlorobenzene	43.86	5.0	50	0	87.7	80-120	46.21	5.23	20	
Dichloromethane	46.52	10	50	0	93	65-133	45.01	3.3	20	
Ethylbenzene	46.89	5.0	50	0	93.8	80-120	47.14	0.515	20	
Toluene	43.02	5.0	50	0	86	80-120	48.68	12.3	20	
Xylenes, Total	142.2	15	150	0	94.8	80-120	149.7	5.1	20	
Surr: 1,2-Dichloroethane-d4	*46.81*	5.0	*50*	0	*93.6*	*70-125*	44.7	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.12*	5.0	*50*	0	*98.2*	*72-125*	50.69	*3.15*	*20*	
Surr: Dibromofluoromethane	*50.53*	5.0	*50*	0	*101*	*71-125*	47.87	*5.41*	*20*	
Surr: Toluene-d8	*47.32*	5.0	*50*	0	*94.6*	*75-125*	48.39	*2.22*	*20*	

MS Sample ID: **1006737-07AMS** Units: **µg/L** Analysis Date: **6/28/2010 03:16 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010801** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.39	5.0	50	0	94.8	78-120	0			
Benzene	47.72	5.0	50	0	95.4	73-121	0			
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Dichloromethane	43.99	10	50	0	88	65-133	0			
Ethylbenzene	41.09	5.0	50	0	82.2	80-120	0			
Toluene	43.14	5.0	50	0	86.3	80-120	0			
Xylenes, Total	138	15	150	0	92	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.05*	5.0	*50*	0	*88.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.8*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*49.31*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006737-07AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:42 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010802** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.82	5.0	50	0	93.6	78-120	47.39	1.21	20	
Benzene	44.08	5.0	50	0	88.2	73-121	47.72	7.93	20	
Chlorobenzene	45.04	5.0	50	0	90.1	80-120	43.5	3.48	20	
Dichloromethane	39.46	10	50	0	78.9	65-133	43.99	10.9	20	
Ethylbenzene	45	5.0	50	0	90	80-120	41.09	9.07	20	
Toluene	46.63	5.0	50	0	93.3	80-120	43.14	7.78	20	
Xylenes, Total	141.1	15	150	0	94.1	80-120	138	2.23	20	
Surr: 1,2-Dichloroethane-d4	*41.14*	5.0	*50*	0	*82.3*	*70-125*	44.05	*6.83*	*20*	
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	50.8	*1.67*	*20*	
Surr: Dibromofluoromethane	*46.87*	5.0	*50*	0	*93.7*	*71-125*	49.31	*5.08*	*20*	
Surr: Toluene-d8	*48.85*	5.0	*50*	0	*97.7*	*75-125*	47.82	*2.13*	*20*	

The following samples were analyzed in this batch: 1006826-04A 1006826-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 12:16 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011527** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.67*	5.0	*50*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.59*	5.0	*50*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*47.24*	5.0	*50*	0	*94.5*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 11:05 AM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011526** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.21	5.0	50	0	108	78-120	0			
Benzene	49.35	5.0	50	0	98.7	73-121	0			
Chlorobenzene	47.93	5.0	50	0	95.9	80-120	0			
Dichloromethane	58.21	10	50	0	116	65-133	0			
Ethylbenzene	46.2	5.0	50	0	92.4	80-120	0			
Toluene	47.36	5.0	50	0	94.7	80-120	0			
Xylenes, Total	138.5	15	150	0	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*52.75*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	0			
Surr: Dibromofluoromethane	*51.79*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.37*	5.0	*50*	0	*96.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1006737-05AMS** Units: **µg/L** Analysis Date: **6/28/2010 02:39 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011529** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.83	5.0	50	0	112	78-120	0			
Benzene	51.74	5.0	50	0	103	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	48.93	10	50	0	97.9	65-133	0			
Ethylbenzene	46.92	5.0	50	0.5648	92.7	80-120	0			
Toluene	45.5	5.0	50	0	91	80-120	0			
Xylenes, Total	141.2	15	150	2.629	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.75*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.33*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*51.56*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*47.99*	5.0	*50*	0	*96*	*75-125*	0			

MSD Sample ID: **1006737-05AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:03 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011530** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.37	5.0	50	0	101	78-120	55.83	10.3	20	
Benzene	47.3	5.0	50	0	94.6	73-121	51.74	8.95	20	
Chlorobenzene	46.48	5.0	50	0	93	80-120	46.49	0.00964	20	
Dichloromethane	49.75	10	50	0	99.5	65-133	48.93	1.66	20	
Ethylbenzene	47.51	5.0	50	0.5648	93.9	80-120	46.92	1.24	20	
Toluene	46.51	5.0	50	0	93	80-120	45.5	2.19	20	
Xylenes, Total	143.5	15	150	2.629	93.9	80-120	141.2	1.64	20	
Surr: 1,2-Dichloroethane-d4	*51.04*	5.0	*50*	0	*102*	*70-125*	50.75	*0.568*	*20*	
Surr: 4-Bromofluorobenzene	*49.68*	5.0	*50*	0	*99.4*	*72-125*	49.33	*0.709*	*20*	
Surr: Dibromofluoromethane	*51.04*	5.0	*50*	0	*102*	*71-125*	51.56	*1.01*	*20*	
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	47.99	*5.12*	*20*	

The following samples were analyzed in this batch:

1006826-03A	1006826-05A	1006826-07A
1006826-08A	1006826-09A	1006826-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93410** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:56 AM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013671** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*45*	5.0	*50*	0	*90*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.46*	5.0	*50*	0	*98.9*	*72-125*	0			
Surr: Dibromofluoromethane	*47.55*	5.0	*50*	0	*95.1*	*71-125*	0			
Surr: Toluene-d8	*49.4*	5.0	*50*	0	*98.8*	*75-125*	0			

LCS Sample ID: **VLCSW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:29 AM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013670** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.99	5.0	50	0	100	78-120	0			
Benzene	49.1	5.0	50	0	98.2	73-121	0			
Chlorobenzene	48.38	5.0	50	0	96.8	80-120	0			
Dichloromethane	46.85	10	50	0	93.7	65-133	0			
Ethylbenzene	48.68	5.0	50	0	97.4	80-120	0			
Toluene	47.78	5.0	50	0	95.6	80-120	0			
Xylenes, Total	141	15	150	0	94	80-120	0			
Surr: 1,2-Dichloroethane-d4	*42.21*	5.0	*50*	0	*84.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.13*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*45.96*	5.0	*50*	0	*91.9*	*71-125*	0			
Surr: Toluene-d8	*47.94*	5.0	*50*	0	*95.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006826
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93410** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1006826-02AMS** Units: **µg/L** Analysis Date: **6/29/2010 02:51 PM**

Client ID: **WG-1620-MW18C-20100624** Run ID: **VOA1_100629B** SeqNo: **2013674** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	247.4	25	250	0	99	78-120	0			
Benzene	1220	25	250	1118	40.7	73-121	0			SEO
Chlorobenzene	213.8	25	250	0	85.5	80-120	0			
Dichloromethane	193.4	50	250	0	77.4	65-133	0			
Ethylbenzene	341.9	25	250	134.5	83	80-120	0			
Toluene	910.6	25	250	720.8	75.9	80-120	0			S
Xylenes, Total	1625	75	750	1033	79	80-120	0			S
Surr: 1,2-Dichloroethane-d4	*192.6*	25	*250*	0	*77*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*258.6*	25	*250*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*214.9*	25	*250*	0	*86*	*71-125*	0			
Surr: Toluene-d8	*244.3*	25	*250*	0	*97.7*	*75-125*	0			

MSD Sample ID: **1006826-02AMSD** Units: **µg/L** Analysis Date: **6/29/2010 03:17 PM**

Client ID: **WG-1620-MW18C-20100624** Run ID: **VOA1_100629B** SeqNo: **2013675** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	243.7	25	250	0	97.5	78-120	247.4	1.5	20	
Benzene	1151	25	250	1118	13	73-121	1220	5.84	20	SEO
Chlorobenzene	218.6	25	250	0	87.4	80-120	213.8	2.21	20	
Dichloromethane	199.4	50	250	0	79.8	65-133	193.4	3.04	20	
Ethylbenzene	332.2	25	250	134.5	79.1	80-120	341.9	2.89	20	S
Toluene	869.7	25	250	720.8	59.5	80-120	910.6	4.6	20	S
Xylenes, Total	1650	75	750	1033	82.3	80-120	1625	1.48	20	
Surr: 1,2-Dichloroethane-d4	*194.6*	25	*250*	0	*77.8*	*70-125*	192.6	*1.02*	*20*	
Surr: 4-Bromofluorobenzene	*258*	25	*250*	0	*103*	*72-125*	258.6	*0.215*	*20*	
Surr: Dibromofluoromethane	*206.6*	25	*250*	0	*82.6*	*71-125*	214.9	*3.96*	*20*	
Surr: Toluene-d8	*248.4*	25	*250*	0	*99.4*	*75-125*	244.3	*1.66*	*20*	

The following samples were analyzed in this batch: 1006826-01A 1006826-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1006826**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Chain of Custody Form

Page 1 of 2

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Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1006626

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 601790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW18A-20100624	6-24-10	0900	W		5	X	X									
2	WG-1620-MW18C-20100624	6-24-10	1000	W		5	X	X									
3	WG-1620-MW18C-MS-20100624	6-24-10	1000	W		5	X	X									
4	WG-1620-MW18CMSD-20100624	6-24-10	1000	W		5	X	X									
5	WG-1620-MW60A-20100624	6-24-10	1110	W		5	X	X									
6	WG-1620-MW48C-20100624	6-24-10	1205	W		5	X	X									
7	WG-1620-MW59A-20100624	6-24-10	1300	W		5	X	X									
8	WG-1620-MW49B-20100624	6-24-10	1350	W		5	X	X									
9	WG-1620-MW47C-20100624	6-24-10	1500	W		5	X	X									
10	WG-1620-MW51A-20100624	6-24-10	1600	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAUTON John Brauton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std. 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brauton | Date: 6-24-10 | Time: 1753 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 6-24-10 1753

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 100826

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-FB3-20100624	6-24-10	1615	W		5	X	X									
2	WG-1620-TB3-20100624	6-24-10	—	W		2	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton	Date: 6-24-10	Time: 1733	Received by:	Notes: 10 Work Days TAT
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID / Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **24-Jun-10 17:33**

Work Order: **1006826** Received by: **RSZ**

Checklist completed by Raymond N Gamboa (eSignature) 24-Jun-10 (Date) Reviewed by: Shannon L. Tyrell (eSignature) 25-Jun-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.1c, 0.4c, 0.2c	002	
Cooler(s)/Kit(s):	3438, 3284, 3303		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

14-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1006872**

Dear Eric,

ALS Laboratory Group received 5 samples on 25-Jun-2010 11:35 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 30.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1006872

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1006872**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1006872-01	WG-1620-MW49A-20100625	Water		6/25/2010 07:45	6/25/2010 11:35	☐
1006872-02	WG-1620-MW50A-20100625	Water		6/25/2010 08:45	6/25/2010 11:35	☐
1006872-03	WG-1620-MW26A-20100625	Water		6/25/2010 10:00	6/25/2010 11:35	☐
1006872-04	WG-1620-FB4-20100625	Water		6/25/2010 10:30	6/25/2010 11:35	☐
1006872-05	WG-1620-TB4-20100625	Water		6/25/2010	6/25/2010 11:35	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/14/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1006872
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44072, R93224, R93304, R93410

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?		X			2
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			3
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				4

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 07/14/2010					
Project Name: HWPW-Site Wide Monitoring			Laboratory Job Number: 1006872					
Reviewer Name: R. Kevin Given			Prep Batch Number(s): : 44072, R93224, R93304, R93410					
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]	
S1	OI	**INITIAL CALIBRATION (ICAL)**						
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X					
		2) Were percent RSDs or correlation coefficient criteria met?	X					
		3) Was the number of standards recommended in the method used for all analytes?	X					
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X					
		5) Are ICAL data available for all instruments used?	X					
		6) 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**						
		1) Was the CCV analyzed at the method-required frequency?	X					
		2) Were percent differences for each analyte within the method-required QC limits?	X					
		3) Was the ICAL curve verified for each analyte?	X					
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X			
S3	O	**MASS SPECTRAL TUNING:**						
		1) Was the appropriate compound for the method used for tuning?	X					
		2) 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**						
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X					
		2) 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**						
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X			
S10	OI	**PROFICIENCY TEST REPORTS:**						
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X					
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**						
		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**						
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X					
		2) Is documentation of the analyst's competency up-to-date and on file?	X					
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**						
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/14/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1006872
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44072, R93224, R93304, R93410

ER #[1]	DESCRIPTION
1	Low-Level Semivolatiles, Sample WG-1620-MW49A-20100625 : Surrogate recoveries were diluted out in the 500X dilution. Low-Level Semivolatiles, Sample WG-1620-MW49A-20100625 : Surrogate recoveries were diluted out in the 2000X dilution.
2	Batch 44072, Semivolatile Organics, LCSD RPD was above the control limits for 2,4-Dimethylphenol and 4-Nitrophenol. The individual recoveries were within control limits.
3	Batch R93410, Volatile Organics, Sample 1006826-02 : MS/MSD is for an unrelated sample.
4	Low-Level Semivolatiles, Sample WG-1620-MW49A-20100625 could not be analyzed at a lower dilution due to high concentrations of target compounds. TCL Volatiles, Sample WG-1620-MW49A-20100625 could not be analyzed at a lower dilution due to matrix interference.

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

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW49A-20100625
Collection Date: 6/25/2010 07:45 AM

Work Order: 1006872
Lab ID: 1006872-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.50	1.0	µg/L	5	7/12/2010 12:32
2,4-Dimethylphenol	**3,700**		**40**	**100**	**µg/L**	500	7/12/2010 17:37
2,4-Dinitrotoluene	U		0.45	1.0	µg/L	5	7/12/2010 12:32
2,6-Dinitrotoluene	U		0.35	1.0	µg/L	5	7/12/2010 12:32
2-Chloronaphthalene	U		0.50	1.0	µg/L	5	7/12/2010 12:32
2-Methylnaphthalene	**440**		**3.5**	**10**	**µg/L**	50	7/12/2010 18:18
4,6-Dinitro-2-methylphenol	U		0.40	1.0	µg/L	5	7/12/2010 12:32
4-Nitrophenol	U		0.35	5.0	µg/L	5	7/12/2010 12:32
Acenaphthene	**210**		**4.5**	**10**	**µg/L**	50	7/12/2010 18:18
Acenaphthylene	**5.2**		**0.35**	**1.0**	**µg/L**	5	7/12/2010 12:32
Anthracene	**9.9**		**0.35**	**1.0**	**µg/L**	5	7/12/2010 12:32
Benz(a)anthracene	U		0.35	1.0	µg/L	5	7/12/2010 12:32
Benzo(a)pyrene	U		0.40	1.0	µg/L	5	7/12/2010 12:32
Bis(2-chloroethoxy)methane	U		0.45	1.0	µg/L	5	7/12/2010 12:32
Bis(2-ethylhexyl)phthalate	U		1.0	1.0	µg/L	5	7/12/2010 12:32
Chrysene	U		0.35	1.0	µg/L	5	7/12/2010 12:32
Dibenzofuran	**160**		**4.0**	**10**	**µg/L**	50	7/12/2010 18:18
Di-n-butyl phthalate	U		0.35	1.0	µg/L	5	7/12/2010 12:32
Fluoranthene	**3.4**		**0.35**	**1.0**	**µg/L**	5	7/12/2010 12:32
Fluorene	**130**		**3.5**	**10**	**µg/L**	50	7/12/2010 18:18
Naphthalene	**10,000**		**200**	**400**	**µg/L**	2000	7/12/2010 18:39
Nitrobenzene	U		0.45	1.0	µg/L	5	7/12/2010 12:32
N-Nitrosodiphenylamine	U		0.45	1.0	µg/L	5	7/12/2010 12:32
Pentachlorophenol	U		0.40	1.0	µg/L	5	7/12/2010 12:32
Phenanthrene	**86**		**3.5**	**10**	**µg/L**	50	7/12/2010 18:18
Phenol	**1.1**		**0.35**	**1.0**	**µg/L**	5	7/12/2010 12:32
Pyrene	**1.8**		**0.35**	**1.0**	**µg/L**	5	7/12/2010 12:32
Surr: 2,4,6-Tribromophenol	*115*			*34-129*	*%REC*	5	7/12/2010 12:32
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/12/2010 17:37
Surr: 2,4,6-Tribromophenol	*82.7*	J		*34-129*	*%REC*	50	7/12/2010 18:18
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	7/12/2010 18:39
Surr: 2-Fluorobiphenyl	*65.1*			*40-125*	*%REC*	5	7/12/2010 12:32
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/12/2010 17:37
Surr: 2-Fluorobiphenyl	*50.8*	J		*40-125*	*%REC*	50	7/12/2010 18:18
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	7/12/2010 18:39
Surr: 2-Fluorophenol	*88.6*			*20-120*	*%REC*	5	7/12/2010 12:32
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/12/2010 17:37
Surr: 2-Fluorophenol	*97.0*	J		*20-120*	*%REC*	50	7/12/2010 18:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW49A-20100625
Collection Date: 6/25/2010 07:45 AM

Work Order: 1006872
Lab ID: 1006872-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	7/12/2010 18:39
Surr: 4-Terphenyl-d14	*78.1*			*40-135*	*%REC*	5	7/12/2010 12:32
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/12/2010 17:37
Surr: 4-Terphenyl-d14	*88.4*	J		*40-135*	*%REC*	50	7/12/2010 18:18
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	7/12/2010 18:39
Surr: Nitrobenzene-d5	*90.0*			*41-120*	*%REC*	5	7/12/2010 12:32
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/12/2010 17:37
Surr: Nitrobenzene-d5	*85.8*	J		*41-120*	*%REC*	50	7/12/2010 18:18
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	7/12/2010 18:39
Surr: Phenol-d6	*73.7*			*20-120*	*%REC*	5	7/12/2010 12:32
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/12/2010 17:37
Surr: Phenol-d6	*80.6*	J		*20-120*	*%REC*	50	7/12/2010 18:18
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	7/12/2010 18:39
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	6/29/2010 16:10
Benzene	**290**		**5.0**	**50**	**µg/L**	10	6/29/2010 16:10
Chlorobenzene	U		5.0	50	µg/L	10	6/29/2010 16:10
Dichloromethane	U		5.0	100	µg/L	10	6/29/2010 16:10
Ethylbenzene	**140**		**5.0**	**50**	**µg/L**	10	6/29/2010 16:10
Toluene	**130**		**5.0**	**50**	**µg/L**	10	6/29/2010 16:10
Xylenes, Total	**340**		**10**	**150**	**µg/L**	10	6/29/2010 16:10
Surr: 1,2-Dichloroethane-d4	*79.8*			*70-125*	*%REC*	10	6/29/2010 16:10
Surr: 4-Bromofluorobenzene	*106*			*72-125*	*%REC*	10	6/29/2010 16:10
Surr: Dibromofluoromethane	*89.1*			*71-125*	*%REC*	10	6/29/2010 16:10
Surr: Toluene-d8	*101*			*75-125*	*%REC*	10	6/29/2010 16:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW50A-20100625
Collection Date: 6/25/2010 08:45 AM

Work Order: 1006872
Lab ID: 1006872-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/12/2010 11:33
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/12/2010 11:33
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/12/2010 11:33
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/12/2010 11:33
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/12/2010 11:33
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/12/2010 11:33
Acenaphthene	U		0.090	0.20	µg/L	1	7/12/2010 11:33
Acenaphthylene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Anthracene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/12/2010 11:33
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/12/2010 11:33
Bis(2-ethylhexyl)phthalate	**0.30**		**0.20**	**0.20**	**µg/L**	1	7/12/2010 11:33
Chrysene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Dibenzofuran	U		0.080	0.20	µg/L	1	7/12/2010 11:33
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Fluoranthene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Fluorene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Naphthalene	**0.40**		**0.10**	**0.20**	**µg/L**	1	7/12/2010 11:33
Nitrobenzene	U		0.090	0.20	µg/L	1	7/12/2010 11:33
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/12/2010 11:33
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/12/2010 11:33
Phenanthrene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Phenol	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Pyrene	U		0.070	0.20	µg/L	1	7/12/2010 11:33
Surr: 2,4,6-Tribromophenol	*38.2*			*34-129*	*%REC*	1	7/12/2010 11:33
Surr: 2-Fluorobiphenyl	*40.6*			*40-125*	*%REC*	1	7/12/2010 11:33
Surr: 2-Fluorophenol	*22.9*			*20-120*	*%REC*	1	7/12/2010 11:33
Surr: 4-Terphenyl-d14	*42.1*			*40-135*	*%REC*	1	7/12/2010 11:33
Surr: Nitrobenzene-d5	*41.1*			*41-120*	*%REC*	1	7/12/2010 11:33
Surr: Phenol-d6	*21.9*			*20-120*	*%REC*	1	7/12/2010 11:33
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 22:12
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 22:12
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 22:12
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 22:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW50A-20100625
Collection Date: 6/25/2010 08:45 AM

Work Order: 1006872
Lab ID: 1006872-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 22:12
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 22:12
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 22:12
Surr: 1,2-Dichloroethane-d4	*92.9*			*70-125*	*%REC*	1	6/28/2010 22:12
Surr: 4-Bromofluorobenzene	*106*			*72-125*	*%REC*	1	6/28/2010 22:12
Surr: Dibromofluoromethane	*95.6*			*71-125*	*%REC*	1	6/28/2010 22:12
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	6/28/2010 22:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW26A-20100625
Collection Date: 6/25/2010 10:00 AM

Work Order: 1006872
Lab ID: 1006872-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/12/2010 14:14
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/12/2010 14:14
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/12/2010 14:14
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/12/2010 14:14
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/12/2010 14:14
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/12/2010 14:14
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/12/2010 14:14
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/12/2010 14:14
Acenaphthene	**5.0**		**0.090**	**0.20**	**µg/L**	1	7/12/2010 14:14
Acenaphthylene	U		0.070	0.20	µg/L	1	7/12/2010 14:14
Anthracene	**0.20**		**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/12/2010 14:14
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/12/2010 14:14
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/12/2010 14:14
Bis(2-ethylhexyl)phthalate	**0.45**		**0.20**	**0.20**	**µg/L**	1	7/12/2010 14:14
Chrysene	**0.30**		**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Dibenzofuran	**0.33**		**0.080**	**0.20**	**µg/L**	1	7/12/2010 14:14
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/12/2010 14:14
Fluoranthene	**0.40**		**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Fluorene	**0.34**		**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Naphthalene	U		0.10	0.20	µg/L	1	7/12/2010 14:14
Nitrobenzene	U		0.090	0.20	µg/L	1	7/12/2010 14:14
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/12/2010 14:14
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/12/2010 14:14
Phenanthrene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Phenol	U		0.070	0.20	µg/L	1	7/12/2010 14:14
Pyrene	**0.20**	J	**0.070**	**0.20**	**µg/L**	1	7/12/2010 14:14
Surr: 2,4,6-Tribromophenol	*96.1*			*34-129*	*%REC*	1	7/12/2010 14:14
Surr: 2-Fluorobiphenyl	*47.4*			*40-125*	*%REC*	1	7/12/2010 14:14
Surr: 2-Fluorophenol	*45.0*			*20-120*	*%REC*	1	7/12/2010 14:14
Surr: 4-Terphenyl-d14	*75.4*			*40-135*	*%REC*	1	7/12/2010 14:14
Surr: Nitrobenzene-d5	*53.7*			*41-120*	*%REC*	1	7/12/2010 14:14
Surr: Phenol-d6	*44.6*			*20-120*	*%REC*	1	7/12/2010 14:14
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 22:38
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 22:38
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 22:38
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 22:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW26A-20100625
Collection Date: 6/25/2010 10:00 AM

Work Order: 1006872
Lab ID: 1006872-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 22:38
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 22:38
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 22:38
Surr: 1,2-Dichloroethane-d4	*92.5*			*70-125*	*%REC*	1	6/28/2010 22:38
Surr: 4-Bromofluorobenzene	*107*			*72-125*	*%REC*	1	6/28/2010 22:38
Surr: Dibromofluoromethane	*97.1*			*71-125*	*%REC*	1	6/28/2010 22:38
Surr: Toluene-d8	*106*			*75-125*	*%REC*	1	6/28/2010 22:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB4-20100625
Collection Date: 6/25/2010 10:30 AM

Work Order: 1006872
Lab ID: 1006872-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 6/26/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/12/2010 11:53
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/12/2010 11:53
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/12/2010 11:53
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/12/2010 11:53
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/12/2010 11:53
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/12/2010 11:53
Acenaphthene	U		0.090	0.20	µg/L	1	7/12/2010 11:53
Acenaphthylene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Anthracene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/12/2010 11:53
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/12/2010 11:53
Bis(2-ethylhexyl)phthalate	**0.25**		**0.20**	**0.20**	**µg/L**	1	7/12/2010 11:53
Chrysene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Dibenzofuran	U		0.080	0.20	µg/L	1	7/12/2010 11:53
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Fluoranthene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Fluorene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Naphthalene	**0.39**		**0.10**	**0.20**	**µg/L**	1	7/12/2010 11:53
Nitrobenzene	U		0.090	0.20	µg/L	1	7/12/2010 11:53
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/12/2010 11:53
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/12/2010 11:53
Phenanthrene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Phenol	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Pyrene	U		0.070	0.20	µg/L	1	7/12/2010 11:53
Surr: 2,4,6-Tribromophenol	*48.8*			*34-129*	*%REC*	1	7/12/2010 11:53
Surr: 2-Fluorobiphenyl	*44.0*			*40-125*	*%REC*	1	7/12/2010 11:53
Surr: 2-Fluorophenol	*25.4*			*20-120*	*%REC*	1	7/12/2010 11:53
Surr: 4-Terphenyl-d14	*40.1*			*40-135*	*%REC*	1	7/12/2010 11:53
Surr: Nitrobenzene-d5	*41.3*			*41-120*	*%REC*	1	7/12/2010 11:53
Surr: Phenol-d6	*25.4*			*20-120*	*%REC*	1	7/12/2010 11:53
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 21:00
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 21:00
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 21:00
Dichloromethane	U		0.50	10	µg/L	1	6/28/2010 21:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB4-20100625
Collection Date: 6/25/2010 10:30 AM

Work Order: 1006872
Lab ID: 1006872-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 21:00
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 21:00
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 21:00
Surr: 1,2-Dichloroethane-d4	*101*			*70-125*	*%REC*	1	6/28/2010 21:00
Surr: 4-Bromofluorobenzene	*99.2*			*72-125*	*%REC*	1	6/28/2010 21:00
Surr: Dibromofluoromethane	*98.4*			*71-125*	*%REC*	1	6/28/2010 21:00
Surr: Toluene-d8	*97.3*			*75-125*	*%REC*	1	6/28/2010 21:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *14-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB4-20100625
Collection Date: 6/25/2010

Work Order: 1006872
Lab ID: 1006872-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	6/28/2010 21:21
Benzene	U		0.50	5.0	µg/L	1	6/28/2010 21:21
Chlorobenzene	U		0.50	5.0	µg/L	1	6/28/2010 21:21
Dichloromethane	**2.4**	J	**0.50**	**10**	**µg/L**	1	6/28/2010 21:21
Ethylbenzene	U		0.50	5.0	µg/L	1	6/28/2010 21:21
Toluene	U		0.50	5.0	µg/L	1	6/28/2010 21:21
Xylenes, Total	U		1.0	15	µg/L	1	6/28/2010 21:21
Surr: 1,2-Dichloroethane-d4	*91.8*			*70-125*	*%REC*	1	6/28/2010 21:21
Surr: 4-Bromofluorobenzene	*98.1*			*72-125*	*%REC*	1	6/28/2010 21:21
Surr: Dibromofluoromethane	*98.3*			*71-125*	*%REC*	1	6/28/2010 21:21
Surr: Toluene-d8	*104*			*75-125*	*%REC*	1	6/28/2010 21:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006872
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 14-Jul-10

WorkOrder: 1006872
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44072** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW3-100626-44072** Units: **µg/L** Analysis Date: **7/1/2010 11:31 AM**

Client ID: Run ID: **SV-2_100701A** SeqNo: **2014975** Prep Date: **6/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Dibenzofuran	U	0.20								
Di-n-butyl phthalate	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.045*	0.20	*5*	0	*60.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.601*	0.20	*5*	0	*72*	*40-125*	0			
Surr: 2-Fluorophenol	*3.01*	0.20	*5*	0	*60.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.558*	0.20	*5*	0	*71.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.667*	0.20	*5*	0	*73.3*	*41-120*	0			
Surr: Phenol-d6	*3.171*	0.20	*5*	0	*63.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44072** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW3-100626-44072** Units: **µg/L** Analysis Date: **7/1/2010 11:52 AM**

Client ID: Run ID: **SV-2_100701A** SeqNo: **2014976** Prep Date: **6/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.734	0.20	5	0	94.7	39-127	0			
2,4-Dimethylphenol	3.265	0.20	5	0	65.3	35-120	0			
2,4-Dinitrotoluene	3.615	0.20	5	0	72.3	50-122	0			
2,6-Dinitrotoluene	3.769	0.20	5	0	75.4	50-120	0			
2-Chloronaphthalene	4.129	0.20	5	0	82.6	50-120	0			
2-Methylnaphthalene	3.647	0.20	5	0	72.9	50-120	0			
4,6-Dinitro-2-methylphenol	3.473	0.20	5	0	69.5	25-121	0			
4-Nitrophenol	3.678	1.0	5	0	73.6	30-130	0			
Acenaphthene	3.98	0.20	5	0	79.6	45-120	0			
Acenaphthylene	3.813	0.20	5	0	76.3	47-120	0			
Anthracene	4.152	0.20	5	0	83	45-120	0			
Benz(a)anthracene	3.711	0.20	5	0	74.2	40-120	0			
Benzo(a)pyrene	4.092	0.20	5	0	81.8	45-120	0			
Bis(2-chloroethoxy)methane	3.861	0.20	5	0	77.2	45-120	0			
Bis(2-ethylhexyl)phthalate	4.361	0.20	5	0	87.2	40-139	0			
Chrysene	4.506	0.20	5	0	90.1	43-120	0			
Dibenzofuran	3.802	0.20	5	0	76	50-120	0			
Di-n-butyl phthalate	4.258	0.20	5	0	85.2	45-123	0			
Fluoranthene	3.839	0.20	5	0	76.8	45-125	0			
Fluorene	3.675	0.20	5	0	73.5	49-120	0			
Naphthalene	3.623	0.20	5	0	72.5	45-120	0			
Nitrobenzene	3.745	0.20	5	0	74.9	44-120	0			
N-Nitrosodiphenylamine	4	0.20	5	0	80	40-125	0			
Pentachlorophenol	4.003	0.20	5	0	80.1	19-121	0			
Phenanthrene	4.141	0.20	5	0	82.8	45-121	0			
Phenol	3.255	0.20	5	0	65.1	20-124	0			
Pyrene	4.038	0.20	5	0	80.8	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.335*	0.20	*5*	0	*66.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.487*	0.20	*5*	0	*69.7*	*40-125*	0			
Surr: 2-Fluorophenol	*2.983*	0.20	*5*	0	*59.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.455*	0.20	*5*	0	*69.1*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.587*	0.20	*5*	0	*71.7*	*41-120*	0			
Surr: Phenol-d6	*3.107*	0.20	*5*	0	*62.1*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44072** Instrument ID **SV-2** Method: **SW8270**

LCSD Sample ID: **SLCSDW3-100626-44072** Units: **µg/L** Analysis Date: **7/1/2010 12:13 PM**

Client ID: Run ID: **SV-2_100701A** SeqNo: **2014977** Prep Date: **6/26/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.498	0.20	5	0	90	39-127	4.734	5.12	20	
2,4-Dimethylphenol	2.621	0.20	5	0	52.4	35-120	3.265	21.9	20	R
2,4-Dinitrotoluene	3.43	0.20	5	0	68.6	50-122	3.615	5.26	20	
2,6-Dinitrotoluene	3.689	0.20	5	0	73.8	50-120	3.769	2.13	20	
2-Chloronaphthalene	4.024	0.20	5	0	80.5	50-120	4.129	2.56	20	
2-Methylnaphthalene	3.843	0.20	5	0	76.9	50-120	3.647	5.24	20	
4,6-Dinitro-2-methylphenol	3.513	0.20	5	0	70.3	25-121	3.473	1.17	20	
4-Nitrophenol	4.871	1.0	5	0	97.4	30-130	3.678	27.9	20	R
Acenaphthene	3.556	0.20	5	0	71.1	45-120	3.98	11.2	20	
Acenaphthylene	3.768	0.20	5	0	75.4	47-120	3.813	1.19	20	
Anthracene	3.513	0.20	5	0	70.3	45-120	4.152	16.7	20	
Benz(a)anthracene	3.78	0.20	5	0	75.6	40-120	3.711	1.84	20	
Benzo(a)pyrene	4.142	0.20	5	0	82.8	45-120	4.092	1.2	20	
Bis(2-chloroethoxy)methane	3.841	0.20	5	0	76.8	45-120	3.861	0.504	20	
Bis(2-ethylhexyl)phthalate	4.339	0.20	5	0	86.8	40-139	4.361	0.488	20	
Chrysene	4.687	0.20	5	0	93.7	43-120	4.506	3.92	20	
Dibenzofuran	3.744	0.20	5	0	74.9	50-120	3.802	1.54	20	
Di-n-butyl phthalate	4.161	0.20	5	0	83.2	45-123	4.258	2.3	20	
Fluoranthene	3.702	0.20	5	0	74	45-125	3.839	3.62	20	
Fluorene	3.705	0.20	5	0	74.1	49-120	3.675	0.804	20	
Naphthalene	3.657	0.20	5	0	73.1	45-120	3.623	0.933	20	
Nitrobenzene	3.943	0.20	5	0	78.9	44-120	3.745	5.15	20	
N-Nitrosodiphenylamine	3.729	0.20	5	0	74.6	40-125	4	7	20	
Pentachlorophenol	3.741	0.20	5	0	74.8	19-121	4.003	6.75	20	
Phenanthrene	3.923	0.20	5	0	78.5	45-121	4.141	5.4	20	
Phenol	3.374	0.20	5	0	67.5	20-124	3.255	3.6	20	
Pyrene	4.162	0.20	5	0	83.2	40-130	4.038	3.04	20	
Surr: 2,4,6-Tribromophenol	*3.481*	0.20	*5*	0	*69.6*	*34-129*	3.335	*4.29*	*20*	
Surr: 2-Fluorobiphenyl	*3.407*	0.20	*5*	0	*68.1*	*40-125*	3.487	*2.3*	*20*	
Surr: 2-Fluorophenol	*2.935*	0.20	*5*	0	*58.7*	*20-120*	2.983	*1.65*	*20*	
Surr: 4-Terphenyl-d14	*3.357*	0.20	*5*	0	*67.1*	*40-135*	3.455	*2.86*	*20*	
Surr: Nitrobenzene-d5	*4.393*	0.20	*5*	0	*87.9*	*41-120*	3.587	*20.2*	*20*	*R*
Surr: Phenol-d6	*3.044*	0.20	*5*	0	*60.9*	*20-120*	3.107	*2.05*	*20*	

The following samples were analyzed in this batch: 1006872-01B 1006872-02B 1006872-03B 1006872-04B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 01:06 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009707** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	0.5976	10								J
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*49.17*	5.0	*50*	0	*98.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.01*	5.0	*50*	0	*94*	*72-125*	0			
Surr: Dibromofluoromethane	*52.08*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.96*	5.0	*50*	0	*97.9*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 11:48 AM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.72	5.0	50	0	101	78-120	0			
Benzene	48.81	5.0	50	0	97.6	73-121	0			
Chlorobenzene	46.21	5.0	50	0	92.4	80-120	0			
Dichloromethane	45.01	10	50	0	90	65-133	0			
Ethylbenzene	47.14	5.0	50	0	94.3	80-120	0			
Toluene	48.68	5.0	50	0	97.4	80-120	0			
Xylenes, Total	149.7	15	150	0	99.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.7*	5.0	*50*	0	*89.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.87*	5.0	*50*	0	*95.7*	*71-125*	0			
Surr: Toluene-d8	*48.39*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLCSDW-062810-R93224** Units: **µg/L** Analysis Date: **6/28/2010 12:15 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2009706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.52	5.0	50	0	95	78-120	50.72	6.51	20	
Benzene	48.61	5.0	50	0	97.2	73-121	48.81	0.399	20	
Chlorobenzene	43.86	5.0	50	0	87.7	80-120	46.21	5.23	20	
Dichloromethane	46.52	10	50	0	93	65-133	45.01	3.3	20	
Ethylbenzene	46.89	5.0	50	0	93.8	80-120	47.14	0.515	20	
Toluene	43.02	5.0	50	0	86	80-120	48.68	12.3	20	
Xylenes, Total	142.2	15	150	0	94.8	80-120	149.7	5.1	20	
Surr: 1,2-Dichloroethane-d4	*46.81*	5.0	*50*	0	*93.6*	*70-125*	44.7	*4.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.12*	5.0	*50*	0	*98.2*	*72-125*	50.69	*3.15*	*20*	
Surr: Dibromofluoromethane	*50.53*	5.0	*50*	0	*101*	*71-125*	47.87	*5.41*	*20*	
Surr: Toluene-d8	*47.32*	5.0	*50*	0	*94.6*	*75-125*	48.39	*2.22*	*20*	

MS Sample ID: **1006737-07AMS** Units: **µg/L** Analysis Date: **6/28/2010 03:16 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010801** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.39	5.0	50	0	94.8	78-120	0			
Benzene	47.72	5.0	50	0	95.4	73-121	0			
Chlorobenzene	43.5	5.0	50	0	87	80-120	0			
Dichloromethane	43.99	10	50	0	88	65-133	0			
Ethylbenzene	41.09	5.0	50	0	82.2	80-120	0			
Toluene	43.14	5.0	50	0	86.3	80-120	0			
Xylenes, Total	138	15	150	0	92	80-120	0			
Surr: 1,2-Dichloroethane-d4	*44.05*	5.0	*50*	0	*88.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.8*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*49.31*	5.0	*50*	0	*98.6*	*71-125*	0			
Surr: Toluene-d8	*47.82*	5.0	*50*	0	*95.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93224** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006737-07AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:42 PM**

Client ID: Run ID: **VOA1_100628A** SeqNo: **2010802** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.82	5.0	50	0	93.6	78-120	47.39	1.21	20	
Benzene	44.08	5.0	50	0	88.2	73-121	47.72	7.93	20	
Chlorobenzene	45.04	5.0	50	0	90.1	80-120	43.5	3.48	20	
Dichloromethane	39.46	10	50	0	78.9	65-133	43.99	10.9	20	
Ethylbenzene	45	5.0	50	0	90	80-120	41.09	9.07	20	
Toluene	46.63	5.0	50	0	93.3	80-120	43.14	7.78	20	
Xylenes, Total	141.1	15	150	0	94.1	80-120	138	2.23	20	
Surr: 1,2-Dichloroethane-d4	*41.14*	5.0	*50*	0	*82.3*	*70-125*	44.05	*6.83*	*20*	
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	50.8	*1.67*	*20*	
Surr: Dibromofluoromethane	*46.87*	5.0	*50*	0	*93.7*	*71-125*	49.31	*5.08*	*20*	
Surr: Toluene-d8	*48.85*	5.0	*50*	0	*97.7*	*75-125*	47.82	*2.13*	*20*	

The following samples were analyzed in this batch: 1006872-02A 1006872-03A 1006872-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 12:16 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011527** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.31*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.67*	5.0	*50*	0	*97.3*	*72-125*	0			
Surr: Dibromofluoromethane	*49.59*	5.0	*50*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*47.24*	5.0	*50*	0	*94.5*	*75-125*	0			

LCS Sample ID: **VLCSW-062810-R93304** Units: **µg/L** Analysis Date: **6/28/2010 11:05 AM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011526** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	54.21	5.0	50	0	108	78-120	0			
Benzene	49.35	5.0	50	0	98.7	73-121	0			
Chlorobenzene	47.93	5.0	50	0	95.9	80-120	0			
Dichloromethane	58.21	10	50	0	116	65-133	0			
Ethylbenzene	46.2	5.0	50	0	92.4	80-120	0			
Toluene	47.36	5.0	50	0	94.7	80-120	0			
Xylenes, Total	138.5	15	150	0	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*52.75*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.95*	5.0	*50*	0	*99.9*	*72-125*	0			
Surr: Dibromofluoromethane	*51.79*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*48.37*	5.0	*50*	0	*96.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93304** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1006737-05AMS** Units: **µg/L** Analysis Date: **6/28/2010 02:39 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011529** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.83	5.0	50	0	112	78-120	0			
Benzene	51.74	5.0	50	0	103	73-121	0			
Chlorobenzene	46.49	5.0	50	0	93	80-120	0			
Dichloromethane	48.93	10	50	0	97.9	65-133	0			
Ethylbenzene	46.92	5.0	50	0.5648	92.7	80-120	0			
Toluene	45.5	5.0	50	0	91	80-120	0			
Xylenes, Total	141.2	15	150	2.629	92.4	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.75*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.33*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*51.56*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*47.99*	5.0	*50*	0	*96*	*75-125*	0			

MSD Sample ID: **1006737-05AMSD** Units: **µg/L** Analysis Date: **6/28/2010 03:03 PM**

Client ID: Run ID: **VOA2_100628C** SeqNo: **2011530** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.37	5.0	50	0	101	78-120	55.83	10.3	20	
Benzene	47.3	5.0	50	0	94.6	73-121	51.74	8.95	20	
Chlorobenzene	46.48	5.0	50	0	93	80-120	46.49	0.00964	20	
Dichloromethane	49.75	10	50	0	99.5	65-133	48.93	1.66	20	
Ethylbenzene	47.51	5.0	50	0.5648	93.9	80-120	46.92	1.24	20	
Toluene	46.51	5.0	50	0	93	80-120	45.5	2.19	20	
Xylenes, Total	143.5	15	150	2.629	93.9	80-120	141.2	1.64	20	
Surr: 1,2-Dichloroethane-d4	*51.04*	5.0	*50*	0	*102*	*70-125*	50.75	*0.568*	*20*	
Surr: 4-Bromofluorobenzene	*49.68*	5.0	*50*	0	*99.4*	*72-125*	49.33	*0.709*	*20*	
Surr: Dibromofluoromethane	*51.04*	5.0	*50*	0	*102*	*71-125*	51.56	*1.01*	*20*	
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	47.99	*5.12*	*20*	

The following samples were analyzed in this batch: 1006872-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93410** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:56 AM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013671** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*45*	5.0	*50*	0	*90*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.46*	5.0	*50*	0	*98.9*	*72-125*	0			
Surr: Dibromofluoromethane	*47.55*	5.0	*50*	0	*95.1*	*71-125*	0			
Surr: Toluene-d8	*49.4*	5.0	*50*	0	*98.8*	*75-125*	0			

LCS Sample ID: **VLCSW-062910-R93410** Units: **µg/L** Analysis Date: **6/29/2010 10:29 AM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013670** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.99	5.0	50	0	100	78-120	0			
Benzene	49.1	5.0	50	0	98.2	73-121	0			
Chlorobenzene	48.38	5.0	50	0	96.8	80-120	0			
Dichloromethane	46.85	10	50	0	93.7	65-133	0			
Ethylbenzene	48.68	5.0	50	0	97.4	80-120	0			
Toluene	47.78	5.0	50	0	95.6	80-120	0			
Xylenes, Total	141	15	150	0	94	80-120	0			
Surr: 1,2-Dichloroethane-d4	*42.21*	5.0	*50*	0	*84.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.13*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*45.96*	5.0	*50*	0	*91.9*	*71-125*	0			
Surr: Toluene-d8	*47.94*	5.0	*50*	0	*95.9*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1006872
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93410** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1006826-02AMS** Units: **µg/L** Analysis Date: **6/29/2010 02:51 PM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013674** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	247.4	25	250	0	99	78-120	0			
Benzene	1220	25	250	1118	40.7	73-121	0			SEO
Chlorobenzene	213.8	25	250	0	85.5	80-120	0			
Dichloromethane	193.4	50	250	0	77.4	65-133	0			
Ethylbenzene	341.9	25	250	134.5	83	80-120	0			
Toluene	910.6	25	250	720.8	75.9	80-120	0			S
Xylenes, Total	1625	75	750	1033	79	80-120	0			S
Surr: 1,2-Dichloroethane-d4	*192.6*	25	*250*	0	*77*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*258.6*	25	*250*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*214.9*	25	*250*	0	*86*	*71-125*	0			
Surr: Toluene-d8	*244.3*	25	*250*	0	*97.7*	*75-125*	0			

MSD Sample ID: **1006826-02AMSD** Units: **µg/L** Analysis Date: **6/29/2010 03:17 PM**

Client ID: Run ID: **VOA1_100629B** SeqNo: **2013675** Prep Date: DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	243.7	25	250	0	97.5	78-120	247.4	1.5	20	
Benzene	1151	25	250	1118	13	73-121	1220	5.84	20	SEO
Chlorobenzene	218.6	25	250	0	87.4	80-120	213.8	2.21	20	
Dichloromethane	199.4	50	250	0	79.8	65-133	193.4	3.04	20	
Ethylbenzene	332.2	25	250	134.5	79.1	80-120	341.9	2.89	20	S
Toluene	869.7	25	250	720.8	59.5	80-120	910.6	4.6	20	S
Xylenes, Total	1650	75	750	1033	82.3	80-120	1625	1.48	20	
Surr: 1,2-Dichloroethane-d4	*194.6*	25	*250*	0	*77.8*	*70-125*	192.6	*1.02*	*20*	
Surr: 4-Bromofluorobenzene	*258*	25	*250*	0	*103*	*72-125*	258.6	*0.215*	*20*	
Surr: Dibromofluoromethane	*206.6*	25	*250*	0	*82.6*	*71-125*	214.9	*3.96*	*20*	
Surr: Toluene-d8	*248.4*	25	*250*	0	*99.4*	*75-125*	244.3	*1.66*	*20*	

The following samples were analyzed in this batch: 1006872-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 14-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1006872**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager:

ALS Work Order #: 1006872

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW49A-20100625	6-25-10	0745	W		5	X	X									
2	WG-1620-MW50A-20100625	6-25-10	0845	W		5	X	X									
3	WG-1620-MW26A-20100625	6-25-10	1000	W		5	X	X									
4	WG-1620-FB4-20100625	6-25-10	1030	W		5	X	X									
5	WG-1620-TB4-20100625			W		2	X										
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAUTIGAM

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 6-25-10	Time: 1135	Received by:	
Relinquished by:	Date: 6-25-10	Time: 1135	Received by (Laboratory):	6/25/10 1135
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Work Days TAT

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **25-Jun-10 11:35**

Work Order: **1006872** Received by: **RSZ**

Checklist completed by Raymond N Gamboa (eSignature) 25-Jun-10 (Date) Reviewed by: Shannon L. Tyrell (eSignature) 28-Jun-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.3c	002	
Cooler(s)/Kit(s):	2522		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

19-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1007004**

Dear Eric,

ALS Laboratory Group received 11 samples on 30-Jun-2010 06:42 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 47.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1007004

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 19-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1007004**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007004-01	WG-1620-MW25A-20100630	Water		6/30/2010 07:50	6/30/2010 18:42	☐
1007004-02	WG-1620-MW44A-20100630	Water		6/30/2010 08:50	6/30/2010 18:42	☐
1007004-03	WG-1620-MW53C-20100630	Water		6/30/2010 10:10	6/30/2010 18:42	☐
1007004-04	WG-1620-MW54C-20100630	Water		6/30/2010 11:05	6/30/2010 18:42	☐
1007004-05	WG-1620-MW63B-20100630	Water		6/30/2010 12:00	6/30/2010 18:42	☐
1007004-06	WG-1620-MW28A-20100630	Water		6/30/2010 13:00	6/30/2010 18:42	☐
1007004-07	WG-1620-MW28C-20100630	Water		6/30/2010 13:45	6/30/2010 18:42	☐
1007004-08	WG-1620-MW27C-20100630	Water		6/30/2010 14:50	6/30/2010 18:42	☐
1007004-09	WG-1620-MW35A-20100630	Water		6/30/2010 16:05	6/30/2010 18:42	☐
1007004-10	WG-1620-FB6-20100630	Water		6/30/2010 16:45	6/30/2010 18:42	☐
1007004-11	WG-1620-TB6-20100630	Water		6/30/2010	6/30/2010 18:42	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/19/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007004
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44214, R93437, R93559, R93592, R93726

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 07/19/2010					
Project Name: HWPW-Site Wide Monitoring			Laboratory Job Number: 1007004					
Reviewer Name: R. Kevin Given			Prep Batch Number(s): 44214, R93437, R93559, R93592, R93726					
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]	
S1	OI	**INITIAL CALIBRATION (ICAL)**						
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X					
		2) Were percent RSDs or correlation coefficient criteria met?	X					
		3) Was the number of standards recommended in the method used for all analytes?	X					
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X					
		5) Are ICAL data available for all instruments used?	X					
		6) 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**						
		1) Was the CCV analyzed at the method-required frequency?	X					
		2) Were percent differences for each analyte within the method-required QC limits?	X					
		3) Was the ICAL curve verified for each analyte?	X					
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X			
S3	O	**MASS SPECTRAL TUNING:**						
		1) Was the appropriate compound for the method used for tuning?	X					
		2) 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**						
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X					
		2) 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**						
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X			
S10	OI	**PROFICIENCY TEST REPORTS:**						
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X					
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**						
		1) Was a MDL study performed for each reported analyte?	X					
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**						
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X					
		2) Is documentation of the analyst's competency up-to-date and on file?	X					
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**						
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/19/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007004
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44214, R93437, R93559, R93592, R93726

ER #[1]	DESCRIPTION
1	Low-Level Semivolatiles surrogate recoveries were outside the control limits for Sample WG-1620-MW54C-20100630. Results confirmed as matrix interference by reanalysis at dilution. Low-Level Semivolatiles, Sample WG-1620-MW63B-20100630 : Surrogate recoveries were diluted out in the 100X dilution.
2	Batch 44214, Semivolatile Organics, Sample WG-1620-MW44A-20100630 : MS recovery was below the control limits for Pyrene. The associated RPD was within the control limits. Batch 44214, Semivolatile Organics, Sample WG-1620-MW44A-20100630 : MSD recovery was below the control limits for Bis(2-chloroethoxy)methane. The associated RPD was within the control limits. Batch 44214, Semivolatile Organics, Sample WG-1620-MW44A-20100630 : MS/MSD recoveries were below the control limits for 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Dibenzofuran, Fluoranthene, Fluorene, Naphthalene, and Phenanthrene. The associated RPD's were within the control limits. Results were flagged with an E and an O qualifier as applicable.

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

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW25A-20100630
Collection Date: 6/30/2010 07:50 AM

Work Order: 1007004
Lab ID: 1007004-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 18:15
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 18:15
2,4-Dinitrotoluene	**0.66**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 18:15
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 18:15
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
4,6-Dinitro-2-methylphenol	**0.26**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 18:15
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 18:15
Acenaphthene	**1.2**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 18:15
Acenaphthylene	**0.34**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:15
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Benzo(a)pyrene	**0.12**	J	**0.080**	**0.20**	**µg/L**	1	7/14/2010 18:15
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 18:15
Bis(2-ethylhexyl)phthalate	**0.56**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 18:15
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Dibenzofuran	**0.34**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 18:15
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Fluoranthene	**0.092**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:15
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Naphthalene	**0.24**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 18:15
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 18:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 18:15
Pentachlorophenol	**0.33**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 18:15
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 18:15
Pyrene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:15
Surr: 2,4,6-Tribromophenol	*48.9*			*34-129*	*%REC*	1	7/14/2010 18:15
Surr: 2-Fluorobiphenyl	*43.2*			*40-125*	*%REC*	1	7/14/2010 18:15
Surr: 2-Fluorophenol	*32.7*			*20-120*	*%REC*	1	7/14/2010 18:15
Surr: 4-Terphenyl-d14	*51.1*			*40-135*	*%REC*	1	7/14/2010 18:15
Surr: Nitrobenzene-d5	*44.3*			*41-120*	*%REC*	1	7/14/2010 18:15
Surr: Phenol-d6	*23.8*			*20-120*	*%REC*	1	7/14/2010 18:15
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/5/2010 15:31
Benzene	U		0.50	5.0	µg/L	1	7/5/2010 15:31
Chlorobenzene	U		0.50	5.0	µg/L	1	7/5/2010 15:31
Dichloromethane	U		0.50	10	µg/L	1	7/5/2010 15:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW25A-20100630
Collection Date: 6/30/2010 07:50 AM

Work Order: 1007004
Lab ID: 1007004-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/5/2010 15:31
Toluene	U		0.50	5.0	µg/L	1	7/5/2010 15:31
Xylenes, Total	U		1.0	15	µg/L	1	7/5/2010 15:31
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	7/5/2010 15:31
Surr: 4-Bromofluorobenzene	*104*			*72-125*	*%REC*	1	7/5/2010 15:31
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/5/2010 15:31
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	7/5/2010 15:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW44A-20100630
Collection Date: 6/30/2010 08:50 AM

Work Order: 1007004
Lab ID: 1007004-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/8/2010 20:53
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/8/2010 20:53
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/8/2010 20:53
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/8/2010 20:53
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/8/2010 20:53
2-Methylnaphthalene	**4.0**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/8/2010 20:53
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/8/2010 20:53
Acenaphthene	**200**		**3.6**	**8.0**	**µg/L**	40	7/17/2010 15:51
Acenaphthylene	**0.96**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
Anthracene	**6.7**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/8/2010 20:53
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/8/2010 20:53
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/8/2010 20:53
Bis(2-ethylhexyl)phthalate	**0.28**		**0.20**	**0.20**	**µg/L**	1	7/8/2010 20:53
Chrysene	U		0.070	0.20	µg/L	1	7/8/2010 20:53
Dibenzofuran	**4.3**		**0.080**	**0.20**	**µg/L**	1	7/8/2010 20:53
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/8/2010 20:53
Fluoranthene	**6.0**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
Fluorene	**97**		**2.8**	**8.0**	**µg/L**	40	7/17/2010 15:51
Naphthalene	**160**		**4.0**	**8.0**	**µg/L**	40	7/17/2010 15:51
Nitrobenzene	U		0.090	0.20	µg/L	1	7/8/2010 20:53
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/8/2010 20:53
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/8/2010 20:53
Phenanthrene	**2.5**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
Phenol	U		0.070	0.20	µg/L	1	7/8/2010 20:53
Pyrene	**3.0**		**0.070**	**0.20**	**µg/L**	1	7/8/2010 20:53
Surr: 2,4,6-Tribromophenol	*56.3*			*34-129*	*%REC*	1	7/8/2010 20:53
Surr: 2,4,6-Tribromophenol	*108*	J		*34-129*	*%REC*	40	7/17/2010 15:51
Surr: 2-Fluorobiphenyl	*58.0*			*40-125*	*%REC*	1	7/8/2010 20:53
Surr: 2-Fluorobiphenyl	*109*	J		*40-125*	*%REC*	40	7/17/2010 15:51
Surr: 2-Fluorophenol	*62.0*			*20-120*	*%REC*	1	7/8/2010 20:53
Surr: 2-Fluorophenol	*72.0*	J		*20-120*	*%REC*	40	7/17/2010 15:51
Surr: 4-Terphenyl-d14	*49.7*			*40-135*	*%REC*	1	7/8/2010 20:53
Surr: 4-Terphenyl-d14	*97.9*	J		*40-135*	*%REC*	40	7/17/2010 15:51
Surr: Nitrobenzene-d5	*53.3*			*41-120*	*%REC*	1	7/8/2010 20:53
Surr: Nitrobenzene-d5	*93.2*	J		*41-120*	*%REC*	40	7/17/2010 15:51
Surr: Phenol-d6	*62.9*			*20-120*	*%REC*	1	7/8/2010 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW44A-20100630
Collection Date: 6/30/2010 08:50 AM

Work Order: 1007004
Lab ID: 1007004-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*63.2*	J		*20-120*	*%REC*	40	7/17/2010 15:51
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 01:36
Benzene	**2.6**	J	**0.50**	**5.0**	**µg/L**	1	7/7/2010 01:36
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 01:36
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 01:36
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 01:36
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 01:36
Xylenes, Total	**2.6**	J	**1.0**	**15**	**µg/L**	1	7/7/2010 01:36
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	7/7/2010 01:36
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	1	7/7/2010 01:36
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	7/7/2010 01:36
Surr: Toluene-d8	*106*			*75-125*	*%REC*	1	7/7/2010 01:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW53C-20100630
Collection Date: 6/30/2010 10:10 AM

Work Order: 1007004
Lab ID: 1007004-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 18:34
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 18:34
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 18:34
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 18:34
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 18:34
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 18:34
Acenaphthene	**0.32**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 18:34
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 18:34
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 18:34
Bis(2-ethylhexyl)phthalate	**0.32**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 18:34
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 18:34
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 18:34
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 18:34
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 18:34
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 18:34
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 18:34
Surr: 2,4,6-Tribromophenol	*63.2*			*34-129*	*%REC*	1	7/14/2010 18:34
Surr: 2-Fluorobiphenyl	*44.3*			*40-125*	*%REC*	1	7/14/2010 18:34
Surr: 2-Fluorophenol	*35.8*			*20-120*	*%REC*	1	7/14/2010 18:34
Surr: 4-Terphenyl-d14	*65.2*			*40-135*	*%REC*	1	7/14/2010 18:34
Surr: Nitrobenzene-d5	*43.4*			*41-120*	*%REC*	1	7/14/2010 18:34
Surr: Phenol-d6	*28.6*			*20-120*	*%REC*	1	7/14/2010 18:34
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 03:43
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 03:43
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 03:43
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 03:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW53C-20100630
Collection Date: 6/30/2010 10:10 AM

Work Order: 1007004
Lab ID: 1007004-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 03:43
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 03:43
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 03:43
Surr: 1,2-Dichloroethane-d4	*99.9*			*70-125*	*%REC*	1	7/7/2010 03:43
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	7/7/2010 03:43
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/7/2010 03:43
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	7/7/2010 03:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW54C-20100630
Collection Date: 6/30/2010 11:05 AM

Work Order: 1007004
Lab ID: 1007004-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 18:53
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 18:53
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 18:53
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 18:53
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 18:53
2-Methylnaphthalene	**9.6**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:53
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 18:53
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 18:53
Acenaphthene	**24**		**0.90**	**2.0**	**µg/L**	10	7/15/2010 15:02
Acenaphthylene	**0.42**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:53
Anthracene	**5.0**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:53
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 18:53
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 18:53
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 18:53
Bis(2-ethylhexyl)phthalate	**0.37**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 18:53
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 18:53
Dibenzofuran	**28**		**0.80**	**2.0**	**µg/L**	10	7/15/2010 15:02
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 18:53
Fluoranthene	**3.2**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:53
Fluorene	**15**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 15:02
Naphthalene	**210**		**5.0**	**10**	**µg/L**	50	7/15/2010 16:04
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 18:53
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 18:53
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 18:53
Phenanthrene	**24**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 15:02
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 18:53
Pyrene	**1.6**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 18:53
Surr: 2,4,6-Tribromophenol	*44.3*			*34-129*	*%REC*	1	7/14/2010 18:53
Surr: 2,4,6-Tribromophenol	*34.2*	J		*34-129*	*%REC*	10	7/15/2010 15:02
Surr: 2,4,6-Tribromophenol	*52.3*	J		*34-129*	*%REC*	50	7/15/2010 16:04
Surr: 2-Fluorobiphenyl	*40.5*			*40-125*	*%REC*	1	7/14/2010 18:53
Surr: 2-Fluorobiphenyl	*40.1*			*40-125*	*%REC*	10	7/15/2010 15:02
Surr: 2-Fluorobiphenyl	*44.4*	J		*40-125*	*%REC*	50	7/15/2010 16:04
Surr: 2-Fluorophenol	*33.1*			*20-120*	*%REC*	1	7/14/2010 18:53
Surr: 2-Fluorophenol	*38.1*	J		*20-120*	*%REC*	10	7/15/2010 15:02
Surr: 2-Fluorophenol	*31.1*	J		*20-120*	*%REC*	50	7/15/2010 16:04
Surr: 4-Terphenyl-d14	*54.8*			*40-135*	*%REC*	1	7/14/2010 18:53
Surr: 4-Terphenyl-d14	*62.0*			*40-135*	*%REC*	10	7/15/2010 15:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW54C-20100630
Collection Date: 6/30/2010 11:05 AM

Work Order: 1007004
Lab ID: 1007004-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*55.0*	J		*40-135*	*%REC*	50	7/15/2010 16:04
Surr: Nitrobenzene-d5	*40.0*	S		*41-120*	*%REC*	1	7/14/2010 18:53
Surr: Nitrobenzene-d5	*41.7*			*41-120*	*%REC*	10	7/15/2010 15:02
Surr: Nitrobenzene-d5	*43.7*	J		*41-120*	*%REC*	50	7/15/2010 16:04
Surr: Phenol-d6	*30.2*			*20-120*	*%REC*	1	7/14/2010 18:53
Surr: Phenol-d6	*36.3*	J		*20-120*	*%REC*	10	7/15/2010 15:02
Surr: Phenol-d6	*25.4*	J		*20-120*	*%REC*	50	7/15/2010 16:04
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 04:34
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 04:34
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 04:34
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 04:34
Ethylbenzene	**2.4**	J	**0.50**	**5.0**	**µg/L**	1	7/7/2010 04:34
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 04:34
Xylenes, Total	**1.1**	J	**1.0**	**15**	**µg/L**	1	7/7/2010 04:34
Surr: 1,2-Dichloroethane-d4	*113*			*70-125*	*%REC*	1	7/7/2010 04:34
Surr: 4-Bromofluorobenzene	*121*			*72-125*	*%REC*	1	7/7/2010 04:34
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/7/2010 04:34
Surr: Toluene-d8	*123*			*75-125*	*%REC*	1	7/7/2010 04:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW63B-20100630
Collection Date: 6/30/2010 12:00 PM

Work Order: 1007004
Lab ID: 1007004-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 19:12
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 19:12
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 19:12
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 19:12
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 19:12
2-Methylnaphthalene	**31**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 15:22
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 19:12
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 19:12
Acenaphthene	**13**		**0.90**	**2.0**	**µg/L**	10	7/15/2010 15:22
Acenaphthylene	**0.18**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 19:12
Anthracene	**0.39**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 19:12
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 19:12
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 19:12
Bis(2-ethylhexyl)phthalate	**0.36**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 19:12
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Dibenzofuran	**8.0**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 19:12
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Fluorene	**4.1**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 19:12
Naphthalene	**670**		**10**	**20**	**µg/L**	100	7/15/2010 16:24
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 19:12
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 19:12
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 19:12
Phenanthrene	**0.76**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 19:12
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 19:12
Surr: 2,4,6-Tribromophenol	*69.6*			*34-129*	*%REC*	1	7/14/2010 19:12
Surr: 2,4,6-Tribromophenol	*52.6*			*34-129*	*%REC*	10	7/15/2010 15:22
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	7/15/2010 16:24
Surr: 2-Fluorobiphenyl	*40.5*			*40-125*	*%REC*	1	7/14/2010 19:12
Surr: 2-Fluorobiphenyl	*49.4*			*40-125*	*%REC*	10	7/15/2010 15:22
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	7/15/2010 16:24
Surr: 2-Fluorophenol	*48.8*			*20-120*	*%REC*	1	7/14/2010 19:12
Surr: 2-Fluorophenol	*46.5*			*20-120*	*%REC*	10	7/15/2010 15:22
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	7/15/2010 16:24
Surr: 4-Terphenyl-d14	*62.8*			*40-135*	*%REC*	1	7/14/2010 19:12
Surr: 4-Terphenyl-d14	*62.8*			*40-135*	*%REC*	10	7/15/2010 15:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW63B-20100630
Collection Date: 6/30/2010 12:00 PM

Work Order: 1007004
Lab ID: 1007004-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	7/15/2010 16:24
Surr: Nitrobenzene-d5	*57.0*			*41-120*	*%REC*	1	7/14/2010 19:12
Surr: Nitrobenzene-d5	*48.1*			*41-120*	*%REC*	10	7/15/2010 15:22
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	7/15/2010 16:24
Surr: Phenol-d6	*39.5*			*20-120*	*%REC*	1	7/14/2010 19:12
Surr: Phenol-d6	*40.1*			*20-120*	*%REC*	10	7/15/2010 15:22
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	7/15/2010 16:24
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 05:24
Benzene	**15**		**0.50**	**5.0**	**µg/L**	1	7/7/2010 05:24
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 05:24
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 05:24
Ethylbenzene	**72**		**0.50**	**5.0**	**µg/L**	1	7/7/2010 05:24
Toluene	**1.6**	J	**0.50**	**5.0**	**µg/L**	1	7/7/2010 05:24
Xylenes, Total	**20**		**1.0**	**15**	**µg/L**	1	7/7/2010 05:24
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	7/7/2010 05:24
Surr: 4-Bromofluorobenzene	*102*			*72-125*	*%REC*	1	7/7/2010 05:24
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	7/7/2010 05:24
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	7/7/2010 05:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW28A-20100630
Collection Date: 6/30/2010 01:00 PM

Work Order: 1007004
Lab ID: 1007004-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 12:03
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 12:03
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 12:03
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 12:03
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 12:03
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 12:03
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 12:03
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 12:03
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 12:03
Bis(2-ethylhexyl)phthalate	**1.9**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 12:03
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 12:03
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Naphthalene	U		0.10	0.20	µg/L	1	7/15/2010 12:03
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 12:03
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 12:03
Pentachlorophenol	**0.32**		**0.080**	**0.20**	**µg/L**	1	7/15/2010 12:03
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 12:03
Surr: 2,4,6-Tribromophenol	*63.4*			*34-129*	*%REC*	1	7/15/2010 12:03
Surr: 2-Fluorobiphenyl	*51.7*			*40-125*	*%REC*	1	7/15/2010 12:03
Surr: 2-Fluorophenol	*46.4*			*20-120*	*%REC*	1	7/15/2010 12:03
Surr: 4-Terphenyl-d14	*65.3*			*40-135*	*%REC*	1	7/15/2010 12:03
Surr: Nitrobenzene-d5	*49.0*			*41-120*	*%REC*	1	7/15/2010 12:03
Surr: Phenol-d6	*46.3*			*20-120*	*%REC*	1	7/15/2010 12:03
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 23:24
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 23:24
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 23:24
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 23:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW28A-20100630
Collection Date: 6/30/2010 01:00 PM

Work Order: 1007004
Lab ID: 1007004-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 23:24
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 23:24
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 23:24
Surr: 1,2-Dichloroethane-d4	*111*			*70-125*	*%REC*	1	7/3/2010 23:24
Surr: 4-Bromofluorobenzene	*98.0*			*72-125*	*%REC*	1	7/3/2010 23:24
Surr: Dibromofluoromethane	*111*			*71-125*	*%REC*	1	7/3/2010 23:24
Surr: Toluene-d8	*108*			*75-125*	*%REC*	1	7/3/2010 23:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW28C-20100630
Collection Date: 6/30/2010 01:45 PM

Work Order: 1007004
Lab ID: 1007004-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 14:52
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 14:52
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 14:52
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 14:52
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 14:52
2-Methylnaphthalene	**0.077**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 14:52
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 14:52
Acenaphthene	**0.33**		**0.090**	**0.20**	**µg/L**	1	7/15/2010 14:52
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 14:52
Anthracene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 14:52
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 14:52
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 14:52
Bis(2-ethylhexyl)phthalate	**1.2**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 14:52
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 14:52
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 14:52
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 14:52
Fluoranthene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
Fluorene	**0.33**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
Naphthalene	**0.35**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 14:52
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 14:52
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 14:52
Pentachlorophenol	**0.34**		**0.080**	**0.20**	**µg/L**	1	7/15/2010 14:52
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 14:52
Phenol	**0.75**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
Pyrene	**0.070**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 14:52
Surr: 2,4,6-Tribromophenol	*77.0*			*34-129*	*%REC*	1	7/15/2010 14:52
Surr: 2-Fluorobiphenyl	*45.6*			*40-125*	*%REC*	1	7/15/2010 14:52
Surr: 2-Fluorophenol	*44.6*			*20-120*	*%REC*	1	7/15/2010 14:52
Surr: 4-Terphenyl-d14	*52.4*			*40-135*	*%REC*	1	7/15/2010 14:52
Surr: Nitrobenzene-d5	*45.9*			*41-120*	*%REC*	1	7/15/2010 14:52
Surr: Phenol-d6	*42.9*			*20-120*	*%REC*	1	7/15/2010 14:52
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 04:59
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 04:59
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 04:59
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 04:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW28C-20100630
Collection Date: 6/30/2010 01:45 PM

Work Order: 1007004
Lab ID: 1007004-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 04:59
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 04:59
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 04:59
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	1	7/7/2010 04:59
Surr: 4-Bromofluorobenzene	*105*			*72-125*	*%REC*	1	7/7/2010 04:59
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/7/2010 04:59
Surr: Toluene-d8	*108*			*75-125*	*%REC*	1	7/7/2010 04:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW27C-20100630
Collection Date: 6/30/2010 02:50 PM

Work Order: 1007004
Lab ID: 1007004-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 15:11
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:11
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 15:11
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 15:11
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:11
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 15:11
Acenaphthene	**0.28**		**0.090**	**0.20**	**µg/L**	1	7/15/2010 15:11
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 15:11
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 15:11
Bis(2-ethylhexyl)phthalate	**1.5**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 15:11
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 15:11
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Fluorene	**0.25**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 15:11
Naphthalene	**0.24**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 15:11
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 15:11
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 15:11
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 15:11
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 15:11
Surr: 2,4,6-Tribromophenol	*64.2*			*34-129*	*%REC*	1	7/15/2010 15:11
Surr: 2-Fluorobiphenyl	*50.3*			*40-125*	*%REC*	1	7/15/2010 15:11
Surr: 2-Fluorophenol	*49.6*			*20-120*	*%REC*	1	7/15/2010 15:11
Surr: 4-Terphenyl-d14	*48.1*			*40-135*	*%REC*	1	7/15/2010 15:11
Surr: Nitrobenzene-d5	*50.1*			*41-120*	*%REC*	1	7/15/2010 15:11
Surr: Phenol-d6	*48.2*			*20-120*	*%REC*	1	7/15/2010 15:11
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 22:59
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 22:59
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 22:59
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 22:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW27C-20100630
Collection Date: 6/30/2010 02:50 PM

Work Order: 1007004
Lab ID: 1007004-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 22:59
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 22:59
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 22:59
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	7/3/2010 22:59
Surr: 4-Bromofluorobenzene	*99.4*			*72-125*	*%REC*	1	7/3/2010 22:59
Surr: Dibromofluoromethane	*113*			*71-125*	*%REC*	1	7/3/2010 22:59
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	7/3/2010 22:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW35A-20100630
Collection Date: 6/30/2010 04:05 PM

Work Order: 1007004
Lab ID: 1007004-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	**0.30**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 15:30
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:30
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 15:30
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 15:30
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:30
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 15:30
Acenaphthene	**7.7**		**0.090**	**0.20**	**µg/L**	1	7/15/2010 15:30
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Anthracene	**0.35**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 15:30
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 15:30
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 15:30
Bis(2-ethylhexyl)phthalate	**0.48**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 15:30
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Dibenzofuran	**2.6**		**0.080**	**0.20**	**µg/L**	1	7/15/2010 15:30
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Fluoranthene	**0.48**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 15:30
Fluorene	**1.4**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 15:30
Naphthalene	**1.7**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 15:30
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 15:30
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 15:30
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 15:30
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 15:30
Pyrene	**0.31**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 15:30
Surr: 2,4,6-Tribromophenol	*67.7*			*34-129*	*%REC*	1	7/15/2010 15:30
Surr: 2-Fluorobiphenyl	*45.9*			*40-125*	*%REC*	1	7/15/2010 15:30
Surr: 2-Fluorophenol	*46.2*			*20-120*	*%REC*	1	7/15/2010 15:30
Surr: 4-Terphenyl-d14	*55.6*			*40-135*	*%REC*	1	7/15/2010 15:30
Surr: Nitrobenzene-d5	*45.1*			*41-120*	*%REC*	1	7/15/2010 15:30
Surr: Phenol-d6	*41.7*			*20-120*	*%REC*	1	7/15/2010 15:30
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 04:08
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 04:08
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 04:08
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 04:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW35A-20100630
Collection Date: 6/30/2010 04:05 PM

Work Order: 1007004
Lab ID: 1007004-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 04:08
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 04:08
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 04:08
Surr: 1,2-Dichloroethane-d4	*98.5*			*70-125*	*%REC*	1	7/7/2010 04:08
Surr: 4-Bromofluorobenzene	*112*			*72-125*	*%REC*	1	7/7/2010 04:08
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/7/2010 04:08
Surr: Toluene-d8	*117*			*75-125*	*%REC*	1	7/7/2010 04:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB6-20100630
Collection Date: 6/30/2010 04:45 PM

Work Order: 1007004
Lab ID: 1007004-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 15:49
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:49
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 15:49
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 15:49
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 15:49
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 15:49
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 15:49
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 15:49
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 15:49
Bis(2-ethylhexyl)phthalate	**0.40**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 15:49
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 15:49
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Naphthalene	U		0.10	0.20	µg/L	1	7/15/2010 15:49
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 15:49
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 15:49
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 15:49
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 15:49
Surr: 2,4,6-Tribromophenol	*55.2*			*34-129*	*%REC*	1	7/15/2010 15:49
Surr: 2-Fluorobiphenyl	*51.8*			*40-125*	*%REC*	1	7/15/2010 15:49
Surr: 2-Fluorophenol	*52.5*			*20-120*	*%REC*	1	7/15/2010 15:49
Surr: 4-Terphenyl-d14	*54.1*			*40-135*	*%REC*	1	7/15/2010 15:49
Surr: Nitrobenzene-d5	*54.9*			*41-120*	*%REC*	1	7/15/2010 15:49
Surr: Phenol-d6	*47.1*			*20-120*	*%REC*	1	7/15/2010 15:49
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/1/2010 12:42
Benzene	U		0.50	5.0	µg/L	1	7/1/2010 12:42
Chlorobenzene	U		0.50	5.0	µg/L	1	7/1/2010 12:42
Dichloromethane	U		0.50	10	µg/L	1	7/1/2010 12:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB6-20100630
Collection Date: 6/30/2010 04:45 PM

Work Order: 1007004
Lab ID: 1007004-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/1/2010 12:42
Toluene	U		0.50	5.0	µg/L	1	7/1/2010 12:42
Xylenes, Total	U		1.0	15	µg/L	1	7/1/2010 12:42
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	7/1/2010 12:42
Surr: 4-Bromofluorobenzene	*97.5*			*72-125*	*%REC*	1	7/1/2010 12:42
Surr: Dibromofluoromethane	*100*			*71-125*	*%REC*	1	7/1/2010 12:42
Surr: Toluene-d8	*98.5*			*75-125*	*%REC*	1	7/1/2010 12:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB6-20100630
Collection Date: 6/30/2010

Work Order: 1007004
Lab ID: 1007004-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 17:27
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 17:27
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 17:27
Dichloromethane	**4.5**	J	**0.50**	**10**	**µg/L**	1	7/3/2010 17:27
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 17:27
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 17:27
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 17:27
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	7/3/2010 17:27
Surr: 4-Bromofluorobenzene	*97.6*			*72-125*	*%REC*	1	7/3/2010 17:27
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	7/3/2010 17:27
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	7/3/2010 17:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 19-Jul-10

WorkOrder: 1007004
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 19-Jul-10

WorkOrder: 1007004
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100702-44214** Units: **µg/L** Analysis Date: **7/8/2010 08:12 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022568** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Dibenzofuran	U	0.20								
Di-n-butyl phthalate	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.255*	0.20	*5*	0	*65.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.66*	0.20	*5*	0	*73.2*	*40-125*	0			
Surr: 2-Fluorophenol	*3.928*	0.20	*5*	0	*78.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.761*	0.20	*5*	0	*75.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.988*	0.20	*5*	0	*79.8*	*41-120*	0			
Surr: Phenol-d6	*3.776*	0.20	*5*	0	*75.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW1-100702-44214** Units: **µg/L** Analysis Date: **7/8/2010 08:33 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022569** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.068	0.20	5	0	81.4	39-127	0			
2,4-Dimethylphenol	2.164	0.20	5	0	43.3	35-120	0			
2,4-Dinitrotoluene	3.992	0.20	5	0	79.8	50-122	0			
2,6-Dinitrotoluene	4.34	0.20	5	0	86.8	50-120	0			
2-Chloronaphthalene	4.513	0.20	5	0	90.3	50-120	0			
2-Methylnaphthalene	4.089	0.20	5	0	81.8	50-120	0			
4,6-Dinitro-2-methylphenol	4.116	0.20	5	0	82.3	25-121	0			
4-Nitrophenol	3.82	1.0	5	0	76.4	30-130	0			
Acenaphthene	4.596	0.20	5	0	91.9	45-120	0			
Acenaphthylene	4.278	0.20	5	0	85.6	47-120	0			
Anthracene	4.118	0.20	5	0	82.4	45-120	0			
Benz(a)anthracene	4.775	0.20	5	0	95.5	40-120	0			
Benzo(a)pyrene	4.459	0.20	5	0	89.2	45-120	0			
Bis(2-chloroethoxy)methane	3.818	0.20	5	0	76.4	45-120	0			
Bis(2-ethylhexyl)phthalate	4.927	0.20	5	0	98.5	40-139	0			
Chrysene	4.465	0.20	5	0	89.3	43-120	0			
Dibenzofuran	4.351	0.20	5	0	87	50-120	0			
Di-n-butyl phthalate	4.309	0.20	5	0	86.2	45-123	0			
Fluoranthene	4.406	0.20	5	0	88.1	45-125	0			
Fluorene	4.395	0.20	5	0	87.9	49-120	0			
Naphthalene	3.947	0.20	5	0	78.9	45-120	0			
Nitrobenzene	4.078	0.20	5	0	81.6	44-120	0			
N-Nitrosodiphenylamine	4.053	0.20	5	0	81.1	40-125	0			
Pentachlorophenol	4.019	0.20	5	0	80.4	19-121	0			
Phenanthrene	4.029	0.20	5	0	80.6	45-121	0			
Phenol	4.534	0.20	5	0	90.7	20-124	0			
Pyrene	4.449	0.20	5	0	89	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.239*	0.20	*5*	0	*84.8*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.95*	0.20	*5*	0	*79*	*40-125*	0			
Surr: 2-Fluorophenol	*3.743*	0.20	*5*	0	*74.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.006*	0.20	*5*	0	*80.1*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.824*	0.20	*5*	0	*76.5*	*41-120*	0			
Surr: Phenol-d6	*3.974*	0.20	*5*	0	*79.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1007004-02BMS** Units: **µg/L** Analysis Date: **7/8/2010 09:14 PM**

Client ID: **WG-1620-MW44A-20100630** Run ID: **SV-2_100708B** SeqNo: **2022571** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.869	0.20	5	0	57.4	39-127	0			
2,4-Dimethylphenol	2.404	0.20	5	0	48.1	35-120	0			
2,4-Dinitrotoluene	2.771	0.20	5	0	55.4	50-122	0			
2,6-Dinitrotoluene	2.677	0.20	5	0	53.5	50-120	0			
2-Chloronaphthalene	4.391	0.20	5	0	87.8	50-120	0			
2-Methylnaphthalene	4.978	0.20	5	3.965	20.3	50-120	0			S
4,6-Dinitro-2-methylphenol	2.552	0.20	5	0	51	25-121	0			
4-Nitrophenol	2.701	1.0	5	0	54	30-130	0			
Acenaphthene	49.04	0.20	5	76.56	-550	45-120	0			SEO
Acenaphthylene	3.294	0.20	5	0.9635	46.6	47-120	0			S
Anthracene	8.412	0.20	5	6.686	34.5	45-120	0			S
Benz(a)anthracene	2.582	0.20	5	0	51.6	40-120	0			
Benzo(a)pyrene	2.652	0.20	5	0	53	45-120	0			
Bis(2-chloroethoxy)methane	2.49	0.20	5	0	49.8	45-120	0			
Bis(2-ethylhexyl)phthalate	2.716	0.20	5	0.2761	48.8	40-139	0			
Chrysene	2.736	0.20	5	0	54.7	43-120	0			
Dibenzofuran	5.609	0.20	5	4.314	25.9	50-120	0			S
Di-n-butyl phthalate	2.62	0.20	5	0	52.4	45-123	0			
Fluoranthene	6.811	0.20	5	6.049	15.2	45-125	0			S
Fluorene	29.91	0.20	5	42.68	-255	49-120	0			SEO
Naphthalene	30.61	0.20	5	51.86	-425	45-120	0			SEO
Nitrobenzene	3.13	0.20	5	0	62.6	44-120	0			
N-Nitrosodiphenylamine	2.537	0.20	5	0	50.7	40-125	0			
Pentachlorophenol	2.437	0.20	5	0	48.7	19-121	0			
Phenanthrene	4.278	0.20	5	2.509	35.4	45-121	0			S
Phenol	2.835	0.20	5	0	56.7	20-124	0			
Pyrene	4.616	0.20	5	3.041	31.5	40-130	0			S
Surr: 2,4,6-Tribromophenol	*2.579*	0.20	*5*	0	*51.6*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*2.516*	0.20	*5*	0	*50.3*	*40-125*	0			
Surr: 2-Fluorophenol	*2.623*	0.20	*5*	0	*52.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*2.385*	0.20	*5*	0	*47.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*2.623*	0.20	*5*	0	*52.5*	*41-120*	0			
Surr: Phenol-d6	*2.717*	0.20	*5*	0	*54.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1007004-02BMSD** Units: **µg/L** Analysis Date: **7/8/2010 09:34 PM**

Client ID: **WG-1620-MW44A-20100630** Run ID: **SV-2_100708B** SeqNo: **2022572** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.888	0.20	5	0	57.8	39-127	2.869	0.674	20	
2,4-Dimethylphenol	2.046	0.20	5	0	40.9	35-120	2.404	16.1	20	
2,4-Dinitrotoluene	2.882	0.20	5	0	57.6	50-122	2.771	3.96	20	
2,6-Dinitrotoluene	2.552	0.20	5	0	51	50-120	2.677	4.8	20	
2-Chloronaphthalene	3.722	0.20	5	0	74.4	50-120	4.391	16.5	20	
2-Methylnaphthalene	4.798	0.20	5	3.965	16.7	50-120	4.978	3.7	20	S
4,6-Dinitro-2-methylphenol	2.59	0.20	5	0	51.8	25-121	2.552	1.46	20	
4-Nitrophenol	2.88	1.0	5	0	57.6	30-130	2.701	6.4	20	
Acenaphthene	47.17	0.20	5	76.56	-588	45-120	49.04	3.88	20	SEO
Acenaphthylene	2.848	0.20	5	0.9635	37.7	47-120	3.294	14.5	20	S
Anthracene	8.619	0.20	5	6.686	38.7	45-120	8.412	2.43	20	S
Benz(a)anthracene	2.858	0.20	5	0	57.2	40-120	2.582	10.1	20	
Benzo(a)pyrene	2.863	0.20	5	0	57.3	45-120	2.652	7.63	20	
Bis(2-chloroethoxy)methane	2.166	0.20	5	0	43.3	45-120	2.49	13.9	20	S
Bis(2-ethylhexyl)phthalate	3.214	0.20	5	0.2761	58.8	40-139	2.716	16.8	20	
Chrysene	3.113	0.20	5	0	62.3	43-120	2.736	12.9	20	
Dibenzofuran	5.363	0.20	5	4.314	21	50-120	5.609	4.49	20	S
Di-n-butyl phthalate	2.831	0.20	5	0	56.6	45-123	2.62	7.76	20	
Fluoranthene	7.791	0.20	5	6.049	34.8	45-125	6.811	13.4	20	S
Fluorene	30.12	0.20	5	42.68	-251	49-120	29.91	0.702	20	SEO
Naphthalene	31.43	0.20	5	51.86	-409	45-120	30.61	2.63	20	SEO
Nitrobenzene	2.815	0.20	5	0	56.3	44-120	3.13	10.6	20	
N-Nitrosodiphenylamine	3.084	0.20	5	0	61.7	40-125	2.537	19.5	20	
Pentachlorophenol	2.954	0.20	5	0	59.1	19-121	2.437	19.2	20	
Phenanthrene	4.687	0.20	5	2.509	43.6	45-121	4.278	9.13	20	S
Phenol	2.396	0.20	5	0	47.9	20-124	2.835	16.8	20	
Pyrene	5.459	0.20	5	3.041	48.4	40-130	4.616	16.8	20	
Surr: 2,4,6-Tribromophenol	*2.934*	0.20	*5*	0	*58.7*	*34-129*	2.579	*12.9*	*20*	
Surr: 2-Fluorobiphenyl	*2.004*	0.20	*5*	0	*40.1*	*40-125*	2.516	*22.7*	*20*	*R*
Surr: 2-Fluorophenol	*1.985*	0.20	*5*	0	*39.7*	*20-120*	2.623	*27.7*	*20*	*R*
Surr: 4-Terphenyl-d14	*2.839*	0.20	*5*	0	*56.8*	*40-135*	2.385	*17.4*	*20*	
Surr: Nitrobenzene-d5	*2.334*	0.20	*5*	0	*46.7*	*41-120*	2.623	*11.6*	*20*	
Surr: Phenol-d6	*2.265*	0.20	*5*	0	*45.3*	*20-120*	2.717	*18.1*	*20*	

The following samples were analyzed in this batch:

1007004-01B	1007004-02B	1007004-03B
1007004-04B	1007004-05B	1007004-06B
1007004-07B	1007004-08B	1007004-09B
1007004-10B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93437** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-070110-R93437** Units: **µg/L** Analysis Date: **7/1/2010 11:54 AM**

Client ID: Run ID: **VOA2_100701A** SeqNo: **2014516** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*50.81*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.59*	5.0	*50*	0	*97.2*	*72-125*	0			
Surr: Dibromofluoromethane	*49.77*	5.0	*50*	0	*99.5*	*71-125*	0			
Surr: Toluene-d8	*49.92*	5.0	*50*	0	*99.8*	*75-125*	0			

LCS Sample ID: **VLCSW-070110-R93437** Units: **µg/L** Analysis Date: **7/1/2010 10:43 AM**

Client ID: Run ID: **VOA2_100701A** SeqNo: **2014512** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.71	5.0	50	0	95.4	78-120	0			
Benzene	49.2	5.0	50	0	98.4	73-121	0			
Chlorobenzene	48.57	5.0	50	0	97.1	80-120	0			
Dichloromethane	43.42	10	50	0	86.8	65-133	0			
Ethylbenzene	48.92	5.0	50	0	97.8	80-120	0			
Toluene	49.83	5.0	50	0	99.7	80-120	0			
Xylenes, Total	146.5	15	150	0	97.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.27*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.88*	5.0	*50*	0	*97.8*	*72-125*	0			
Surr: Dibromofluoromethane	*51.26*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*51.45*	5.0	*50*	0	*103*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93437** Instrument ID **VOA2** Method: **SW8260**

LCSD Sample ID: **VLCSDW-070110-R93437** Units: **µg/L** Analysis Date: **7/1/2010 12:18 PM**

Client ID: Run ID: **VOA2_100701A** SeqNo: **2014513** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.32	5.0	50	0	96.6	78-120	47.71	1.26	20	
Benzene	49.32	5.0	50	0	98.6	73-121	49.2	0.251	20	
Chlorobenzene	48.42	5.0	50	0	96.8	80-120	48.57	0.307	20	
Dichloromethane	42.96	10	50	0	85.9	65-133	43.42	1.06	20	
Ethylbenzene	49.78	5.0	50	0	99.6	80-120	48.92	1.75	20	
Toluene	48.55	5.0	50	0	97.1	80-120	49.83	2.58	20	
Xylenes, Total	148.4	15	150	0	98.9	80-120	146.5	1.26	20	
Surr: 1,2-Dichloroethane-d4	*51.07*	5.0	*50*	0	*102*	*70-125*	50.27	*1.6*	*20*	
Surr: 4-Bromofluorobenzene	*49.4*	5.0	*50*	0	*98.8*	*72-125*	48.88	*1.07*	*20*	
Surr: Dibromofluoromethane	*51.05*	5.0	*50*	0	*102*	*71-125*	51.26	*0.418*	*20*	
Surr: Toluene-d8	*49.23*	5.0	*50*	0	*98.5*	*75-125*	51.45	*4.41*	*20*	

MS Sample ID: **1006868-17AMS** Units: **µg/L** Analysis Date: **7/1/2010 05:26 PM**

Client ID: Run ID: **VOA2_100701A** SeqNo: **2016094** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	48.02	5.0	50	0	96	78-120	0			
Benzene	45.75	5.0	50	0	91.5	73-121	0			
Chlorobenzene	46.45	5.0	50	0	92.9	80-120	0			
Dichloromethane	40.19	10	50	0	80.4	65-133	0			
Ethylbenzene	47.22	5.0	50	0	94.4	80-120	0			
Toluene	46.4	5.0	50	0	92.8	80-120	0			
Xylenes, Total	142.1	15	150	0	94.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.81*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.86*	5.0	*50*	0	*99.7*	*72-125*	0			
Surr: Dibromofluoromethane	*51.9*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*50.06*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93437** Instrument ID **VOA2** Method: **SW8260**

MSD Sample ID: **1006868-17AMSD** Units: **µg/L** Analysis Date: **7/1/2010 05:50 PM**

Client ID: Run ID: **VOA2_100701A** SeqNo: **2016095** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.03	5.0	50	0	94.1	78-120	48.02	2.08	20	
Benzene	44.73	5.0	50	0	89.5	73-121	45.75	2.27	20	
Chlorobenzene	45.64	5.0	50	0	91.3	80-120	46.45	1.76	20	
Dichloromethane	39.54	10	50	0	79.1	65-133	40.19	1.63	20	
Ethylbenzene	45.24	5.0	50	0	90.5	80-120	47.22	4.28	20	
Toluene	44.61	5.0	50	0	89.2	80-120	46.4	3.94	20	
Xylenes, Total	137.5	15	150	0	91.7	80-120	142.1	3.27	20	
Surr: 1,2-Dichloroethane-d4	*51.07*	5.0	*50*	0	*102*	*70-125*	51.81	*1.44*	*20*	
Surr: 4-Bromofluorobenzene	*49.68*	5.0	*50*	0	*99.4*	*72-125*	49.86	*0.349*	*20*	
Surr: Dibromofluoromethane	*51.61*	5.0	*50*	0	*103*	*71-125*	51.9	*0.567*	*20*	
Surr: Toluene-d8	*49.65*	5.0	*50*	0	*99.3*	*75-125*	50.06	*0.829*	*20*	

The following samples were analyzed in this batch: 1007004-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 01:37 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016898** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*54.61*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.8*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*52.47*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*52.32*	5.0	*50*	0	*105*	*75-125*	0			

LCS Sample ID: **VLCSW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 12:19 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016896** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.81	5.0	50	0	106	78-120	0			
Benzene	52.5	5.0	50	0	105	73-121	0			
Chlorobenzene	48.96	5.0	50	0	97.9	80-120	0			
Dichloromethane	51.75	10	50	0	104	65-133	0			
Ethylbenzene	52.39	5.0	50	0	105	80-120	0			
Toluene	51.98	5.0	50	0	104	80-120	0			
Xylenes, Total	149.6	15	150	0	99.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.23*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*51.51*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*49.86*	5.0	*50*	0	*99.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLSDW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 12:45 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016897** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.2	5.0	50	0	102	78-120	52.81	3.1	20	
Benzene	48.84	5.0	50	0	97.7	73-121	52.5	7.22	20	
Chlorobenzene	50.2	5.0	50	0	100	80-120	48.96	2.5	20	
Dichloromethane	52.15	10	50	0	104	65-133	51.75	0.766	20	
Ethylbenzene	51.12	5.0	50	0	102	80-120	52.39	2.45	20	
Toluene	50.78	5.0	50	0	102	80-120	51.98	2.34	20	
Xylenes, Total	153.9	15	150	0	103	80-120	149.6	2.81	20	
Surr: 1,2-Dichloroethane-d4	*48.91*	5.0	*50*	0	*97.8*	*70-125*	50.23	*2.66*	*20*	
Surr: 4-Bromofluorobenzene	*52.81*	5.0	*50*	0	*106*	*72-125*	52	*1.55*	*20*	
Surr: Dibromofluoromethane	*52*	5.0	*50*	0	*104*	*71-125*	51.51	*0.941*	*20*	
Surr: Toluene-d8	*54.89*	5.0	*50*	0	*110*	*75-125*	49.86	*9.61*	*20*	

MS Sample ID: **1006858-10AMS** Units: **µg/L** Analysis Date: **7/3/2010 04:10 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2017465** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.02	5.0	50	0	102	78-120	0			
Benzene	47.33	5.0	50	0	94.7	73-121	0			
Chlorobenzene	46.44	5.0	50	0	92.9	80-120	0			
Dichloromethane	49.29	10	50	0	98.6	65-133	0			
Ethylbenzene	45.02	5.0	50	0	90	80-120	0			
Toluene	47.23	5.0	50	0	94.5	80-120	0			
Xylenes, Total	134.6	15	150	0	89.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.4*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.13*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*51.11*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*51.85*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006858-10AMSD** Units: **µg/L** Analysis Date: **7/3/2010 04:36 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2017466** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.74	5.0	50	0	101	78-120	51.02	0.556	20	
Benzene	47.55	5.0	50	0	95.1	73-121	47.33	0.473	20	
Chlorobenzene	47.39	5.0	50	0	94.8	80-120	46.44	2.02	20	
Dichloromethane	46.27	10	50	0	92.5	65-133	49.29	6.33	20	
Ethylbenzene	44.73	5.0	50	0	89.5	80-120	45.02	0.649	20	
Toluene	44.06	5.0	50	0	88.1	80-120	47.23	6.94	20	
Xylenes, Total	132.2	15	150	0	88.1	80-120	134.6	1.79	20	
Surr: 1,2-Dichloroethane-d4	*49.25*	5.0	*50*	0	*98.5*	*70-125*	50.4	*2.3*	*20*	
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	50.13	*1.1*	*20*	
Surr: Dibromofluoromethane	*50.47*	5.0	*50*	0	*101*	*71-125*	51.11	*1.25*	*20*	
Surr: Toluene-d8	*50.07*	5.0	*50*	0	*100*	*75-125*	51.85	*3.5*	*20*	

The following samples were analyzed in this batch: 1007004-06A 1007004-08A 1007004-11A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93592** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070510-R93592** Units: **µg/L** Analysis Date: **7/5/2010 01:23 PM**

Client ID: Run ID: **VOA1_100705A** SeqNo: **2017564** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.81*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.14*	5.0	*50*	0	*98.3*	*72-125*	0			
Surr: Dibromofluoromethane	*52.29*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.02*	5.0	*50*	0	*98*	*75-125*	0			

LCS Sample ID: **VLCSW-070510-R93592** Units: **µg/L** Analysis Date: **7/5/2010 12:31 PM**

Client ID: Run ID: **VOA1_100705A** SeqNo: **2017563** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.13	5.0	50	0	110	78-120	0			
Benzene	52.57	5.0	50	0	105	73-121	0			
Chlorobenzene	50.66	5.0	50	0	101	80-120	0			
Dichloromethane	48.01	10	50	0	96	65-133	0			
Ethylbenzene	45.16	5.0	50	0	90.3	80-120	0			
Toluene	52.03	5.0	50	0	104	80-120	0			
Xylenes, Total	150.8	15	150	0	101	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.91*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.58*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*53.19*	5.0	*50*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*52.76*	5.0	*50*	0	*106*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93592** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1006858-02AMS** Units: **µg/L** Analysis Date: **7/5/2010 02:40 PM**

Client ID: Run ID: **VOA1_100705A** SeqNo: **2017566** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.23	5.0	50	0	98.5	78-120	0			
Benzene	47.13	5.0	50	0	94.3	73-121	0			
Chlorobenzene	47.07	5.0	50	0	94.1	80-120	0			
Dichloromethane	49.4	10	50	0	98.8	65-133	0			
Ethylbenzene	47.59	5.0	50	0	95.2	80-120	0			
Toluene	49.19	5.0	50	0	98.4	80-120	0			
Xylenes, Total	144	15	150	0	96	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.47*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.53*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*57.57*	5.0	*50*	0	*115*	*71-125*	0			
Surr: Toluene-d8	*53.73*	5.0	*50*	0	*107*	*75-125*	0			

MSD Sample ID: **1006858-02AMSD** Units: **µg/L** Analysis Date: **7/5/2010 03:05 PM**

Client ID: Run ID: **VOA1_100705A** SeqNo: **2017567** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.49	5.0	50	0	101	78-120	49.23	2.55	20	
Benzene	50.18	5.0	50	0	100	73-121	47.13	6.25	20	
Chlorobenzene	49.47	5.0	50	0	98.9	80-120	47.07	4.98	20	
Dichloromethane	48.17	10	50	0	96.3	65-133	49.4	2.51	20	
Ethylbenzene	49.13	5.0	50	0	98.3	80-120	47.59	3.18	20	
Toluene	51.96	5.0	50	0	104	80-120	49.19	5.49	20	
Xylenes, Total	151.5	15	150	0	101	80-120	144	5.14	20	
Surr: 1,2-Dichloroethane-d4	*51.78*	5.0	*50*	0	*104*	*70-125*	51.47	*0.607*	*20*	
Surr: 4-Bromofluorobenzene	*51.65*	5.0	*50*	0	*103*	*72-125*	51.53	*0.229*	*20*	
Surr: Dibromofluoromethane	*52.96*	5.0	*50*	0	*106*	*71-125*	57.57	*8.34*	*20*	
Surr: Toluene-d8	*53.84*	5.0	*50*	0	*108*	*75-125*	53.73	*0.2*	*20*	

The following samples were analyzed in this batch: 1007004-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 01:10 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019742** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.62*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.75*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*53.61*	5.0	*50*	0	*107*	*71-125*	0			
Surr: Toluene-d8	*53.96*	5.0	*50*	0	*108*	*75-125*	0			

LCS Sample ID: **VLCSW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 12:20 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019740** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	57.19	5.0	50	0	114	78-120	0			
Benzene	53.29	5.0	50	0	107	73-121	0			
Chlorobenzene	49.28	5.0	50	0	98.6	80-120	0			
Dichloromethane	50.14	10	50	0	100	65-133	0			
Ethylbenzene	49	5.0	50	0	98	80-120	0			
Toluene	50.49	5.0	50	0	101	80-120	0			
Xylenes, Total	148.2	15	150	0	98.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.52*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.53*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*52.45*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*51.96*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007004
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1007004-02AMS** Units: **µg/L** Analysis Date: **7/7/2010 02:01 AM**

Client ID: **WG-1620-MW44A-20100630** Run ID: **VOA1_100706D** SeqNo: **2019747** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.27	5.0	50	0	105	78-120	0			
Benzene	50.26	5.0	50	2.554	95.4	73-121	0			
Chlorobenzene	47.32	5.0	50	0	94.6	80-120	0			
Dichloromethane	46.58	10	50	0	93.2	65-133	0			
Ethylbenzene	49.77	5.0	50	0	99.5	80-120	0			
Toluene	47.87	5.0	50	0	95.7	80-120	0			
Xylenes, Total	151.4	15	150	2.605	99.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.96*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*53.58*	5.0	*50*	0	*107*	*72-125*	0			
Surr: Dibromofluoromethane	*52.13*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*52.75*	5.0	*50*	0	*105*	*75-125*	0			

MSD Sample ID: **1007004-02AMSD** Units: **µg/L** Analysis Date: **7/7/2010 02:27 AM**

Client ID: **WG-1620-MW44A-20100630** Run ID: **VOA1_100706D** SeqNo: **2019750** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.94	5.0	50	0	95.9	78-120	52.27	8.65	20	
Benzene	45.44	5.0	50	2.554	85.8	73-121	50.26	10.1	20	
Chlorobenzene	47.2	5.0	50	0	94.4	80-120	47.32	0.257	20	
Dichloromethane	45.83	10	50	0	91.7	65-133	46.58	1.64	20	
Ethylbenzene	48.6	5.0	50	0	97.2	80-120	49.77	2.38	20	
Toluene	46.49	5.0	50	0	93	80-120	47.87	2.92	20	
Xylenes, Total	146.6	15	150	2.605	96	80-120	151.4	3.18	20	
Surr: 1,2-Dichloroethane-d4	*48.12*	5.0	*50*	0	*96.2*	*70-125*	51.96	*7.68*	*20*	
Surr: 4-Bromofluorobenzene	*53.39*	5.0	*50*	0	*107*	*72-125*	53.58	*0.356*	*20*	
Surr: Dibromofluoromethane	*52.68*	5.0	*50*	0	*105*	*71-125*	52.13	*1.05*	*20*	
Surr: Toluene-d8	*55.2*	5.0	*50*	0	*110*	*75-125*	52.75	*4.56*	*20*	

The following samples were analyzed in this batch:

1007004-02A	1007004-03A	1007004-04A
1007004-05A	1007004-07A	1007004-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 19-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1007004**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
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Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1010674

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW35A-20100630	6-30-10	1605	W		5	X	X									
2	WG-1620-FB6-20100630	6-30-10	1645	W		5	X	X									
3	WG-1620-TB6-20100630	6-30-10	—	W		2	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton Date: 6/30/10 Time: 1900

Received by: Date: Time:

Relinquished by: Date: Time:

Received by (Laboratory): 6/30/10 1912

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: 10 Work Days TAT.

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
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Chain of Custody Form

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager:

ALS Work Order #: 1000[illegible]

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Paster, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW25A-20100630	6-30-10	0750	W		5	X	X									
2	WG-1620-MW44A-20100630	6-30-10	0850	W		5	X	X									
3	WG-1620-MW44AMS-20100630	6-30-10	0850	W		5	X	X									
4	WG-1620-MW44AMSD-20100630	6-30-10	0850	W		5	X	X									
5	WG-1620-MW53C-20100630	6-30-10	1010	W		5	X	X									
6	WG1620-MW54C-20100630	6-30-10	1105	W		5	X	X									
7	WG-1620-MW63B-20100630	6-30-10	1200	W		5	X	X									
8	WG-1620-MW28A-20100630	6-30-10	1300	W		5	X	X									
9	WG-1620-MW28C-20100630	6-30-10	1345	W		5	X	X									
10	WG-1620-MW27C-20100630	6-30-10	1450	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☐ 2 Wk Days ☐ 5 Wk Days ☐ Std 10 Wk Days ☐ 24 hour

Results Due Date:

Relinquished by: John Brayton Date: 6-30-10 Time: 1042

Received by:

Notes: 10 Work Days TAT.

Relinquished by: Date: 6-30-10 Time:

Received by (Laboratory): Date: 6/30/10 Time: 1842

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **30-Jun-10 18:42**

Work Order: **1007004** Received by: **RSZ**

Checklist completed by Richard Sanchez (eSignature) 01-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 02-Jul-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.6c, 2.2c	002	
Cooler(s)/Kit(s):	7075,9627		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

16-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1007048**

Dear Eric,

ALS Laboratory Group received 13 samples on 29-Jun-2010 06:05 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 45.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1007048

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 16-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1007048**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007048-01	WG-1620-MW33A-20100629	Water		6/29/2010 07:45	6/29/2010 18:05	☐
1007048-02	WG-1620-MWX2-20100629	Water		6/29/2010 07:45	6/29/2010 18:05	☐
1007048-03	WG-1620-MW33B-20100629	Water		6/29/2010 08:45	6/29/2010 18:05	☐
1007048-04	WG-1620-MW38A-20100629	Water		6/29/2010 09:40	6/29/2010 18:05	☐
1007048-05	WG-1620-MW38B-20100629	Water		6/29/2010 10:25	6/29/2010 18:05	☐
1007048-06	WG-1620-MW22B-20100629	Water		6/29/2010 11:15	6/29/2010 18:05	☐
1007048-07	WG-1620-MW22A-20100629	Water		6/29/2010 12:00	6/29/2010 18:05	☐
1007048-08	WG-1620-MW24C-20100629	Water		6/29/2010 13:00	6/29/2010 18:05	☐
1007048-09	WG-1620-MW24B-20100629	Water		6/29/2010 14:00	6/29/2010 18:05	☐
1007048-10	WG-1620-MW24AR-20100629	Water		6/29/2010 15:00	6/29/2010 18:05	☐
1007048-11	WG-1620-MW36A-20100629	Water		6/29/2010 16:15	6/29/2010 18:05	☐
1007048-12	WG-1620-FB5-20100629	Water		6/29/2010 16:45	6/29/2010 18:05	☐
1007048-13	WG-1620-TB5-20100629	Water		6/29/2010	6/29/2010 18:05	☐

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/16/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007048
Reviewer Name: R. Kevin Given	Prep Batch Number(s) : 44216, R93559, R93726

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
R5	OI	**TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	**LABORATORY CONTROL SAMPLES (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	OI	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**METHOD QUANTITATION LIMITS (MQLS):**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SDLs documented?	X				2

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o 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).

Laboratory Review Checklist: Supporting Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/16/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007048
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44216, R93559, R93726

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) 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**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**MASS SPECTRAL TUNING:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) 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**					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) 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**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**PROFICIENCY TEST REPORTS:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S11	OI	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	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)**					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/16/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007048
Reviewer Name: R. Kevin Given	Prep Batch Number(s): : 44216, R93559, R93726

ER #[1]	DESCRIPTION
1	Low-Level Semivolatiles, Sample WG-1620-MW33B-20100629 : Surrogate recoveries were diluted out in the 100X dilution. Low-Level Semivolatiles, Sample WG-1620-MW33B-20100629 : Surrogate recoveries were diluted out in the 500X dilution.
2	Batch R93726, TCL Volatiles, Sample WG-1620-MW33B-20100629 could not be analyzed at a lower dilution due to large concentrations of non-target volatile compounds.

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

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW33A-20100629
Collection Date: 6/29/2010 07:45 AM

Work Order: 1007048
Lab ID: 1007048-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 14:15
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:15
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 14:15
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 14:15
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 14:15
2-Methylnaphthalene	**0.92**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:15
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 14:15
Acenaphthene	**12**		**0.18**	**0.40**	**µg/L**	2	7/14/2010 19:27
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 14:15
Anthracene	**0.21**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Benz(a)anthracene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 14:15
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 14:15
Bis(2-ethylhexyl)phthalate	**0.35**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 14:15
Chrysene	**0.090**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Dibenzofuran	**1.4**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 14:15
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 14:15
Fluoranthene	**1.2**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Fluorene	**1.2**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Naphthalene	**8.2**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 14:15
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 14:15
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 14:15
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 14:15
Phenanthrene	**0.65**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 14:15
Pyrene	**1.6**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:15
Surr: 2,4,6-Tribromophenol	*64.3*			*34-129*	*%REC*	1	7/14/2010 14:15
Surr: 2,4,6-Tribromophenol	*79.5*			*34-129*	*%REC*	2	7/14/2010 19:27
Surr: 2-Fluorobiphenyl	*53.6*			*40-125*	*%REC*	1	7/14/2010 14:15
Surr: 2-Fluorobiphenyl	*56.1*			*40-125*	*%REC*	2	7/14/2010 19:27
Surr: 2-Fluorophenol	*51.3*			*20-120*	*%REC*	1	7/14/2010 14:15
Surr: 2-Fluorophenol	*38.4*			*20-120*	*%REC*	2	7/14/2010 19:27
Surr: 4-Terphenyl-d14	*63.9*			*40-135*	*%REC*	1	7/14/2010 14:15
Surr: 4-Terphenyl-d14	*60.5*			*40-135*	*%REC*	2	7/14/2010 19:27
Surr: Nitrobenzene-d5	*55.2*			*41-120*	*%REC*	1	7/14/2010 14:15
Surr: Nitrobenzene-d5	*52.9*			*41-120*	*%REC*	2	7/14/2010 19:27
Surr: Phenol-d6	*44.9*			*20-120*	*%REC*	1	7/14/2010 14:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW33A-20100629
Collection Date: 6/29/2010 07:45 AM

Work Order: 1007048
Lab ID: 1007048-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*37.5*			*20-120*	*%REC*	2	7/14/2010 19:27
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 05:50
Benzene	**1.8**	J	**0.50**	**5.0**	**µg/L**	1	7/7/2010 05:50
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 05:50
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 05:50
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 05:50
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 05:50
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 05:50
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	7/7/2010 05:50
Surr: 4-Bromofluorobenzene	*110*			*72-125*	*%REC*	1	7/7/2010 05:50
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/7/2010 05:50
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	7/7/2010 05:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX2-20100629
Collection Date: 6/29/2010 07:45 AM

Work Order: 1007048
Lab ID: 1007048-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 14:34
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:34
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 14:34
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 14:34
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:34
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 14:34
Acenaphthene	**7.2**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 14:34
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Benz(a)anthracene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:34
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 14:34
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 14:34
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 14:34
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Dibenzofuran	**0.35**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 14:34
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Fluoranthene	**0.95**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:34
Fluorene	**0.41**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:34
Naphthalene	**1.3**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 14:34
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 14:34
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 14:34
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 14:34
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 14:34
Pyrene	**1.5**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:34
Surr: 2,4,6-Tribromophenol	*65.2*			*34-129*	*%REC*	1	7/14/2010 14:34
Surr: 2-Fluorobiphenyl	*46.3*			*40-125*	*%REC*	1	7/14/2010 14:34
Surr: 2-Fluorophenol	*43.9*			*20-120*	*%REC*	1	7/14/2010 14:34
Surr: 4-Terphenyl-d14	*69.2*			*40-135*	*%REC*	1	7/14/2010 14:34
Surr: Nitrobenzene-d5	*49.4*			*41-120*	*%REC*	1	7/14/2010 14:34
Surr: Phenol-d6	*41.3*			*20-120*	*%REC*	1	7/14/2010 14:34
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 18:44
Benzene	**3.4**	J	**0.50**	**5.0**	**µg/L**	1	7/3/2010 18:44
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 18:44
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX2-20100629
Collection Date: 6/29/2010 07:45 AM

Work Order: 1007048
Lab ID: 1007048-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 18:44
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 18:44
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 18:44
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	7/3/2010 18:44
Surr: 4-Bromofluorobenzene	*104*			*72-125*	*%REC*	1	7/3/2010 18:44
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/3/2010 18:44
Surr: Toluene-d8	*106*			*75-125*	*%REC*	1	7/3/2010 18:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW33B-20100629
Collection Date: 6/29/2010 08:45 AM

Work Order: 1007048
Lab ID: 1007048-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 14:53
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:53
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 14:53
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 14:53
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 14:53
2-Methylnaphthalene	**510**		**7.0**	**20**	**µg/L**	100	7/15/2010 13:24
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 14:53
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 14:53
Acenaphthene	**96**		**0.90**	**2.0**	**µg/L**	10	7/14/2010 19:07
Acenaphthylene	**1.1**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Anthracene	**11**		**0.70**	**2.0**	**µg/L**	10	7/14/2010 19:07
Benz(a)anthracene	**0.073**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 14:53
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 14:53
Bis(2-ethylhexyl)phthalate	**0.54**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 14:53
Chrysene	**0.092**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Dibenzofuran	**130**		**8.0**	**20**	**µg/L**	100	7/15/2010 13:24
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 14:53
Fluoranthene	**1.8**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Fluorene	**48**		**0.70**	**2.0**	**µg/L**	10	7/14/2010 19:07
Naphthalene	**2,200**		**50**	**100**	**µg/L**	500	7/15/2010 13:44
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 14:53
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 14:53
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 14:53
Phenanthrene	**41**		**0.70**	**2.0**	**µg/L**	10	7/14/2010 19:07
Phenol	**3.2**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Pyrene	**0.92**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 14:53
Surr: 2,4,6-Tribromophenol	*83.5*			*34-129*	*%REC*	1	7/14/2010 14:53
Surr: 2,4,6-Tribromophenol	*70.3*			*34-129*	*%REC*	10	7/14/2010 19:07
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	100	7/15/2010 13:24
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	500	7/15/2010 13:44
Surr: 2-Fluorobiphenyl	*56.1*			*40-125*	*%REC*	1	7/14/2010 14:53
Surr: 2-Fluorobiphenyl	*61.2*			*40-125*	*%REC*	10	7/14/2010 19:07
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	100	7/15/2010 13:24
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	500	7/15/2010 13:44
Surr: 2-Fluorophenol	*70.6*			*20-120*	*%REC*	1	7/14/2010 14:53
Surr: 2-Fluorophenol	*63.9*			*20-120*	*%REC*	10	7/14/2010 19:07
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	100	7/15/2010 13:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW33B-20100629
Collection Date: 6/29/2010 08:45 AM

Work Order: 1007048
Lab ID: 1007048-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	500	7/15/2010 13:44
Surr: 4-Terphenyl-d14	*70.9*			*40-135*	*%REC*	1	7/14/2010 14:53
Surr: 4-Terphenyl-d14	*69.6*			*40-135*	*%REC*	10	7/14/2010 19:07
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	100	7/15/2010 13:24
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	500	7/15/2010 13:44
Surr: Nitrobenzene-d5	*54.7*			*41-120*	*%REC*	1	7/14/2010 14:53
Surr: Nitrobenzene-d5	*69.4*			*41-120*	*%REC*	10	7/14/2010 19:07
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	100	7/15/2010 13:24
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	500	7/15/2010 13:44
Surr: Phenol-d6	*59.2*			*20-120*	*%REC*	1	7/14/2010 14:53
Surr: Phenol-d6	*62.1*			*20-120*	*%REC*	10	7/14/2010 19:07
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	100	7/15/2010 13:24
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	500	7/15/2010 13:44
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		5.0	50	µg/L	10	7/7/2010 09:13
Benzene	**2,000**		**5.0**	**50**	**µg/L**	10	7/7/2010 09:13
Chlorobenzene	U		5.0	50	µg/L	10	7/7/2010 09:13
Dichloromethane	U		5.0	100	µg/L	10	7/7/2010 09:13
Ethylbenzene	**620**		**5.0**	**50**	**µg/L**	10	7/7/2010 09:13
Toluene	**16**	J	**5.0**	**50**	**µg/L**	10	7/7/2010 09:13
Xylenes, Total	**1,500**		**10**	**150**	**µg/L**	10	7/7/2010 09:13
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	10	7/7/2010 09:13
Surr: 4-Bromofluorobenzene	*104*			*72-125*	*%REC*	10	7/7/2010 09:13
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	10	7/7/2010 09:13
Surr: Toluene-d8	*97.0*			*75-125*	*%REC*	10	7/7/2010 09:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW38A-20100629
Collection Date: 6/29/2010 09:40 AM

Work Order: 1007048
Lab ID: 1007048-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 15:12
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 15:12
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 15:12
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 15:12
2-Methylnaphthalene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 15:12
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 15:12
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 15:12
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 15:12
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 15:12
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 15:12
Bis(2-ethylhexyl)phthalate	**0.44**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 15:12
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Dibenzofuran	**0.083**	J	**0.080**	**0.20**	**µg/L**	1	7/14/2010 15:12
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 15:12
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 15:12
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 15:12
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 15:12
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 15:12
Surr: 2,4,6-Tribromophenol	*70.1*			*34-129*	*%REC*	1	7/14/2010 15:12
Surr: 2-Fluorobiphenyl	*46.1*			*40-125*	*%REC*	1	7/14/2010 15:12
Surr: 2-Fluorophenol	*42.8*			*20-120*	*%REC*	1	7/14/2010 15:12
Surr: 4-Terphenyl-d14	*66.3*			*40-135*	*%REC*	1	7/14/2010 15:12
Surr: Nitrobenzene-d5	*56.0*			*41-120*	*%REC*	1	7/14/2010 15:12
Surr: Phenol-d6	*39.2*			*20-120*	*%REC*	1	7/14/2010 15:12
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 19:09
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 19:09
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 19:09
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 19:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW38A-20100629
Collection Date: 6/29/2010 09:40 AM

Work Order: 1007048
Lab ID: 1007048-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 19:09
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 19:09
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 19:09
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	7/3/2010 19:09
Surr: 4-Bromofluorobenzene	*95.7*			*72-125*	*%REC*	1	7/3/2010 19:09
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/3/2010 19:09
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	7/3/2010 19:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW38B-20100629
Collection Date: 6/29/2010 10:25 AM

Work Order: 1007048
Lab ID: 1007048-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 15:31
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 15:31
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 15:31
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 15:31
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 15:31
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 15:31
Acenaphthene	**0.47**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 15:31
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 15:31
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 15:31
Bis(2-ethylhexyl)phthalate	**0.74**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 15:31
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 15:31
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Fluoranthene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 15:31
Fluorene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 15:31
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 15:31
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 15:31
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 15:31
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 15:31
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 15:31
Pyrene	**0.27**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 15:31
Surr: 2,4,6-Tribromophenol	*85.7*			*34-129*	*%REC*	1	7/14/2010 15:31
Surr: 2-Fluorobiphenyl	*61.3*			*40-125*	*%REC*	1	7/14/2010 15:31
Surr: 2-Fluorophenol	*51.1*			*20-120*	*%REC*	1	7/14/2010 15:31
Surr: 4-Terphenyl-d14	*65.2*			*40-135*	*%REC*	1	7/14/2010 15:31
Surr: Nitrobenzene-d5	*66.6*			*41-120*	*%REC*	1	7/14/2010 15:31
Surr: Phenol-d6	*39.1*			*20-120*	*%REC*	1	7/14/2010 15:31
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 19:35
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 19:35
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 19:35
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 19:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW38B-20100629
Collection Date: 6/29/2010 10:25 AM

Work Order: 1007048
Lab ID: 1007048-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 19:35
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 19:35
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 19:35
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	7/3/2010 19:35
Surr: 4-Bromofluorobenzene	*99.4*			*72-125*	*%REC*	1	7/3/2010 19:35
Surr: Dibromofluoromethane	*98.2*			*71-125*	*%REC*	1	7/3/2010 19:35
Surr: Toluene-d8	*95.5*			*75-125*	*%REC*	1	7/3/2010 19:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW22B-20100629
Collection Date: 6/29/2010 11:15 AM

Work Order: 1007048
Lab ID: 1007048-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 13:47
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 13:47
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 13:47
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 13:47
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 13:47
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 13:47
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 13:47
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 13:47
Acenaphthene	**9.3**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 13:47
Acenaphthylene	**0.12**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:47
Anthracene	**0.31**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:47
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 13:47
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 13:47
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 13:47
Bis(2-ethylhexyl)phthalate	**0.61**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 13:47
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 13:47
Dibenzofuran	**1.9**		**0.080**	**0.20**	**µg/L**	1	7/14/2010 13:47
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 13:47
Fluoranthene	**0.61**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:47
Fluorene	**1.8**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:47
Naphthalene	**0.36**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 13:47
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 13:47
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 13:47
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 13:47
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 13:47
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 13:47
Pyrene	**0.27**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:47
Surr: 2,4,6-Tribromophenol	*68.8*			*34-129*	*%REC*	1	7/14/2010 13:47
Surr: 2-Fluorobiphenyl	*44.8*			*40-125*	*%REC*	1	7/14/2010 13:47
Surr: 2-Fluorophenol	*42.3*			*20-120*	*%REC*	1	7/14/2010 13:47
Surr: 4-Terphenyl-d14	*64.0*			*40-135*	*%REC*	1	7/14/2010 13:47
Surr: Nitrobenzene-d5	*48.4*			*41-120*	*%REC*	1	7/14/2010 13:47
Surr: Phenol-d6	*37.3*			*20-120*	*%REC*	1	7/14/2010 13:47
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 08:47
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 08:47
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 08:47
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 08:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW22B-20100629
Collection Date: 6/29/2010 11:15 AM

Work Order: 1007048
Lab ID: 1007048-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 08:47
Toluene	**0.53**	J	**0.50**	**5.0**	**µg/L**	1	7/7/2010 08:47
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 08:47
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	7/7/2010 08:47
Surr: 4-Bromofluorobenzene	*97.7*			*72-125*	*%REC*	1	7/7/2010 08:47
Surr: Dibromofluoromethane	*110*			*71-125*	*%REC*	1	7/7/2010 08:47
Surr: Toluene-d8	*98.7*			*75-125*	*%REC*	1	7/7/2010 08:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW22A-20100629
Collection Date: 6/29/2010 12:00 PM

Work Order: 1007048
Lab ID: 1007048-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 12:51
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:51
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 12:51
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 12:51
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:51
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 12:51
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 12:51
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 12:51
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 12:51
Bis(2-ethylhexyl)phthalate	**1.2**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 12:51
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 12:51
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 12:51
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 12:51
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 12:51
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 12:51
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 12:51
Surr: 2,4,6-Tribromophenol	*66.6*			*34-129*	*%REC*	1	7/14/2010 12:51
Surr: 2-Fluorobiphenyl	*53.3*			*40-125*	*%REC*	1	7/14/2010 12:51
Surr: 2-Fluorophenol	*46.3*			*20-120*	*%REC*	1	7/14/2010 12:51
Surr: 4-Terphenyl-d14	*71.6*			*40-135*	*%REC*	1	7/14/2010 12:51
Surr: Nitrobenzene-d5	*55.1*			*41-120*	*%REC*	1	7/14/2010 12:51
Surr: Phenol-d6	*46.8*			*20-120*	*%REC*	1	7/14/2010 12:51
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 20:01
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 20:01
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:01
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW22A-20100629
Collection Date: 6/29/2010 12:00 PM

Work Order: 1007048
Lab ID: 1007048-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:01
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 20:01
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 20:01
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	7/3/2010 20:01
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	1	7/3/2010 20:01
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/3/2010 20:01
Surr: Toluene-d8	*97.1*			*75-125*	*%REC*	1	7/3/2010 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24C-20100629
Collection Date: 6/29/2010 01:00 PM

Work Order: 1007048
Lab ID: 1007048-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 11:31
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 11:31
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 11:31
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 11:31
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 11:31
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 11:31
Acenaphthene	**0.22**		**0.090**	**0.20**	**µg/L**	1	7/14/2010 11:31
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 11:31
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 11:31
Bis(2-ethylhexyl)phthalate	**1.0**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 11:31
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 11:31
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 11:31
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 11:31
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 11:31
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 11:31
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 11:31
Surr: 2,4,6-Tribromophenol	*63.3*			*34-129*	*%REC*	1	7/14/2010 11:31
Surr: 2-Fluorobiphenyl	*47.3*			*40-125*	*%REC*	1	7/14/2010 11:31
Surr: 2-Fluorophenol	*42.0*			*20-120*	*%REC*	1	7/14/2010 11:31
Surr: 4-Terphenyl-d14	*68.4*			*40-135*	*%REC*	1	7/14/2010 11:31
Surr: Nitrobenzene-d5	*48.8*			*41-120*	*%REC*	1	7/14/2010 11:31
Surr: Phenol-d6	*46.9*			*20-120*	*%REC*	1	7/14/2010 11:31
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 20:26
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 20:26
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:26
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 20:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24C-20100629
Collection Date: 6/29/2010 01:00 PM

Work Order: 1007048
Lab ID: 1007048-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:26
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 20:26
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 20:26
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	7/3/2010 20:26
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	7/3/2010 20:26
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/3/2010 20:26
Surr: Toluene-d8	*103*			*75-125*	*%REC*	1	7/3/2010 20:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24B-20100629
Collection Date: 6/29/2010 02:00 PM

Work Order: 1007048
Lab ID: 1007048-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 12:09
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:09
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 12:09
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 12:09
2-Methylnaphthalene	**0.099**	J	**0.070**	**0.20**	**µg/L**	1	7/14/2010 12:09
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:09
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 12:09
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 12:09
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 12:09
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 12:09
Bis(2-ethylhexyl)phthalate	**0.74**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 12:09
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 12:09
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Naphthalene	**0.83**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 12:09
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 12:09
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 12:09
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 12:09
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 12:09
Surr: 2,4,6-Tribromophenol	*58.1*			*34-129*	*%REC*	1	7/14/2010 12:09
Surr: 2-Fluorobiphenyl	*54.5*			*40-125*	*%REC*	1	7/14/2010 12:09
Surr: 2-Fluorophenol	*51.6*			*20-120*	*%REC*	1	7/14/2010 12:09
Surr: 4-Terphenyl-d14	*54.7*			*40-135*	*%REC*	1	7/14/2010 12:09
Surr: Nitrobenzene-d5	*55.5*			*41-120*	*%REC*	1	7/14/2010 12:09
Surr: Phenol-d6	*55.1*			*20-120*	*%REC*	1	7/14/2010 12:09
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 20:51
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 20:51
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:51
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 20:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24B-20100629
Collection Date: 6/29/2010 02:00 PM

Work Order: 1007048
Lab ID: 1007048-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 20:51
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 20:51
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 20:51
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	7/3/2010 20:51
Surr: 4-Bromofluorobenzene	*94.0*			*72-125*	*%REC*	1	7/3/2010 20:51
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/3/2010 20:51
Surr: Toluene-d8	*102*			*75-125*	*%REC*	1	7/3/2010 20:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24AR-20100629
Collection Date: 6/29/2010 03:00 PM

Work Order: 1007048
Lab ID: 1007048-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 12:32
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:32
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 12:32
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 12:32
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 12:32
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 12:32
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 12:32
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 12:32
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 12:32
Bis(2-ethylhexyl)phthalate	**2.4**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 12:32
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Dibenzofuran	**0.11**	J	**0.080**	**0.20**	**µg/L**	1	7/14/2010 12:32
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Naphthalene	**0.36**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 12:32
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 12:32
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 12:32
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 12:32
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 12:32
Surr: 2,4,6-Tribromophenol	*58.0*			*34-129*	*%REC*	1	7/14/2010 12:32
Surr: 2-Fluorobiphenyl	*52.9*			*40-125*	*%REC*	1	7/14/2010 12:32
Surr: 2-Fluorophenol	*50.8*			*20-120*	*%REC*	1	7/14/2010 12:32
Surr: 4-Terphenyl-d14	*48.1*			*40-135*	*%REC*	1	7/14/2010 12:32
Surr: Nitrobenzene-d5	*55.3*			*41-120*	*%REC*	1	7/14/2010 12:32
Surr: Phenol-d6	*48.1*			*20-120*	*%REC*	1	7/14/2010 12:32
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 21:17
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 21:17
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 21:17
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 21:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW24AR-20100629
Collection Date: 6/29/2010 03:00 PM

Work Order: 1007048
Lab ID: 1007048-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 21:17
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 21:17
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 21:17
Surr: 1,2-Dichloroethane-d4	*98.9*			*70-125*	*%REC*	1	7/3/2010 21:17
Surr: 4-Bromofluorobenzene	*103*			*72-125*	*%REC*	1	7/3/2010 21:17
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/3/2010 21:17
Surr: Toluene-d8	*114*			*75-125*	*%REC*	1	7/3/2010 21:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36A-20100629
Collection Date: 6/29/2010 04:15 PM

Work Order: 1007048
Lab ID: 1007048-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 13:10
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 13:10
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 13:10
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 13:10
2-Methylnaphthalene	**0.23**		**0.070**	**0.20**	**µg/L**	1	7/14/2010 13:10
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 13:10
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 13:10
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 13:10
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 13:10
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 13:10
Bis(2-ethylhexyl)phthalate	**0.61**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 13:10
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 13:10
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Naphthalene	**2.3**		**0.10**	**0.20**	**µg/L**	1	7/14/2010 13:10
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 13:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 13:10
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 13:10
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 13:10
Surr: 2,4,6-Tribromophenol	*57.6*			*34-129*	*%REC*	1	7/14/2010 13:10
Surr: 2-Fluorobiphenyl	*54.6*			*40-125*	*%REC*	1	7/14/2010 13:10
Surr: 2-Fluorophenol	*48.4*			*20-120*	*%REC*	1	7/14/2010 13:10
Surr: 4-Terphenyl-d14	*54.3*			*40-135*	*%REC*	1	7/14/2010 13:10
Surr: Nitrobenzene-d5	*58.1*			*41-120*	*%REC*	1	7/14/2010 13:10
Surr: Phenol-d6	*49.7*			*20-120*	*%REC*	1	7/14/2010 13:10
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 21:42
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 21:42
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 21:42
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 21:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36A-20100629
Collection Date: 6/29/2010 04:15 PM

Work Order: 1007048
Lab ID: 1007048-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 21:42
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 21:42
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 21:42
Surr: 1,2-Dichloroethane-d4	*108*			*70-125*	*%REC*	1	7/3/2010 21:42
Surr: 4-Bromofluorobenzene	*105*			*72-125*	*%REC*	1	7/3/2010 21:42
Surr: Dibromofluoromethane	*110*			*71-125*	*%REC*	1	7/3/2010 21:42
Surr: Toluene-d8	*101*			*75-125*	*%REC*	1	7/3/2010 21:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB5-20100629
Collection Date: 6/29/2010 04:45 PM

Work Order: 1007048
Lab ID: 1007048-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/14/2010 11:50
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/14/2010 11:50
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/14/2010 11:50
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/14/2010 11:50
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/14/2010 11:50
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/14/2010 11:50
Acenaphthene	U		0.090	0.20	µg/L	1	7/14/2010 11:50
Acenaphthylene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Anthracene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/14/2010 11:50
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/14/2010 11:50
Bis(2-ethylhexyl)phthalate	**3.3**		**0.20**	**0.20**	**µg/L**	1	7/14/2010 11:50
Chrysene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Dibenzofuran	U		0.080	0.20	µg/L	1	7/14/2010 11:50
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Fluoranthene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Fluorene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Naphthalene	U		0.10	0.20	µg/L	1	7/14/2010 11:50
Nitrobenzene	U		0.090	0.20	µg/L	1	7/14/2010 11:50
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/14/2010 11:50
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/14/2010 11:50
Phenanthrene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Phenol	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Pyrene	U		0.070	0.20	µg/L	1	7/14/2010 11:50
Surr: 2,4,6-Tribromophenol	*65.9*			*34-129*	*%REC*	1	7/14/2010 11:50
Surr: 2-Fluorobiphenyl	*53.4*			*40-125*	*%REC*	1	7/14/2010 11:50
Surr: 2-Fluorophenol	*48.6*			*20-120*	*%REC*	1	7/14/2010 11:50
Surr: 4-Terphenyl-d14	*74.6*			*40-135*	*%REC*	1	7/14/2010 11:50
Surr: Nitrobenzene-d5	*53.3*			*41-120*	*%REC*	1	7/14/2010 11:50
Surr: Phenol-d6	*52.2*			*20-120*	*%REC*	1	7/14/2010 11:50
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 17:53
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 17:53
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 17:53
Dichloromethane	U		0.50	10	µg/L	1	7/3/2010 17:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB5-20100629
Collection Date: 6/29/2010 04:45 PM

Work Order: 1007048
Lab ID: 1007048-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 17:53
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 17:53
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 17:53
Surr: 1,2-Dichloroethane-d4	*103*			*70-125*	*%REC*	1	7/3/2010 17:53
Surr: 4-Bromofluorobenzene	*105*			*72-125*	*%REC*	1	7/3/2010 17:53
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	7/3/2010 17:53
Surr: Toluene-d8	*107*			*75-125*	*%REC*	1	7/3/2010 17:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *16-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB5-20100629
Collection Date: 6/29/2010

Work Order: 1007048
Lab ID: 1007048-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/3/2010 18:18
Benzene	U		0.50	5.0	µg/L	1	7/3/2010 18:18
Chlorobenzene	U		0.50	5.0	µg/L	1	7/3/2010 18:18
Dichloromethane	**2.6**	J	**0.50**	**10**	**µg/L**	1	7/3/2010 18:18
Ethylbenzene	U		0.50	5.0	µg/L	1	7/3/2010 18:18
Toluene	U		0.50	5.0	µg/L	1	7/3/2010 18:18
Xylenes, Total	U		1.0	15	µg/L	1	7/3/2010 18:18
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	1	7/3/2010 18:18
Surr: 4-Bromofluorobenzene	*96.3*			*72-125*	*%REC*	1	7/3/2010 18:18
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	7/3/2010 18:18
Surr: Toluene-d8	*99.2*			*75-125*	*%REC*	1	7/3/2010 18:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 16-Jul-10

WorkOrder: 1007048
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.5	5
A	Benzene	71-43-2	0.5	5
A	Chlorobenzene	108-90-7	0.5	5
A	Dichloromethane	75-09-2	0.5	10
A	Ethylbenzene	100-41-4	0.5	5
A	Toluene	108-88-3	0.5	5
M	Xylenes, Total	1330-20-7	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	5
S	Surr: Toluene-d8	2037-26-5	0	5

ALS Laboratory Group

Date: 16-Jul-10

WorkOrder: 1007048
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.08	0.2
A	4-Nitrophenol	100-02-7	0.07	1
A	Acenaphthene	83-32-9	0.09	0.2
A	Acenaphthylene	208-96-8	0.07	0.2
A	Anthracene	120-12-7	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.2	0.2
A	Chrysene	218-01-9	0.07	0.2
A	Dibenzofuran	132-64-9	0.08	0.2
A	Di-n-butyl phthalate	84-74-2	0.07	0.2
A	Fluoranthene	206-44-0	0.07	0.2
A	Fluorene	86-73-7	0.07	0.2
A	Naphthalene	91-20-3	0.1	0.2
A	Nitrobenzene	98-95-3	0.09	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.09	0.2
A	Pentachlorophenol	87-86-5	0.08	0.2
A	Phenanthrene	85-01-8	0.07	0.2
A	Phenol	108-95-2	0.07	0.2
A	Pyrene	129-00-0	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0.2

Batch ID: **44216** Instrument ID **SV-6** Method: **SW8270**

MBLK Sample ID: **SBLKW2-100702-44216** Units: **µg/L** Analysis Date: **7/13/2010 12:52 PM**

Client ID: Run ID: **SV-6_100713B** SeqNo: **2029597** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Dibenzofuran	U	0.20								
Di-n-butyl phthalate	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*2.643*	0.20	*5*	0	*52.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.466*	0.20	*5*	0	*69.3*	*40-125*	0			
Surr: 2-Fluorophenol	*3.012*	0.20	*5*	0	*60.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.41*	0.20	*5*	0	*68.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.259*	0.20	*5*	0	*65.2*	*41-120*	0			
Surr: Phenol-d6	*3.239*	0.20	*5*	0	*64.8*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44216** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSW2-100702-44216** Units: **µg/L** Analysis Date: **7/13/2010 01:11 PM**

Client ID: Run ID: **SV-6_100713B** SeqNo: **2029598** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.424	0.20	5	0	68.5	39-127	0			
2,4-Dimethylphenol	2.154	0.20	5	0	43.1	35-120	0			
2,4-Dinitrotoluene	3.511	0.20	5	0	70.2	50-122	0			
2,6-Dinitrotoluene	3.503	0.20	5	0	70.1	50-120	0			
2-Chloronaphthalene	3.892	0.20	5	0	77.8	50-120	0			
2-Methylnaphthalene	3.433	0.20	5	0	68.7	50-120	0			
4,6-Dinitro-2-methylphenol	3.159	0.20	5	0	63.2	25-121	0			
4-Nitrophenol	3.532	1.0	5	0	70.6	30-130	0			
Acenaphthene	3.481	0.20	5	0	69.6	45-120	0			
Acenaphthylene	3.565	0.20	5	0	71.3	47-120	0			
Anthracene	3.492	0.20	5	0	69.8	45-120	0			
Benz(a)anthracene	3.633	0.20	5	0	72.7	40-120	0			
Benzo(a)pyrene	3.7	0.20	5	0	74	45-120	0			
Bis(2-chloroethoxy)methane	3.423	0.20	5	0	68.5	45-120	0			
Bis(2-ethylhexyl)phthalate	3.228	0.20	5	0	64.6	40-139	0			
Chrysene	3.429	0.20	5	0	68.6	43-120	0			
Dibenzofuran	3.389	0.20	5	0	67.8	50-120	0			
Di-n-butyl phthalate	3.835	0.20	5	0	76.7	45-123	0			
Fluoranthene	3.675	0.20	5	0	73.5	45-125	0			
Fluorene	3.435	0.20	5	0	68.7	49-120	0			
Naphthalene	3.408	0.20	5	0	68.2	45-120	0			
Nitrobenzene	3.284	0.20	5	0	65.7	44-120	0			
N-Nitrosodiphenylamine	3.403	0.20	5	0	68.1	40-125	0			
Pentachlorophenol	3.169	0.20	5	0	63.4	19-121	0			
Phenanthrene	3.474	0.20	5	0	69.5	45-121	0			
Phenol	3.527	0.20	5	0	70.5	20-124	0			
Pyrene	3.577	0.20	5	0	71.5	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.093*	0.20	*5*	0	*61.9*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.231*	0.20	*5*	0	*64.6*	*40-125*	0			
Surr: 2-Fluorophenol	*3.256*	0.20	*5*	0	*65.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.113*	0.20	*5*	0	*62.3*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.04*	0.20	*5*	0	*60.8*	*41-120*	0			
Surr: Phenol-d6	*3.314*	0.20	*5*	0	*66.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44216** Instrument ID **SV-6** Method: **SW8270**

LCS Sample ID: **SLCSDW2-100702-44216** Units: **µg/L** Analysis Date: **7/13/2010 02:28 PM**

Client ID: Run ID: **SV-6_100713B** SeqNo: **2029599** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.385	0.20	5	0	67.7	39-127	0			
2,4-Dimethylphenol	2.189	0.20	5	0	43.8	35-120	0			
2,4-Dinitrotoluene	3.593	0.20	5	0	71.9	50-122	0			
2,6-Dinitrotoluene	3.599	0.20	5	0	72	50-120	0			
2-Chloronaphthalene	3.83	0.20	5	0	76.6	50-120	0			
2-Methylnaphthalene	3.434	0.20	5	0	68.7	50-120	0			
4,6-Dinitro-2-methylphenol	3.307	0.20	5	0	66.1	25-121	0			
4-Nitrophenol	3.651	1.0	5	0	73	30-130	0			
Acenaphthene	3.399	0.20	5	0	68	45-120	0			
Acenaphthylene	3.502	0.20	5	0	70	47-120	0			
Anthracene	3.475	0.20	5	0	69.5	45-120	0			
Benz(a)anthracene	3.57	0.20	5	0	71.4	40-120	0			
Benzo(a)pyrene	3.666	0.20	5	0	73.3	45-120	0			
Bis(2-chloroethoxy)methane	3.399	0.20	5	0	68	45-120	0			
Bis(2-ethylhexyl)phthalate	3.359	0.20	5	0	67.2	40-139	0			
Chrysene	3.385	0.20	5	0	67.7	43-120	0			
Dibenzofuran	3.328	0.20	5	0	66.6	50-120	0			
Di-n-butyl phthalate	3.854	0.20	5	0	77.1	45-123	0			
Fluoranthene	3.642	0.20	5	0	72.8	45-125	0			
Fluorene	3.391	0.20	5	0	67.8	49-120	0			
Naphthalene	3.428	0.20	5	0	68.6	45-120	0			
Nitrobenzene	3.373	0.20	5	0	67.5	44-120	0			
N-Nitrosodiphenylamine	3.389	0.20	5	0	67.8	40-125	0			
Pentachlorophenol	3.314	0.20	5	0	66.3	19-121	0			
Phenanthrene	3.449	0.20	5	0	69	45-121	0			
Phenol	3.426	0.20	5	0	68.5	20-124	0			
Pyrene	3.552	0.20	5	0	71	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.284*	0.20	*5*	0	*65.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.146*	0.20	*5*	0	*62.9*	*40-125*	0			
Surr: 2-Fluorophenol	*3.165*	0.20	*5*	0	*63.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.141*	0.20	*5*	0	*62.8*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.164*	0.20	*5*	0	*63.3*	*41-120*	0			
Surr: Phenol-d6	*3.227*	0.20	*5*	0	*64.5*	*20-120*	0			

The following samples were analyzed in this batch:

1007048-01B	1007048-02B	1007048-03B
1007048-04B	1007048-05B	1007048-06B
1007048-07B	1007048-08B	1007048-09B
1007048-10B	1007048-11B	1007048-12B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 01:37 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016898** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*54.61*	5.0	*50*	0	*109*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.8*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*52.47*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*52.32*	5.0	*50*	0	*105*	*75-125*	0			

LCS Sample ID: **VLCSW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 12:19 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016896** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.81	5.0	50	0	106	78-120	0			
Benzene	52.5	5.0	50	0	105	73-121	0			
Chlorobenzene	48.96	5.0	50	0	97.9	80-120	0			
Dichloromethane	51.75	10	50	0	104	65-133	0			
Ethylbenzene	52.39	5.0	50	0	105	80-120	0			
Toluene	51.98	5.0	50	0	104	80-120	0			
Xylenes, Total	149.6	15	150	0	99.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.23*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*51.51*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*49.86*	5.0	*50*	0	*99.7*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

LCSD Sample ID: **VLSDW-070310-R93559** Units: **µg/L** Analysis Date: **7/3/2010 12:45 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2016897** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.2	5.0	50	0	102	78-120	52.81	3.1	20	
Benzene	48.84	5.0	50	0	97.7	73-121	52.5	7.22	20	
Chlorobenzene	50.2	5.0	50	0	100	80-120	48.96	2.5	20	
Dichloromethane	52.15	10	50	0	104	65-133	51.75	0.766	20	
Ethylbenzene	51.12	5.0	50	0	102	80-120	52.39	2.45	20	
Toluene	50.78	5.0	50	0	102	80-120	51.98	2.34	20	
Xylenes, Total	153.9	15	150	0	103	80-120	149.6	2.81	20	
Surr: 1,2-Dichloroethane-d4	*48.91*	5.0	*50*	0	*97.8*	*70-125*	50.23	*2.66*	*20*	
Surr: 4-Bromofluorobenzene	*52.81*	5.0	*50*	0	*106*	*72-125*	52	*1.55*	*20*	
Surr: Dibromofluoromethane	*52*	5.0	*50*	0	*104*	*71-125*	51.51	*0.941*	*20*	
Surr: Toluene-d8	*54.89*	5.0	*50*	0	*110*	*75-125*	49.86	*9.61*	*20*	

MS Sample ID: **1006858-10AMS** Units: **µg/L** Analysis Date: **7/3/2010 04:10 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2017465** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.02	5.0	50	0	102	78-120	0			
Benzene	47.33	5.0	50	0	94.7	73-121	0			
Chlorobenzene	46.44	5.0	50	0	92.9	80-120	0			
Dichloromethane	49.29	10	50	0	98.6	65-133	0			
Ethylbenzene	45.02	5.0	50	0	90	80-120	0			
Toluene	47.23	5.0	50	0	94.5	80-120	0			
Xylenes, Total	134.6	15	150	0	89.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.4*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.13*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*51.11*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*51.85*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93559** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1006858-10AMSD** Units: **µg/L** Analysis Date: **7/3/2010 04:36 PM**

Client ID: Run ID: **VOA1_100703A** SeqNo: **2017466** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.74	5.0	50	0	101	78-120	51.02	0.556	20	
Benzene	47.55	5.0	50	0	95.1	73-121	47.33	0.473	20	
Chlorobenzene	47.39	5.0	50	0	94.8	80-120	46.44	2.02	20	
Dichloromethane	46.27	10	50	0	92.5	65-133	49.29	6.33	20	
Ethylbenzene	44.73	5.0	50	0	89.5	80-120	45.02	0.649	20	
Toluene	44.06	5.0	50	0	88.1	80-120	47.23	6.94	20	
Xylenes, Total	132.2	15	150	0	88.1	80-120	134.6	1.79	20	
Surr: 1,2-Dichloroethane-d4	*49.25*	5.0	*50*	0	*98.5*	*70-125*	50.4	*2.3*	*20*	
Surr: 4-Bromofluorobenzene	*50.69*	5.0	*50*	0	*101*	*72-125*	50.13	*1.1*	*20*	
Surr: Dibromofluoromethane	*50.47*	5.0	*50*	0	*101*	*71-125*	51.11	*1.25*	*20*	
Surr: Toluene-d8	*50.07*	5.0	*50*	0	*100*	*75-125*	51.85	*3.5*	*20*	

The following samples were analyzed in this batch:

1007048-02A	1007048-04A	1007048-05A
1007048-07A	1007048-08A	1007048-09A
1007048-10A	1007048-11A	1007048-12A
1007048-13A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 01:10 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019742** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.62*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.75*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*53.61*	5.0	*50*	0	*107*	*71-125*	0			
Surr: Toluene-d8	*53.96*	5.0	*50*	0	*108*	*75-125*	0			

LCS Sample ID: **VLCSW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 12:20 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019740** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	57.19	5.0	50	0	114	78-120	0			
Benzene	53.29	5.0	50	0	107	73-121	0			
Chlorobenzene	49.28	5.0	50	0	98.6	80-120	0			
Dichloromethane	50.14	10	50	0	100	65-133	0			
Ethylbenzene	49	5.0	50	0	98	80-120	0			
Toluene	50.49	5.0	50	0	101	80-120	0			
Xylenes, Total	148.2	15	150	0	98.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.52*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.53*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*52.45*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*51.96*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007048
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1007004-02AMS** Units: **µg/L** Analysis Date: **7/7/2010 02:01 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019747** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.27	5.0	50	0	105	78-120	0			
Benzene	50.26	5.0	50	2.554	95.4	73-121	0			
Chlorobenzene	47.32	5.0	50	0	94.6	80-120	0			
Dichloromethane	46.58	10	50	0	93.2	65-133	0			
Ethylbenzene	49.77	5.0	50	0	99.5	80-120	0			
Toluene	47.87	5.0	50	0	95.7	80-120	0			
Xylenes, Total	151.4	15	150	2.605	99.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.96*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*53.58*	5.0	*50*	0	*107*	*72-125*	0			
Surr: Dibromofluoromethane	*52.13*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*52.75*	5.0	*50*	0	*105*	*75-125*	0			

MSD Sample ID: **1007004-02AMSD** Units: **µg/L** Analysis Date: **7/7/2010 02:27 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019750** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.94	5.0	50	0	95.9	78-120	52.27	8.65	20	
Benzene	45.44	5.0	50	2.554	85.8	73-121	50.26	10.1	20	
Chlorobenzene	47.2	5.0	50	0	94.4	80-120	47.32	0.257	20	
Dichloromethane	45.83	10	50	0	91.7	65-133	46.58	1.64	20	
Ethylbenzene	48.6	5.0	50	0	97.2	80-120	49.77	2.38	20	
Toluene	46.49	5.0	50	0	93	80-120	47.87	2.92	20	
Xylenes, Total	146.6	15	150	2.605	96	80-120	151.4	3.18	20	
Surr: 1,2-Dichloroethane-d4	*48.12*	5.0	*50*	0	*96.2*	*70-125*	51.96	*7.68*	*20*	
Surr: 4-Bromofluorobenzene	*53.39*	5.0	*50*	0	*107*	*72-125*	53.58	*0.356*	*20*	
Surr: Dibromofluoromethane	*52.68*	5.0	*50*	0	*105*	*71-125*	52.13	*1.05*	*20*	
Surr: Toluene-d8	*55.2*	5.0	*50*	0	*110*	*75-125*	52.75	*4.56*	*20*	

The following samples were analyzed in this batch: 1007048-01A 1007048-03A 1007048-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 16-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1007048**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1007048

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW33A-20100629	6-29-10	0745	W		5	X	X									
2	WG-1620-MWX2-20100629	6-29-10	0745	W		5	X	X									
3	WG-1620-MW33B-20100629	6-29-10	0845	W		5	X	X									
4	WG-1620-MW38A-20100629	6-29-10	0940	W		5	X	X									
5	WG-1620-MW-38B-20100629	6-29-10	1025	W		5	X	X									
6	WG-1620-MW22B-20100629	6-29-10	1115	W		5	X	X									
7	WG-1620-MW22A-20100629	6-29-10	1200	W		5	X	X									
8	WG-1620-MW24C-20100629	6-29-10	1300	W		5	X	X									
9	WG-1620-MW24B-20100629	6-29-10	1400	W		5	X	X									
10	WG-1620-MW24AR-20100629	6-29-10	1500	W		5	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYDON John Brayd | Shipment Method: HAND DELIVERED | Required Turnaround Time: (Check Box) ☐ Other ☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour | Results Due Date:

Relinquished by	Date:	Time:	Received by:	Notes: 10 Work Days TAT.
John Brayd	6-29-10	1705		
Relinquished By:	Date:	Time:	Received by (Laboratory):	
John Brayd				
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
		☐ Level II Std QC ☑ TRRP CheckList
		☐ Level III Std QC/Raw Data ☐ TRRP Level IV
		☐ Level IV SW846/CLP
		☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1007048

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW36A-20100629	6-29-10	1615	W		5	X	X									
2	WG-1620-FB5-20100629	6-29-10	1645	W		5	X	X									
3	WG-1620-TB5-20100629	6-29-10		W		2	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN GRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☒ Std 10 WK Days ☐ 5 WK Days ☐ 3 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 6-29-10	Time: 1705	Received by:	Notes: 10 Work Days TAT.
Relinquished by:	Date:	Time:	Received By (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
		☐ Level II Std QC ☒ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **29-Jun-10 18:05**

Work Order: **1007048** Received by: **RDH**

Checklist completed by Robert D. Harris (eSignature) 01-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 03-Jul-10 (Date)

Matrices: waters
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.3c,2.9c	002	
Cooler(s)/Kit(s):	2450,7090		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

19-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1007051**

Dear Eric,

ALS Laboratory Group received 9 samples on 01-Jul-2010 01:36 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 43.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1007051

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 19-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1007051**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007051-01	WG-1620-MW32A-20100701	Water		7/1/2010 08:15	7/1/2010 13:36	☐
1007051-02	WG-1620-MW65D-20100701	Water		7/1/2010 09:10	7/1/2010 13:36	☐
1007051-03	WG-1620-MW35B-20100701	Water		7/1/2010 07:30	7/1/2010 13:36	☐
1007051-04	WG-1620-MW59D-20100701	Water		7/1/2010 10:10	7/1/2010 13:36	☐
1007051-05	WG-1620-MWX3-20100701	Water		7/1/2010 10:10	7/1/2010 13:36	☐
1007051-06	WG-1620-MW66D-20100701	Water		7/1/2010 11:00	7/1/2010 13:36	☐
1007051-07	WG-1620-MW61A-20100701	Water		7/1/2010 11:45	7/1/2010 13:36	☐
1007051-08	WG-1620-TB7-20100701	Water		7/1/2010	7/1/2010 13:36	☐
1007051-09	WG-1620-FB7-20100701	Water		7/1/2010 12:00	7/1/2010 13:36	☐

Laboratory Review Checklist: Reportable Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 07/19/10					
Project Name: HWPW-Site Wide Monitoring			Laboratory Job Number: 1007051					
Reviewer Name: R. Kevin Given			Prep Batch Number(s): 44214, R93726, R93767, R93909, R94029					
#[1]	**A[2]**	**Description**	**Yes**	**No**	**NA[3]**	**NR[4]**	**ER#[5]**
R1	OI	**Chain-of-custody (C-O-C)**					
		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 detection 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		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			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				
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 and DCSs 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 SDL minimize the matrix interference affects on the sample results?	X				3
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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Laboratory Review Checklist: Reportable Data								
Laboratory Name: ALS Laboratory Group			LRC Date: 07/19/10					
Project Name: HWPW-Site Wide Monitoring			Laboratory Job Number: 1007051					
Reviewer Name: R. Kevin Given			Prep Batch Number(s): 44214, R93726, R93767, R93909, R94029					
#[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 blank (CCB)**					
		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 method?			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 studies?	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 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Reportable Data	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/19/10
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007051
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44214, R93726, R93767, R93909, R94029

ER#[5]	Description
1	Low-Level Semivolatiles, Sample WG-1620-MW32A-20100701 : Surrogate recoveries were diluted out in the 50X dilution. Low-Level Semivolatiles, Sample WG-1620-MW32A-20100701 : Surrogate recoveries were diluted out in the 4000X dilution. Low-Level Semivolatiles, Sample WG-1620-MW35B-20100701 : Surrogate recoveries were diluted out in the 2000X dilution.
2	Batch 44214, Semivolatile Organics, Sample 1007004-02 : MS/MSD is for an unrelated sample.
3	Low-Level Semivolatiles, Sample WG-1620-MW32A-20100701 could not be analyzed at a lower dilution due to matrix interference.

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW32A-20100701
Collection Date: 7/1/2010 08:15 AM

Work Order: 1007051
Lab ID: 1007051-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		1.0	2.0	µg/L	10	7/15/2010 20:05
2,4-Dimethylphenol	**15,000**		**320**	**800**	**µg/L**	4000	7/15/2010 22:28
2,4-Dinitrotoluene	U		0.90	2.0	µg/L	10	7/15/2010 20:05
2,6-Dinitrotoluene	U		0.70	2.0	µg/L	10	7/15/2010 20:05
2-Chloronaphthalene	U		1.0	2.0	µg/L	10	7/15/2010 20:05
2-Methylnaphthalene	**480**		**3.5**	**10**	**µg/L**	50	7/15/2010 21:18
4,6-Dinitro-2-methylphenol	U		0.80	2.0	µg/L	10	7/15/2010 20:05
4-Nitrophenol	U		0.70	10	µg/L	10	7/15/2010 20:05
Acenaphthene	**190**		**4.5**	**10**	**µg/L**	50	7/15/2010 21:18
Acenaphthylene	**7.9**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Anthracene	**93**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Benz(a)anthracene	**10**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Benzo(a)pyrene	**6.7**		**0.80**	**2.0**	**µg/L**	10	7/15/2010 20:05
Bis(2-chloroethoxy)methane	U		0.90	2.0	µg/L	10	7/15/2010 20:05
Bis(2-ethylhexyl)phthalate	**4.1**		**2.0**	**2.0**	**µg/L**	10	7/15/2010 20:05
Chrysene	**9.9**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Dibenzofuran	**210**		**4.0**	**10**	**µg/L**	50	7/15/2010 21:18
Di-n-butyl phthalate	U		0.70	2.0	µg/L	10	7/15/2010 20:05
Fluoranthene	**90**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Fluorene	**130**		**3.5**	**10**	**µg/L**	50	7/15/2010 21:18
Naphthalene	**11,000**		**400**	**800**	**µg/L**	4000	7/15/2010 22:28
Nitrobenzene	U		0.90	2.0	µg/L	10	7/15/2010 20:05
N-Nitrosodiphenylamine	**14**		**0.90**	**2.0**	**µg/L**	10	7/15/2010 20:05
Pentachlorophenol	U		0.80	2.0	µg/L	10	7/15/2010 20:05
Phenanthrene	**190**		**3.5**	**10**	**µg/L**	50	7/15/2010 21:18
Phenol	**14,000**		**280**	**800**	**µg/L**	4000	7/15/2010 22:28
Pyrene	**47**		**0.70**	**2.0**	**µg/L**	10	7/15/2010 20:05
Surr: 2,4,6-Tribromophenol	*122*			*34-129*	*%REC*	10	7/15/2010 20:05
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	50	7/15/2010 21:18
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	4000	7/15/2010 22:28
Surr: 2-Fluorobiphenyl	*92.4*			*40-125*	*%REC*	10	7/15/2010 20:05
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	50	7/15/2010 21:18
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	4000	7/15/2010 22:28
Surr: 2-Fluorophenol	*71.7*			*20-120*	*%REC*	10	7/15/2010 20:05
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	50	7/15/2010 21:18
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	4000	7/15/2010 22:28
Surr: 4-Terphenyl-d14	*78.9*			*40-135*	*%REC*	10	7/15/2010 20:05
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	50	7/15/2010 21:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW32A-20100701
Collection Date: 7/1/2010 08:15 AM

Work Order: 1007051
Lab ID: 1007051-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	4000	7/15/2010 22:28
Surr: Nitrobenzene-d5	*59.7*			*41-120*	*%REC*	10	7/15/2010 20:05
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	50	7/15/2010 21:18
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	4000	7/15/2010 22:28
Surr: Phenol-d6	*96.7*			*20-120*	*%REC*	10	7/15/2010 20:05
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	50	7/15/2010 21:18
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	4000	7/15/2010 22:28
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		2.5	25	µg/L	5	7/9/2010 20:51
Benzene	**1,500**		**12**	**120**	**µg/L**	25	7/13/2010 15:55
Chlorobenzene	U		2.5	25	µg/L	5	7/9/2010 20:51
Dichloromethane	**3.2**	J	**2.5**	**50**	**µg/L**	5	7/9/2010 20:51
Ethylbenzene	**450**		**2.5**	**25**	**µg/L**	5	7/9/2010 20:51
Toluene	**1,500**		**12**	**120**	**µg/L**	25	7/13/2010 15:55
Xylenes, Total	**1,300**		**5.0**	**75**	**µg/L**	5	7/9/2010 20:51
Surr: 1,2-Dichloroethane-d4	*90.0*			*70-125*	*%REC*	5	7/9/2010 20:51
Surr: 1,2-Dichloroethane-d4	*102*			*70-125*	*%REC*	25	7/13/2010 15:55
Surr: 4-Bromofluorobenzene	*103*			*72-125*	*%REC*	5	7/9/2010 20:51
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	25	7/13/2010 15:55
Surr: Dibromofluoromethane	*89.7*			*71-125*	*%REC*	5	7/9/2010 20:51
Surr: Dibromofluoromethane	*98.2*			*71-125*	*%REC*	25	7/13/2010 15:55
Surr: Toluene-d8	*102*			*75-125*	*%REC*	5	7/9/2010 20:51
Surr: Toluene-d8	*98.7*			*75-125*	*%REC*	25	7/13/2010 15:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW65D-20100701
Collection Date: 7/1/2010 09:10 AM

Work Order: 1007051
Lab ID: 1007051-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 16:33
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:33
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 16:33
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 16:33
2-Methylnaphthalene	**0.14**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:33
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:33
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 16:33
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 16:33
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 16:33
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 16:33
Bis(2-ethylhexyl)phthalate	**1.0**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 16:33
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 16:33
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Naphthalene	**0.59**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 16:33
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 16:33
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 16:33
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 16:33
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 16:33
Surr: 2,4,6-Tribromophenol	*79.5*			*34-129*	*%REC*	1	7/15/2010 16:33
Surr: 2-Fluorobiphenyl	*49.0*			*40-125*	*%REC*	1	7/15/2010 16:33
Surr: 2-Fluorophenol	*45.7*			*20-120*	*%REC*	1	7/15/2010 16:33
Surr: 4-Terphenyl-d14	*60.0*			*40-135*	*%REC*	1	7/15/2010 16:33
Surr: Nitrobenzene-d5	*62.7*			*41-120*	*%REC*	1	7/15/2010 16:33
Surr: Phenol-d6	*49.4*			*20-120*	*%REC*	1	7/15/2010 16:33
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 05:28
Benzene	U		0.50	5.0	µg/L	1	7/8/2010 05:28
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 05:28
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 05:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW65D-20100701
Collection Date: 7/1/2010 09:10 AM

Work Order: 1007051
Lab ID: 1007051-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/8/2010 05:28
Toluene	U		0.50	5.0	µg/L	1	7/8/2010 05:28
Xylenes, Total	U		1.0	15	µg/L	1	7/8/2010 05:28
Surr: 1,2-Dichloroethane-d4	*115*			*70-125*	*%REC*	1	7/8/2010 05:28
Surr: 4-Bromofluorobenzene	*104*			*72-125*	*%REC*	1	7/8/2010 05:28
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	7/8/2010 05:28
Surr: Toluene-d8	*99.3*			*75-125*	*%REC*	1	7/8/2010 05:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW35B-20100701
Collection Date: 7/1/2010 07:30 AM

Work Order: 1007051
Lab ID: 1007051-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	**1.2**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 16:12
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:12
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 16:12
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 16:12
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 16:12
2-Methylnaphthalene	**360**		**3.5**	**10**	**µg/L**	50	7/15/2010 17:59
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:12
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 16:12
Acenaphthene	**200**		**4.5**	**10**	**µg/L**	50	7/15/2010 17:59
Acenaphthylene	**1.1**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:12
Anthracene	**15**		**3.5**	**10**	**µg/L**	50	7/15/2010 17:59
Benz(a)anthracene	**0.22**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:12
Benzo(a)pyrene	**0.12**	J	**0.080**	**0.20**	**µg/L**	1	7/15/2010 16:12
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 16:12
Bis(2-ethylhexyl)phthalate	**0.97**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 16:12
Chrysene	**0.17**	J	**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:12
Dibenzofuran	**220**		**4.0**	**10**	**µg/L**	50	7/15/2010 17:59
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 16:12
Fluoranthene	**6.0**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:12
Fluorene	**110**		**3.5**	**10**	**µg/L**	50	7/15/2010 17:59
Naphthalene	**11,000**		**200**	**400**	**µg/L**	2000	7/15/2010 21:39
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 16:12
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 16:12
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 16:12
Phenanthrene	**120**		**3.5**	**10**	**µg/L**	50	7/15/2010 17:59
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 16:12
Pyrene	**2.5**		**0.070**	**0.20**	**µg/L**	1	7/15/2010 16:12
Surr: 2,4,6-Tribromophenol	*66.1*			*34-129*	*%REC*	1	7/15/2010 16:12
Surr: 2,4,6-Tribromophenol	*99.9*	J		*34-129*	*%REC*	50	7/15/2010 17:59
Surr: 2,4,6-Tribromophenol	*0*	S		*34-129*	*%REC*	2000	7/15/2010 21:39
Surr: 2-Fluorobiphenyl	*46.3*			*40-125*	*%REC*	1	7/15/2010 16:12
Surr: 2-Fluorobiphenyl	*99.0*	J		*40-125*	*%REC*	50	7/15/2010 17:59
Surr: 2-Fluorobiphenyl	*0*	S		*40-125*	*%REC*	2000	7/15/2010 21:39
Surr: 2-Fluorophenol	*79.6*			*20-120*	*%REC*	1	7/15/2010 16:12
Surr: 2-Fluorophenol	*79.8*	J		*20-120*	*%REC*	50	7/15/2010 17:59
Surr: 2-Fluorophenol	*0*	S		*20-120*	*%REC*	2000	7/15/2010 21:39
Surr: 4-Terphenyl-d14	*62.1*			*40-135*	*%REC*	1	7/15/2010 16:12
Surr: 4-Terphenyl-d14	*77.6*	J		*40-135*	*%REC*	50	7/15/2010 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW35B-20100701
Collection Date: 7/1/2010 07:30 AM

Work Order: 1007051
Lab ID: 1007051-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*0*	S		*40-135*	*%REC*	2000	7/15/2010 21:39
Surr: Nitrobenzene-d5	*79.8*			*41-120*	*%REC*	1	7/15/2010 16:12
Surr: Nitrobenzene-d5	*76.3*	J		*41-120*	*%REC*	50	7/15/2010 17:59
Surr: Nitrobenzene-d5	*0*	S		*41-120*	*%REC*	2000	7/15/2010 21:39
Surr: Phenol-d6	*54.1*			*20-120*	*%REC*	1	7/15/2010 16:12
Surr: Phenol-d6	*57.0*	J		*20-120*	*%REC*	50	7/15/2010 17:59
Surr: Phenol-d6	*0*	S		*20-120*	*%REC*	2000	7/15/2010 21:39
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 05:05
Benzene	**68**		**0.50**	**5.0**	**µg/L**	1	7/8/2010 05:05
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 05:05
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 05:05
Ethylbenzene	**210**		**5.0**	**50**	**µg/L**	10	7/9/2010 21:17
Toluene	**5.0**		**0.50**	**5.0**	**µg/L**	1	7/8/2010 05:05
Xylenes, Total	**170**		**1.0**	**15**	**µg/L**	1	7/8/2010 05:05
Surr: 1,2-Dichloroethane-d4	*117*			*70-125*	*%REC*	1	7/8/2010 05:05
Surr: 1,2-Dichloroethane-d4	*96.0*			*70-125*	*%REC*	10	7/9/2010 21:17
Surr: 4-Bromofluorobenzene	*101*			*72-125*	*%REC*	1	7/8/2010 05:05
Surr: 4-Bromofluorobenzene	*104*			*72-125*	*%REC*	10	7/9/2010 21:17
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	7/8/2010 05:05
Surr: Dibromofluoromethane	*92.1*			*71-125*	*%REC*	10	7/9/2010 21:17
Surr: Toluene-d8	*98.3*			*75-125*	*%REC*	1	7/8/2010 05:05
Surr: Toluene-d8	*98.4*			*75-125*	*%REC*	10	7/9/2010 21:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59D-20100701
Collection Date: 7/1/2010 10:10 AM

Work Order: 1007051
Lab ID: 1007051-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/16/2010 20:06
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/16/2010 20:06
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/16/2010 20:06
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/16/2010 20:06
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/16/2010 20:06
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/16/2010 20:06
Acenaphthene	U		0.090	0.20	µg/L	1	7/16/2010 20:06
Acenaphthylene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Anthracene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/16/2010 20:06
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/16/2010 20:06
Bis(2-ethylhexyl)phthalate	**0.31**		**0.20**	**0.20**	**µg/L**	1	7/16/2010 20:06
Chrysene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Dibenzofuran	U		0.080	0.20	µg/L	1	7/16/2010 20:06
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Fluoranthene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Fluorene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Naphthalene	**0.22**		**0.10**	**0.20**	**µg/L**	1	7/16/2010 20:06
Nitrobenzene	U		0.090	0.20	µg/L	1	7/16/2010 20:06
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/16/2010 20:06
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/16/2010 20:06
Phenanthrene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Phenol	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Pyrene	U		0.070	0.20	µg/L	1	7/16/2010 20:06
Surr: 2,4,6-Tribromophenol	*50.5*			*34-129*	*%REC*	1	7/16/2010 20:06
Surr: 2-Fluorobiphenyl	*42.1*			*40-125*	*%REC*	1	7/16/2010 20:06
Surr: 2-Fluorophenol	*42.4*			*20-120*	*%REC*	1	7/16/2010 20:06
Surr: 4-Terphenyl-d14	*62.8*			*40-135*	*%REC*	1	7/16/2010 20:06
Surr: Nitrobenzene-d5	*43.0*			*41-120*	*%REC*	1	7/16/2010 20:06
Surr: Phenol-d6	*43.2*			*20-120*	*%REC*	1	7/16/2010 20:06
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 05:52
Benzene	U		0.50	5.0	µg/L	1	7/8/2010 05:52
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 05:52
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 05:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59D-20100701
Collection Date: 7/1/2010 10:10 AM

Work Order: 1007051
Lab ID: 1007051-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/8/2010 05:52
Toluene	U		0.50	5.0	µg/L	1	7/8/2010 05:52
Xylenes, Total	U		1.0	15	µg/L	1	7/8/2010 05:52
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	7/8/2010 05:52
Surr: 4-Bromofluorobenzene	*99.7*			*72-125*	*%REC*	1	7/8/2010 05:52
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	7/8/2010 05:52
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	1	7/8/2010 05:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX3-20100701
Collection Date: 7/1/2010 10:10 AM

Work Order: 1007051
Lab ID: 1007051-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 16:52
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:52
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 16:52
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 16:52
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 16:52
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 16:52
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 16:52
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 16:52
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 16:52
Bis(2-ethylhexyl)phthalate	**0.49**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 16:52
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 16:52
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Naphthalene	U		0.10	0.20	µg/L	1	7/15/2010 16:52
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 16:52
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 16:52
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 16:52
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 16:52
Surr: 2,4,6-Tribromophenol	*71.9*			*34-129*	*%REC*	1	7/15/2010 16:52
Surr: 2-Fluorobiphenyl	*57.5*			*40-125*	*%REC*	1	7/15/2010 16:52
Surr: 2-Fluorophenol	*58.0*			*20-120*	*%REC*	1	7/15/2010 16:52
Surr: 4-Terphenyl-d14	*59.7*			*40-135*	*%REC*	1	7/15/2010 16:52
Surr: Nitrobenzene-d5	*62.3*			*41-120*	*%REC*	1	7/15/2010 16:52
Surr: Phenol-d6	*53.0*			*20-120*	*%REC*	1	7/15/2010 16:52
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 06:16
Benzene	U		0.50	5.0	µg/L	1	7/8/2010 06:16
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 06:16
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 06:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX3-20100701
Collection Date: 7/1/2010 10:10 AM

Work Order: 1007051
Lab ID: 1007051-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/8/2010 06:16
Toluene	U		0.50	5.0	µg/L	1	7/8/2010 06:16
Xylenes, Total	U		1.0	15	µg/L	1	7/8/2010 06:16
Surr: 1,2-Dichloroethane-d4	*112*			*70-125*	*%REC*	1	7/8/2010 06:16
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	7/8/2010 06:16
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	7/8/2010 06:16
Surr: Toluene-d8	*99.3*			*75-125*	*%REC*	1	7/8/2010 06:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW66D-20100701
Collection Date: 7/1/2010 11:00 AM

Work Order: 1007051
Lab ID: 1007051-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 17:11
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:11
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 17:11
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 17:11
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:11
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 17:11
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 17:11
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 17:11
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 17:11
Bis(2-ethylhexyl)phthalate	**0.96**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 17:11
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Dibenzofuran	**0.083**	J	**0.080**	**0.20**	**µg/L**	1	7/15/2010 17:11
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Naphthalene	**0.20**	J	**0.10**	**0.20**	**µg/L**	1	7/15/2010 17:11
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 17:11
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 17:11
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/15/2010 17:11
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 17:11
Surr: 2,4,6-Tribromophenol	*78.3*			*34-129*	*%REC*	1	7/15/2010 17:11
Surr: 2-Fluorobiphenyl	*54.5*			*40-125*	*%REC*	1	7/15/2010 17:11
Surr: 2-Fluorophenol	*52.8*			*20-120*	*%REC*	1	7/15/2010 17:11
Surr: 4-Terphenyl-d14	*65.6*			*40-135*	*%REC*	1	7/15/2010 17:11
Surr: Nitrobenzene-d5	*57.1*			*41-120*	*%REC*	1	7/15/2010 17:11
Surr: Phenol-d6	*49.3*			*20-120*	*%REC*	1	7/15/2010 17:11
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 06:40
Benzene	U		0.50	5.0	µg/L	1	7/8/2010 06:40
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 06:40
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 06:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW66D-20100701
Collection Date: 7/1/2010 11:00 AM

Work Order: 1007051
Lab ID: 1007051-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/8/2010 06:40
Toluene	U		0.50	5.0	µg/L	1	7/8/2010 06:40
Xylenes, Total	U		1.0	15	µg/L	1	7/8/2010 06:40
Surr: 1,2-Dichloroethane-d4	*115*			*70-125*	*%REC*	1	7/8/2010 06:40
Surr: 4-Bromofluorobenzene	*100*			*72-125*	*%REC*	1	7/8/2010 06:40
Surr: Dibromofluoromethane	*104*			*71-125*	*%REC*	1	7/8/2010 06:40
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	1	7/8/2010 06:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW61A-20100701
Collection Date: 7/1/2010 11:45 AM

Work Order: 1007051
Lab ID: 1007051-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 17:49
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:49
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 17:49
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 17:49
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:49
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 17:49
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 17:49
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 17:49
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 17:49
Bis(2-ethylhexyl)phthalate	**2.1**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 17:49
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 17:49
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Naphthalene	**0.18**	J	**0.10**	**0.20**	**µg/L**	1	7/15/2010 17:49
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 17:49
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 17:49
Pentachlorophenol	**0.32**		**0.080**	**0.20**	**µg/L**	1	7/15/2010 17:49
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 17:49
Surr: 2,4,6-Tribromophenol	*83.5*			*34-129*	*%REC*	1	7/15/2010 17:49
Surr: 2-Fluorobiphenyl	*53.1*			*40-125*	*%REC*	1	7/15/2010 17:49
Surr: 2-Fluorophenol	*45.9*			*20-120*	*%REC*	1	7/15/2010 17:49
Surr: 4-Terphenyl-d14	*68.7*			*40-135*	*%REC*	1	7/15/2010 17:49
Surr: Nitrobenzene-d5	*51.0*			*41-120*	*%REC*	1	7/15/2010 17:49
Surr: Phenol-d6	*46.5*			*20-120*	*%REC*	1	7/15/2010 17:49
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/8/2010 07:03
Benzene	U		0.50	5.0	µg/L	1	7/8/2010 07:03
Chlorobenzene	U		0.50	5.0	µg/L	1	7/8/2010 07:03
Dichloromethane	U		0.50	10	µg/L	1	7/8/2010 07:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW61A-20100701
Collection Date: 7/1/2010 11:45 AM

Work Order: 1007051
Lab ID: 1007051-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/8/2010 07:03
Toluene	U		0.50	5.0	µg/L	1	7/8/2010 07:03
Xylenes, Total	U		1.0	15	µg/L	1	7/8/2010 07:03
Surr: 1,2-Dichloroethane-d4	*113*			*70-125*	*%REC*	1	7/8/2010 07:03
Surr: 4-Bromofluorobenzene	*99.6*			*72-125*	*%REC*	1	7/8/2010 07:03
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	7/8/2010 07:03
Surr: Toluene-d8	*99.0*			*75-125*	*%REC*	1	7/8/2010 07:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TB7-20100701
Collection Date: 7/1/2010

Work Order: 1007051
Lab ID: 1007051-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 02:52
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 02:52
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 02:52
Dichloromethane	**4.4**	J	**0.50**	**10**	**µg/L**	1	7/7/2010 02:52
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 02:52
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 02:52
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 02:52
Surr: 1,2-Dichloroethane-d4	*110*			*70-125*	*%REC*	1	7/7/2010 02:52
Surr: 4-Bromofluorobenzene	*106*			*72-125*	*%REC*	1	7/7/2010 02:52
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/7/2010 02:52
Surr: Toluene-d8	*108*			*75-125*	*%REC*	1	7/7/2010 02:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *19-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB7-20100701
Collection Date: 7/1/2010 12:00 PM

Work Order: 1007051
Lab ID: 1007051-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/2/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/15/2010 17:30
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:30
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/15/2010 17:30
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/15/2010 17:30
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/15/2010 17:30
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/15/2010 17:30
Acenaphthene	U		0.090	0.20	µg/L	1	7/15/2010 17:30
Acenaphthylene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/15/2010 17:30
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/15/2010 17:30
Bis(2-ethylhexyl)phthalate	**1.7**		**0.20**	**0.20**	**µg/L**	1	7/15/2010 17:30
Chrysene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Dibenzofuran	U		0.080	0.20	µg/L	1	7/15/2010 17:30
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Fluoranthene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Fluorene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Naphthalene	**0.35**		**0.10**	**0.20**	**µg/L**	1	7/15/2010 17:30
Nitrobenzene	U		0.090	0.20	µg/L	1	7/15/2010 17:30
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/15/2010 17:30
Pentachlorophenol	**0.33**		**0.080**	**0.20**	**µg/L**	1	7/15/2010 17:30
Phenanthrene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Phenol	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Pyrene	U		0.070	0.20	µg/L	1	7/15/2010 17:30
Surr: 2,4,6-Tribromophenol	*44.1*			*34-129*	*%REC*	1	7/15/2010 17:30
Surr: 2-Fluorobiphenyl	*44.3*			*40-125*	*%REC*	1	7/15/2010 17:30
Surr: 2-Fluorophenol	*38.3*			*20-120*	*%REC*	1	7/15/2010 17:30
Surr: 4-Terphenyl-d14	*63.4*			*40-135*	*%REC*	1	7/15/2010 17:30
Surr: Nitrobenzene-d5	*46.7*			*41-120*	*%REC*	1	7/15/2010 17:30
Surr: Phenol-d6	*36.8*			*20-120*	*%REC*	1	7/15/2010 17:30
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/7/2010 03:17
Benzene	U		0.50	5.0	µg/L	1	7/7/2010 03:17
Chlorobenzene	U		0.50	5.0	µg/L	1	7/7/2010 03:17
Dichloromethane	U		0.50	10	µg/L	1	7/7/2010 03:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-FB7-20100701
Collection Date: 7/1/2010 12:00 PM

Work Order: 1007051
Lab ID: 1007051-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/7/2010 03:17
Toluene	U		0.50	5.0	µg/L	1	7/7/2010 03:17
Xylenes, Total	U		1.0	15	µg/L	1	7/7/2010 03:17
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	7/7/2010 03:17
Surr: 4-Bromofluorobenzene	*93.1*			*72-125*	*%REC*	1	7/7/2010 03:17
Surr: Dibromofluoromethane	*109*			*71-125*	*%REC*	1	7/7/2010 03:17
Surr: Toluene-d8	*93.5*			*75-125*	*%REC*	1	7/7/2010 03:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 19-Jul-10

WorkOrder: 1007051
InstrumentID: SV-2
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.17	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.13	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.11	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.13	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.14	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.16	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.11	0.08	0.2
A	4-Nitrophenol	100-02-7	0.11	0.07	1
A	Acenaphthene	83-32-9	0.12	0.09	0.2
A	Acenaphthylene	208-96-8	0.12	0.07	0.2
A	Anthracene	120-12-7	0.15	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.18	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.15	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.13	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.17	0.2	0.2
A	Chrysene	218-01-9	0.19	0.07	0.2
A	Di-n-butyl phthalate	84-74-2	0.17	0.07	0.2
A	Dibenzofuran	132-64-9	0.16	0.08	0.2
A	Fluoranthene	206-44-0	0.13	0.07	0.2
A	Fluorene	86-73-7	0.15	0.07	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.17	0.09	0.2
A	Naphthalene	91-20-3	0.14	0.1	0.2
A	Nitrobenzene	98-95-3	0.15	0.09	0.2
A	Pentachlorophenol	87-86-5	0.22	0.08	0.2
A	Phenanthrene	85-01-8	0.14	0.07	0.2
A	Phenol	108-95-2	0.14	0.07	0.2
A	Pyrene	129-00-0	0.17	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0	0.2

WorkOrder: 1007051
InstrumentID: VOA1
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	0.8	0.5	5
A	Benzene	71-43-2	0.82	0.5	5
A	Chlorobenzene	108-90-7	1.1	0.5	5
A	Dichloromethane	75-09-2	1.5	0.5	10
A	Ethylbenzene	100-41-4	0.72	0.5	5
A	Toluene	108-88-3	0.9	0.5	5
M	Xylenes, Total	1330-20-7	2.4	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	0	5
S	Surr: Toluene-d8	2037-26-5	0	0	5

WorkOrder: 1007051
InstrumentID: VOA2
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	1.3	0.5	5
A	Benzene	71-43-2	1.3	0.5	5
A	Chlorobenzene	108-90-7	1.3	0.5	5
A	Dichloromethane	75-09-2	1.4	0.5	10
A	Ethylbenzene	100-41-4	1.2	0.5	5
A	Toluene	108-88-3	1.3	0.5	5
M	Xylenes, Total	1330-20-7	3.6	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	0	5
S	Surr: Toluene-d8	2037-26-5	0	0	5

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MBLK Sample ID: **SBLKW1-100702-44214** Units: **µg/L** Analysis Date: **7/8/2010 08:12 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022568** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Dibenzofuran	U	0.20								
Di-n-butyl phthalate	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.255*	0.20	*5*	0	*65.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.66*	0.20	*5*	0	*73.2*	*40-125*	0			
Surr: 2-Fluorophenol	*3.928*	0.20	*5*	0	*78.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*3.761*	0.20	*5*	0	*75.2*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.988*	0.20	*5*	0	*79.8*	*41-120*	0			
Surr: Phenol-d6	*3.776*	0.20	*5*	0	*75.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

LCS Sample ID: **SLCSW1-100702-44214** Units: **µg/L** Analysis Date: **7/8/2010 08:33 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022569** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	4.068	0.20	5	0	81.4	39-127	0			
2,4-Dimethylphenol	2.164	0.20	5	0	43.3	35-120	0			
2,4-Dinitrotoluene	3.992	0.20	5	0	79.8	50-122	0			
2,6-Dinitrotoluene	4.34	0.20	5	0	86.8	50-120	0			
2-Chloronaphthalene	4.513	0.20	5	0	90.3	50-120	0			
2-Methylnaphthalene	4.089	0.20	5	0	81.8	50-120	0			
4,6-Dinitro-2-methylphenol	4.116	0.20	5	0	82.3	25-121	0			
4-Nitrophenol	3.82	1.0	5	0	76.4	30-130	0			
Acenaphthene	4.596	0.20	5	0	91.9	45-120	0			
Acenaphthylene	4.278	0.20	5	0	85.6	47-120	0			
Anthracene	4.118	0.20	5	0	82.4	45-120	0			
Benz(a)anthracene	4.775	0.20	5	0	95.5	40-120	0			
Benzo(a)pyrene	4.459	0.20	5	0	89.2	45-120	0			
Bis(2-chloroethoxy)methane	3.818	0.20	5	0	76.4	45-120	0			
Bis(2-ethylhexyl)phthalate	4.927	0.20	5	0	98.5	40-139	0			
Chrysene	4.465	0.20	5	0	89.3	43-120	0			
Dibenzofuran	4.351	0.20	5	0	87	50-120	0			
Di-n-butyl phthalate	4.309	0.20	5	0	86.2	45-123	0			
Fluoranthene	4.406	0.20	5	0	88.1	45-125	0			
Fluorene	4.395	0.20	5	0	87.9	49-120	0			
Naphthalene	3.947	0.20	5	0	78.9	45-120	0			
Nitrobenzene	4.078	0.20	5	0	81.6	44-120	0			
N-Nitrosodiphenylamine	4.053	0.20	5	0	81.1	40-125	0			
Pentachlorophenol	4.019	0.20	5	0	80.4	19-121	0			
Phenanthrene	4.029	0.20	5	0	80.6	45-121	0			
Phenol	4.534	0.20	5	0	90.7	20-124	0			
Pyrene	4.449	0.20	5	0	89	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.239*	0.20	*5*	0	*84.8*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.95*	0.20	*5*	0	*79*	*40-125*	0			
Surr: 2-Fluorophenol	*3.743*	0.20	*5*	0	*74.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.006*	0.20	*5*	0	*80.1*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.824*	0.20	*5*	0	*76.5*	*41-120*	0			
Surr: Phenol-d6	*3.974*	0.20	*5*	0	*79.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MS Sample ID: **1007004-02BMS** Units: **µg/L** Analysis Date: **7/8/2010 09:14 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022571** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.869	0.20	5	0	57.4	39-127	0			
2,4-Dimethylphenol	2.404	0.20	5	0	48.1	35-120	0			
2,4-Dinitrotoluene	2.771	0.20	5	0	55.4	50-122	0			
2,6-Dinitrotoluene	2.677	0.20	5	0	53.5	50-120	0			
2-Chloronaphthalene	4.391	0.20	5	0	87.8	50-120	0			
2-Methylnaphthalene	4.978	0.20	5	3.965	20.3	50-120	0			S
4,6-Dinitro-2-methylphenol	2.552	0.20	5	0	51	25-121	0			
4-Nitrophenol	2.701	1.0	5	0	54	30-130	0			
Acenaphthene	49.04	0.20	5	76.56	-550	45-120	0			SEO
Acenaphthylene	3.294	0.20	5	0.9635	46.6	47-120	0			S
Anthracene	8.412	0.20	5	6.686	34.5	45-120	0			S
Benz(a)anthracene	2.582	0.20	5	0	51.6	40-120	0			
Benzo(a)pyrene	2.652	0.20	5	0	53	45-120	0			
Bis(2-chloroethoxy)methane	2.49	0.20	5	0	49.8	45-120	0			
Bis(2-ethylhexyl)phthalate	2.716	0.20	5	0.2761	48.8	40-139	0			
Chrysene	2.736	0.20	5	0	54.7	43-120	0			
Dibenzofuran	5.609	0.20	5	4.314	25.9	50-120	0			S
Di-n-butyl phthalate	2.62	0.20	5	0	52.4	45-123	0			
Fluoranthene	6.811	0.20	5	6.049	15.2	45-125	0			S
Fluorene	29.91	0.20	5	42.68	-255	49-120	0			SEO
Naphthalene	30.61	0.20	5	51.86	-425	45-120	0			SEO
Nitrobenzene	3.13	0.20	5	0	62.6	44-120	0			
N-Nitrosodiphenylamine	2.537	0.20	5	0	50.7	40-125	0			
Pentachlorophenol	2.437	0.20	5	0	48.7	19-121	0			
Phenanthrene	4.278	0.20	5	2.509	35.4	45-121	0			S
Phenol	2.835	0.20	5	0	56.7	20-124	0			
Pyrene	4.616	0.20	5	3.041	31.5	40-130	0			S
Surr: 2,4,6-Tribromophenol	*2.579*	0.20	*5*	0	*51.6*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*2.516*	0.20	*5*	0	*50.3*	*40-125*	0			
Surr: 2-Fluorophenol	*2.623*	0.20	*5*	0	*52.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*2.385*	0.20	*5*	0	*47.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*2.623*	0.20	*5*	0	*52.5*	*41-120*	0			
Surr: Phenol-d6	*2.717*	0.20	*5*	0	*54.3*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44214** Instrument ID **SV-2** Method: **SW8270**

MSD Sample ID: **1007004-02BMSD** Units: **µg/L** Analysis Date: **7/8/2010 09:34 PM**

Client ID: Run ID: **SV-2_100708B** SeqNo: **2022572** Prep Date: **7/2/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.888	0.20	5	0	57.8	39-127	2.869	0.674	20	
2,4-Dimethylphenol	2.046	0.20	5	0	40.9	35-120	2.404	16.1	20	
2,4-Dinitrotoluene	2.882	0.20	5	0	57.6	50-122	2.771	3.96	20	
2,6-Dinitrotoluene	2.552	0.20	5	0	51	50-120	2.677	4.8	20	
2-Chloronaphthalene	3.722	0.20	5	0	74.4	50-120	4.391	16.5	20	
2-Methylnaphthalene	4.798	0.20	5	3.965	16.7	50-120	4.978	3.7	20	S
4,6-Dinitro-2-methylphenol	2.59	0.20	5	0	51.8	25-121	2.552	1.46	20	
4-Nitrophenol	2.88	1.0	5	0	57.6	30-130	2.701	6.4	20	
Acenaphthene	47.17	0.20	5	76.56	-588	45-120	49.04	3.88	20	SEO
Acenaphthylene	2.848	0.20	5	0.9635	37.7	47-120	3.294	14.5	20	S
Anthracene	8.619	0.20	5	6.686	38.7	45-120	8.412	2.43	20	S
Benz(a)anthracene	2.858	0.20	5	0	57.2	40-120	2.582	10.1	20	
Benzo(a)pyrene	2.863	0.20	5	0	57.3	45-120	2.652	7.63	20	
Bis(2-chloroethoxy)methane	2.166	0.20	5	0	43.3	45-120	2.49	13.9	20	S
Bis(2-ethylhexyl)phthalate	3.214	0.20	5	0.2761	58.8	40-139	2.716	16.8	20	
Chrysene	3.113	0.20	5	0	62.3	43-120	2.736	12.9	20	
Dibenzofuran	5.363	0.20	5	4.314	21	50-120	5.609	4.49	20	S
Di-n-butyl phthalate	2.831	0.20	5	0	56.6	45-123	2.62	7.76	20	
Fluoranthene	7.791	0.20	5	6.049	34.8	45-125	6.811	13.4	20	S
Fluorene	30.12	0.20	5	42.68	-251	49-120	29.91	0.702	20	SEO
Naphthalene	31.43	0.20	5	51.86	-409	45-120	30.61	2.63	20	SEO
Nitrobenzene	2.815	0.20	5	0	56.3	44-120	3.13	10.6	20	
N-Nitrosodiphenylamine	3.084	0.20	5	0	61.7	40-125	2.537	19.5	20	
Pentachlorophenol	2.954	0.20	5	0	59.1	19-121	2.437	19.2	20	
Phenanthrene	4.687	0.20	5	2.509	43.6	45-121	4.278	9.13	20	S
Phenol	2.396	0.20	5	0	47.9	20-124	2.835	16.8	20	
Pyrene	5.459	0.20	5	3.041	48.4	40-130	4.616	16.8	20	
Surr: 2,4,6-Tribromophenol	*2.934*	0.20	*5*	0	*58.7*	*34-129*	2.579	*12.9*	*20*	
Surr: 2-Fluorobiphenyl	*2.004*	0.20	*5*	0	*40.1*	*40-125*	2.516	*22.7*	*20*	*R*
Surr: 2-Fluorophenol	*1.985*	0.20	*5*	0	*39.7*	*20-120*	2.623	*27.7*	*20*	*R*
Surr: 4-Terphenyl-d14	*2.839*	0.20	*5*	0	*56.8*	*40-135*	2.385	*17.4*	*20*	
Surr: Nitrobenzene-d5	*2.334*	0.20	*5*	0	*46.7*	*41-120*	2.623	*11.6*	*20*	
Surr: Phenol-d6	*2.265*	0.20	*5*	0	*45.3*	*20-120*	2.717	*18.1*	*20*	

The following samples were analyzed in this batch:

1007051-01B	1007051-02B	1007051-03B
1007051-04B	1007051-05B	1007051-06B
1007051-07B	1007051-09B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 01:10 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019742** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*51.62*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.75*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*53.61*	5.0	*50*	0	*107*	*71-125*	0			
Surr: Toluene-d8	*53.96*	5.0	*50*	0	*108*	*75-125*	0			

LCS Sample ID: **VLCSW-070610-R93726** Units: **µg/L** Analysis Date: **7/7/2010 12:20 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019740** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	57.19	5.0	50	0	114	78-120	0			
Benzene	53.29	5.0	50	0	107	73-121	0			
Chlorobenzene	49.28	5.0	50	0	98.6	80-120	0			
Dichloromethane	50.14	10	50	0	100	65-133	0			
Ethylbenzene	49	5.0	50	0	98	80-120	0			
Toluene	50.49	5.0	50	0	101	80-120	0			
Xylenes, Total	148.2	15	150	0	98.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.52*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.53*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*52.45*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*51.96*	5.0	*50*	0	*104*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93726** Instrument ID **VOA1** Method: **SW8260**

MS Sample ID: **1007004-02AMS** Units: **µg/L** Analysis Date: **7/7/2010 02:01 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019747** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.27	5.0	50	0	105	78-120	0			
Benzene	50.26	5.0	50	2.554	95.4	73-121	0			
Chlorobenzene	47.32	5.0	50	0	94.6	80-120	0			
Dichloromethane	46.58	10	50	0	93.2	65-133	0			
Ethylbenzene	49.77	5.0	50	0	99.5	80-120	0			
Toluene	47.87	5.0	50	0	95.7	80-120	0			
Xylenes, Total	151.4	15	150	2.605	99.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.96*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*53.58*	5.0	*50*	0	*107*	*72-125*	0			
Surr: Dibromofluoromethane	*52.13*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*52.75*	5.0	*50*	0	*105*	*75-125*	0			

MSD Sample ID: **1007004-02AMSD** Units: **µg/L** Analysis Date: **7/7/2010 02:27 AM**

Client ID: Run ID: **VOA1_100706D** SeqNo: **2019750** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.94	5.0	50	0	95.9	78-120	52.27	8.65	20	
Benzene	45.44	5.0	50	2.554	85.8	73-121	50.26	10.1	20	
Chlorobenzene	47.2	5.0	50	0	94.4	80-120	47.32	0.257	20	
Dichloromethane	45.83	10	50	0	91.7	65-133	46.58	1.64	20	
Ethylbenzene	48.6	5.0	50	0	97.2	80-120	49.77	2.38	20	
Toluene	46.49	5.0	50	0	93	80-120	47.87	2.92	20	
Xylenes, Total	146.6	15	150	2.605	96	80-120	151.4	3.18	20	
Surr: 1,2-Dichloroethane-d4	*48.12*	5.0	*50*	0	*96.2*	*70-125*	51.96	*7.68*	*20*	
Surr: 4-Bromofluorobenzene	*53.39*	5.0	*50*	0	*107*	*72-125*	53.58	*0.356*	*20*	
Surr: Dibromofluoromethane	*52.68*	5.0	*50*	0	*105*	*71-125*	52.13	*1.05*	*20*	
Surr: Toluene-d8	*55.2*	5.0	*50*	0	*110*	*75-125*	52.75	*4.56*	*20*	

The following samples were analyzed in this batch: 1007051-08A 1007051-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93767** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-070710-R93767** Units: **µg/L** Analysis Date: **7/8/2010 12:20 AM**

Client ID: Run ID: **VOA2_100707C** SeqNo: **2020873** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*57.82*	5.0	*50*	0	*116*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.33*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*51.69*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*48.98*	5.0	*50*	0	*98*	*75-125*	0			

LCS Sample ID: **VLCSW-070710-R93767** Units: **µg/L** Analysis Date: **7/7/2010 11:33 PM**

Client ID: Run ID: **VOA2_100707C** SeqNo: **2020872** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	56.05	5.0	50	0	112	78-120	0			
Benzene	49.27	5.0	50	0	98.5	73-121	0			
Chlorobenzene	48.63	5.0	50	0	97.3	80-120	0			
Dichloromethane	43.56	10	50	0	87.1	65-133	0			
Ethylbenzene	49.36	5.0	50	0	98.7	80-120	0			
Toluene	48.23	5.0	50	0	96.5	80-120	0			
Xylenes, Total	149.6	15	150	0	99.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	*55.85*	5.0	*50*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.29*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*52.43*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*48.8*	5.0	*50*	0	*97.6*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93767** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1007118-01AMS** Units: **µg/L** Analysis Date: **7/8/2010 01:08 AM**
Client ID: Run ID: **VOA2_100707C** SeqNo: **2020876** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1358	120	1250	0	109	78-120	0			
Benzene	1138	120	1250	0	91	73-121	0			
Chlorobenzene	1198	120	1250	0	95.8	80-120	0			
Dichloromethane	1017	250	1250	0	81.3	65-133	0			
Ethylbenzene	1189	120	1250	0	95.1	80-120	0			
Toluene	1145	120	1250	0	91.6	80-120	0			
Xylenes, Total	3624	380	3750	0	96.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	*1430*	120	*1250*	0	*114*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1310*	120	*1250*	0	*105*	*72-125*	0			
Surr: Dibromofluoromethane	*1323*	120	*1250*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*1254*	120	*1250*	0	*100*	*75-125*	0			

MSD Sample ID: **1007118-01AMSD** Units: **µg/L** Analysis Date: **7/8/2010 01:31 AM**
Client ID: Run ID: **VOA2_100707C** SeqNo: **2020877** Prep Date: DF: **25**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	1364	120	1250	0	109	78-120	1358	0.49	20	
Benzene	1163	120	1250	0	93	73-121	1138	2.21	20	
Chlorobenzene	1224	120	1250	0	97.9	80-120	1198	2.12	20	
Dichloromethane	1035	250	1250	0	82.8	65-133	1017	1.82	20	
Ethylbenzene	1221	120	1250	0	97.7	80-120	1189	2.64	20	
Toluene	1187	120	1250	0	95	80-120	1145	3.55	20	
Xylenes, Total	3678	380	3750	0	98.1	80-120	3624	1.48	20	
Surr: 1,2-Dichloroethane-d4	*1402*	120	*1250*	0	*112*	*70-125*	1430	*1.95*	*20*	
Surr: 4-Bromofluorobenzene	*1320*	120	*1250*	0	*106*	*72-125*	1310	*0.772*	*20*	
Surr: Dibromofluoromethane	*1335*	120	*1250*	0	*107*	*71-125*	1323	*0.886*	*20*	
Surr: Toluene-d8	*1262*	120	*1250*	0	*101*	*75-125*	1254	*0.632*	*20*	

The following samples were analyzed in this batch:

1007051-02A	1007051-03A	1007051-04A
1007051-05A	1007051-06A	1007051-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93909** Instrument ID **VOA1** Method: **SW8260**

MBLK Sample ID: **VBLKW-070910-R93909** Units: **µg/L** Analysis Date: **7/9/2010 11:41 AM**
Client ID: Run ID: **VOA1_100709A** SeqNo: **2024424** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*47.19*	5.0	*50*	0	*94.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.92*	5.0	*50*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*48.93*	5.0	*50*	0	*97.9*	*71-125*	0			
Surr: Toluene-d8	*48.89*	5.0	*50*	0	*97.8*	*75-125*	0			

LCS Sample ID: **VLCSW-070910-R93909** Units: **µg/L** Analysis Date: **7/9/2010 10:49 AM**
Client ID: Run ID: **VOA1_100709A** SeqNo: **2024423** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	50.05	5.0	50	0	100	78-120	0			
Chlorobenzene	48.35	5.0	50	0	96.7	80-120	0			
Dichloromethane	47.54	10	50	0	95.1	65-133	0			
Ethylbenzene	50.45	5.0	50	0	101	80-120	0			
Xylenes, Total	144.1	15	150	0	96.1	80-120	0			
Surr: 1,2-Dichloroethane-d4	*45.83*	5.0	*50*	0	*91.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.15*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*49.41*	5.0	*50*	0	*98.8*	*71-125*	0			
Surr: Toluene-d8	*50.52*	5.0	*50*	0	*101*	*75-125*	0			

MS Sample ID: **1007226-06AMS** Units: **µg/L** Analysis Date: **7/9/2010 02:44 PM**
Client ID: Run ID: **VOA1_100709A** SeqNo: **2024429** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.2	5.0	50	0	98.4	78-120	0			
Chlorobenzene	47.69	5.0	50	0	95.4	80-120	0			
Dichloromethane	48.19	10	50	0	96.4	65-133	0			
Ethylbenzene	50.76	5.0	50	0	102	80-120	0			
Xylenes, Total	142.2	15	150	0	94.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*45.93*	5.0	*50*	0	*91.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.46*	5.0	*50*	0	*98.9*	*72-125*	0			
Surr: Dibromofluoromethane	*49.12*	5.0	*50*	0	*98.2*	*71-125*	0			
Surr: Toluene-d8	*48.24*	5.0	*50*	0	*96.5*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R93909** Instrument ID **VOA1** Method: **SW8260**

MSD Sample ID: **1007226-06AMSD** Units: **µg/L** Analysis Date: **7/9/2010 03:10 PM**

Client ID: Run ID: **VOA1_100709A** SeqNo: **2024430** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.72	5.0	50	0	99.4	78-120	49.2	1.06	20	
Chlorobenzene	47.14	5.0	50	0	94.3	80-120	47.69	1.16	20	
Dichloromethane	43.96	10	50	0	87.9	65-133	48.19	9.19	20	
Ethylbenzene	44.5	5.0	50	0	89	80-120	50.76	13.2	20	
Xylenes, Total	139	15	150	0	92.7	80-120	142.2	2.22	20	
Surr: 1,2-Dichloroethane-d4	*45.14*	5.0	*50*	0	*90.3*	*70-125*	45.93	*1.74*	*20*	
Surr: 4-Bromofluorobenzene	*51.83*	5.0	*50*	0	*104*	*72-125*	49.46	*4.7*	*20*	
Surr: Dibromofluoromethane	*49.42*	5.0	*50*	0	*98.8*	*71-125*	49.12	*0.617*	*20*	
Surr: Toluene-d8	*49.48*	5.0	*50*	0	*99*	*75-125*	48.24	*2.52*	*20*	

The following samples were analyzed in this batch: 1007051-01A 1007051-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007051
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94029** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-071310-R94029** Units: **µg/L** Analysis Date: **7/13/2010 12:45 PM**
Client ID: Run ID: **VOA2_100713A** SeqNo: **2027327** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	5.0								
Toluene	U	5.0								
Surr: 1,2-Dichloroethane-d4	*52.19*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.62*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*48.79*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*49.33*	5.0	*50*	0	*98.7*	*75-125*	0			

LCS Sample ID: **VLCSW-071310-R94029** Units: **µg/L** Analysis Date: **7/13/2010 01:08 PM**
Client ID: Run ID: **VOA2_100713A** SeqNo: **2027328** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	51.28	5.0	50	0	103	73-121	0			
Toluene	50.88	5.0	50	0	102	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.82*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.92*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*50.27*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*50.03*	5.0	*50*	0	*100*	*75-125*	0			

MS Sample ID: **1007087-02AMS** Units: **µg/L** Analysis Date: **7/13/2010 03:07 PM**
Client ID: Run ID: **VOA2_100713A** SeqNo: **2027332** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2347	250	2500	0	93.9	73-121	0			
Toluene	2244	250	2500	0	89.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*2528*	250	*2500*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*2487*	250	*2500*	0	*99.5*	*72-125*	0			
Surr: Dibromofluoromethane	*2470*	250	*2500*	0	*98.8*	*71-125*	0			
Surr: Toluene-d8	*2433*	250	*2500*	0	*97.3*	*75-125*	0			

MSD Sample ID: **1007087-02AMSD** Units: **µg/L** Analysis Date: **7/13/2010 03:31 PM**
Client ID: Run ID: **VOA2_100713A** SeqNo: **2027333** Prep Date: DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2379	250	2500	0	95.2	73-121	2347	1.35	20	
Toluene	2380	250	2500	0	95.2	80-120	2244	5.85	20	
Surr: 1,2-Dichloroethane-d4	*2399*	250	*2500*	0	*96*	*70-125*	2528	*5.23*	*20*	
Surr: 4-Bromofluorobenzene	*2508*	250	*2500*	0	*100*	*72-125*	2487	*0.872*	*20*	
Surr: Dibromofluoromethane	*2448*	250	*2500*	0	*97.9*	*71-125*	2470	*0.896*	*20*	
Surr: Toluene-d8	*2477*	250	*2500*	0	*99.1*	*75-125*	2433	*1.79*	*20*	

The following samples were analyzed in this batch: 1007051-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 19-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1007051**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Chain of Custody Form

Page 1 of 1

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ALS Project Manager: | ALS Work Order #: 1007051

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive, Suite 4004	Address	1400 Douglas Street, Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW32A-20100701	7-1-10	0815	W		5	X	X									
2	WG-1620-MW65D-20100701	7-1-10	0910	W		5	X	X									
3	WG-1620-MW35B-20100630	7-1-10	0730	W		5	X	X									
4	WG-1620-MW59D-20100701	7-1-10	1010	W		5	X	X									
5	WG-1620-MWX3-20100701	7-1-10	1010	W		5	X	X									
6	WG-1620-MW66D-20100701	7-1-10	1100	W		5	X	X									
7	WG-1620-MW61A-20100701	7-1-10	1145	W		5	X	X									
8	WG-1620-~~FB~~TB7-20100701	7-1-10	—	W		2	X										
9	WG-1620-FB7-20100701	7-1-10	1200	W		5	X	X									
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) 1 Other | 5 Work Days | 3 Work Days | 2 Work Days | 24 Hour

Results Due Date:

Relinquished by: John Brayton	Date: 7-1-10	Time: 1530	Received by:	Notes: 10 Work Days TAT
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID / Cooler Temp:
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory): 7.1.10/1336	

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **01-Jul-10 13:36**

Work Order: **1007051** Received by: **RSZ**

Checklist completed by Raymond N Gamboa (eSignature) 01-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 03-Jul-10 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.3c, 2.6c	002	
Cooler(s)/Kit(s):	7029, 7095		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Kevin Given

From: Eric C. Matzner [eric.matzner@pbwllc.com]
Sent: Monday, July 05, 2010 11:54 AM
To: Kevin Given
Subject: RE: 1007051 HWPW-Site Wide Monitoring

Kevin,
Let's amend the sample ID to reflect the following: **WG-1620-MW35B-20100701**.

Thanks,
Eric C. Matzner, P.G.
Pastor, Behling & Wheeler, LLC
512-671-3434

From: Kevin Given [mailto:Kevin.Given@ALSGlobal.com]
Sent: Monday, July 05, 2010 10:56 AM
To: Eric C. Matzner; UPRR-SysDat@craworld.com
Subject: 1007051 HWPW-Site Wide Monitoring

Hi Eric,

I just want to point out that your third sample "WG-1620-MW35B-20100630" has a sample collection date of 6/30. This 'breaks' the pattern where the last part of the sample ID matches the collection date. Let me know if I need to amend something.

Please see the attached file that contains the sample IDs, test assignment, and costs associated with the recent samples you submitted. Please let me know if you have any changes, otherwise we will proceed as shown. Modifications to the final report, after issue, may incur additional cost.

Thanks again.

Regards,

R. Kevin Given
ALS Laboratory Group
10450 Stancliff Rd, Suite 210
Houston, Texas 77099-4338
(281) 530-5656
http://www.alsglobal.com

****

26-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW-Site Wide Monitoring Work Order: **1007485**

Dear Eric,

ALS Laboratory Group received 14 samples on 15-Jul-2010 03:05 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 50.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: 1007485

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory have been identified by the laboratory in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [NA] This laboratory meets an exception under 30 TAC §25.6 and was last inspected by [ ] TCEQ or [ ] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 26-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Work Order: **1007485**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007485-01	WG-1620-MW64A-20100714	Water		7/14/2010 15:15	7/15/2010 15:05	☐
1007485-02	WG-1620-MW62B-20100714	Water		7/14/2010 16:30	7/15/2010 15:05	☐
1007485-03	WG-1620-MW48C-20100715	Water		7/15/2010 06:45	7/15/2010 15:05	☐
1007485-04	WG-1620-MW59B-20100715	Water		7/15/2010 07:45	7/15/2010 15:05	☐
1007485-05	WG-1620-MW69A-20100715	Water		7/15/2010 09:05	7/15/2010 15:05	☐
1007485-06	WSANITS-1620-SSW3-20100715	Water		7/15/2010 09:45	7/15/2010 15:05	☐
1007485-07	WSANITS-1620-SSW2-20100715	Water		7/15/2010 10:00	7/15/2010 15:05	☐
1007485-08	WSANITS-1620-SSW1-20100715	Water		7/15/2010 10:15	7/15/2010 15:05	☐
1007485-09	WG-1620-MW36D-20100715	Water		7/15/2010 11:30	7/15/2010 15:05	☐
1007485-10	WG-1620-MW36B-20100715	Water		7/15/2010 12:20	7/15/2010 15:05	☐
1007485-11	WG-1620-MWX4-20100715	Water		7/15/2010 12:20	7/15/2010 15:05	☐
1007485-12	WG-1620-MW67B-20100715	Water		7/15/2010 13:30	7/15/2010 15:05	☐
1007485-13	WG-1620-MW68C-20100715	Water		7/15/2010 14:20	7/15/2010 15:05	☐
1007485-14	WG-1620-TRIP BLANK-20100715	Water		7/15/2010	7/15/2010 15:05	☐

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group			LRC Date: 07/26/2010				
Project Name: HWPW-Site Wide Monitoring			Laboratory Job Number: 1007485				
Reviewer Name: R. Kevin Given			Prep Batch Number(s): 44655, R94238, R94624, R94629				
#[1]	**A[2]**	**Description**	**Yes**	**No**	**NA[3]**	**NR[4]**	**ER#[5]**
R1	OI	**Chain-of-custody (C-O-C)**					
		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 detection 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		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			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				
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			1
		Were MS/MSD RPDs within laboratory QC limits?		X			2
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 and DCSs 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 SDL minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/26/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007485
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44655, R94238, R94624, R94629

#[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 blank (CCB)**					
		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 method?			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 studies?	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 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Reportable Data	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/26/2010
Project Name: HWPW-Site Wide Monitoring	Laboratory Job Number: 1007485
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44655, R94238, R94624, R94629

ER#[5]	Description
1	Batch 44655, Semivolatile Organics, Sample WG-1620-MW36D-20100715 : MS recovery was below the control limits for 2,4-Dimethylphenol. Batch 44655, Semivolatile Organics, Sample WG-1620-MW36D-20100715 : MSD recovery was below the control limits for Bis(2-ethylhexyl)phthalate.
2	Batch 44655, Semivolatile Organics, Sample WG-1620-MW36D-20100715 : MSD RPD was above the control limits for 2,4-Dimethylphenol, 2,4-Dinitrotoluene, and Bis(2-ethylhexyl)phthalate.

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW64A-20100714
Collection Date: 7/14/2010 03:15 PM

Work Order: 1007485
Lab ID: 1007485-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 01:02
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:02
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 01:02
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 01:02
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:02
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 01:02
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 01:02
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 01:02
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 01:02
Bis(2-ethylhexyl)phthalate	**2.0**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 01:02
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 01:02
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Naphthalene	U		0.10	0.20	µg/L	1	7/22/2010 01:02
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 01:02
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 01:02
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 01:02
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Phenol	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 01:02
Surr: 2,4,6-Tribromophenol	*82.8*			*34-129*	*%REC*	1	7/22/2010 01:02
Surr: 2-Fluorobiphenyl	*74.2*			*40-125*	*%REC*	1	7/22/2010 01:02
Surr: 2-Fluorophenol	*58.2*			*20-120*	*%REC*	1	7/22/2010 01:02
Surr: 4-Terphenyl-d14	*71.1*			*40-135*	*%REC*	1	7/22/2010 01:02
Surr: Nitrobenzene-d5	*76.2*			*41-120*	*%REC*	1	7/22/2010 01:02
Surr: Phenol-d6	*68.0*			*20-120*	*%REC*	1	7/22/2010 01:02
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 06:21
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 06:21
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 06:21
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 06:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW64A-20100714
Collection Date: 7/14/2010 03:15 PM

Work Order: 1007485
Lab ID: 1007485-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 06:21
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 06:21
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 06:21
Surr: 1,2-Dichloroethane-d4	*105*			*70-125*	*%REC*	1	7/17/2010 06:21
Surr: 4-Bromofluorobenzene	*95.6*			*72-125*	*%REC*	1	7/17/2010 06:21
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/17/2010 06:21
Surr: Toluene-d8	*100*			*75-125*	*%REC*	1	7/17/2010 06:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW62B-20100714
Collection Date: 7/14/2010 04:30 PM

Work Order: 1007485
Lab ID: 1007485-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 01:22
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:22
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 01:22
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 01:22
2-Methylnaphthalene	**0.64**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 01:22
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:22
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 01:22
Acenaphthene	**0.41**		**0.090**	**0.20**	**µg/L**	1	7/22/2010 01:22
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 01:22
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 01:22
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 01:22
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Dibenzofuran	**0.34**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 01:22
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Fluorene	**0.16**	J	**0.070**	**0.20**	**µg/L**	1	7/22/2010 01:22
Naphthalene	**9.6**		**0.10**	**0.20**	**µg/L**	1	7/22/2010 01:22
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 01:22
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 01:22
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 01:22
Phenanthrene	**0.25**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 01:22
Phenol	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 01:22
Surr: 2,4,6-Tribromophenol	*82.2*			*34-129*	*%REC*	1	7/22/2010 01:22
Surr: 2-Fluorobiphenyl	*65.1*			*40-125*	*%REC*	1	7/22/2010 01:22
Surr: 2-Fluorophenol	*63.2*			*20-120*	*%REC*	1	7/22/2010 01:22
Surr: 4-Terphenyl-d14	*73.7*			*40-135*	*%REC*	1	7/22/2010 01:22
Surr: Nitrobenzene-d5	*76.6*			*41-120*	*%REC*	1	7/22/2010 01:22
Surr: Phenol-d6	*67.7*			*20-120*	*%REC*	1	7/22/2010 01:22
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 06:44
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 06:44
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 06:44
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 06:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW62B-20100714
Collection Date: 7/14/2010 04:30 PM

Work Order: 1007485
Lab ID: 1007485-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 06:44
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 06:44
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 06:44
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	7/17/2010 06:44
Surr: 4-Bromofluorobenzene	*95.8*			*72-125*	*%REC*	1	7/17/2010 06:44
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/17/2010 06:44
Surr: Toluene-d8	*99.9*			*75-125*	*%REC*	1	7/17/2010 06:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW48C-20100715
Collection Date: 7/15/2010 06:45 AM

Work Order: 1007485
Lab ID: 1007485-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 01:42
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:42
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 01:42
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 01:42
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 01:42
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 01:42
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 01:42
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 01:42
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 01:42
Bis(2-ethylhexyl)phthalate	**1.3**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 01:42
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 01:42
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Fluoranthene	**0.19**	J	**0.070**	**0.20**	**µg/L**	1	7/22/2010 01:42
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Naphthalene	U		0.10	0.20	µg/L	1	7/22/2010 01:42
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 01:42
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 01:42
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 01:42
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Phenol	U		0.070	0.20	µg/L	1	7/22/2010 01:42
Pyrene	**0.15**	J	**0.070**	**0.20**	**µg/L**	1	7/22/2010 01:42
Surr: 2,4,6-Tribromophenol	*74.5*			*34-129*	*%REC*	1	7/22/2010 01:42
Surr: 2-Fluorobiphenyl	*72.0*			*40-125*	*%REC*	1	7/22/2010 01:42
Surr: 2-Fluorophenol	*67.8*			*20-120*	*%REC*	1	7/22/2010 01:42
Surr: 4-Terphenyl-d14	*85.0*			*40-135*	*%REC*	1	7/22/2010 01:42
Surr: Nitrobenzene-d5	*75.1*			*41-120*	*%REC*	1	7/22/2010 01:42
Surr: Phenol-d6	*66.9*			*20-120*	*%REC*	1	7/22/2010 01:42
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 07:08
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 07:08
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:08
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 07:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW48C-20100715
Collection Date: 7/15/2010 06:45 AM

Work Order: 1007485
Lab ID: 1007485-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:08
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 07:08
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 07:08
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	7/17/2010 07:08
Surr: 4-Bromofluorobenzene	*96.6*			*72-125*	*%REC*	1	7/17/2010 07:08
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/17/2010 07:08
Surr: Toluene-d8	*99.8*			*75-125*	*%REC*	1	7/17/2010 07:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59B-20100715
Collection Date: 7/15/2010 07:45 AM

Work Order: 1007485
Lab ID: 1007485-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 02:02
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 02:02
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 02:02
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 02:02
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 02:02
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 02:02
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 02:02
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 02:02
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 02:02
Bis(2-ethylhexyl)phthalate	**2.0**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 02:02
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 02:02
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Naphthalene	**0.14**	J	**0.10**	**0.20**	**µg/L**	1	7/22/2010 02:02
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 02:02
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 02:02
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 02:02
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Phenol	**0.20**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:02
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 02:02
Surr: 2,4,6-Tribromophenol	*80.7*			*34-129*	*%REC*	1	7/22/2010 02:02
Surr: 2-Fluorobiphenyl	*67.9*			*40-125*	*%REC*	1	7/22/2010 02:02
Surr: 2-Fluorophenol	*64.0*			*20-120*	*%REC*	1	7/22/2010 02:02
Surr: 4-Terphenyl-d14	*74.6*			*40-135*	*%REC*	1	7/22/2010 02:02
Surr: Nitrobenzene-d5	*75.4*			*41-120*	*%REC*	1	7/22/2010 02:02
Surr: Phenol-d6	*68.3*			*20-120*	*%REC*	1	7/22/2010 02:02
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 07:31
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 07:31
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:31
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 07:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW59B-20100715
Collection Date: 7/15/2010 07:45 AM

Work Order: 1007485
Lab ID: 1007485-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:31
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 07:31
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 07:31
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	7/17/2010 07:31
Surr: 4-Bromofluorobenzene	*94.9*			*72-125*	*%REC*	1	7/17/2010 07:31
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	7/17/2010 07:31
Surr: Toluene-d8	*97.8*			*75-125*	*%REC*	1	7/17/2010 07:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW69A-20100715
Collection Date: 7/15/2010 09:05 AM

Work Order: 1007485
Lab ID: 1007485-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 02:23
2,4-Dimethylphenol	**3.6**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 02:23
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 02:23
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 02:23
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 02:23
2-Methylnaphthalene	**3.8**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 02:23
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 02:23
Acenaphthene	**3.7**		**0.090**	**0.20**	**µg/L**	1	7/22/2010 02:23
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 02:23
Anthracene	**0.39**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Benz(a)anthracene	**0.49**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Benzo(a)pyrene	**0.13**	J	**0.080**	**0.20**	**µg/L**	1	7/22/2010 02:23
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 02:23
Bis(2-ethylhexyl)phthalate	**5.9**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 02:23
Chrysene	**0.32**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Dibenzofuran	**3.0**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 02:23
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 02:23
Fluoranthene	**2.5**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Fluorene	**3.3**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Naphthalene	**26**		**0.50**	**1.0**	**µg/L**	5	7/23/2010 13:58
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 02:23
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 02:23
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 02:23
Phenanthrene	**8.3**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Phenol	**6.9**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Pyrene	**2.2**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:23
Surr: 2,4,6-Tribromophenol	*78.7*			*34-129*	*%REC*	1	7/22/2010 02:23
Surr: 2,4,6-Tribromophenol	*95.4*			*34-129*	*%REC*	5	7/23/2010 13:58
Surr: 2-Fluorobiphenyl	*70.8*			*40-125*	*%REC*	1	7/22/2010 02:23
Surr: 2-Fluorobiphenyl	*80.5*			*40-125*	*%REC*	5	7/23/2010 13:58
Surr: 2-Fluorophenol	*63.6*			*20-120*	*%REC*	1	7/22/2010 02:23
Surr: 2-Fluorophenol	*49.4*			*20-120*	*%REC*	5	7/23/2010 13:58
Surr: 4-Terphenyl-d14	*90.4*			*40-135*	*%REC*	1	7/22/2010 02:23
Surr: 4-Terphenyl-d14	*79.6*			*40-135*	*%REC*	5	7/23/2010 13:58
Surr: Nitrobenzene-d5	*63.0*			*41-120*	*%REC*	1	7/22/2010 02:23
Surr: Nitrobenzene-d5	*71.3*			*41-120*	*%REC*	5	7/23/2010 13:58
Surr: Phenol-d6	*87.1*			*20-120*	*%REC*	1	7/22/2010 02:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW69A-20100715
Collection Date: 7/15/2010 09:05 AM

Work Order: 1007485
Lab ID: 1007485-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*100*			*20-120*	*%REC*	5	7/23/2010 13:58
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 07:55
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 07:55
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:55
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 07:55
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 07:55
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 07:55
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 07:55
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	7/17/2010 07:55
Surr: 4-Bromofluorobenzene	*95.5*			*72-125*	*%REC*	1	7/17/2010 07:55
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/17/2010 07:55
Surr: Toluene-d8	*98.9*			*75-125*	*%REC*	1	7/17/2010 07:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW3-20100715
Collection Date: 7/15/2010 09:45 AM

Work Order: 1007485
Lab ID: 1007485-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 02:43
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 02:43
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 02:43
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 02:43
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 02:43
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 02:43
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 02:43
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 02:43
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 02:43
Bis(2-ethylhexyl)phthalate	**1.1**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 02:43
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 02:43
Di-n-butyl phthalate	**0.18**	J	**0.070**	**0.20**	**µg/L**	1	7/22/2010 02:43
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Naphthalene	U		0.10	0.20	µg/L	1	7/22/2010 02:43
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 02:43
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 02:43
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 02:43
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Phenol	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 02:43
Surr: 2,4,6-Tribromophenol	*81.2*			*34-129*	*%REC*	1	7/22/2010 02:43
Surr: 2-Fluorobiphenyl	*61.9*			*40-125*	*%REC*	1	7/22/2010 02:43
Surr: 2-Fluorophenol	*64.0*			*20-120*	*%REC*	1	7/22/2010 02:43
Surr: 4-Terphenyl-d14	*81.2*			*40-135*	*%REC*	1	7/22/2010 02:43
Surr: Nitrobenzene-d5	*73.8*			*41-120*	*%REC*	1	7/22/2010 02:43
Surr: Phenol-d6	*69.0*			*20-120*	*%REC*	1	7/22/2010 02:43
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/23/2010 17:46
Benzene	U		0.50	5.0	µg/L	1	7/23/2010 17:46
Chlorobenzene	U		0.50	5.0	µg/L	1	7/23/2010 17:46
Dichloromethane	U		0.50	10	µg/L	1	7/23/2010 17:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW3-20100715
Collection Date: 7/15/2010 09:45 AM

Work Order: 1007485
Lab ID: 1007485-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/23/2010 17:46
Toluene	**0.77**	J	**0.50**	**5.0**	**µg/L**	1	7/23/2010 17:46
Xylenes, Total	U		1.0	15	µg/L	1	7/23/2010 17:46
Surr: 1,2-Dichloroethane-d4	*119*			*70-125*	*%REC*	1	7/23/2010 17:46
Surr: 4-Bromofluorobenzene	*94.1*			*72-125*	*%REC*	1	7/23/2010 17:46
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/23/2010 17:46
Surr: Toluene-d8	*94.0*			*75-125*	*%REC*	1	7/23/2010 17:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW2-20100715
Collection Date: 7/15/2010 10:00 AM

Work Order: 1007485
Lab ID: 1007485-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 13:30
2,4-Dimethylphenol	**1.9**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 13:30
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 13:30
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 13:30
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 13:30
2-Methylnaphthalene	**1.9**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 13:30
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 13:30
Acenaphthene	**1.3**		**0.090**	**0.20**	**µg/L**	1	7/22/2010 13:30
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 13:30
Anthracene	**0.23**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 13:30
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 13:30
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 13:30
Bis(2-ethylhexyl)phthalate	**4.4**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 13:30
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 13:30
Dibenzofuran	**0.95**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 13:30
Di-n-butyl phthalate	**0.58**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Fluoranthene	**0.29**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Fluorene	**0.87**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Naphthalene	**14**		**0.40**	**0.80**	**µg/L**	4	7/26/2010 13:55
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 13:30
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 13:30
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 13:30
Phenanthrene	**1.3**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Phenol	**6.3**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Pyrene	**0.24**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:30
Surr: 2,4,6-Tribromophenol	*69.5*			*34-129*	*%REC*	1	7/22/2010 13:30
Surr: 2,4,6-Tribromophenol	*74.7*			*34-129*	*%REC*	4	7/26/2010 13:55
Surr: 2-Fluorobiphenyl	*51.9*			*40-125*	*%REC*	1	7/22/2010 13:30
Surr: 2-Fluorobiphenyl	*54.0*			*40-125*	*%REC*	4	7/26/2010 13:55
Surr: 2-Fluorophenol	*41.5*			*20-120*	*%REC*	1	7/22/2010 13:30
Surr: 2-Fluorophenol	*55.0*			*20-120*	*%REC*	4	7/26/2010 13:55
Surr: 4-Terphenyl-d14	*60.4*			*40-135*	*%REC*	1	7/22/2010 13:30
Surr: 4-Terphenyl-d14	*71.4*			*40-135*	*%REC*	4	7/26/2010 13:55
Surr: Nitrobenzene-d5	*48.2*			*41-120*	*%REC*	1	7/22/2010 13:30
Surr: Nitrobenzene-d5	*54.5*			*41-120*	*%REC*	4	7/26/2010 13:55
Surr: Phenol-d6	*52.7*			*20-120*	*%REC*	1	7/22/2010 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW2-20100715
Collection Date: 7/15/2010 10:00 AM

Work Order: 1007485
Lab ID: 1007485-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*54.6*			*20-120*	*%REC*	4	7/26/2010 13:55
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/23/2010 21:18
Benzene	U		0.50	5.0	µg/L	1	7/23/2010 21:18
Chlorobenzene	U		0.50	5.0	µg/L	1	7/23/2010 21:18
Dichloromethane	U		0.50	10	µg/L	1	7/23/2010 21:18
Ethylbenzene	U		0.50	5.0	µg/L	1	7/23/2010 21:18
Toluene	U		0.50	5.0	µg/L	1	7/23/2010 21:18
Xylenes, Total	U		1.0	15	µg/L	1	7/23/2010 21:18
Surr: 1,2-Dichloroethane-d4	*124*			*70-125*	*%REC*	1	7/23/2010 21:18
Surr: 4-Bromofluorobenzene	*94.7*			*72-125*	*%REC*	1	7/23/2010 21:18
Surr: Dibromofluoromethane	*114*			*71-125*	*%REC*	1	7/23/2010 21:18
Surr: Toluene-d8	*95.0*			*75-125*	*%REC*	1	7/23/2010 21:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW1-20100715
Collection Date: 7/15/2010 10:15 AM

Work Order: 1007485
Lab ID: 1007485-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 13:50
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 13:50
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 13:50
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 13:50
2-Methylnaphthalene	**0.48**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:50
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 13:50
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 13:50
Acenaphthene	**0.38**		**0.090**	**0.20**	**µg/L**	1	7/22/2010 13:50
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 13:50
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 13:50
Bis(2-ethylhexyl)phthalate	**9.2**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 13:50
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Dibenzofuran	**0.29**		**0.080**	**0.20**	**µg/L**	1	7/22/2010 13:50
Di-n-butyl phthalate	**0.70**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:50
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Fluorene	**0.28**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:50
Naphthalene	**3.2**		**0.10**	**0.20**	**µg/L**	1	7/22/2010 13:50
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 13:50
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 13:50
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 13:50
Phenanthrene	**0.41**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:50
Phenol	**6.4**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 13:50
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 13:50
Surr: 2,4,6-Tribromophenol	*74.4*			*34-129*	*%REC*	1	7/22/2010 13:50
Surr: 2-Fluorobiphenyl	*42.6*			*40-125*	*%REC*	1	7/22/2010 13:50
Surr: 2-Fluorophenol	*40.3*			*20-120*	*%REC*	1	7/22/2010 13:50
Surr: 4-Terphenyl-d14	*67.1*			*40-135*	*%REC*	1	7/22/2010 13:50
Surr: Nitrobenzene-d5	*50.8*			*41-120*	*%REC*	1	7/22/2010 13:50
Surr: Phenol-d6	*55.2*			*20-120*	*%REC*	1	7/22/2010 13:50
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/25/2010 15:13
Benzene	U		0.50	5.0	µg/L	1	7/25/2010 15:13
Chlorobenzene	U		0.50	5.0	µg/L	1	7/25/2010 15:13
Dichloromethane	U		0.50	10	µg/L	1	7/25/2010 15:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WSANITS-1620-SSW1-20100715
Collection Date: 7/15/2010 10:15 AM

Work Order: 1007485
Lab ID: 1007485-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/25/2010 15:13
Toluene	**0.87**	J	**0.50**	**5.0**	**µg/L**	1	7/25/2010 15:13
Xylenes, Total	U		1.0	15	µg/L	1	7/25/2010 15:13
Surr: 1,2-Dichloroethane-d4	*111*			*70-125*	*%REC*	1	7/25/2010 15:13
Surr: 4-Bromofluorobenzene	*92.2*			*72-125*	*%REC*	1	7/25/2010 15:13
Surr: Dibromofluoromethane	*103*			*71-125*	*%REC*	1	7/25/2010 15:13
Surr: Toluene-d8	*90.2*			*75-125*	*%REC*	1	7/25/2010 15:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36D-20100715
Collection Date: 7/15/2010 11:30 AM

Work Order: 1007485
Lab ID: 1007485-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/21/2010 19:19
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/21/2010 19:19
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/21/2010 19:19
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/21/2010 19:19
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/21/2010 19:19
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/21/2010 19:19
Acenaphthene	U		0.090	0.20	µg/L	1	7/21/2010 19:19
Acenaphthylene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Anthracene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/21/2010 19:19
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/21/2010 19:19
Bis(2-ethylhexyl)phthalate	**5.0**		**0.20**	**0.20**	**µg/L**	1	7/21/2010 19:19
Chrysene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Dibenzofuran	U		0.080	0.20	µg/L	1	7/21/2010 19:19
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Fluoranthene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Fluorene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Naphthalene	U		0.10	0.20	µg/L	1	7/21/2010 19:19
Nitrobenzene	U		0.090	0.20	µg/L	1	7/21/2010 19:19
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/21/2010 19:19
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/21/2010 19:19
Phenanthrene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Phenol	**0.65**		**0.070**	**0.20**	**µg/L**	1	7/21/2010 19:19
Pyrene	U		0.070	0.20	µg/L	1	7/21/2010 19:19
Surr: 2,4,6-Tribromophenol	*67.4*			*34-129*	*%REC*	1	7/21/2010 19:19
Surr: 2-Fluorobiphenyl	*43.5*			*40-125*	*%REC*	1	7/21/2010 19:19
Surr: 2-Fluorophenol	*40.0*			*20-120*	*%REC*	1	7/21/2010 19:19
Surr: 4-Terphenyl-d14	*70.2*			*40-135*	*%REC*	1	7/21/2010 19:19
Surr: Nitrobenzene-d5	*47.0*			*41-120*	*%REC*	1	7/21/2010 19:19
Surr: Phenol-d6	*45.5*			*20-120*	*%REC*	1	7/21/2010 19:19
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 00:50
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 00:50
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 00:50
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 00:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36D-20100715
Collection Date: 7/15/2010 11:30 AM

Work Order: 1007485
Lab ID: 1007485-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 00:50
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 00:50
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 00:50
Surr: 1,2-Dichloroethane-d4	*104*			*70-125*	*%REC*	1	7/17/2010 00:50
Surr: 4-Bromofluorobenzene	*96.3*			*72-125*	*%REC*	1	7/17/2010 00:50
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	7/17/2010 00:50
Surr: Toluene-d8	*98.8*			*75-125*	*%REC*	1	7/17/2010 00:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36B-20100715
Collection Date: 7/15/2010 12:20 PM

Work Order: 1007485
Lab ID: 1007485-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 14:10
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 14:10
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 14:10
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 14:10
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 14:10
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 14:10
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 14:10
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 14:10
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 14:10
Bis(2-ethylhexyl)phthalate	**10**		**0.80**	**0.80**	**µg/L**	4	7/23/2010 14:19
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 14:10
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Naphthalene	U		0.10	0.20	µg/L	1	7/22/2010 14:10
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 14:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 14:10
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 14:10
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Phenol	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 14:10
Surr: 2,4,6-Tribromophenol	*47.5*			*34-129*	*%REC*	1	7/22/2010 14:10
Surr: 2,4,6-Tribromophenol	*70.0*			*34-129*	*%REC*	4	7/23/2010 14:19
Surr: 2-Fluorobiphenyl	*42.4*			*40-125*	*%REC*	1	7/22/2010 14:10
Surr: 2-Fluorobiphenyl	*60.6*			*40-125*	*%REC*	4	7/23/2010 14:19
Surr: 2-Fluorophenol	*50.7*			*20-120*	*%REC*	1	7/22/2010 14:10
Surr: 2-Fluorophenol	*48.7*			*20-120*	*%REC*	4	7/23/2010 14:19
Surr: 4-Terphenyl-d14	*64.9*			*40-135*	*%REC*	1	7/22/2010 14:10
Surr: 4-Terphenyl-d14	*70.0*			*40-135*	*%REC*	4	7/23/2010 14:19
Surr: Nitrobenzene-d5	*62.5*			*41-120*	*%REC*	1	7/22/2010 14:10
Surr: Nitrobenzene-d5	*70.3*			*41-120*	*%REC*	4	7/23/2010 14:19
Surr: Phenol-d6	*45.9*			*20-120*	*%REC*	1	7/22/2010 14:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW36B-20100715
Collection Date: 7/15/2010 12:20 PM

Work Order: 1007485
Lab ID: 1007485-10
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Surr: Phenol-d6	*63.7*			*20-120*	*%REC*	4	7/23/2010 14:19
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 08:18
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 08:18
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 08:18
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 08:18
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 08:18
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 08:18
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 08:18
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	7/17/2010 08:18
Surr: 4-Bromofluorobenzene	*94.0*			*72-125*	*%REC*	1	7/17/2010 08:18
Surr: Dibromofluoromethane	*105*			*71-125*	*%REC*	1	7/17/2010 08:18
Surr: Toluene-d8	*98.8*			*75-125*	*%REC*	1	7/17/2010 08:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX4-20100715
Collection Date: 7/15/2010 12:20 PM

Work Order: 1007485
Lab ID: 1007485-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/23/2010 13:19
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/23/2010 13:19
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/23/2010 13:19
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/23/2010 13:19
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/23/2010 13:19
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/23/2010 13:19
Acenaphthene	U		0.090	0.20	µg/L	1	7/23/2010 13:19
Acenaphthylene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Anthracene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/23/2010 13:19
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/23/2010 13:19
Bis(2-ethylhexyl)phthalate	**2.4**		**0.20**	**0.20**	**µg/L**	1	7/23/2010 13:19
Chrysene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Dibenzofuran	U		0.080	0.20	µg/L	1	7/23/2010 13:19
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Fluoranthene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Fluorene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Naphthalene	U		0.10	0.20	µg/L	1	7/23/2010 13:19
Nitrobenzene	U		0.090	0.20	µg/L	1	7/23/2010 13:19
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/23/2010 13:19
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/23/2010 13:19
Phenanthrene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Phenol	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Pyrene	U		0.070	0.20	µg/L	1	7/23/2010 13:19
Surr: 2,4,6-Tribromophenol	*61.9*			*34-129*	*%REC*	1	7/23/2010 13:19
Surr: 2-Fluorobiphenyl	*51.9*			*40-125*	*%REC*	1	7/23/2010 13:19
Surr: 2-Fluorophenol	*42.2*			*20-120*	*%REC*	1	7/23/2010 13:19
Surr: 4-Terphenyl-d14	*56.7*			*40-135*	*%REC*	1	7/23/2010 13:19
Surr: Nitrobenzene-d5	*56.6*			*41-120*	*%REC*	1	7/23/2010 13:19
Surr: Phenol-d6	*56.7*			*20-120*	*%REC*	1	7/23/2010 13:19
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 08:42
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 08:42
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 08:42
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 08:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MWX4-20100715
Collection Date: 7/15/2010 12:20 PM

Work Order: 1007485
Lab ID: 1007485-11
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 08:42
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 08:42
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 08:42
Surr: 1,2-Dichloroethane-d4	*107*			*70-125*	*%REC*	1	7/17/2010 08:42
Surr: 4-Bromofluorobenzene	*95.0*			*72-125*	*%REC*	1	7/17/2010 08:42
Surr: Dibromofluoromethane	*107*			*71-125*	*%REC*	1	7/17/2010 08:42
Surr: Toluene-d8	*98.7*			*75-125*	*%REC*	1	7/17/2010 08:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW67B-20100715
Collection Date: 7/15/2010 01:30 PM

Work Order: 1007485
Lab ID: 1007485-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/23/2010 13:38
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/23/2010 13:38
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/23/2010 13:38
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/23/2010 13:38
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/23/2010 13:38
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/23/2010 13:38
Acenaphthene	**0.11**	J	**0.090**	**0.20**	**µg/L**	1	7/23/2010 13:38
Acenaphthylene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Anthracene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/23/2010 13:38
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/23/2010 13:38
Bis(2-ethylhexyl)phthalate	**1.6**		**0.20**	**0.20**	**µg/L**	1	7/23/2010 13:38
Chrysene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Dibenzofuran	U		0.080	0.20	µg/L	1	7/23/2010 13:38
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Fluoranthene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Fluorene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Naphthalene	U		0.10	0.20	µg/L	1	7/23/2010 13:38
Nitrobenzene	U		0.090	0.20	µg/L	1	7/23/2010 13:38
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/23/2010 13:38
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/23/2010 13:38
Phenanthrene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Phenol	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Pyrene	U		0.070	0.20	µg/L	1	7/23/2010 13:38
Surr: 2,4,6-Tribromophenol	*62.7*			*34-129*	*%REC*	1	7/23/2010 13:38
Surr: 2-Fluorobiphenyl	*48.4*			*40-125*	*%REC*	1	7/23/2010 13:38
Surr: 2-Fluorophenol	*51.5*			*20-120*	*%REC*	1	7/23/2010 13:38
Surr: 4-Terphenyl-d14	*62.1*			*40-135*	*%REC*	1	7/23/2010 13:38
Surr: Nitrobenzene-d5	*53.0*			*41-120*	*%REC*	1	7/23/2010 13:38
Surr: Phenol-d6	*55.4*			*20-120*	*%REC*	1	7/23/2010 13:38
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 09:06
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 09:06
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 09:06
Dichloromethane	U		0.50	10	µg/L	1	7/17/2010 09:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW67B-20100715
Collection Date: 7/15/2010 01:30 PM

Work Order: 1007485
Lab ID: 1007485-12
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	**1.5**	J	**0.50**	**5.0**	**µg/L**	1	7/17/2010 09:06
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 09:06
Xylenes, Total	**1.2**	J	**1.0**	**15**	**µg/L**	1	7/17/2010 09:06
Surr: 1,2-Dichloroethane-d4	*109*			*70-125*	*%REC*	1	7/17/2010 09:06
Surr: 4-Bromofluorobenzene	*96.2*			*72-125*	*%REC*	1	7/17/2010 09:06
Surr: Dibromofluoromethane	*108*			*71-125*	*%REC*	1	7/17/2010 09:06
Surr: Toluene-d8	*98.8*			*75-125*	*%REC*	1	7/17/2010 09:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW68C-20100715
Collection Date: 7/15/2010 02:20 PM

Work Order: 1007485
Lab ID: 1007485-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/20/10		Analyst: **LG**
1,2-Diphenylhydrazine	U		0.10	0.20	µg/L	1	7/22/2010 15:10
2,4-Dimethylphenol	U		0.080	0.20	µg/L	1	7/22/2010 15:10
2,4-Dinitrotoluene	U		0.090	0.20	µg/L	1	7/22/2010 15:10
2,6-Dinitrotoluene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
2-Chloronaphthalene	U		0.10	0.20	µg/L	1	7/22/2010 15:10
2-Methylnaphthalene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
4,6-Dinitro-2-methylphenol	U		0.080	0.20	µg/L	1	7/22/2010 15:10
4-Nitrophenol	U		0.070	1.0	µg/L	1	7/22/2010 15:10
Acenaphthene	U		0.090	0.20	µg/L	1	7/22/2010 15:10
Acenaphthylene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Anthracene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Benz(a)anthracene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Benzo(a)pyrene	U		0.080	0.20	µg/L	1	7/22/2010 15:10
Bis(2-chloroethoxy)methane	U		0.090	0.20	µg/L	1	7/22/2010 15:10
Bis(2-ethylhexyl)phthalate	**0.98**		**0.20**	**0.20**	**µg/L**	1	7/22/2010 15:10
Chrysene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Dibenzofuran	U		0.080	0.20	µg/L	1	7/22/2010 15:10
Di-n-butyl phthalate	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Fluoranthene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Fluorene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Naphthalene	**0.83**		**0.10**	**0.20**	**µg/L**	1	7/22/2010 15:10
Nitrobenzene	U		0.090	0.20	µg/L	1	7/22/2010 15:10
N-Nitrosodiphenylamine	U		0.090	0.20	µg/L	1	7/22/2010 15:10
Pentachlorophenol	U		0.080	0.20	µg/L	1	7/22/2010 15:10
Phenanthrene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Phenol	**0.50**		**0.070**	**0.20**	**µg/L**	1	7/22/2010 15:10
Pyrene	U		0.070	0.20	µg/L	1	7/22/2010 15:10
Surr: 2,4,6-Tribromophenol	*73.2*			*34-129*	*%REC*	1	7/22/2010 15:10
Surr: 2-Fluorobiphenyl	*48.0*			*40-125*	*%REC*	1	7/22/2010 15:10
Surr: 2-Fluorophenol	*44.1*			*20-120*	*%REC*	1	7/22/2010 15:10
Surr: 4-Terphenyl-d14	*72.2*			*40-135*	*%REC*	1	7/22/2010 15:10
Surr: Nitrobenzene-d5	*54.7*			*41-120*	*%REC*	1	7/22/2010 15:10
Surr: Phenol-d6	*55.0*			*20-120*	*%REC*	1	7/22/2010 15:10
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/23/2010 17:22
Benzene	**0.81**	J	**0.50**	**5.0**	**µg/L**	1	7/23/2010 17:22
Chlorobenzene	U		0.50	5.0	µg/L	1	7/23/2010 17:22
Dichloromethane	U		0.50	10	µg/L	1	7/23/2010 17:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-MW68C-20100715
Collection Date: 7/15/2010 02:20 PM

Work Order: 1007485
Lab ID: 1007485-13
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.50	5.0	µg/L	1	7/23/2010 17:22
Toluene	U		0.50	5.0	µg/L	1	7/23/2010 17:22
Xylenes, Total	U		1.0	15	µg/L	1	7/23/2010 17:22
Surr: 1,2-Dichloroethane-d4	*122*			*70-125*	*%REC*	1	7/23/2010 17:22
Surr: 4-Bromofluorobenzene	*97.7*			*72-125*	*%REC*	1	7/23/2010 17:22
Surr: Dibromofluoromethane	*112*			*71-125*	*%REC*	1	7/23/2010 17:22
Surr: Toluene-d8	*97.1*			*75-125*	*%REC*	1	7/23/2010 17:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *26-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
Sample ID: WG-1620-TRIP BLANK-20100715
Collection Date: 7/15/2010

Work Order: 1007485
Lab ID: 1007485-14
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		Method: **SW8260**					Analyst: **PC**
1,2-Dichloroethane	U		0.50	5.0	µg/L	1	7/17/2010 05:57
Benzene	U		0.50	5.0	µg/L	1	7/17/2010 05:57
Chlorobenzene	U		0.50	5.0	µg/L	1	7/17/2010 05:57
Dichloromethane	**0.76**	J	**0.50**	**10**	**µg/L**	1	7/17/2010 05:57
Ethylbenzene	U		0.50	5.0	µg/L	1	7/17/2010 05:57
Toluene	U		0.50	5.0	µg/L	1	7/17/2010 05:57
Xylenes, Total	U		1.0	15	µg/L	1	7/17/2010 05:57
Surr: 1,2-Dichloroethane-d4	*106*			*70-125*	*%REC*	1	7/17/2010 05:57
Surr: 4-Bromofluorobenzene	*94.7*			*72-125*	*%REC*	1	7/17/2010 05:57
Surr: Dibromofluoromethane	*106*			*71-125*	*%REC*	1	7/17/2010 05:57
Surr: Toluene-d8	*98.4*			*75-125*	*%REC*	1	7/17/2010 05:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 26-Jul-10

WorkOrder: 1007485
InstrumentID: SV-4
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	1,2-Diphenylhydrazine	122-66-7	0.12	0.1	0.2
A	2,4-Dimethylphenol	105-67-9	0.083	0.08	0.2
A	2,4-Dinitrotoluene	121-14-2	0.1	0.09	0.2
A	2,6-Dinitrotoluene	606-20-2	0.14	0.07	0.2
A	2-Chloronaphthalene	91-58-7	0.13	0.1	0.2
A	2-Methylnaphthalene	91-57-6	0.13	0.07	0.2
A	4,6-Dinitro-2-methylphenol	534-52-1	0.094	0.08	0.2
A	4-Nitrophenol	100-02-7	0.13	0.07	1
A	Acenaphthene	83-32-9	0.13	0.09	0.2
A	Acenaphthylene	208-96-8	0.13	0.07	0.2
A	Anthracene	120-12-7	0.12	0.07	0.2
A	Benz(a)anthracene	56-55-3	0.14	0.07	0.2
A	Benzo(a)pyrene	50-32-8	0.12	0.08	0.2
A	Bis(2-chloroethoxy)methane	111-91-1	0.14	0.09	0.2
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.14	0.2	0.2
A	Chrysene	218-01-9	0.14	0.07	0.2
A	Dibenzofuran	132-64-9	0.13	0.08	0.2
A	Di-n-butyl phthalate	84-74-2	0.13	0.07	0.2
A	Fluoranthene	206-44-0	0.12	0.07	0.2
A	Fluorene	86-73-7	0.14	0.07	0.2
A	Naphthalene	91-20-3	0.13	0.1	0.2
A	Nitrobenzene	98-95-3	0.15	0.09	0.2
A	N-Nitrosodiphenylamine	86-30-6	0.15	0.09	0.2
A	Pentachlorophenol	87-86-5	0.11	0.08	0.2
A	Phenanthrene	85-01-8	0.13	0.07	0.2
A	Phenol	108-95-2	0.15	0.07	0.2
A	Pyrene	129-00-0	0.13	0.07	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0	0.2

WorkOrder: 1007485
InstrumentID: SV-6
Test Code: 8270_LOW_W
Test Number: SW8270
Test Name: Low-Level Semivolatiles **Matrix:** Aqueous **Units:** µg/L

METHOD DETECTION / REPORTING LIMITS

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Naphthalene	91-20-3	0.081	0.1	0.2
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0	0.2
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0	0.2
S	Surr: 2-Fluorophenol	367-12-4	0	0	0.2
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0	0.2
S	Surr: Nitrobenzene-d5	4165-60-0	0	0	0.2
S	Surr: Phenol-d6	13127-88-3	0	0	0.2

ALS Laboratory Group

Date: 26-Jul-10

WorkOrder: 1007485
InstrumentID: VOA2
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	1,2-Dichloroethane	107-06-2	1.3	0.5	5
A	Benzene	71-43-2	1.3	0.5	5
A	Chlorobenzene	108-90-7	1.3	0.5	5
A	Dichloromethane	75-09-2	1.4	0.5	10
A	Ethylbenzene	100-41-4	1.2	0.5	5
A	Toluene	108-88-3	1.3	0.5	5
M	Xylenes, Total	1330-20-7	3.6	1	15
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0	5
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0	5
S	Surr: Dibromofluoromethane	1868-53-7	0	0	5
S	Surr: Toluene-d8	2037-26-5	0	0	5

Batch ID: **44655** Instrument ID **SV-4** Method: **SW8270**

MBLK Sample ID: **SBLKW3-100720-44655** Units: **µg/L** Analysis Date: **7/21/2010 05:17 PM**

Client ID: Run ID: **SV-4_100721B** SeqNo: **2040299** Prep Date: **7/20/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Methylnaphthalene	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.20								
Acenaphthylene	U	0.20								
Anthracene	U	0.20								
Benz(a)anthracene	U	0.20								
Benzo(a)pyrene	U	0.20								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Chrysene	U	0.20								
Dibenzofuran	U	0.20								
Di-n-butyl phthalate	U	0.20								
Fluoranthene	U	0.20								
Fluorene	U	0.20								
Naphthalene	U	0.20								
Nitrobenzene	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.20								
Phenol	U	0.20								
Pyrene	U	0.20								
Surr: 2,4,6-Tribromophenol	*3.107*	0.20	*5*	0	*62.1*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*2.949*	0.20	*5*	0	*59*	*40-125*	0			
Surr: 2-Fluorophenol	*2.308*	0.20	*5*	0	*46.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*2.874*	0.20	*5*	0	*57.5*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.079*	0.20	*5*	0	*61.6*	*41-120*	0			
Surr: Phenol-d6	*2.873*	0.20	*5*	0	*57.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44655** Instrument ID **SV-4** Method: **SW8270**

LCS Sample ID: **SLCSW3-100720-44655** Units: **µg/L** Analysis Date: **7/21/2010 05:38 PM**

Client ID: Run ID: **SV-4_100721B** SeqNo: **2040300** Prep Date: **7/20/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.635	0.20	5	0	52.7	39-127	0			
2,4-Dimethylphenol	3.108	0.20	5	0	62.2	35-120	0			
2,4-Dinitrotoluene	3.285	0.20	5	0	65.7	50-122	0			
2,6-Dinitrotoluene	3.367	0.20	5	0	67.3	50-120	0			
2-Chloronaphthalene	3.394	0.20	5	0	67.9	50-120	0			
2-Methylnaphthalene	3.297	0.20	5	0	65.9	50-120	0			
4,6-Dinitro-2-methylphenol	2.895	0.20	5	0	57.9	25-121	0			
4-Nitrophenol	3.431	1.0	5	0	68.6	30-130	0			
Acenaphthene	2.851	0.20	5	0	57	45-120	0			
Acenaphthylene	3.082	0.20	5	0	61.6	47-120	0			
Anthracene	3.023	0.20	5	0	60.5	45-120	0			
Benz(a)anthracene	3.087	0.20	5	0	61.7	40-120	0			
Benzo(a)pyrene	3.25	0.20	5	0	65	45-120	0			
Bis(2-chloroethoxy)methane	3.073	0.20	5	0	61.5	45-120	0			
Bis(2-ethylhexyl)phthalate	3.358	0.20	5	0	67.2	40-139	0			
Chrysene	3.107	0.20	5	0	62.1	43-120	0			
Dibenzofuran	3.056	0.20	5	0	61.1	50-120	0			
Di-n-butyl phthalate	3.319	0.20	5	0	66.4	45-123	0			
Fluoranthene	3.174	0.20	5	0	63.5	45-125	0			
Fluorene	3.078	0.20	5	0	61.6	49-120	0			
Naphthalene	3.287	0.20	5	0	65.7	45-120	0			
Nitrobenzene	3.151	0.20	5	0	63	44-120	0			
N-Nitrosodiphenylamine	2.636	0.20	5	0	52.7	40-125	0			
Pentachlorophenol	1.733	0.20	5	0	34.7	19-121	0			
Phenanthrene	2.976	0.20	5	0	59.5	45-121	0			
Phenol	2.967	0.20	5	0	59.3	20-124	0			
Pyrene	3.126	0.20	5	0	62.5	40-130	0			
Surr: 2,4,6-Tribromophenol	*3.186*	0.20	*5*	0	*63.7*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*2.887*	0.20	*5*	0	*57.7*	*40-125*	0			
Surr: 2-Fluorophenol	*2.786*	0.20	*5*	0	*55.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*2.934*	0.20	*5*	0	*58.7*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.128*	0.20	*5*	0	*62.6*	*41-120*	0			
Surr: Phenol-d6	*3.05*	0.20	*5*	0	*61*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44655** Instrument ID **SV-4** Method: **SW8270**

MS Sample ID: **1007485-09BMS** Units: **µg/L** Analysis Date: **7/23/2010 11:38 AM**

Client ID: **WG-1620-MW36D-20100715** Run ID: **SV-4_100721B** SeqNo: **2040314** Prep Date: **7/20/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	3.214	0.20	5	0	64.3	39-127	0			
2,4-Dimethylphenol	1.583	0.20	5	0	31.7	35-120	0			S
2,4-Dinitrotoluene	4.443	0.20	5	0	88.9	50-122	0			
2,6-Dinitrotoluene	4.228	0.20	5	0	84.6	50-120	0			
2-Chloronaphthalene	5.216	0.20	5	0	104	50-120	0			
2-Methylnaphthalene	3.855	0.20	5	0	77.1	50-120	0			
4,6-Dinitro-2-methylphenol	2.96	0.20	5	0	59.2	25-121	0			
4-Nitrophenol	5.401	1.0	5	0	108	30-130	0			
Acenaphthene	3.831	0.20	5	0	76.6	45-120	0			
Acenaphthylene	4.06	0.20	5	0	81.2	47-120	0			
Anthracene	3.716	0.20	5	0	74.3	45-120	0			
Benz(a)anthracene	4.161	0.20	5	0	83.2	40-120	0			
Benzo(a)pyrene	4.775	0.20	5	0	95.5	45-120	0			
Bis(2-chloroethoxy)methane	3.667	0.20	5	0	73.3	45-120	0			
Bis(2-ethylhexyl)phthalate	7.465	0.20	5	4.951	50.3	40-139	0			
Chrysene	4.191	0.20	5	0	83.8	43-120	0			
Dibenzofuran	3.76	0.20	5	0	75.2	50-120	0			
Di-n-butyl phthalate	4.416	0.20	5	0	88.3	45-123	0			
Fluoranthene	3.871	0.20	5	0	77.4	45-125	0			
Fluorene	4.041	0.20	5	0	80.8	49-120	0			
Naphthalene	3.998	0.20	5	0	80	45-120	0			
Nitrobenzene	3.746	0.20	5	0	74.9	44-120	0			
N-Nitrosodiphenylamine	3.501	0.20	5	0	70	40-125	0			
Pentachlorophenol	2.635	0.20	5	0	52.7	19-121	0			
Phenanthrene	4.579	0.20	5	0	91.6	45-121	0			
Phenol	3.895	0.20	5	0.6481	64.9	20-124	0			
Pyrene	4.391	0.20	5	0	87.8	40-130	0			
Surr: 2,4,6-Tribromophenol	*4.222*	0.20	*5*	0	*84.4*	*34-129*	0			
Surr: 2-Fluorobiphenyl	*3.629*	0.20	*5*	0	*72.6*	*40-125*	0			
Surr: 2-Fluorophenol	*2.8*	0.20	*5*	0	*56*	*20-120*	0			
Surr: 4-Terphenyl-d14	*4.08*	0.20	*5*	0	*81.6*	*40-135*	0			
Surr: Nitrobenzene-d5	*3.755*	0.20	*5*	0	*75.1*	*41-120*	0			
Surr: Phenol-d6	*3.372*	0.20	*5*	0	*67.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **44655** Instrument ID **SV-4** Method: **SW8270**

MSD Sample ID: **1007485-09BMSD** Units: **µg/L** Analysis Date: **7/23/2010 11:57 AM**

Client ID: **WG-1620-MW36D-20100715** Run ID: **SV-4_100721B** SeqNo: **2040315** Prep Date: **7/20/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Diphenylhydrazine	2.99	0.20	5	0	59.8	39-127	3.214	7.23	20	
2,4-Dimethylphenol	3.897	0.20	5	0	77.9	35-120	1.583	84.5	20	R
2,4-Dinitrotoluene	3.474	0.20	5	0	69.5	50-122	4.443	24.5	20	R
2,6-Dinitrotoluene	4.166	0.20	5	0	83.3	50-120	4.228	1.47	20	
2-Chloronaphthalene	5.15	0.20	5	0	103	50-120	5.216	1.27	20	
2-Methylnaphthalene	3.886	0.20	5	0	77.7	50-120	3.855	0.799	20	
4,6-Dinitro-2-methylphenol	3.078	0.20	5	0	61.6	25-121	2.96	3.91	20	
4-Nitrophenol	4.851	1.0	5	0	97	30-130	5.401	10.7	20	
Acenaphthene	3.45	0.20	5	0	69	45-120	3.831	10.5	20	
Acenaphthylene	3.958	0.20	5	0	79.2	47-120	4.06	2.55	20	
Anthracene	3.633	0.20	5	0	72.7	45-120	3.716	2.27	20	
Benz(a)anthracene	4.243	0.20	5	0	84.9	40-120	4.161	1.94	20	
Benzo(a)pyrene	4.192	0.20	5	0	83.8	45-120	4.775	13	20	
Bis(2-chloroethoxy)methane	3.775	0.20	5	0	75.5	45-120	3.667	2.89	20	
Bis(2-ethylhexyl)phthalate	5.653	0.20	5	4.951	14.1	40-139	7.465	27.6	20	SR
Chrysene	4.173	0.20	5	0	83.5	43-120	4.191	0.421	20	
Dibenzofuran	3.409	0.20	5	0	68.2	50-120	3.76	9.8	20	
Di-n-butyl phthalate	3.84	0.20	5	0	76.8	45-123	4.416	14	20	
Fluoranthene	3.644	0.20	5	0	72.9	45-125	3.871	6.05	20	
Fluorene	3.733	0.20	5	0	74.7	49-120	4.041	7.9	20	
Naphthalene	3.833	0.20	5	0	76.7	45-120	3.998	4.2	20	
Nitrobenzene	3.861	0.20	5	0	77.2	44-120	3.746	3.03	20	
N-Nitrosodiphenylamine	3.133	0.20	5	0	62.7	40-125	3.501	11.1	20	
Pentachlorophenol	3.036	0.20	5	0	60.7	19-121	2.635	14.1	20	
Phenanthrene	4.308	0.20	5	0	86.2	45-121	4.579	6.09	20	
Phenol	4.345	0.20	5	0.6481	73.9	20-124	3.895	10.9	20	
Pyrene	3.796	0.20	5	0	75.9	40-130	4.391	14.5	20	
Surr: 2,4,6-Tribromophenol	*3.954*	0.20	*5*	0	*79.1*	*34-129*	4.222	*6.56*	*20*	
Surr: 2-Fluorobiphenyl	*3.937*	0.20	*5*	0	*78.7*	*40-125*	3.629	*8.14*	*20*	
Surr: 2-Fluorophenol	*3.079*	0.20	*5*	0	*61.6*	*20-120*	2.8	*9.49*	*20*	
Surr: 4-Terphenyl-d14	*3.747*	0.20	*5*	0	*74.9*	*40-135*	4.08	*8.5*	*20*	
Surr: Nitrobenzene-d5	*4.064*	0.20	*5*	0	*81.3*	*41-120*	3.755	*7.9*	*20*	
Surr: Phenol-d6	*3.613*	0.20	*5*	0	*72.3*	*20-120*	3.372	*6.9*	*20*	

The following samples were analyzed in this batch:

1007485-01B	1007485-02B	1007485-03B
1007485-04B	1007485-05B	1007485-06B
1007485-07B	1007485-08B	1007485-09B
1007485-10B	1007485-11B	1007485-12B
1007485-13B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94238** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-071610-R94238** Units: **µg/L** Analysis Date: **7/17/2010 12:27 AM**

Client ID: Run ID: **VOA2_100716F** SeqNo: **2031589** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*52.2*	5.0	*50*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.36*	5.0	*50*	0	*96.7*	*72-125*	0			
Surr: Dibromofluoromethane	*52.47*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.57*	5.0	*50*	0	*99.1*	*75-125*	0			

LCS Sample ID: **VLCSW-071610-R94238** Units: **µg/L** Analysis Date: **7/16/2010 11:39 PM**

Client ID: Run ID: **VOA2_100716F** SeqNo: **2031587** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	47.93	5.0	50	0	95.9	78-120	0			
Benzene	50.03	5.0	50	0	100	73-121	0			
Chlorobenzene	47.99	5.0	50	0	96	80-120	0			
Dichloromethane	48.96	10	50	0	97.9	65-133	0			
Ethylbenzene	48.42	5.0	50	0	96.8	80-120	0			
Toluene	49.8	5.0	50	0	99.6	80-120	0			
Xylenes, Total	144.3	15	150	0	96.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	*51.43*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.89*	5.0	*50*	0	*99.8*	*72-125*	0			
Surr: Dibromofluoromethane	*53.38*	5.0	*50*	0	*107*	*71-125*	0			
Surr: Toluene-d8	*50.13*	5.0	*50*	0	*100*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94238** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1007485-09AMS** Units: **µg/L** Analysis Date: **7/17/2010 01:14 AM**

Client ID: **WG-1620-MW36D-20100715** Run ID: **VOA2_100716F** SeqNo: **2031591** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	46.55	5.0	50	0	93.1	78-120	0			
Benzene	47.17	5.0	50	0	94.3	73-121	0			
Chlorobenzene	45.73	5.0	50	0	91.5	80-120	0			
Dichloromethane	46.35	10	50	0	92.7	65-133	0			
Ethylbenzene	43.85	5.0	50	0	87.7	80-120	0			
Toluene	44.88	5.0	50	0	89.8	80-120	0			
Xylenes, Total	133.1	15	150	0	88.8	80-120	0			
Surr: 1,2-Dichloroethane-d4	*50.45*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.58*	5.0	*50*	0	*97.2*	*72-125*	0			
Surr: Dibromofluoromethane	*52.25*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*49.02*	5.0	*50*	0	*98*	*75-125*	0			

MSD Sample ID: **1007485-09AMSD** Units: **µg/L** Analysis Date: **7/17/2010 01:38 AM**

Client ID: **WG-1620-MW36D-20100715** Run ID: **VOA2_100716F** SeqNo: **2031592** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	45.73	5.0	50	0	91.5	78-120	46.55	1.77	20	
Benzene	46.93	5.0	50	0	93.9	73-121	47.17	0.506	20	
Chlorobenzene	45.16	5.0	50	0	90.3	80-120	45.73	1.25	20	
Dichloromethane	46.08	10	50	0	92.2	65-133	46.35	0.583	20	
Ethylbenzene	46.44	5.0	50	0	92.9	80-120	43.85	5.72	20	
Toluene	45.94	5.0	50	0	91.9	80-120	44.88	2.33	20	
Xylenes, Total	137.2	15	150	0	91.5	80-120	133.1	3.01	20	
Surr: 1,2-Dichloroethane-d4	*51.28*	5.0	*50*	0	*103*	*70-125*	50.45	*1.63*	*20*	
Surr: 4-Bromofluorobenzene	*49.63*	5.0	*50*	0	*99.3*	*72-125*	48.58	*2.13*	*20*	
Surr: Dibromofluoromethane	*52.29*	5.0	*50*	0	*105*	*71-125*	52.25	*0.0824*	*20*	
Surr: Toluene-d8	*49.48*	5.0	*50*	0	*99*	*75-125*	49.02	*0.946*	*20*	

The following samples were analyzed in this batch:

1007485-01A	1007485-02A	1007485-03A
1007485-04A	1007485-05A	1007485-09A
1007485-10A	1007485-11A	1007485-12A
1007485-14A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94624** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-072310-R94624** Units: **µg/L** Analysis Date: **7/23/2010 01:23 PM**

Client ID: Run ID: **VOA2_100723A** SeqNo: **2039706** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*61.92*	5.0	*50*	0	*124*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.16*	5.0	*50*	0	*96.3*	*72-125*	0			
Surr: Dibromofluoromethane	*56.2*	5.0	*50*	0	*112*	*71-125*	0			
Surr: Toluene-d8	*48.13*	5.0	*50*	0	*96.3*	*75-125*	0			

LCS Sample ID: **VLCSW-072310-R94624** Units: **µg/L** Analysis Date: **7/23/2010 11:49 AM**

Client ID: Run ID: **VOA2_100723A** SeqNo: **2039705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	53.45	5.0	50	0	107	78-120	0			
Benzene	54.16	5.0	50	0	108	73-121	0			
Chlorobenzene	48.86	5.0	50	0	97.7	80-120	0			
Dichloromethane	57.69	10	50	0	115	65-133	0			
Ethylbenzene	52.31	5.0	50	0	105	80-120	0			
Toluene	52.52	5.0	50	0	105	80-120	0			
Xylenes, Total	151.6	15	150	0	101	80-120	0			
Surr: 1,2-Dichloroethane-d4	*59.18*	5.0	*50*	0	*118*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.75*	5.0	*50*	0	*99.5*	*72-125*	0			
Surr: Dibromofluoromethane	*56.57*	5.0	*50*	0	*113*	*71-125*	0			
Surr: Toluene-d8	*48.38*	5.0	*50*	0	*96.8*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94624** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1007559-07AMS** Units: **µg/L** Analysis Date: **7/23/2010 03:24 PM**

Client ID: Run ID: **VOA2_100723A** SeqNo: **2039711** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	59.61	5.0	50	7.597	104	78-120	0			
Benzene	51.48	5.0	50	0	103	73-121	0			
Chlorobenzene	47.18	5.0	50	0	94.4	80-120	0			
Dichloromethane	57.54	10	50	0	115	65-133	0			
Ethylbenzene	48.76	5.0	50	0	97.5	80-120	0			
Toluene	50.25	5.0	50	0	101	80-120	0			
Xylenes, Total	144.4	15	150	0	96.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*57.92*	5.0	*50*	0	*116*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.39*	5.0	*50*	0	*98.8*	*72-125*	0			
Surr: Dibromofluoromethane	*55.21*	5.0	*50*	0	*110*	*71-125*	0			
Surr: Toluene-d8	*46.9*	5.0	*50*	0	*93.8*	*75-125*	0			

MSD Sample ID: **1007559-07AMSD** Units: **µg/L** Analysis Date: **7/23/2010 03:48 PM**

Client ID: Run ID: **VOA2_100723A** SeqNo: **2039712** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	55.37	5.0	50	7.597	95.5	78-120	59.61	7.37	20	
Benzene	48.95	5.0	50	0	97.9	73-121	51.48	5.04	20	
Chlorobenzene	45.15	5.0	50	0	90.3	80-120	47.18	4.39	20	
Dichloromethane	54.59	10	50	0	109	65-133	57.54	5.27	20	
Ethylbenzene	46.36	5.0	50	0	92.7	80-120	48.76	5.04	20	
Toluene	47.06	5.0	50	0	94.1	80-120	50.25	6.56	20	
Xylenes, Total	137	15	150	0	91.4	80-120	144.4	5.21	20	
Surr: 1,2-Dichloroethane-d4	*57.35*	5.0	*50*	0	*115*	*70-125*	57.92	*0.988*	*20*	
Surr: 4-Bromofluorobenzene	*49.25*	5.0	*50*	0	*98.5*	*72-125*	49.39	*0.266*	*20*	
Surr: Dibromofluoromethane	*55.6*	5.0	*50*	0	*111*	*71-125*	55.21	*0.704*	*20*	
Surr: Toluene-d8	*47.42*	5.0	*50*	0	*94.8*	*75-125*	46.9	*1.12*	*20*	

The following samples were analyzed in this batch: 1007485-06A 1007485-07A 1007485-13A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94629** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-072510-R94629** Units: **µg/L** Analysis Date: **7/25/2010 12:51 PM**

Client ID: Run ID: **VOA2_100725A** SeqNo: **2039823** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	U	5.0								
Benzene	U	5.0								
Chlorobenzene	U	5.0								
Dichloromethane	U	10								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	*55.89*	5.0	*50*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*45.12*	5.0	*50*	0	*90.2*	*72-125*	0			
Surr: Dibromofluoromethane	*50.94*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*45.44*	5.0	*50*	0	*90.9*	*75-125*	0			

LCS Sample ID: **VLCSW-072510-R94629** Units: **µg/L** Analysis Date: **7/25/2010 12:03 PM**

Client ID: Run ID: **VOA2_100725A** SeqNo: **2039822** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	51.03	5.0	50	0	102	78-120	0			
Benzene	51.17	5.0	50	0	102	73-121	0			
Chlorobenzene	45.59	5.0	50	0	91.2	80-120	0			
Dichloromethane	54.11	10	50	0	108	65-133	0			
Ethylbenzene	44.29	5.0	50	0	88.6	80-120	0			
Toluene	48.59	5.0	50	0	97.2	80-120	0			
Xylenes, Total	131.9	15	150	0	87.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	*53.85*	5.0	*50*	0	*108*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.37*	5.0	*50*	0	*94.7*	*72-125*	0			
Surr: Dibromofluoromethane	*52.8*	5.0	*50*	0	*106*	*71-125*	0			
Surr: Toluene-d8	*46.1*	5.0	*50*	0	*92.2*	*75-125*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007485
Project: HWPW-Site Wide Monitoring

QC BATCH REPORT

Batch ID: **R94629** Instrument ID **VOA2** Method: **SW8260**

MS Sample ID: **1007751-05AMS** Units: **µg/L** Analysis Date: **7/25/2010 02:25 PM**

Client ID: Run ID: **VOA2_100725A** SeqNo: **2039825** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	49.39	5.0	50	0	98.8	78-120	0			
Benzene	48.45	5.0	50	0	96.9	73-121	0			
Chlorobenzene	45.38	5.0	50	0	90.8	80-120	0			
Dichloromethane	52.67	10	50	0	105	65-133	0			
Ethylbenzene	44.88	5.0	50	0	89.8	80-120	0			
Toluene	47.12	5.0	50	0	94.2	80-120	0			
Xylenes, Total	133.9	15	150	0	89.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	*54*	5.0	*50*	0	*108*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*46.61*	5.0	*50*	0	*93.2*	*72-125*	0			
Surr: Dibromofluoromethane	*52.12*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*44.81*	5.0	*50*	0	*89.6*	*75-125*	0			

MSD Sample ID: **1007751-05AMSD** Units: **µg/L** Analysis Date: **7/25/2010 02:49 PM**

Client ID: Run ID: **VOA2_100725A** SeqNo: **2039827** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2-Dichloroethane	52.82	5.0	50	0	106	78-120	49.39	6.7	20	
Benzene	50.86	5.0	50	0	102	73-121	48.45	4.84	20	
Chlorobenzene	47.12	5.0	50	0	94.2	80-120	45.38	3.76	20	
Dichloromethane	54.19	10	50	0	108	65-133	52.67	2.84	20	
Ethylbenzene	47.28	5.0	50	0	94.6	80-120	44.88	5.22	20	
Toluene	49.26	5.0	50	0	98.5	80-120	47.12	4.44	20	
Xylenes, Total	141.7	15	150	0	94.5	80-120	133.9	5.64	20	
Surr: 1,2-Dichloroethane-d4	*54.76*	5.0	*50*	0	*110*	*70-125*	54	*1.4*	*20*	
Surr: 4-Bromofluorobenzene	*48.02*	5.0	*50*	0	*96*	*72-125*	46.61	*2.98*	*20*	
Surr: Dibromofluoromethane	*52.78*	5.0	*50*	0	*106*	*71-125*	52.12	*1.25*	*20*	
Surr: Toluene-d8	*45.73*	5.0	*50*	0	*91.5*	*75-125*	44.81	*2.02*	*20*	

The following samples were analyzed in this batch: 1007485-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 26-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW-Site Wide Monitoring
WorkOrder: **1007485**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
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Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1009495

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW64A-20100714	7-14-10	1515	GW			X	X									
2	WG-1620-MW62B-20100714	7-14-10	1630	GW			X	X									
3	WG-1620-MW48C-20100715	7-15-10	0645	GW			X	X									
4	WG-1620-MW59B-20100715	7-15-10	0745	GW			X	X									
5	WG-1620-MW69A-20100715	7-15-10	0905	GW			X	X									
6	WSANTIS-1620-SSW3-20100715	7-15-10	0945	GW			X	X									
7	WSANTIS-1620-SSW2-20100715	7-15-10	1000	GW			X	X									
8	WSANTIS-1620-SSW1-20100715	7-15-10	1015	GW			X	X									
9	WG-1620-MW36D-20100715	7-15-10	1130	GW			X	X									
10	WG-1620-MW36DMS-20100715	7-15-10	1130	GW			X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☑ Std: 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton | Date: 7-15-10 | Time: 1505 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 7/15/10 1505

Notes: 10 Work Days TAT.

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Cooler ID | Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1009465

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW-Site Wide Monitoring	A	VOC (8260) Select
Work Order		Project Number	1620	B	LOW SVOC (8270) Select
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW36DMSD-20100715	7-15-10	1130	GW			X	X									
2	WG-1620-MW36B-20100715	7-15-10	1220	GW			X	X									
3	WG-1620-MWX4-20100715	7-15-10	1220	GW			X	X									
4	WG-1620-MW67B-20100715	7-15-10	1330	GW			X	X									
5	WG-1620-MW68C-20100715	7-15-10	1420	GW			X	X									
6	WG-1620-TRIP BLANK-20100715	7-15-10	—	GW			X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton | Shipment Method: HAND DELIVERED | Required Turnaround Time: (Check Box) 1 Day | Std 10 WK Days | 5 WK Days | 2 WK Days | 24 Hour | Results Due Date:

Relinquished by: John Brayton	Date: 7-15-10	Time: 1505	Received by:	Notes: 10 Work Days TAT.	
Relinquished by:	Date:	Time:	Received by (Laboratory): 7-15-10 1505	Cooler ID	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

QC Package: (Check One Box Below)
- ☐ Level I Std QC
- ☐ Level II Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **15-Jul-10 15:05**

Work Order: **1007485** Received by: **RSZ**

Checklist completed by Robert D. Harris (eSignature) 15-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 18-Jul-10 (Date)

Matrices: waters
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.3c,1.5c,2.2c	002	
Cooler(s)/Kit(s):	3382,2077,3472		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CONESTOGA-ROVERS & ASSOCIATES

E-Mail Date: September 2, 2010
E-Mail To: Eric Matzner\ Pastor, Behling & Wheeler, LLC
c.c.: Patricia Lynch

DATA USABILITY SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SEMI-ANNUAL COMPLIANCE MONITORING
SWMU NO 1
HOUSTON, TEXAS
JULY 2010

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
6320 Rothway, Suite 100
Houston, Texas 77040
Telephone: 713-734-3090 Fax: 713-734-3391
Contact: Patricia L. Lynch [jih]
Date: September 2, 2010
www.CRAworld.com

Data Usability Summary

Reviewer:	Patricia L. Lynch – Conestoga-Rovers & Associates, Inc.
Contract Laboratory:	ALS Laboratory Group—Houston, Texas
Project/Area of Interest:	UPRR Houston Wood Preserving Works – Houston, Texas
Description of Data Packages Reviewed:	Groundwater sample results for SWMU No. 1 in data package 1007402 & 1007444
Sample Collection Date(s):	July 13 & 14, 2010
Intended Use of Data:	To monitor the COCs in groundwater at the site and to evaluate whether migration of COCs could result in risk to human or ecological health.

1.0 Scope of Data Usability Summary

Data were reviewed and validated in accordance with Title 30 of the Texas Administrative Code Section 350.54 (30 TAC 350.54) as described in *Review and Reporting of COC*

Concentration Data, (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The review included examination of the reported data, the laboratory review checklist (LRC), and field/laboratory quality assurance/quality control (QA/QC) samples collected at the Site. Tables summarizing data qualifications discussed in this DUS can be found in Appendix A.

Ten (10) groundwater samples plus two field duplicates and one field blank were analyzed for semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C[1].

A sampling and analysis summary is presented in Table 1. This summary includes a cross-reference of field sample identification numbers and laboratory sample numbers. Each sample was assigned a unique field identification number. The lists of SVOC target compounds are presented in Table 2.

[1] "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846, 3rd Edition, September 1986 (with subsequent revisions).

2.0 Laboratory Qualifications

Analytical services were provided by ALS Laboratory Group (ALS) located in Houston, Texas. The laboratory's quality assurance program is consistent with the quality standards outlined in the National Environmental Laboratory Accreditation Program (NELAP). The laboratory was accredited under Texas Certification Number T104704231-10-3 at the time the analyses were performed.

3.0 Project Objectives

3.1 Levels of Required Performance (LORP)

Prior to sampling, the LORP for each COC was established for the investigation. A standard available analytical method was selected and minimal detection limits that are at or below the Texas Risk Reduction Tier 1 Residential Protective Concentration Levels (PCLs), $^{GW}GW_{ING}$ for groundwater were sought.

3.2 Sampling/Analytical QA/QC Objectives

Pastor, Behling & Wheeler, LLC designed the QA/QC program to identify contamination resulting from sample collection, sample transport and the analytical process.

- Method blanks of a similar matrix to that of the associated samples are prepared by the laboratory and analyzed to determine if laboratory contaminants are affecting the analytical results. Method blanks are prepared and analyzed with each batch.
- A field blank was collected and analyzed to determine if the chemicals of concern would be detected based on the ambient field conditions. The field blank was kept in the same environment in which the other field samples were collected.

Similarly, the QA/QC program was designed to evaluate the quality of the resulting data with respect to bias and precision. First, a laboratory control sample (LCS) was prepared and analyzed with each batch. The recovery ranges established by the laboratory are adopted as the acceptance criteria for the project. Second, a matrix spike/matrix spike duplicate (MS/MSD) was prepared and analyzed with each batch. The recovery ranges and RPDs established by the laboratory are adopted as the acceptance criteria for the project. Third, field duplicates were collected and submitted for analysis. The RPD acceptance criterion for the water field duplicates is 30 percent. This RPD criterion is only used when sample concentrations are above the estimated regions of detection.

4.0 Data Review/Validation Results

4.1 Analytical Results

The laboratory qualified analytes with concentrations above the Sample Detection Limits (SDLs) but below the Method Quantitation Limits (MQL) as estimated on the analytical tables per the TRRP-13 document. None of the data required further qualification based on the established QC criteria.

4.2 LORP

All SDLs and unadjusted MQLs met the LORP for this investigation.

4.3 Preservation and Holding Times

Samples were properly preserved in the field and cooled to 4°C (±2°C). Samples were shipped with chains of custody, and the paperwork was filled out properly. All samples were shipped on ice. All samples were prepared and analyzed within the applicable holding times.

4.4 Sample Containers

Sample containers were certified pre-cleaned glass provided by the laboratory. These containers meet or exceed analyte specifications established in the USEPA *Specifications and Guidance for Contaminant-free Sample Containers*.

4.5 Calibrations

According to the LRCs, initial calibration and continuing calibration data met the criteria for the selected methods.

4.6 Blanks

Method Blanks: As this was not discrete samples handled in the field, the method blanks are not listed on the sample identification cross-reference table found in Table 1. Results are reported in the data packages on a laboratory batch basis. All of the laboratory blank results were reported as ND (not detected).

Field Blank: A field blank was collected and analyzed for semi-volatiles and is listed on the sample summary table. All target SVOC compounds were non-detect in the field blank.

4.7 Internal Standard and Surrogate Recoveries

Recoveries of internal standards and surrogates for SVOCs are addressed in the LRCs of the laboratory data packages. All surrogate recoveries and internal standard areas and retention times were within the acceptance limits except for the surrogate 2-fluorobiphenyl in the samples listed below:

- WG-1620-P10-20100714
- WG-1620-SMVX1-20100714.

Data qualification was not required since all other surrogate recoveries were acceptable.

4.8 Laboratory Control Samples (LCS)

LCS data for all COCs were reported for each batch, and the LCS spike recoveries for all COCs were within the project objectives.

4.9 Matrix Spikes

Sample WG-1620-P12-20100714 was selected for matrix spike/matrix spike duplicate analyses for SVOCs, and the results are reported in the data packages. All recoveries and RPDs were within the laboratory established control limits.

4.10 Field Duplicate

Field duplicates of the samples listed below were collected and analyzed.

- WG-1620-SMVX1-20100714 is a duplicate of WG-1620-P10-20100714;
- WG-1620-SMVX2-20100714 is a duplicate of WG-1620-MW01-20100714.

All results for samples WG-1620-SMVX1-20100714 and WG-1620-P10-20100714 were non detect. All results for samples WG-1620-SMVX2-20100714 and WG-1620-MW01-20100714 showed good precision above the estimated regions of detection (see Table 3). Some results were non-detect, and the RPDs could not be calculated. Only detected results are found on Table 3.

4.11 Field Procedures

Pastor, Behling & Wheeler, LLC collected groundwater samples in accordance with their Standard Operating Procedures (SOP) for sample collection.

4.12 Summary

The analytical data in this report are usable to assess the impact of COCs in groundwater at the site without qualification.

APPENDIX A

TABLES

TABLE 1

SAMPLE AND ANALYSIS SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
SWMU No. 1
HOUSTON, TEXAS
JULY 2010

Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Analysis/Parameters [1 parameter]*	*Comment*
WG-1620-MW11A-20100713	MW-11A	Water	7/13/2010	13:50	SVOCs	
WG-1620-MW11B-20100713	MW-11B	Water	7/13/2010	15:00	SVOCs	
WG-1620-MW10A-20100713	MW-10A	Water	7/13/2010	15:45	SVOCs	
WG-1620-MW10B-20100713	MW-10B	Water	7/13/2010	16:45	SVOCs	
WG-1620-P12-20100714	P-12	Water	7/14/2010	7:40	SVOCs	
WG-1620-P10-20100714	P-10	Water	7/14/2010	8:40	SVOCs	
WG-1620-SMVX1-20100714	P-10	Water	7/14/2010	8:40	SVOCs	Field Duplicate of WG-1620-P10-20100714
WG-1620-MW07-20100714	MW-07	Water	7/14/2010	9:30	SVOCs	
WG-1620-MW08-20100714	MW-08	Water	7/14/2010	10:50	SVOCs	
WG-1620-MW02-20100714	MW-02	Water	7/14/2010	12:50	SVOCs	
WG-1620-MW01A-20100714	MW-01A	Water	7/14/2010	14:15	SVOCs	
WG-1620-SMVX2-20100714	MW-01A	Water	7/14/2010	14:15	SVOCs	Field Duplicate of WG-1620-MW01A-20100714
WG-1620-SMVFB-20100714	Field Blank	Water	7/14/2010	14:30	SVOCs	

SVOCs Semi-Volatile Organic Compounds

TABLE 2
TARGET COMPOUND SUMMARY
SEMI-ANNUAL COMPLIANCE MONITORING
SWMU NO. 1
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
JULY 2010

SVOCs (ATZ)	SVOCs (BTZ)
Acenaphthene	Acenaphthene
Acenaphthylene	Acenaphthylene
Anthracene	Anthracene
bis(2-ethylhexyl)phthalate	bis(2-ethylhexyl)phthalate
Dibenzofuran	Dibenzofuran
Fluoranthene	Fluoranthene
Fluorene	Fluorene
Naphthalene	Naphthalene
Phenanthrene	Pyrene
Pyrene	Phenol
2-Methylnaphthalene	Di-n-butyl phthalate

TABLE 3
FIELD DUPLICATE SUMMARY
UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS
HOUSTON, TEXAS
SWMU NO. 1
JULY 2010

Sample Location:	*MW01A*					
	Orig		*Duplicate*		*RPD*	*Units*
Semi-Volatile Organics						
Dibenzofuran	4.4	J	6.7		52.2	ug/L
Fluoranthene	4.0	j	4.9	J	22.5	ug/L
Acenaphthene	68		75		10.3	ug/L
Fluorene	40		47		17.5	ug/L
Phenanthrene	1.1	J	2.5	J	127.0	ug/L
2-Methylnaphthalene	ND		2.6		NC	ug/L
Pyrene	2.1	J	2.6	J	23.80	ug/L
Anthracene	1.7	J	2.2	J	29.40	ug/L

Notes:

J - Estimated concentration
NC - Unable to calculate

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

28-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW SWMU 1 Work Order: **1007402**

Dear Eric,

ALS Laboratory Group received 4 samples on 13-Jul-2010 06:28 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Chris Bryson

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *28-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Work Order: 1007402

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 28-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Work Order: **1007402**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007402-01	WG-1620-MW11A-20100713	Water		7/13/2010 13:50	7/13/2010 18:28	☐
1007402-02	WG-1620-MW11B-20100713	Water		7/13/2010 15:00	7/13/2010 18:28	☐
1007402-03	WG-1620-MW10A-20100713	Water		7/13/2010 15:45	7/13/2010 18:28	☐
1007402-04	WG-1620-MW10B-20100713	Water		7/13/2010 16:45	7/13/2010 18:28	☐

ALS Laboratory Group

Date: *28-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW11A-20100713
Collection Date: 7/13/2010 01:50 PM

Work Order: 1007402
Lab ID: 1007402-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/15/10		Analyst: **KMB**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/19/2010 15:16
Acenaphthene	**2.8**	J	**0.90**	**5.0**	**µg/L**	1	7/19/2010 15:16
Acenaphthylene	U		0.50	5.0	µg/L	1	7/19/2010 15:16
Anthracene	U		0.60	5.0	µg/L	1	7/19/2010 15:16
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/19/2010 15:16
Dibenzofuran	U		0.70	5.0	µg/L	1	7/19/2010 15:16
Fluoranthene	U		0.50	5.0	µg/L	1	7/19/2010 15:16
Fluorene	U		0.60	5.0	µg/L	1	7/19/2010 15:16
Naphthalene	U		0.60	5.0	µg/L	1	7/19/2010 15:16
Phenanthrene	U		0.50	5.0	µg/L	1	7/19/2010 15:16
Pyrene	U		0.50	5.0	µg/L	1	7/19/2010 15:16
Surr: 2,4,6-Tribromophenol	*84.8*			*42-124*	*%REC*	1	7/19/2010 15:16
Surr: 2-Fluorobiphenyl	*63.2*			*48-120*	*%REC*	1	7/19/2010 15:16
Surr: 2-Fluorophenol	*52.1*			*20-120*	*%REC*	1	7/19/2010 15:16
Surr: 4-Terphenyl-d14	*75.8*			*51-135*	*%REC*	1	7/19/2010 15:16
Surr: Nitrobenzene-d5	*63.7*			*41-120*	*%REC*	1	7/19/2010 15:16
Surr: Phenol-d6	*64.5*			*20-120*	*%REC*	1	7/19/2010 15:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *28-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW11B-20100713
Collection Date: 7/13/2010 03:00 PM

Work Order: 1007402
Lab ID: 1007402-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/15/10		Analyst: **KMB**
Acenaphthene	**110**		**0.90**	**5.0**	**µg/L**	1	7/17/2010 01:13
Acenaphthylene	U		0.50	5.0	µg/L	1	7/17/2010 01:13
Anthracene	**5.5**		**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:13
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/17/2010 01:13
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/17/2010 01:13
Dibenzofuran	**48**		**0.70**	**5.0**	**µg/L**	1	7/17/2010 01:13
Fluoranthene	**4.6**	J	**0.50**	**5.0**	**µg/L**	1	7/17/2010 01:13
Fluorene	**56**		**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:13
Naphthalene	**6.8**		**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:13
Phenol	U		0.50	5.0	µg/L	1	7/17/2010 01:13
Pyrene	**2.2**	J	**0.50**	**5.0**	**µg/L**	1	7/17/2010 01:13
Surr: 2,4,6-Tribromophenol	*62.2*			*42-124*	*%REC*	1	7/17/2010 01:13
Surr: 2-Fluorobiphenyl	*58.6*			*48-120*	*%REC*	1	7/17/2010 01:13
Surr: 2-Fluorophenol	*42.6*			*20-120*	*%REC*	1	7/17/2010 01:13
Surr: 4-Terphenyl-d14	*71.9*			*51-135*	*%REC*	1	7/17/2010 01:13
Surr: Nitrobenzene-d5	*55.5*			*41-120*	*%REC*	1	7/17/2010 01:13
Surr: Phenol-d6	*49.8*			*20-120*	*%REC*	1	7/17/2010 01:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *28-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW10A-20100713
Collection Date: 7/13/2010 03:45 PM

Work Order: 1007402
Lab ID: 1007402-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/15/10		Analyst: **KMB**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/17/2010 01:35
Acenaphthene	U		0.90	5.0	µg/L	1	7/17/2010 01:35
Acenaphthylene	U		0.50	5.0	µg/L	1	7/17/2010 01:35
Anthracene	U		0.60	5.0	µg/L	1	7/17/2010 01:35
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/17/2010 01:35
Dibenzofuran	U		0.70	5.0	µg/L	1	7/17/2010 01:35
Fluoranthene	U		0.50	5.0	µg/L	1	7/17/2010 01:35
Fluorene	U		0.60	5.0	µg/L	1	7/17/2010 01:35
Naphthalene	U		0.60	5.0	µg/L	1	7/17/2010 01:35
Phenanthrene	U		0.50	5.0	µg/L	1	7/17/2010 01:35
Pyrene	U		0.50	5.0	µg/L	1	7/17/2010 01:35
Surr: 2,4,6-Tribromophenol	*68.7*			*42-124*	*%REC*	1	7/17/2010 01:35
Surr: 2-Fluorobiphenyl	*54.3*			*48-120*	*%REC*	1	7/17/2010 01:35
Surr: 2-Fluorophenol	*40.5*			*20-120*	*%REC*	1	7/17/2010 01:35
Surr: 4-Terphenyl-d14	*79.2*			*51-135*	*%REC*	1	7/17/2010 01:35
Surr: Nitrobenzene-d5	*52.2*			*41-120*	*%REC*	1	7/17/2010 01:35
Surr: Phenol-d6	*48.1*			*20-120*	*%REC*	1	7/17/2010 01:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *28-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW10B-20100713
Collection Date: 7/13/2010 04:45 PM

Work Order: 1007402
Lab ID: 1007402-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/15/10		Analyst: **KMB**
Acenaphthene	**69**		**0.90**	**5.0**	**µg/L**	1	7/17/2010 01:58
Acenaphthylene	U		0.50	5.0	µg/L	1	7/17/2010 01:58
Anthracene	**3.8**	J	**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:58
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/17/2010 01:58
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/17/2010 01:58
Dibenzofuran	**25**		**0.70**	**5.0**	**µg/L**	1	7/17/2010 01:58
Fluoranthene	**2.6**	J	**0.50**	**5.0**	**µg/L**	1	7/17/2010 01:58
Fluorene	**41**		**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:58
Naphthalene	**56**		**0.60**	**5.0**	**µg/L**	1	7/17/2010 01:58
Phenol	U		0.50	5.0	µg/L	1	7/17/2010 01:58
Pyrene	**1.0**	J	**0.50**	**5.0**	**µg/L**	1	7/17/2010 01:58
Surr: 2,4,6-Tribromophenol	*68.7*			*42-124*	*%REC*	1	7/17/2010 01:58
Surr: 2-Fluorobiphenyl	*65.0*			*48-120*	*%REC*	1	7/17/2010 01:58
Surr: 2-Fluorophenol	*52.0*			*20-120*	*%REC*	1	7/17/2010 01:58
Surr: 4-Terphenyl-d14	*77.6*			*51-135*	*%REC*	1	7/17/2010 01:58
Surr: Nitrobenzene-d5	*65.9*			*41-120*	*%REC*	1	7/17/2010 01:58
Surr: Phenol-d6	*63.3*			*20-120*	*%REC*	1	7/17/2010 01:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 28-Jul-10

WorkOrder: 1007402
InstrumentID: SV-5
Test Code: 8270_TCL_W
Test Number: SW8270
Test Name: Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	2-Methylnaphthalene	91-57-6	4.2	0.9	5
A	Acenaphthene	83-32-9	4.1	0.9	5
A	Acenaphthylene	208-96-8	4	0.5	5
A	Anthracene	120-12-7	4.2	0.6	5
A	Bis(2-ethylhexyl)phthalate	117-81-7	4.4	3.3	5
A	Di-n-butyl phthalate	84-74-2	4.3	0.5	5
A	Dibenzofuran	132-64-9	4.3	0.7	5
A	Fluoranthene	206-44-0	4.2	0.5	5
A	Fluorene	86-73-7	4.2	0.6	5
A	Naphthalene	91-20-3	4	0.6	5
A	Phenanthrene	85-01-8	4.1	0.5	5
A	Phenol	108-95-2	3.8	0.5	5
A	Pyrene	129-00-0	4.3	0.5	5
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0	5
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0	5
S	Surr: 2-Fluorophenol	367-12-4	0	0	5
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0	5
S	Surr: Nitrobenzene-d5	4165-60-0	0	0	5
S	Surr: Phenol-d6	13127-88-3	0	0	5

Batch ID: **44530** Instrument ID **SV-5** Method: **SW8270**

MBLK Sample ID: **SBLKW3-100715-44530** Units: **µg/L** Analysis Date: **7/16/2010 05:40 PM**

Client ID: Run ID: **SV-5_100716B** SeqNo: **2032219** Prep Date: **7/15/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	U	5.0								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Anthracene	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Di-n-butyl phthalate	U	5.0								
Dibenzofuran	U	5.0								
Fluoranthene	U	5.0								
Fluorene	U	5.0								
Naphthalene	U	5.0								
Phenanthrene	U	5.0								
Phenol	U	5.0								
Pyrene	U	5.0								
Surr: 2,4,6-Tribromophenol	*79.44*	5.0	*100*	0	*79.4*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.05*	5.0	*100*	0	*78*	*48-120*	0			
Surr: 2-Fluorophenol	*66.49*	5.0	*100*	0	*66.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*84.41*	5.0	*100*	0	*84.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*83.71*	5.0	*100*	0	*83.7*	*41-120*	0			
Surr: Phenol-d6	*75.36*	5.0	*100*	0	*75.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007402
Project: HWPW SWMU 1

QC BATCH REPORT

Batch ID: **44530** Instrument ID **SV-5** Method: **SW8270**

LCS Sample ID: **SLCSW3-100715-44530** Units: **µg/L** Analysis Date: **7/16/2010 06:26 PM**

Client ID: Run ID: **SV-5_100716B** SeqNo: **2032220** Prep Date: **7/15/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	51.22	5.0	50	0	102	55-120	0			
Acenaphthene	50.03	5.0	50	0	100	55-120	0			
Acenaphthylene	50.34	5.0	50	0	101	55-120	0			
Anthracene	51.15	5.0	50	0	102	55-120	0			
Bis(2-ethylhexyl)phthalate	50.71	5.0	50	0	101	50-125	0			
Di-n-butyl phthalate	52	5.0	50	0	104	55-120	0			
Dibenzofuran	50.73	5.0	50	0	101	55-120	0			
Fluoranthene	50.34	5.0	50	0	101	55-120	0			
Fluorene	51.31	5.0	50	0	103	55-120	0			
Naphthalene	48.74	5.0	50	0	97.5	55-120	0			
Phenanthrene	51.06	5.0	50	0	102	55-120	0			
Phenol	94.16	5.0	100	0	94.2	50-120	0			
Pyrene	49.06	5.0	50	0	98.1	55-120	0			
Surr: 2,4,6-Tribromophenol	*79.5*	5.0	*100*	0	*79.5*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*89.34*	5.0	*100*	0	*89.3*	*48-120*	0			
Surr: 2-Fluorophenol	*84.13*	5.0	*100*	0	*84.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*82.77*	5.0	*100*	0	*82.8*	*51-135*	0			
Surr: Nitrobenzene-d5	*91.05*	5.0	*100*	0	*91*	*41-120*	0			
Surr: Phenol-d6	*87.36*	5.0	*100*	0	*87.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007402
Project: HWPW SWMU 1

QC BATCH REPORT

Batch ID: **44530** Instrument ID **SV-5** Method: **SW8270**

LCSD Sample ID: **SLCSDW3-100715-44530** Units: **µg/L** Analysis Date: **7/16/2010 06:49 PM**

Client ID: Run ID: **SV-5_100716B** SeqNo: **2032221** Prep Date: **7/15/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	51.82	5.0	50	0	104	55-120	51.22	1.15	20	
Acenaphthene	49.79	5.0	50	0	99.6	55-120	50.03	0.466	20	
Acenaphthylene	49.09	5.0	50	0	98.2	55-120	50.34	2.51	20	
Anthracene	50.6	5.0	50	0	101	55-120	51.15	1.08	20	
Bis(2-ethylhexyl)phthalate	56.73	5.0	50	0	113	50-125	50.71	11.2	20	
Di-n-butyl phthalate	53.33	5.0	50	0	107	55-120	52	2.52	20	
Dibenzofuran	49.74	5.0	50	0	99.5	55-120	50.73	1.96	20	
Fluoranthene	48.82	5.0	50	0	97.6	55-120	50.34	3.06	20	
Fluorene	51.35	5.0	50	0	103	55-120	51.31	0.0789	20	
Naphthalene	48.21	5.0	50	0	96.4	55-120	48.74	1.09	20	
Phenanthrene	49.56	5.0	50	0	99.1	55-120	51.06	2.97	20	
Phenol	101.1	5.0	100	0	101	50-120	94.16	7.16	20	
Pyrene	52.43	5.0	50	0	105	55-120	49.06	6.65	20	
Surr: 2,4,6-Tribromophenol	*83.93*	5.0	*100*	0	*83.9*	*42-124*	79.5	*5.42*	*20*	
Surr: 2-Fluorobiphenyl	*87.16*	5.0	*100*	0	*87.2*	*48-120*	89.34	*2.48*	*20*	
Surr: 2-Fluorophenol	*87.46*	5.0	*100*	0	*87.5*	*20-120*	84.13	*3.89*	*20*	
Surr: 4-Terphenyl-d14	*93.95*	5.0	*100*	0	*94*	*51-135*	82.77	*12.7*	*20*	
Surr: Nitrobenzene-d5	*87.49*	5.0	*100*	0	*87.5*	*41-120*	91.05	*3.99*	*20*	
Surr: Phenol-d6	*93.76*	5.0	*100*	0	*93.8*	*20-120*	87.36	*7.07*	*20*	

The following samples were analyzed in this batch: 1007402-01A 1007402-02A 1007402-03A 1007402-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 28-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
WorkOrder: **1007402**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1

ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1001401

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW SWMU 1	A	LOW SVOC (8270) Select
Work Order		Project Number	1620	B	ATZ SPECIFIC COC LIST
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	BTZ SPECIFIC COC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-MW11A-20100713	7-13-10	1350	GW	-	2		X									
2	WG-1620-MW11B-20100713	7-13-10	1500	GW	-	2			X								
3	WG-1620-MW10A-20100713	7-13-10	1545	GW	-	2		X									
4	WG-1620-MW10B-20100713	7-13-10	1645	GW	-	2			X								
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYDAC John Brayd

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) Other | [x] Std 10 WK Days | 5 WK Days | 2 WK Days | 24 Hour

Results Due Date:

Relinquished by: John Brayd | Date: 7-13-10 | Time: 15:25 | Received by:

Relinquished by: | Date: | Time: | Received by Laboratory: 7/13/10 15:25

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- [ ] Level II Std QC
- [ ] Level III Std QC/Raw Data
- [ ] Level IV SW846/CLP
- [ ] Other / EDD
- [x] TRRP Check/List
- [ ] TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **13-Jul-10 18:28**

Work Order: **1007402** Received by: **RNG**

Checklist completed by Richard Sanchez (eSignature) 14-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 15-Jul-10 (Date)

Matrices: water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.3c	002	
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

22-Jul-2010

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

Tel: (512) 671-3434
Fax: (512) 671-3446

Re: HWPW SWMU 1 Work Order: **1007444**

Dear Eric,

ALS Laboratory Group received 9 samples on 14-Jul-2010 05:20 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Tiffany Van

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Work Order: 1007444

TRRP Laboratory Data Package Cover Page

This data package consists of all or some of the following as applicable:

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 my 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: [NA] 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.

R. Kevin Given

R. Kevin Given
Project Manager

ALS Laboratory Group

Date: 22-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Work Order: **1007444**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1007444-01	WG-1620-P12-20100714	Water		7/14/2010 07:40	7/14/2010 17:20	☐
1007444-02	WG-1620-P10-20100714	Water		7/14/2010 08:40	7/14/2010 17:20	☐
1007444-03	WG-1620-SMVX1-20100714	Water		7/14/2010 08:40	7/14/2010 17:20	☐
1007444-04	WG-1620-MW07-20100714	Water		7/14/2010 09:30	7/14/2010 17:20	☐
1007444-05	WG-1620-MW08-20100714	Water		7/14/2010 10:50	7/14/2010 17:20	☐
1007444-06	WG-1620-MW02-20100714	Water		7/14/2010 12:50	7/14/2010 17:20	☐
1007444-07	WG-1620-MW01A-20100714	Water		7/14/2010 14:15	7/14/2010 17:20	☐
1007444-08	WG-1620-SMVX2-20100714	Water		7/14/2010 14:15	7/14/2010 17:20	☐
1007444-09	WG-1620-SMVFB-20100714	Water		7/14/2010 14:30	7/14/2010 17:20	☐

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group			LRC Date: 07/22/2010				
Project Name: HWPW SWMU 1			Laboratory Job Number: 1007444				
Reviewer Name: R. Kevin Given			Prep Batch Number(s): 44614				
#[1]	**A[2]**	**Description**	**Yes**	**No**	**NA[3]**	**NR[4]**	**ER#[5]**
R1	OI	**Chain-of-custody (C-O-C)**					
		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 detection 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		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			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				
		Were MS/MSD RPDs within laboratory QC limits?	X				
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 and DCSs 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 SDL minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				

.

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group	LRC Date: 07/22/2010
Project Name: HWPW SWMU 1	Laboratory Job Number: 1007444
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44614

#[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 blank (CCB)**					
		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 method?			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 studies?	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 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Reportable Data	
Laboratory Name: ALS Laboratory Group	LRC Date: 07/22/2010
Project Name: HWPW SWMU 1	Laboratory Job Number: 1007444
Reviewer Name: R. Kevin Given	Prep Batch Number(s): 44614

ER#[5]	Description
1	Semivolatile Organics surrogate recoveries were outside the control limits for Samples WG-1620-P10-20100714 and WG-1620-SMVX1-20100714. Results confirmed as matrix interference by reanalysis.

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.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-P12-20100714
Collection Date: 7/14/2010 07:40 AM

Work Order: 1007444
Lab ID: 1007444-01
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 17:59
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 17:59
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 17:59
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 17:59
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 17:59
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/20/2010 17:59
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 17:59
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 17:59
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 17:59
Phenol	U		0.50	5.0	µg/L	1	7/20/2010 17:59
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 17:59
Surr: 2,4,6-Tribromophenol	*63.1*			*42-124*	*%REC*	1	7/20/2010 17:59
Surr: 2-Fluorobiphenyl	*49.3*			*48-120*	*%REC*	1	7/20/2010 17:59
Surr: 2-Fluorophenol	*40.0*			*20-120*	*%REC*	1	7/20/2010 17:59
Surr: 4-Terphenyl-d14	*71.3*			*51-135*	*%REC*	1	7/20/2010 17:59
Surr: Nitrobenzene-d5	*46.9*			*41-120*	*%REC*	1	7/20/2010 17:59
Surr: Phenol-d6	*43.5*			*20-120*	*%REC*	1	7/20/2010 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-P10-20100714
Collection Date: 7/14/2010 08:40 AM

Work Order: 1007444
Lab ID: 1007444-02
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 19:48
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 19:48
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 19:48
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 19:48
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 19:48
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/20/2010 19:48
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 19:48
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 19:48
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 19:48
Phenol	U		0.50	5.0	µg/L	1	7/20/2010 19:48
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 19:48
Surr: 2,4,6-Tribromophenol	*67.9*			*42-124*	*%REC*	1	7/20/2010 19:48
Surr: 2-Fluorobiphenyl	*40.2*	S		*48-120*	*%REC*	1	7/20/2010 19:48
Surr: 2-Fluorophenol	*36.8*			*20-120*	*%REC*	1	7/20/2010 19:48
Surr: 4-Terphenyl-d14	*74.2*			*51-135*	*%REC*	1	7/20/2010 19:48
Surr: Nitrobenzene-d5	*41.4*			*41-120*	*%REC*	1	7/20/2010 19:48
Surr: Phenol-d6	*41.3*			*20-120*	*%REC*	1	7/20/2010 19:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-SMVX1-20100714
Collection Date: 7/14/2010 08:40 AM

Work Order: 1007444
Lab ID: 1007444-03
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 20:09
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 20:09
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 20:09
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 20:09
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 20:09
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/20/2010 20:09
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 20:09
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 20:09
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 20:09
Phenol	U		0.50	5.0	µg/L	1	7/20/2010 20:09
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 20:09
Surr: 2,4,6-Tribromophenol	*64.0*			*42-124*	*%REC*	1	7/20/2010 20:09
Surr: 2-Fluorobiphenyl	*44.8*	S		*48-120*	*%REC*	1	7/20/2010 20:09
Surr: 2-Fluorophenol	*38.8*			*20-120*	*%REC*	1	7/20/2010 20:09
Surr: 4-Terphenyl-d14	*73.8*			*51-135*	*%REC*	1	7/20/2010 20:09
Surr: Nitrobenzene-d5	*44.1*			*41-120*	*%REC*	1	7/20/2010 20:09
Surr: Phenol-d6	*40.7*			*20-120*	*%REC*	1	7/20/2010 20:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW07-20100714
Collection Date: 7/14/2010 09:30 AM

Work Order: 1007444
Lab ID: 1007444-04
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/20/2010 20:31
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 20:31
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 20:31
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 20:31
Bis(2-ethylhexyl)phthalate	**4.9**	J	**3.3**	**5.0**	**µg/L**	1	7/20/2010 20:31
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 20:31
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 20:31
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 20:31
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 20:31
Phenanthrene	U		0.50	5.0	µg/L	1	7/20/2010 20:31
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 20:31
Surr: 2,4,6-Tribromophenol	*77.6*			*42-124*	*%REC*	1	7/20/2010 20:31
Surr: 2-Fluorobiphenyl	*65.4*			*48-120*	*%REC*	1	7/20/2010 20:31
Surr: 2-Fluorophenol	*59.2*			*20-120*	*%REC*	1	7/20/2010 20:31
Surr: 4-Terphenyl-d14	*71.4*			*51-135*	*%REC*	1	7/20/2010 20:31
Surr: Nitrobenzene-d5	*68.1*			*41-120*	*%REC*	1	7/20/2010 20:31
Surr: Phenol-d6	*59.4*			*20-120*	*%REC*	1	7/20/2010 20:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW08-20100714
Collection Date: 7/14/2010 10:50 AM

Work Order: 1007444
Lab ID: 1007444-05
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/20/2010 20:53
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 20:53
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 20:53
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 20:53
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 20:53
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 20:53
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 20:53
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 20:53
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 20:53
Phenanthrene	U		0.50	5.0	µg/L	1	7/20/2010 20:53
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 20:53
Surr: 2,4,6-Tribromophenol	*74.2*			*42-124*	*%REC*	1	7/20/2010 20:53
Surr: 2-Fluorobiphenyl	*59.9*			*48-120*	*%REC*	1	7/20/2010 20:53
Surr: 2-Fluorophenol	*56.1*			*20-120*	*%REC*	1	7/20/2010 20:53
Surr: 4-Terphenyl-d14	*72.2*			*51-135*	*%REC*	1	7/20/2010 20:53
Surr: Nitrobenzene-d5	*65.5*			*41-120*	*%REC*	1	7/20/2010 20:53
Surr: Phenol-d6	*61.3*			*20-120*	*%REC*	1	7/20/2010 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW02-20100714
Collection Date: 7/14/2010 12:50 PM

Work Order: 1007444
Lab ID: 1007444-06
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/20/2010 21:14
Acenaphthene	**18**		**0.90**	**5.0**	**µg/L**	1	7/20/2010 21:14
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 21:14
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 21:14
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 21:14
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 21:14
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 21:14
Fluorene	**11**		**0.60**	**5.0**	**µg/L**	1	7/20/2010 21:14
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 21:14
Phenanthrene	U		0.50	5.0	µg/L	1	7/20/2010 21:14
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 21:14
Surr: 2,4,6-Tribromophenol	*70.4*			*42-124*	*%REC*	1	7/20/2010 21:14
Surr: 2-Fluorobiphenyl	*58.2*			*48-120*	*%REC*	1	7/20/2010 21:14
Surr: 2-Fluorophenol	*55.5*			*20-120*	*%REC*	1	7/20/2010 21:14
Surr: 4-Terphenyl-d14	*71.4*			*51-135*	*%REC*	1	7/20/2010 21:14
Surr: Nitrobenzene-d5	*63.6*			*41-120*	*%REC*	1	7/20/2010 21:14
Surr: Phenol-d6	*60.5*			*20-120*	*%REC*	1	7/20/2010 21:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-MW01A-20100714
Collection Date: 7/14/2010 02:15 PM

Work Order: 1007444
Lab ID: 1007444-07
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/20/2010 21:36
Acenaphthene	**68**		**0.90**	**5.0**	**µg/L**	1	7/20/2010 21:36
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 21:36
Anthracene	**1.7**	J	**0.60**	**5.0**	**µg/L**	1	7/20/2010 21:36
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 21:36
Dibenzofuran	**4.4**	J	**0.70**	**5.0**	**µg/L**	1	7/20/2010 21:36
Fluoranthene	**4.0**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:36
Fluorene	**40**		**0.60**	**5.0**	**µg/L**	1	7/20/2010 21:36
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 21:36
Phenanthrene	**1.1**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:36
Pyrene	**2.1**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:36
Surr: 2,4,6-Tribromophenol	*69.8*			*42-124*	*%REC*	1	7/20/2010 21:36
Surr: 2-Fluorobiphenyl	*60.4*			*48-120*	*%REC*	1	7/20/2010 21:36
Surr: 2-Fluorophenol	*56.9*			*20-120*	*%REC*	1	7/20/2010 21:36
Surr: 4-Terphenyl-d14	*69.1*			*51-135*	*%REC*	1	7/20/2010 21:36
Surr: Nitrobenzene-d5	*65.7*			*41-120*	*%REC*	1	7/20/2010 21:36
Surr: Phenol-d6	*62.6*			*20-120*	*%REC*	1	7/20/2010 21:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-SMVX2-20100714
Collection Date: 7/14/2010 02:15 PM

Work Order: 1007444
Lab ID: 1007444-08
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	**2.6**	J	**0.90**	**5.0**	**µg/L**	1	7/20/2010 21:58
Acenaphthene	**75**		**0.90**	**5.0**	**µg/L**	1	7/20/2010 21:58
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 21:58
Anthracene	**2.2**	J	**0.60**	**5.0**	**µg/L**	1	7/20/2010 21:58
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 21:58
Dibenzofuran	**6.7**		**0.70**	**5.0**	**µg/L**	1	7/20/2010 21:58
Fluoranthene	**4.9**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:58
Fluorene	**47**		**0.60**	**5.0**	**µg/L**	1	7/20/2010 21:58
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 21:58
Phenanthrene	**2.5**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:58
Pyrene	**2.6**	J	**0.50**	**5.0**	**µg/L**	1	7/20/2010 21:58
Surr: 2,4,6-Tribromophenol	*71.5*			*42-124*	*%REC*	1	7/20/2010 21:58
Surr: 2-Fluorobiphenyl	*60.5*			*48-120*	*%REC*	1	7/20/2010 21:58
Surr: 2-Fluorophenol	*58.5*			*20-120*	*%REC*	1	7/20/2010 21:58
Surr: 4-Terphenyl-d14	*69.4*			*51-135*	*%REC*	1	7/20/2010 21:58
Surr: Nitrobenzene-d5	*65.8*			*41-120*	*%REC*	1	7/20/2010 21:58
Surr: Phenol-d6	*64.6*			*20-120*	*%REC*	1	7/20/2010 21:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: *22-Jul-10*

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
Sample ID: WG-1620-SMVFB-20100714
Collection Date: 7/14/2010 02:30 PM

Work Order: 1007444
Lab ID: 1007444-09
Matrix: WATER

Analyses	Result	Qual	SDL	MQL	Units	Dilution Factor	Date Analyzed
SEMIVOLATILES		Method: **SW8270**			Prep: SW3510 / 7/19/10		Analyst: **ACN**
2-Methylnaphthalene	U		0.90	5.0	µg/L	1	7/20/2010 22:20
Acenaphthene	U		0.90	5.0	µg/L	1	7/20/2010 22:20
Acenaphthylene	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Anthracene	U		0.60	5.0	µg/L	1	7/20/2010 22:20
Bis(2-ethylhexyl)phthalate	U		3.3	5.0	µg/L	1	7/20/2010 22:20
Dibenzofuran	U		0.70	5.0	µg/L	1	7/20/2010 22:20
Di-n-butyl phthalate	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Fluoranthene	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Fluorene	U		0.60	5.0	µg/L	1	7/20/2010 22:20
Naphthalene	U		0.60	5.0	µg/L	1	7/20/2010 22:20
Phenanthrene	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Phenol	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Pyrene	U		0.50	5.0	µg/L	1	7/20/2010 22:20
Surr: 2,4,6-Tribromophenol	*70.1*			*42-124*	*%REC*	1	7/20/2010 22:20
Surr: 2-Fluorobiphenyl	*60.3*			*48-120*	*%REC*	1	7/20/2010 22:20
Surr: 2-Fluorophenol	*55.1*			*20-120*	*%REC*	1	7/20/2010 22:20
Surr: 4-Terphenyl-d14	*69.2*			*51-135*	*%REC*	1	7/20/2010 22:20
Surr: Nitrobenzene-d5	*65.5*			*41-120*	*%REC*	1	7/20/2010 22:20
Surr: Phenol-d6	*60.7*			*20-120*	*%REC*	1	7/20/2010 22:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 23-Jul-10

WorkOrder: 1007444
InstrumentID: SV-3
Test Code: 8270_TCL_W
Test Number: SW8270
Test Name: Semivolatiles

METHOD DETECTION / REPORTING LIMITS

Matrix: Aqueous **Units:** µg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	2-Methylnaphthalene	91-57-6	3.8	0.9	5
A	Acenaphthene	83-32-9	4.1	0.9	5
A	Acenaphthylene	208-96-8	4	0.5	5
A	Anthracene	120-12-7	3.8	0.6	5
A	Bis(2-ethylhexyl)phthalate	117-81-7	4	3.3	5
A	Dibenzofuran	132-64-9	4.2	0.7	5
A	Di-n-butyl phthalate	84-74-2	4.1	0.5	5
A	Fluoranthene	206-44-0	4.1	0.5	5
A	Fluorene	86-73-7	4.2	0.6	5
A	Naphthalene	91-20-3	4.1	0.6	5
A	Phenanthrene	85-01-8	4.1	0.5	5
A	Phenol	108-95-2	3.6	0.5	5
A	Pyrene	129-00-0	4.2	0.5	5
S	Surr: 2,4,6-Tribromophenol	118-79-6	0	0	5
S	Surr: 2-Fluorobiphenyl	321-60-8	0	0	5
S	Surr: 2-Fluorophenol	367-12-4	0	0	5
S	Surr: 4-Terphenyl-d14	1718-51-0	0	0	5
S	Surr: Nitrobenzene-d5	4165-60-0	0	0	5
S	Surr: Phenol-d6	13127-88-3	0	0	5

Batch ID: **44614** Instrument ID **SV-3** Method: **SW8270**

MBLK Sample ID: **SBLKW3-100719-44614** Units: **µg/L** Analysis Date: **7/20/2010 12:45 PM**

Client ID: Run ID: **SV-3_100720B** SeqNo: **2034782** Prep Date: **7/19/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	U	5.0								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Anthracene	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Dibenzofuran	U	5.0								
Di-n-butyl phthalate	U	5.0								
Fluoranthene	U	5.0								
Fluorene	U	5.0								
Naphthalene	U	5.0								
Phenanthrene	U	5.0								
Phenol	U	5.0								
Pyrene	U	5.0								
Surr: 2,4,6-Tribromophenol	*65.51*	5.0	*100*	0	*65.5*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*57.73*	5.0	*100*	0	*57.7*	*48-120*	0			
Surr: 2-Fluorophenol	*51.18*	5.0	*100*	0	*51.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*67.71*	5.0	*100*	0	*67.7*	*51-135*	0			
Surr: Nitrobenzene-d5	*66.31*	5.0	*100*	0	*66.3*	*41-120*	0			
Surr: Phenol-d6	*55.92*	5.0	*100*	0	*55.9*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007444
Project: HWPW SWMU 1

QC BATCH REPORT

Batch ID: **44614** Instrument ID **SV-3** Method: **SW8270**

LCS Sample ID: **SLCSW3-100719-44614** Units: **µg/L** Analysis Date: **7/20/2010 01:07 PM**

Client ID: Run ID: **SV-3_100720B** SeqNo: **2034783** Prep Date: **7/19/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	40.95	5.0	50	0	81.9	55-120	0			
Acenaphthene	39.34	5.0	50	0	78.7	55-120	0			
Acenaphthylene	39.33	5.0	50	0	78.7	55-120	0			
Anthracene	40.75	5.0	50	0	81.5	55-120	0			
Bis(2-ethylhexyl)phthalate	41.93	5.0	50	0	83.9	50-125	0			
Dibenzofuran	40	5.0	50	0	80	55-120	0			
Di-n-butyl phthalate	41.14	5.0	50	0	82.3	55-120	0			
Fluoranthene	41.23	5.0	50	0	82.5	55-120	0			
Fluorene	41.35	5.0	50	0	82.7	55-120	0			
Naphthalene	39.22	5.0	50	0	78.4	55-120	0			
Phenanthrene	40.46	5.0	50	0	80.9	55-120	0			
Phenol	66.25	5.0	100	0	66.3	50-120	0			
Pyrene	42.2	5.0	50	0	84.4	55-120	0			
Surr: 2,4,6-Tribromophenol	*78.77*	5.0	*100*	0	*78.8*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*76.76*	5.0	*100*	0	*76.8*	*48-120*	0			
Surr: 2-Fluorophenol	*66.86*	5.0	*100*	0	*66.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*75.93*	5.0	*100*	0	*75.9*	*51-135*	0			
Surr: Nitrobenzene-d5	*74.06*	5.0	*100*	0	*74.1*	*41-120*	0			
Surr: Phenol-d6	*62.45*	5.0	*100*	0	*62.5*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007444
Project: HWPW SWMU 1

QC BATCH REPORT

Batch ID: **44614** Instrument ID **SV-3** Method: **SW8270**

MS Sample ID: **1007444-01AMS** Units: **µg/L** Analysis Date: **7/20/2010 07:04 PM**

Client ID: **WG-1620-P12-20100714** Run ID: **SV-3_100720B** SeqNo: **2034784** Prep Date: **7/19/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	31.24	5.0	50	0	62.5	55-120	0			
Acenaphthene	31.96	5.0	50	0	63.9	55-120	0			
Acenaphthylene	31.97	5.0	50	0	63.9	55-120	0			
Anthracene	39.36	5.0	50	0	78.7	55-120	0			
Bis(2-ethylhexyl)phthalate	42.93	5.0	50	0	85.9	50-125	0			
Dibenzofuran	33.84	5.0	50	0	67.7	55-120	0			
Di-n-butyl phthalate	40.6	5.0	50	0	81.2	55-120	0			
Fluoranthene	42.31	5.0	50	0	84.6	55-120	0			
Fluorene	38.44	5.0	50	0	76.9	55-120	0			
Naphthalene	28.55	5.0	50	0	57.1	55-120	0			
Phenanthrene	37.79	5.0	50	0	75.6	55-120	0			
Phenol	56.21	5.0	100	0	56.2	50-120	0			
Pyrene	41.84	5.0	50	0	83.7	55-120	0			
Surr: 2,4,6-Tribromophenol	*77.24*	5.0	*100*	0	*77.2*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*54.75*	5.0	*100*	0	*54.8*	*48-120*	0			
Surr: 2-Fluorophenol	*46.84*	5.0	*100*	0	*46.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.56*	5.0	*100*	0	*73.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*51.05*	5.0	*100*	0	*51.1*	*41-120*	0			
Surr: Phenol-d6	*51.45*	5.0	*100*	0	*51.4*	*20-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Work Order: 1007444
Project: HWPW SWMU 1

QC BATCH REPORT

Batch ID: **44614** Instrument ID **SV-3** Method: **SW8270**

MSD Sample ID: **1007444-01AMSD** Units: **µg/L** Analysis Date: **7/20/2010 07:26 PM**

Client ID: **WG-1620-P12-20100714** Run ID: **SV-3_100720B** SeqNo: **2034785** Prep Date: **7/19/2010** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Methylnaphthalene	36.4	5.0	50	0	72.8	55-120	31.24	15.2	20	
Acenaphthene	35.16	5.0	50	0	70.3	55-120	31.96	9.54	20	
Acenaphthylene	35.46	5.0	50	0	70.9	55-120	31.97	10.4	20	
Anthracene	38.23	5.0	50	0	76.5	55-120	39.36	2.9	20	
Bis(2-ethylhexyl)phthalate	39.66	5.0	50	0	79.3	50-125	42.93	7.93	20	
Dibenzofuran	36.8	5.0	50	0	73.6	55-120	33.84	8.38	20	
Di-n-butyl phthalate	37.98	5.0	50	0	76	55-120	40.6	6.66	20	
Fluoranthene	38.62	5.0	50	0	77.2	55-120	42.31	9.13	20	
Fluorene	39.19	5.0	50	0	78.4	55-120	38.44	1.94	20	
Naphthalene	33.21	5.0	50	0	66.4	55-120	28.55	15.1	20	
Phenanthrene	37.09	5.0	50	0	74.2	55-120	37.79	1.85	20	
Phenol	65.65	5.0	100	0	65.7	50-120	56.21	15.5	20	
Pyrene	40.36	5.0	50	0	80.7	55-120	41.84	3.6	20	
Surr: 2,4,6-Tribromophenol	*72.67*	5.0	*100*	0	*72.7*	*42-124*	77.24	*6.1*	*20*	
Surr: 2-Fluorobiphenyl	*63.14*	5.0	*100*	0	*63.1*	*48-120*	54.75	*14.2*	*20*	
Surr: 2-Fluorophenol	*57.64*	5.0	*100*	0	*57.6*	*20-120*	46.84	*20.7*	*20*	*R*
Surr: 4-Terphenyl-d14	*72.08*	5.0	*100*	0	*72.1*	*51-135*	73.56	*2.04*	*20*	
Surr: Nitrobenzene-d5	*61.13*	5.0	*100*	0	*61.1*	*41-120*	51.05	*18*	*20*	
Surr: Phenol-d6	*62.1*	5.0	*100*	0	*62.1*	*20-120*	51.45	*18.8*	*20*	

The following samples were analyzed in this batch:

1007444-01A	1007444-02A	1007444-03A
1007444-04A	1007444-05A	1007444-06A
1007444-07A	1007444-08A	1007444-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 22-Jul-10

Client: Pastor, Behling & Wheeler, LLC
Project: HWPW SWMU 1
WorkOrder: **1007444**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter

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Chain of Custody Form

Page 1 of 2

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Holland, MI 49424-9263
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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1009444

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW SWMU 1	A	LOW SVOC (8270) Select
Work Order		Project Number	1620	B	ATZ SPECIFIC COC LIST
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	BTZ SPECIFIC COC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-P12-20100714	7-14-10	0740	GW		2	X		X								
2	WG-1620-P12MS-20100714	7-14-10	0740	GW		2	X		X								
3	WG-1620-P12MSD-20100714	7-14-10	0740	GW		2	X		X								
4	WG-1620-P10-20100714	7-14-10	0840	GW		2	X		X								
5	WG-1620-SMUX1-20100714	7-14-10	0840	GW		2	X		X								
6	WG-1620-MW07-20100714	7-14-10	0930	GW		2	X	X									
7	WG-1620-MW08-20100714	7-14-10	1050	GW		2	X	X									
8	WG-1620-MW02-20100714	7-14-10	1250	GW		2	X	X									
9	WG-1620-MW01A-20100714	7-14-10	1415	GW		2	X	X									
10	WG-1620-SMUX2-20100714	7-14-10	1415	GW		2	X	X									

Sampler(s) Please Print & Sign: JOHN BRAYTON John Brayton

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☐ 5 WK Days ☐ 3 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton | Date: 7/14/10 | Time: 17:20 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 7/14/10 17:20

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☑ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Chain of Custody Form

☒ ALS Laboratory Group
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Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1057444

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HWPW SWMU 1	A	LOW SVOC (8270) Select
Work Order		Project Number	1620	B	ATZ SPECIFIC COC LIST
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad	C	BTZ SPECIFIC COC LIST
Send Report To	Eric Matzner	Invoice Attn		D	
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	
				F	
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha, NE 681790750	G	
Phone	(512) 671-3434	Phone		H	
Fax	(512) 671-3446	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-SMVFB-20100714	7-14-10	1430	GW			X	X	X								
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: JOHN BRAYTON

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☐ Other ☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: John Brayton	Date: 7-14-10	Time: 17:2	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	7/14/10 17:26
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD
- ☑ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: **PBW** Date/Time Received: **14-Jul-10 17:20**

Work Order: **1007444** Received by: **RNG**

Checklist completed by Robert D. Harris (eSignature) 14-Jul-10 (Date) Reviewed by: R. Kevin Given (eSignature) 16-Jul-10 (Date)

Matrices: waters
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6c,1.9c	002	
Cooler(s)/Kit(s):	1869,0425		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

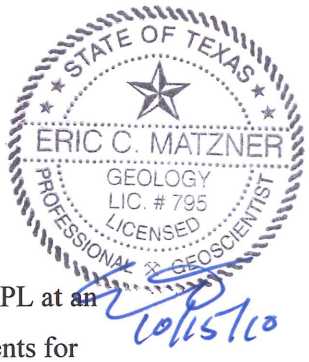
APPENDIX 11
MISCELLANEOUS ASSESSMENT

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

RISK-BASED NAPL MANAGEMENT

UPRR HOUSTON WOOD PRESERVING WORKS, HOUSTON, TX



TRRP-32 ("Risk-Based NAPL Management") provides risk-based guidance on managing NAPL at an Affected Property. The TCEQ guidance document provides a stepped process with requirements for managing occurrences of NAPL. The NAPL assessment (Step 1) has been completed at the Union Pacific Railroad (UPRR) Houston Wood Preserving Works facility, therefore the following discussion focuses on Steps 2 and 3 of TRRP-32:

Step 2 - Identify NAPL Response Triggers

Step 3 - Determine NAPL Response Objectives and Endpoints

STEP 2 - IDENTIFY NAPL RESPONSE TRIGGERS

NAPL response triggers, as detailed in TRRP-32 are used to prompt a risk-based NAPL management response. In the following section, each TRRP-32 NAPL response trigger and referenced section of the guidance document is evaluated based on site-specific conditions. The purpose of this evaluation is to identify which triggers (if any) apply to the DNAPL encountered at the Site (also see "NAPL Occurrence Matrix" and "NAPL Triggers" tables in the front part of APAR).

NAPL Generating Vapors Trigger (Section 2.1.1)

Trigger Description: This trigger applies to any NAPL occurrence that is generating explosive vapor accumulations in surface or subsurface structures such as underground utility conduits, basements, buildings, storm sewers, and soils in anticipated construction zones.

Evaluation: As discussed in Section 3.2 of the APAR Addendum (PBW, 2009), PBW conducted a survey of the storm water drains along Liberty Road using an organic vapor meter (OVM) and photo-ionization detector (PID) to evaluate organic vapors and lower explosive limit (LEL) readings from the drains. There were no OVM or LEL readings above background readings in any of the storm drains tested. In addition, the composition of the DNAPL consists of heavy-end, long carbon chain petroleum hydrocarbons with a fraction of lighter, more volatile benzene and toluene. Surface soil samples indicate that the more volatile fractions have volatized and are not present in surface soils at concentrations that would generate explosive vapors (i.e., highest benzene concentration detected in surface soil was at 0.21

mg/Kg, well below the $^{Tot}Soil_{Comb}$ PCL of 6.6 mg/Kg, and far below levels that might present an explosive concentration).

NAPL Trigger Present? *No.*

Response Required? *No.*

Migrating NAPL Zone Trigger

Trigger Description: The migrating NAPL zone trigger applies when NAPL is observed in any environmental medium to have lateral or vertical movement or that exhibits an increasing or changing volumetric footprint over time.

Evaluation: The sources of DNAPL observed at the Site are likely from spills and drippings at the Site over the 80+ years of operations, with most of the releases likely occurred sometime prior to 1984. The wood treating facility was shut down and dismantled in the mid- to late- 1980s; thus, the DNAPL sources were removed over 20 years ago. The DNAPL plume likely migrated some distance vertically and laterally while the DNAPL sources were present and provided sufficient fluid head to cause DNAPL migration. After the DNAPL source was removed and the NAPL fluid head subsequently dissipated, the DNAPL head was no longer sufficient to overcome pore entry pressures, and the DNAPL movement ceased thereafter.

Lines of evidence indicating a stable DNAPL footprint include:

- A-TZ Unit: In general, relatively little DNAPL has been detected in the A-TZ monitoring wells on-site. DNAPL has commonly been detected in well MW-32A, located off-site to the north. However, as discussed in Section 5.2.2, the DNAPL thickness observed in monitoring well MW-32A may not accurately indicate the presence of DNAPL in the A-TZ since the well is likely completed across one of the thin, carbonate gravel seams observed within the B-CZ clay unit underlying the A-TZ. DNAPL was measured in well MW-57A for the first time in July 2010 with an in-well thickness of 2.55 feet (Figure 5A-10). NAPL was observed in the A-TZ sand encountered in the soil boring for MW-57A where the following observation was noted: "saturated with NAPL from 23.0 to 25.5 ft" (PBW, 2009). The fact that DNAPL entered the well about 1.5 years following installation does not indicate migrating DNAPL, but rather this

indicates that areas of the A-TZ may have residual saturation of DNAPL in the sand matrix that is not very mobile, especially given the high viscosity of the DNAPL material (ranges from 8.52 to 192 centipoises (PBW, 2009)). LNAPL has also been observed in a test well (TW-02) completed in SWMU No. 8 (AST Area). However, LNAPL has not been observed in TW-02) recently, and none of the other A-TZ monitoring wells near TW-02 have had LNAPL observed in the wells.

- B-TZ/B-CZ Unit: Monitoring wells outside of the DNAPL zone in the B-TZ remain free of DNAPL. As shown on Figure 5A-11, B-TZ wells (MW-38B, MW-39B, MW-40B, MW-62B, and P-11) located near monitoring wells MW-41B and MW-12B do not contain DNAPL where DNAPL has been observed often in both MW-12B and MW-41B. For example, despite an in-well DNAPL thickness of as much as 21 feet in MW-41B (January 2010), no DNAPL has been observed in TW-41B, which is located less than 50 feet from MW-41B. The absence of DNAPL in these monitoring wells indicates that the footprint of the DNAPL plume is not increasing over time. Additional monitoring will be necessary to better understand the DNAPL fate and transport in the B-CZ wells; however, based on the data collected from wells surrounding MW-33B where DNAPL is observed, the DNAPL plume in the B-CZ does not appear to be expanding or migrating.

- C-TZ Unit: Monitoring wells outside of the DNAPL zone in the C-TZ remain free of DNAPL. As shown on Figures 5A-13 and 5A-14, the primary area where DNAPL has been observed is around on-site well MW-23C, and off-site monitoring wells MW-25C (no DNAPL detected in July 2010), MW-34C (only gauged in January 2010), MW-44C, MW-45C, and MW-46C. The thickest in-well DNAPL thickness observed in the C-TZ during the 2010 sampling events was 9.29 feet at MW-45C, with the thickest DNAPL measured in the on-site well MW-23C at 1.70 feet (January 2010) (Figure 5A-13). DNAPL has not been observed in the surrounding monitoring wells completed in the C-TZ, including MW-47C, MW-54C, MW-53C, MW-28C, and MW-68C.

- As discussed in Section 5, the dissolved phase plumes in the A-TZ, B-TZ/B-CZ, and C-TZ appear to be stable, which generally indicates a stable DNAPL plume.

UPRR is currently conducting a 12-month DNAPL Recovery Pilot Test (discussed in Section 5.3) where DNAPL in wells is pumped on a monthly basis to evaluate the recoverability for the DNAPL into the wells. Results of the evaluation will be submitted to the TCEQ following the pilot testing period as part of the evaluation of readily recoverable NAPL. In addition, a Plume Management Zone will likely be proposed as part of the Response Action Plan (RAP) that will also address potential recovery in the context of NAPL Response Endpoints.

NAPL Trigger Present? *No.*

Response Required? *No (will re-evaluate following conclusion of the pilot test.)*

Mobile NAPL Zone Trigger (Section 2.1.3)

Trigger Description: The mobile NAPL zone trigger applies in the vadose zone when the concentration of a NAPL-forming compound exceeds the unsaturated zone Theoretical Residual Soil Saturation Limit ($Soil_{Res}$). NAPL also is explicitly mobile when it is observed to move in the vadose zone. For example, NAPL flow into a monitoring well within the NAPL zone is considered to imply mobility.

Evaluation: In surface soils (assumed to be less than 15 feet below ground surface), the maximum COC concentration was naphthalene at 3,900 mg/kg in 2.5 feet at soil boring SB-07. The maximum concentration is well below the Tier 1 Residual Soil Saturation Limit PCL of 10,000 mg/kg.

For subsurface soils (assumed to be greater than 15 feet), the maximum hydrocarbon COC concentration was at 17,000 mg/kg in SB-08 at a depth of 18 feet beneath ground surface that was collected in March 1997 (see Table 4D-3). The concentration indicates potential mobile NAPL in the vadose zone; however, the sample was likely collected at the capillary fringe where some of the NAPL may have collected (NAPL pore pressures not large enough to displace the water pore pressure). In addition, where soil boring SB-8 is located, monitoring well MW-55A was installed to evaluate mobile NAPL. However, as discussed in Section 5.2.2, no DNAPL has been measured in well MW-55A (installed in January 2009). This indicates that areas of the A-TZ may have residual saturation of DNAPL in the sand matrix that is not mobile, especially given the high viscosity of the DNAPL material (ranges from 8.52 to 192 centipoises (PBW, 2009)).

DNAPL has flowed into some site monitoring wells where NAPL was observed in the soil borings, indicating potential mobile NAPL in those areas.

NAPL Trigger Present? *Yes.*

Response Required? *See Step 3 below.*

NAPL Aesthetic Impact or Nuisance Condition Trigger (Section 2.1.4)

Trigger Description: The NAPL aesthetic impact or nuisance condition trigger applies when NAPL causes a condition that results in an environmental resource being made unfit for use. This trigger applies if the NAPL presents objectionable characteristics (e.g., taste and odor) in the affected environmental medium or via a cross-media exposure pathway.

Evaluation: The DNAPL is not visible at or near ground surface. NAPL is in contact with groundwater, which is detailed in the following NAPL Trigger.

NAPL Trigger Present? *No.*

Response Required? *No (see response required for NAPL Contact with Groundwater Trigger).*

NAPL Contact with Groundwater Trigger (Section 2.1.5)

Trigger Description: The NAPL contact with groundwater trigger applies when NAPL is observed or inferred to be in direct contact with a groundwater-bearing unit (GWBU) or its capillary fringe.

Evaluation: Data from the monitoring wells and CPT/ROST borings indicate that DNAPL and possibly LNAPL (see Section 5.2.2 of the Updated APAR Addendum) are in contact with Class 2 groundwater bearing units and the capillary fringe at the Site.

NAPL Trigger Present? *No.*

Response Required? *See Step 3 below.*

NAPL Contact with Surface Water (Section 2.1.6)

Trigger Description: The NAPL contact with surface water trigger applies to the release of NAPL to surface water.

Evaluation: There have been no releases of NAPL to surface water at or around the Site.

NAPL Trigger Present? *No.*

Response Required? *No.*

NAPL Contact with Sediment Trigger (Section 2.1.7)

Trigger Description: The NAPL contact with sediment trigger applies when any NAPL impacts surface water sediments.

Evaluation: With no discharge to waterways at or near the Site, NAPL is not in contact with surface water sediments.

NAPL Trigger Present? *No.*

Response Required? *No.*

STEP 3 - DETERMINE NAPL RESPONSE OBJECTIVES AND ENDPOINTS

Based on the above evaluation, two NAPL response triggers were identified. The NAPL response objectives and endpoints for each of these triggers are discussed below. Table 23 from TRRP-32 is provided with this evaluation to identify the preliminary NAPL response objective and preliminary endpoints for the following triggers. Table 23 is provided as an attachment to this section of the report.

Mobile NAPL Zone Trigger

As indicated in Table 23 of TRRP-32, the site condition that applies is "Mobile NAPL in contact with groundwater". The response objective is to "prevent disturbance of mobile NAPL that could induce migration". Both recovery and control endpoints are allowed. As stated in the TRRP Guidance, this

"response objective applies to mobile NAPL at the capillary zone or in the saturated zone that is not migrating, but which could be induced to migrate by altering the site hydraulics through groundwater pumping." In this instance, an institutional control will be proposed in the RAP for the Site following the TRRP Guidance that discusses acceptable institutional controls can include provisions that warns of the potential mobile NAPL, prohibits groundwater pumping in the affected GWBU and drilling/excavation into or through the mobile NAPL zone, and requires any NAPL removed during future subsurface activities to be properly handled and managed in accordance with all applicable state and federal rules and regulations.

NAPL Contact with Groundwater Trigger

As summarized on Table 23 (see attached), NAPL response objectives and NAPL response endpoints from NAPL in contact with Class 2 groundwater were evaluated. According to TRRP-32, "the default response is to restore the groundwater throughout the dissolved groundwater PCLE zone to the critical PCL". The response objectives are designed to either restore or reduce the groundwater PCLE zone by recovering the readily recoverable NAPL fraction. For the purposes of this submittal, the Site Condition "NAPL contact w/ Class 2 / Class 3 groundwater, in PMZ" was checked. A Plume Management Zone (PMZ) is planned to be submitted with the RAP for the three GWBUs where PCLE Zones have been identified; therefore the recovery endpoint is "Recovery"..

Therefore, the current response objective per the TCEQ Guidance is ensure compliance of NAPL zone in PMZ. Once the PMZs have been established, the response objectives will include compliance with PMZ performance criteria at the NAPL zone and control through institutional controls on groundwater use to protect exposure to residual NAPL in the GWBUs. As part of the evaluation for compliance with PMZ performance criteria, the on-going DNAPL Recovery Pilot Test will used to assess if the DNAPL in the GWBUs is considered readily recoverable using the NAPL Management Tool A detailed in Appendix A of the TCEQ TRRP-32 Risk-Based NAPL Management guidance document.

ATTACHMENT

TABLE 23 – NAPL RESPONSE ENDPOINT MATRIX

Table 23. NAPL Response Endpoint Matrix

NAPL Trigger (*from* STEP 2)	Site Condition (*from* STEP 2)	NAPL Response Objective	NAPL Response Endpoint	
			Recovery Endpoint	Control Endpoint
❑ **NAPL generating vapors** **Sec 2.1.1**	❑ NAPL generating explosive vapor accumulations	**Permanently eliminate NAPL as explosive vapor source** **(Sec 3.2.1)**	**RECOVERY ONLY** ❑ Volatile fraction of NAPL recovered sufficiently to eliminate further explosive vapor accumulations **(Sec 3.2.1.1)**	**CONTROL OPTION NOT AVAILABLE** **(Sec 3.2.1.2)**
	❑ NAPL generating vapors that exceed inhalation PCLs at applicable inhalation POE	**Abate inhalation exposure** **(Sec 3.2.2)**	**RECOVERY** ❑ Volatile fraction of NAPL recovered sufficiently to eliminate vapors that exceed inhalation PCLs **(Sec 3.2.2.1)**	**CONTROL** ❑ Vapors controlled at NAPL source or at POE and exposure to vapors that exceed PCLs eliminated **(Sec 3.2.2.2)**
❑ **Migrating NAPL zone** **Sec 2.1.2**	❑ NAPL in vadose zone ≤ 15 ft below ground surface ❑ NAPL in saturated zone, <u>not</u> in PMZ* ❑ NAPL zone migration in the vadose zone or saturated zone	**Abate NAPL zone migration** **(Sec 3.3.1)**	**RECOVERY ONLY** ❑ NAPL recovered to residual saturation and/or to arrest migration	**CONTROL (via TI)** ❑ NAPL zone migration arrested with physical control **(Sec 3.3.1.2)**
	❑ NAPL discharge to ground surface, surface water or sediment		❑ NAPL recovered sufficient to eliminate NAPL discharge **(Sec 3.3.1.1)**	
	❑ NAPL in saturated zone in a PMZ*		**RECOVERY** ❑ NAPL recovery sufficient to arrest NAPL migration **(Sec 3.3.1.3)**	**CONTROL** ❑ NAPL zone migration arrested with physical control or natural methods **(Sec 3.3.1.4)**
☒ **Mobile NAPL zone** **Sec 2.1.3**	❑ Mobile NAPL threat to subsurface utility or structure ❑ Mobile NAPL in vadose zone at depth ≤ 15 ft; <u>not</u> in *secured/ restricted facility*	**Prevent mobile NAPL impact to shallow vadose zone receptors** **(Sec 3.4.1)**	**RECOVERY ONLY** ❑ NAPL recovered to residual saturation **(Sec 3.4.1.1)**	**CONTROL (via TI)** ❑ Access to NAPL zone prevented using physical control **(Sec 3.4.1.2)**
	❑ Mobile NAPL in vadose zone at depth ≤ 15 ft; in *secured/ restricted facility*	**Prevent potential exposure to mobile NAPL** **(Sec 3.4.2)**	**RECOVERY** ❑ NAPL recovered to residual saturation **(Sec 3.4.2.1)**	**CONTROL** ❑ Exposure to NAPL zone prevented via institutional control **(Sec 3.4.2.2)**
	❑ Mobile NAPL overlies ground-water with which NAPL is <u>not</u> in contact ❑ Mobile NAPL overlies ground-water NAPL zone in PMZ*	**Prevent NAPL migration to groundwater** **(Sec 3.4.3)**	**RECOVERY** ❑ NAPL recovered to residual saturation **(Sec 3.4.3.1)**	**CONTROL** ❑ NAPL zone migration control by physical or natural methods and institutional controls **(Sec 3.4.3.2)**
	☒ Mobile NAPL in contact with groundwater	**Prevent disturbance of mobile NAPL that could induce migration** **(Sec 3.4.4)**	**RECOVERY** ☒ NAPL recovered to residual saturation **(Sec 3.4.4.1)**	**CONTROL** ☒ Disturbance of mobile NAPL zone prevented via institutional control **(Sec 3.4.4.2)**

Table 23. NAPL Response Endpoint Matrix (continued)

NAPL Trigger (*from* STEP 2)	Site Condition (*from* STEP 2)	NAPL Response Objective	NAPL Response Endpoint	
			Recovery Endpoint	Control Endpoint
❑ **NAPL Aesthetic Impact or Nuisance Condition** **Sec 2.1.4**	❑ Aesthetic or nuisance condition at ground surface, surface water, vadose zone or groundwater	**Eliminate NAPL aesthetic impact or nuisance condition** **(Sec 3.5.1)**	**RECOVERY** ❑ Recover NAPL sufficient to eliminate aesthetic or nuisance condition **(Sec 3.5.1.1)**	**CONTROL** ❑ Aesthetic impact or nuisance condition abated with physical control at NAPL zone and/or at POE **(Sec 3.5.1.2)**
☒ **NAPL Contact with Groundwater** **Sec 2.1.5**	❑ NAPL contact w/ Class 1 groundwater ❑ NAPL contact w/ Class 2 / Class 3 groundwater, not in PMZ*	**Groundwater restoration** **(Sec 3.6.1)**	**RECOVERY ONLY** ❑ Recover soluble NAPL fraction sufficient to eliminate source contributions of NAPL to GW PCLE zone **(Sec 3.6.1.1)**	**CONTROL (via TI)** ❑ Control soluble NAPL fraction sufficient to create stable (or shrinking) PCLE zone **(Sec 3.6.1.2)**
	☒ NAPL contact w/ Class 2 / Class 3 groundwater, in PMZ*	**Ensure compliance of NAPL zone in PMZ** **(Sec 3.6.2)**	**RECOVERY** ☒ Recover readily recoverable NAPL fraction** **(Sec 3.6.2.1)**	**(only address recovery endpoint, if applicable)** **(Sec 3.6.2.2)**
❑ **NAPL contact with Surface Water** **Sec 2.1.6**	❑ NAPL floating on surface water or entrained in surface water body	**Eliminate NAPL in contact with surface water** **(Sec 3.7.1)**	**RECOVERY ONLY** ❑ Recover NAPL on or in surface water **(Sec 3.7.1.1)**	**CONTROL OPTION NOT AVAILABLE** **(Sec 3.7.1.2)**
❑ **NAPL contact with Sediment** **Sec 2.1.7**	❑ NAPL in or on banks or bed of surface water body	**Prevent NAPL in sediment from contacting surface water *and* direct human or ecological receptor contact with NAPL** **(Sec 3.8.1)**	**RECOVERY ONLY*** ❑ Recover NAPL to sediment PCLs at applicable POE **(Sec 3.8.1.1)**	**CONTROL (via TI)** ❑ Isolate NAPL zone from surface water bodies and receptors using physical control **(Sec 3.8.1.2)**

LEL- *lower explosive limit* **PCL –** *protective concentration limit* **PMZ –** *plume management zone* **POE –** *point of exposure* **TI –** *technical impracticability demonstration*

*** The PMZ reference includes PMZs that have been approved by the TCEQ, PMZ eligible sites where a PMZ will be proposed to the TCEQ in a RAP, as well as a PMZ via TI demonstration.**

**** For the PMZ situation, the applicability of the readily recoverable circumstance must be determined and recovery must occur if it is applicable (see Table 19 and Figure 6 and associated explanatory text).**

***** Potential ecological impacts from NAPL recovery actions may warrant deviation from this RECOVERY ONLY endpoint on a site-specific basis. Inquire with TCEQ.**

DNAPL RECOVERY MONITORING RECORD

DATE: 5-27-10 / 5-28-10

Project No. 1358-240 | Project Name: UPRR Houston Wood Preserving Works, Houston, TX | PAGE 1 of 1

Weather Conditions: Sunny, 90°

Measuring Device: SOLINST | Purging Device (bailer, pump, etc.): PERASTALTIC PUMP

Observations/Comments:

Well ID		Time	Depth to Water (ft. BMP)	Depth to DNAPL (ft. BMP)	DNAPL Thickness (ft.)	Total Well Depth (ft. BMP)	DNAPL Recovered (gal)	GW Recovered (gal)	Comments	Measured By
MW-12B	Start	1529	7.29	39.50	8.60	48.10				JB
	Stop	1558	7.38	48.00	.10		2	1/4		
MW-23C	Start	1406	22.81	71.50	1.20	72.70				
	Stop	1427	22.96	72.65	.05		1/2	1/4		
MW-25C	Start	—	16.09			62?			CAN'T GET TAPE BELOW 62'. DROPPED TUBING DOWN, NO PRODUCT	
	Stop	—	16.32				—	1	ON TAPE OR TUBING	
MW-32A	Start	0734	5.86	26.20	6.20	32.40				
	Stop	0758	6.45	32.20	.20		2	—		
MW-33B	Start	—	6.82			32.10			Something solid @ 32.10	
	Stop	—					—	—		
MW-34C	Start	—	NM						NO MEASUREMENTS TAKEN	
	Stop	—	NM				—	—		
MW-41B 5/28/10	Start	0837	6.13	25.45	17.30	42.75				
	Stop	0906	6.28	42.70	.05		3 1/2	1/4		
MW-44C	Start	0934	16.67	64.70	6.10	70.80				
	Stop	1006	16.79	70.70	0.10		2	1/4		
MW-45C	Start	1047	16.31	61.10	9.20	70.30				
	Stop	1132	16.49	70.25	0.05		2 1/2	1/4		
MW-46C	Start	0821	16.26	69.40	3.50	72.90				
	Stop	0858	16.55	72.85	.05		1 1/2	—		

Measured By: John Braatz

Checked By:

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Round Rock, Texas
(512) 671-3434 (512)671-3446

DNAPL RECOVERY MONITORING RECORD

DATE: 6-28-10 | 6-29-10

PAGE 1 of 1

Project No. 1358-240 | Project Name: UPRR Houston Wood Preserving Works, Houston, TX

Weather Conditions: RAIN 85°

Measuring Device: SOLINST | Purging Device (bailer, pump, etc.): PERASTALTIC PUMP

Observations/Comments:

Well ID		Time	Depth to Water (ft. BMP)	Depth to DNAPL (ft. BMP)	DNAPL Thickness (ft.)	Total Well Depth (ft. BMP)	DNAPL Recovered (gal)	GW Recovered (gal)	Comments	Measured By
MW-12B	Start	1721	7.39	44.10		48.10				
	Stop	1753	7.56	48.05			1"	1/4		
MW-23C	Start	1841	22.93	72.15		72.70				
	Stop	1856	23.14	72.70			1/4	1/4		
MW-25C	Start	—	16.26			623			hard @ 62.00	
	Stop	—					—	—		
MW-32A	Start	1536	6.02	29.10		32.40				
	Stop	1552	6.22	32.30			1 1/2	—		
MW-33B	Start	—	6.91			32.10			hard @ 32.10	
	Stop	—					—	—		
MW-34C	Start	—	NM							
	Stop	—	NM							
MW-41B	Start	1623	6.21	38.20		42.75				
	Stop	1646	6.46	42.65			1 1/2	1/4		
MW-44C	Start	1239	16.77	67.85		70.80				
	Stop	1257	16.86	70.70			1 1/2	1/4		
MW-45C	Start	1326	16.42	63.45		70.30				
	Stop	1349	16.54	70.20			2	1/4		
MW-46C	Start	1426	16.39	70.85		72.90				
	Stop	1452	16.49	72.85			1	1/4		

Measured By: [signature]

Checked By:

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DNAPL RECOVERY MONITORING RECORD

DATE: 7-22-10 / 7-23-10

Project No. 1358-240 | Project Name: UPRR Houston Wood Preserving Works, Houston, TX | PAGE 1 of 1

Weather Conditions: Sunny, 95°

Measuring Device: SOLINST | Purging Device (bailer, pump, etc.): peristaltic pump

Observations/Comments:

	Well ID		Time	Depth to Water (ft. BMP)	Depth to DNAPL (ft. BMP)	DNAPL Thickness (ft.)	Total Well Depth (ft. BMP)	DNAPL Recovered (gal)	GW Recovered (gal)	Comments	Measured By
IN	MW-12B	Start	1536	7.61	44.20		48.10				JB
		Stop	1608	7.82	48.10			1	1/4		
IN	MW-23C	Start	0807	21.74	72.55		72.70				
		Stop	0816	21.84	72.70						
OUT	MW-25C	Start	—	16.83	[illegible]		62.00?			hard @ 62.00	
		Stop	—								
OUT	MW-32A	Start	0706	5.62	29.45		32.40				
		Stop	0734	5.86	32.40			1			
OUT	MW-33B	Start	—	7.09			32.10			hard @ 32.10	
		Stop	—								
—	MW-34C	Start	—	NM							
		Stop	—	NM							
IN	MW-41B	Start	1346	6.43	38.45		42.75				
		Stop	1412	6.62	42.60			1 1/2	1/4		
OUT	MW-44C	Start	0811	17.03	70.30		70.80				
		Stop	0826	17.26	70.75			1/2			
OUT	MW-45C	Start	0939	16.56	68.80		70.30				
		Stop	0957	16.63	70.30			1 1/2	1/4		
OUT	MW-46C	Start	1047	16.22	72.25		72.90				
		Stop	1101	16.31	72.85			1/2			

Measured By:

Checked By:

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DNAPL RECOVERY MONITORING RECORD

DATE: 8-31-10

Project No. 1358-240 | Project Name: UPRR Houston Wood Preserving Works, Houston, TX | PAGE 1 of 1

Weather Conditions: RAIN 90°

Measuring Device: SOLINST | Purging Device (bailer, pump, etc.): peristaltic pump

Observations/Comments:

Well ID		Time	Depth to Water (ft. BMP)	Depth to DNAPL (ft. BMP)	DNAPL Thickness (ft.)	Total Well Depth (ft. BMP)	DNAPL Recovered (gal)	GW Recovered (gal)	Comments	Measured By
MW-12B IN	Start	1429	7.26	45.42		48.10				
	Stop	1453	7.37	48.05			1 1/2	1/4		
MW-23C IN	Start	1631	21.61	72.65		72.70			mixed water and product	
	Stop	1644	21.64	72.70				1/4	droplets	
MW-25C	Start	—	16.21			62.00			hard @ 62.00	
	Stop	—								
MW-32A	Start	1318	5.43	30.67		32.40				
	Stop	1339	5.69	32.35			1	1/4		
MW-33B	Start	—	7.22			32.10			hard @ 32.10	
	Stop	—								
MW-34C MW-57B	Start	1713	8.42	25.26		27.10				
	Stop	1727	8.61	26.95			1/2	1/4		
MW-41B IN	Start	1529	6.26	39.22		42.75				
	Stop	1603	6.39	42.70			1	1/4		
MW-44C	Start	1026	16.89	70.63		70.80				
	Stop	1041	16.98	70.80			1/4	1/4		
MW-45C	Start	1117	16.46	69.62		70.30				
	Stop	1143	16.61	70.25			1/2	1/4		
MW-46C	Start	0946	16.13	72.46		72.90				
	Stop	0957	16.34	72.90			1/4	1/4		

Measured By: John Black

Checked By:

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APPENDIX 12
WASTE CHARACTERIZATION AND DISPOSITION DOCUMENTATION

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

1,157#

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) LoH 3397

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	TXD000820266	1	866-780-3114	001139387 GBF

GENERATOR

5. Generator's Name and Mailing Address
PO Box 87687 Union Pacific Rail Road
Houston TX 77287

Generator's Site Address (if different than mailing address)
4910 Liberty Rd
Houston TX 77026

Generator's Phone:

6. Transporter 1 Company Name
USA Environment LP

U.S. EPA ID Number
TXR000054437

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology Texas LP
3.5 miles S. on Petronila Rd
Robstown TX 78380

U.S. EPA ID Number
TXD 069452340

Facility's Phone:
800-242-3209

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RCRA, Hazardous Waste Solid, NOS (PPE + Debris/Soil) 9, UA3077 PG III	1	DM	25		F034 091530 1H
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
approval # 090056383-0
USA Job #2469-TD 4156

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Geoffrey Reeder
Signature: Geoffrey Reeder
Month 4 Day 1 Year 10

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Arturo Garcia
Signature: Arturo Garcia
Month 4 Day 1 Year 10

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Javi Andrade
Signature:
Month 4 Day 16 Year 10

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

1. 4/16 #

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) WO # 3357

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	TXD000820266	1	800-780-3116	001139386 GBF

GENERATOR

5. Generator's Name and Mailing Address: Po Box B7687 Union Pacific Rail Road, Houston TX 77287

Generator's Phone: 713 425 6900

Generator's Site Address (if different than mailing address): 4910 Liberty Rd, Houston TX 77026

6. Transporter 1 Company Name: USA Environment, LP — U.S. EPA ID Number: TXR000054437

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: US Ecology Texas LLP, 3.5 miles S Petronila Rd, Robstown TX 78380

Facility's Phone: 800-242-3209 — U.S. EPA ID Number: TXD069452340

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RCRA, Hazardous Waste Liquid NOS (Purgewater) 9, NA 3077 PG III	1	DM	350		F034 09091011H
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

approval # 090056384-D

USA Job #2469-TD-HLSb

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Geoffrey Reeder — Signature: Geoffrey Reeder — Month: 4 Day: 1 Year: 10

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Arturo Rosales — Signature: Arturo Rosales — Month: 4 Day: 1 Year: 10

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Saul Andrade — Signature — Month: 4 Day: 16 Year: 10

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

REPUBLIC SERVICES, INC.

NON-HAZARDOUS WASTE MANIFEST

0126211

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
TXD000820266		

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
UNION PACIFIC RAILROAD PO BOX 87687 HOUSTON, TX 77287 4. Phone ( ) 713-425-6900	4910 LIBERTY RD HOUSTON TX 77026 6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
Rogco Industrial Maintenance Inc	86666	713 [illegible]
10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #2's Phone
13. Designated T/S/D Facility Name and Site Address MC CARTY ROAD LF TX, LP #261A 11013 OLD BEAUMONT HWY HOUSTON, TX 77078	14. US EPA ID Number	15. Facility's Phone 713-671-1575

	16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a.	NON HAZARDOUS SOIL CUTTINGS TCEQ# 14773012	5113101119 exp. 12-31-10			5	Y
b.						
c.						
d.						

21. Additional Descriptions for Materials Listed Above

JOB# 2469-TD-H156

MAIL MANIFESTS TO:

USA ENVIRONMENT L.P.
PO BOX 4988
HOUSTON, TEXAS 77210
ATTN: CARL TRAGESSER

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Geoffrey Redden	Geoffrey Redden	08	06	10

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Rogco Edmond	[signature]	08	06	10

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

REPUBLIC SERVICES, INC.

NON-HAZARDOUS WASTE MANIFEST

0126212

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
TXD000820266		

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
UNION PACIFIC RAILROAD PO BOX 87687 HOUSTON, TX 77287 4. Phone ( ) 713-425-6900	4910 LIBERTY RD HOUSTON TX 77026 6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
Republic Wst	45456	713-861-6911
10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #2's Phone
13. Designated T/S/D Facility Name and Site Address MC CARTY ROAD LF TX, LP #261A 11013 OLD BEAUMONT HWY HOUSTON, TX 77078	14. US EPA ID Number	15. Facility's Phone 713-671-1575

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. NON HAZARDOUS PURGE WATER TCEQ# 14791012	51131011435 exp. 7-29-10				Y
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

JOB# 2469-TD-H156

MAIL MANIFESTS TO:
USA ENVIRONMENT L.P.
PO BOX 4908
HOUSTON, TEXAS 77210
ATTN: CARL TRAGESSER

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
George Reedy	George Reedy	8	6	10

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Marvin Dees	Marvin Dees	8	6	10

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

WO 6643 1.427# 2.185# 3.411#

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
TXD000820266		1 866-780-3116	007464358 JJK

GENERATOR

5. Generator's Name and Mailing Address

UNION PACIFIC RAILROAD
PO BOX 87687
HOUSTON, TX, 77287 713-425-6900

Generator's Phone:

Generator's Site Address (if different than mailing address)

4910 LIBERTY RD
HOUSTON, TX 77026

6. Transporter 1 Company Name: USA Environmental Services — U.S. EPA ID Number: TXR000054437

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address

US ECOLOGY TEXAS LP
3.5 MILES S. ON PETRONILA RD
ROBSTOWN, TEXAS 78380 800-242-3209

Facility's Phone: — U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RCRA, HAZARDOUS WASTE SOLID NOS (PPE/ DEBRIS/SOIL) 9,NA 3077,PGIII	1	DM	100	P	F034 0915301H
	2. RCRA, HAZARDOUS WASTE SOLID NOS (PPE/ DEBRIS/SOIL) 9,NA 3077,PGIII	1	DM	175	P	F034 0915301H
	3. RCRA, HAZARDOUS WASTE LIQUID NOS (PURGE WATER) 9,NA3082,PGIII	1	DM	275	P	F034 0909101H
	4.					

14. Special Handling Instructions and Additional Information

PROFILE#
1- 090056558-1 3- 090056384-0
2- 090056383-0 USA JOB# 2469-TD-H156

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: GEOFFREY REEDER — Signature: Geoffrey Reeder — Month 8 Day 16 Year 10

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LeDE-MONE HATCH — Signature: LeDe-Mone Hatch — Month 8 Day 16 Year 10

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132	H132	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

Printed/Typed Name: SAM ANDRADE — Signature: — Month 8 Day 9 Year 10

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

APPENDIX 16
REFERENCE LIST

AFFECTED PROPERTY ASSESSMENT REPORT ADDENDUM

UPRR Houston Wood Preserving Works
Houston, Texas

APPENDIX 16
REFERENCES

Affected Property Assessment Report Addendum

UPRR Houston Wood Preserving Works
Houston, Texas

Site References

ERM, 2004. *Revised Affected Property Assessment Report (APAR)*, Houston Wood Preserving Works, Houston, Texas, June 10, 2004.

Pastor, Behling & Wheeler, LLC (PBW), 2009. Affected Property Assessment Report Addendum, Union Pacific Railroad Houston Wood Preserving Works, TCEQ SWR No. 31547, Houston, TX. July.

Other References

TCEQ, 2003. Texas Risk Reduction Program (TRRP) Groundwater Classification Guidance Document TRRP-8.

TCEQ, 2005. Screening Target Chemicals of Concern from PCL Development, TRRP Guidance Document TRRP-14.

United States Environmental Protection Agency (EPA), 1996. Test Methods for Evaluating Solid Waste/Physical/Chemical Methods, Third Edition, December.

USEPA, 1996. Low-Flow (Minimal Drawdown) Ground Water Sampling Procedures, Office of Research and Development, EPA/540/S-95/504, April.